



# Open Source Used In OSS Distro Ubuntu Cloud Server Image 24-04- 20241004

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## 1.4 python-httpplib2 0.20.4-3

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## 1.5 python-debian 0.1.49ubuntu2

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Upstream-Name: python-debian

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Files: \*

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lib/debian/changelog.py

setup.py

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## 1.6 libjpeg 8c-2ubuntu11

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Format-Specification: <http://svn.debian.org/wsvn/dep/web/deps/dep5.mdwn?op=file&rev=135>

Name: libjpeg8-empty

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## 1.8 tpm-udev 0.6ubuntu1

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## 1.16 six 1.16.0-4

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## 1.18 lazr-uri 1.0.6-3

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Version 3, 29 June 2007

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## 1.19 networkd-dispatcher 2.2.4-1

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Version 3, 29 June 2007

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Upstream-Name: shim

Upstream-Contact: Matthew Garrett <mjg@redhat.com>

Source: <https://github.com/mjg59/shim.git>

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

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a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library

mechanism for linking with the

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c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

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It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

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b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

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```
<one line to give the library's name and a brief idea of what it does.>  
Copyright (C) <year> <name of author>
```

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Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your  
school, if any, to sign a "copyright disclaimer" for the library, if  
necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the  
library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice

That's all there is to it!

## 1.29 perl 5.38.2-3.2build2

### 1.29.1 Available under license :

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: bitpbyte.U,v 3.0.1.1 1994/10/29 16:02:54 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: bitpbyte.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:02:54 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:27 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:bitpbyte: cat rm Myread Compile run
```



```

?MAKE: -pick add $@ %<
?S:bitpbyte:
?S: This variable contains the value of the BITS_PER_BYTE symbol, which
?S: indicates to the C program how many bits there are in a byte.
?S:.
?C:BITS_PER_BYTE:
?C: This
symbol contains the number of bits in a byte, so that the C
?C: preprocessor can make decisions based on it.
?C:.
?H:#define BITS_PER_BYTE $bitpbyte /**/
?H:.
?F:!try
: check for length of byte
echo " "
case "$bitpbyte" in
")
echo "Checking to see how many bits there are in a byte..." >&4
$cat >try.c <<'EOCP'
#include <stdio.h>
?X: Standard C requires a macro CHAR_BIT in <limits.h>
#ifdef __STDC__
#include <limits.h>
#ifndef CHAR_BIT
#define CHAR_BIT 8
#endif
#ifndef BITSPERBYTE
#define BITSPERBYTE CHAR_BIT
#endif
#else
?X: On non standard C, try with <values.h>
#include <values.h>
#ifndef BITSPERBYTE
#define BITSPERBYTE 8
#endif
#endif
int main()
{
printf("%d\n", BITSPERBYTE);
}
EOCP
set try
if eval $compile_ok; then
dflt=`$run ./try`
else
dflt='8'
echo "(I can't seem to compile the test program. Guessing...)"
fi

```

```
;;
*)
dflt="$bitpbyte"
;;
esac
rp="What is the length of a byte (in bits)?"
./myread
bitpbyte="$ans"
$rm -f try.c try
```

Found in path(s):

\*

/opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/bitpbyte.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_eaccess: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_eaccess:

?S: This variable conditionally defines the HAS\_EACCESS symbol, which

?S: indicates to the C program that the eaccess() routine is available.

?S:.

?C:HAS\_EACCESS :

?C: This symbol, if defined, indicates that the eaccess routine is

?C: available to do extended access checks.

?C:.

?H:#\$d\_eaccess HAS\_EACCESS /\*\*/

?H:.

?LINT:set d\_eaccess

: see if eaccess exists

set eaccess d\_eaccess

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/acl/d\_eaccess.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_pread.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_pread.U,v $
?RCS:
?MAKE:d_pread: Inlibc
?MAKE:-pick add $@ %<
?S:d_pread:
?S: This variable conditionally defines the HAS_PREAD symbol, which
?S: indicates to the C program that the pread() routine is available.
?S:.
?C:HAS_PREAD :
?C: This symbol, if defined, indicates that the pread routine is
?C: available to perform reads on a file descriptor at a given offset.
?C:.
?H:#$d_pread HAS_PREAD /**/
?H:.
?LINT:set d_pread
: see if pread exists
set
    pread d_pread
eval $inlibc

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_pread.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1999 Jarkko Hietaniemi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:siteman1dir siteman1direxp installsiteman1dir: Getfile \
    Setprefixvar prefix siteprefix man1dir sed
?MAKE:-pick add $@ %<
?Y:TOP
?D:siteman1dir="
?S:siteman1dir:

```

?S: This variable contains the name of the directory in which site-specific  
?S: manual source pages are to be put. It is the responsibility of the  
?S: Makefile.SH to get the value of this into the proper command.  
?S: You must be prepared to do the ~name expansion yourself.  
?S: The standard distribution will put nothing in this directory.

?S: After perl

has been installed, users may install their own local

?S: man1 pages in this directory with

?S: MakeMaker Makefile.PL

?S: or equivalent. See INSTALL for details.

?S:.

?D:siteman1direxp="

?S:siteman1direxp:

?S: This variable is the same as the siteman1dir variable, but is filename

?S: expanded at configuration time, for convenient use in makefiles.

?S:.

?D:installsiteman1dir="

?S:installsiteman1dir:

?S: This variable is really the same as siteman1direxp, unless you are using

?S: AFS in which case it points to the read/write location whereas

?S: man1direxp only points to the read-only access location. For extra

?S: portability, you should only use this variable within your makefiles.

?S:.

?LINT:change prefixvar

?LINT:set installsiteman1dir

?LINT:set siteman1dir

?LINT:set siteman1direxp

: determine where add-on manual pages go

case "\$siteman1dir" in

"") dflt=`echo \$man1dir | \$sed "s#^\$prefix#\$siteprefix#"` ;;

\*) dflt=\$siteman1dir ;;

esac

case "\$dflt" in

"| ") dflt=none ;;

esac

fn=dn+~

rp=Pathname

where the site-specific manual pages should be installed?

./getfile

prefixvar=siteman1dir

./setprefixvar

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/siteman1dir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setsent.U,v 3.0 1993/08/18 12:06:09 ram Exp \$

```

?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_setsent.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:09 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_setsent: Inlibc
?MAKE: -pick add $@ %<
?S:d_setsent:
?S: This variable conditionally defines HAS_SETSERVENT if setservernt() is
?S: available.
?S:.
?C:HAS_SETSERVENT:
?C: This symbol, if defined, indicates that the setservernt() routine is
?C: available.
?C:.
?H:#$d_setsent HAS_SETSERVENT /**/
?H:.
?LINT:set d_setsent
: see if setservernt exists
set
setservernt d_setsent
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/modified/d_setsent.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_getnnt.U,v 3.0 1993/08/18 12:06:09 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_getnnt.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:09 ram

```

?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_getnent: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_getnent:  
?S: This variable conditionally defines HAS\_GETNETENT if getnent() is  
?S: available to look up network names in some data base or another.  
?S:.  
?C:HAS\_GETNETENT:  
?C: This symbol, if defined, indicates that the getnent() routine is  
?C: available to look up network names in some data base  
or another.  
?C:.  
?H:#\$d\_getnent HAS\_GETNETENT /\*\*/  
?H:.  
?LINT:set d\_getnent  
: see if getnent exists  
set getnent d\_getnent  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_getnent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_bsdjmp.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
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?RCS:  
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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_bsdjmp.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:31:10 ram  
?RCS: patch61: added ?F: metalint hint  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:09:09 ram  
?RCS: patch36: call ./usg explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:45 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_bsdjmp: Guess Setvar cat +cc libs rm  
?MAKE: -pick add \$@ %<  
?S:d\_bsdjmp:

```

?S: This variable conditionally defines USE_BSDJMP
if BSD _setjmp and
?S: _longjmp routines are available to do non-local gotos without saving
?S: or restoring the signal mask flag.
?S:.
?C:USE_BSDJMP (BSDJMP):
?C: This symbol, if defined, indicates that the BSD _setjmp and _longjmp
?C: routines are available to do non-local gotos without saving or restoring
?C: the signal mask flag.
?C:.
?H:#$d_bsdjmp USE_BSDJMP /**/
?H:.
?F:!set
?LINT:set d_bsdjmp
: see if _setjmp and _longjmp exists
?X: We can't check for these symbols with Inlibc because of the leading "_"
echo " "
case "$d_bsdjmp" in
")
$cat >set.c <<EOP
#include <setjmp.h>
jmp_buf env;
int set = 1;
int main()
{
if (_setjmp(env))
exit(set);
set = 0;
_longjmp(env, 1);
exit(1);
}
EOP
if $cc -o set set.c $libs >/dev/null 2>&1; then
if ./set >/dev/null 2>&1; then
echo "Good! You have BSD _setjmp and _longjmp routines." >&4
val="$define"
else
$cat <<EOM
Uh-Oh! You have BSD _setjmp and _longjmp, but they do not work properly!!
EOM
val="$undef"
fi
else
if
./usg; then
echo "You do not have _setjmp and _longjmp, but that's fine." >&4
else
cat <<EOM

```

It sounds strange for a BSD system to miss `_setjmp` and `_longjmp`, but that's ok.

EOM

```
fi
val="$sundef"
fi
;;
*) val="$d_bsdjmp"
case "$d_bsdjmp" in
$define) echo "Good! You have BSD _setjmp and _longjmp routines." >&4;;
$sundef) echo "You do not have _setjmp and _longjmp, but that's fine." >&4;;
esac
;;
esac
set d_bsdjmp
eval $setvar
$rm -f set.c set
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_bsdjmp.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2008 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:sGMTIME\_max sGMTIME\_min sLOCALTIME\_max sLOCALTIME\_min: cat rm\_try \

Setvar Compile run

?MAKE: -pick add \$@ %<

?S:sGMTIME\_max:

?S: This variable defines the maximum value of the time\_t offset that

?S: the system function gmtime () accepts

?S:.

?S:sGMTIME\_min:

?S: This variable defines the minimum value of the time\_t offset that

?S: the system function gmtime () accepts

?S:.

?S:sLOCALTIME\_max:

?S: This variable defines the maximum value of the time\_t offset that

?S: the system function localtime () accepts

?S:.

?S:sLOCALTIME\_min:

?S: This variable defines the minimum value of the time\_t offset that

?S: the system function localtime () accepts

?S:.



```

?C:GMTIME_MAX:
?C: This symbol contains the maximum value
for the time_t offset that
?C: the system function gmtime () accepts, and defaults to 0
?C:.
?C:GMTIME_MIN:
?C: This symbol contains the minimum value for the time_t offset that
?C: the system function gmtime () accepts, and defaults to 0
?C:.
?C:LOCALTIME_MAX:
?C: This symbol contains the maximum value for the time_t offset that
?C: the system function localtime () accepts, and defaults to 0
?C:.
?C:LOCALTIME_MIN:
?C: This symbol contains the minimum value for the time_t offset that
?C: the system function localtime () accepts, and defaults to 0
?C:.
?H:#define GMTIME_MAX $sGMTIME_max /**/
?H:#define GMTIME_MIN $sGMTIME_min /**/
?H:#define LOCALTIME_MAX $sLOCALTIME_max /**/
?H:#define LOCALTIME_MIN $sLOCALTIME_min /**/
?H:.
?D:sGMTIME_max=0
?D:sGMTIME_min=0
?D:sLOCALTIME_max=0
?D:sLOCALTIME_min=0
?F:!try
: Check the max offset that gmtime and localtime accept
echo "Checking max offsets that gmtime () accepts"

case "$sGMTIME_min/$sGMTIME_max" in
  0/0/)
    $cat >try.c <<EOCP
#include
<sys/types.h>
#include <stdio.h>
#include <time.h>

int i;
struct tm *tmp;
time_t pt;

void gm_check (time_t t, int min_year, int max_year)
{
  tmp = gmtime (&t);
  if ( tmp == NULL ||
/* Check tm_year overflow */
  tmp->tm_year < min_year || tmp->tm_year > max_year)

```

```

tmp = NULL;
else
pt = t;
} /* gm_check */

int check_max ()
{
tmp = NULL;
pt = 0;
#ifdef MAXLONG
gm_check (MAXLONG, 69, 0x7fffffff);
#endif
if (tmp == NULL || tmp->tm_year < 0) {
for (i = 63; i >= 0; i--) {
time_t x = pt | ((time_t)1 << i);
if (x < 0 || x < pt) continue;
gm_check (x, 69, 0x7fffffff);
}
}
printf ("sGMTIME_max=%ld\n", pt);
return (0);
} /* check_max */

int check_min ()
{
tmp = NULL;
pt = 0;
#ifdef MINLONG
gm_check (MINLONG, -1900, 70);
#endif
if (tmp == NULL) {
for (i = 36; i >= 0; i--) {
time_t x = pt - ((time_t)1 << i);
if (x > 0) continue;
gm_check (x, -1900, 70);
}
}
printf ("sGMTIME_min=%ld\n",
pt);
return (0);
} /* check_min */

int main (int argc, char *argv[])
{
/* fprintf (stderr, "Sizeof time_t = %ld\n", sizeof (time_t)); */
check_max ();
check_min ();
return (0);
}

```

```

    } /* main */
EOCP
set try
if eval $compile; then
    eval `$run ./try 2>/dev/null`
else
    echo "Cannot determine sGMTIME_max and sGMTIME_min." >&4
    fi
$rm_try
;;
esac

```

echo "Checking max offsets that localtime () accepts"

```

case "$sLOCALTIME_min/$sLOCALTIME_max" in
    0/0/)
    $cat >try.c <<EOCP
#include <sys/types.h>
#include <stdio.h>
#include <time.h>

int i;
struct tm *tmp;
time_t pt;

void local_check (time_t t, int min_year, int max_year)
{
    if (sizeof (time_t) > 4 && t > 0x7fffffffff000LL)
    tmp = NULL;
    else
    tmp = localtime (&t);
    if ( tmp == NULL ||
/* Check tm_year overflow */
    tmp->tm_year < min_year || tmp->tm_year > max_year)
    tmp = NULL;
    else
    pt = t;
    } /* local_check */

int check_max ()
{
    tmp = NULL;
    pt = 0;
#ifdef
    MAXLONG
    local_check (MAXLONG, 69, 0x7ffffff);
#endif
    if (tmp == NULL || tmp->tm_year < 0) {

```

```

for (i = 63; i >= 0; i--) {
    time_t x = pt | ((time_t)1 << i);
    if (x < 0 || x < pt) continue;
    local_check (x, 69, 0x7fffffff);
}
}
printf ("sLOCALTIME_max=%ld\n", pt);
return (0);
} /* check_max */

```

```

int check_min ()
{
    tmp = NULL;
    pt = 0;
#ifdef MINLONG
    local_check (MINLONG, -1900, 70);
#endif
    if (tmp == NULL) {
        for (i = 36; i >= 0; i--) {
            time_t x = pt - ((time_t)1 << i);
            if (x > 0) continue;
            local_check (x, -1900, 70);
        }
    }
    printf ("sLOCALTIME_min=%ld\n", pt);
    return (0);
} /* check_min */

```

```

int main (int argc, char *argv[])
{
    check_max ();
    check_min ();
    return (0);
} /* main */

```

EOCP

```

set try
if eval $compile; then
    eval ` $run ./try 2>/dev/null `
else
    echo "Cannot determine sLOCALTIME_max and sLOCALTIME_min." >&4
fi
$rm_try
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/time_size.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysmode.U,v $
?RCS:
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:i_sysmode: Inhdr Hasfield
?MAKE: -pick add $@ %<
?S:i_sysmode:
?S: This variable conditionally defines the I_SYSMODE symbol,
?S: and indicates whether a C program should include <sys/mode.h>.
?S:.
?C:I_SYSMODE:
?C: This symbol, if defined, indicates that <sys/mode.h> exists and
?C: should be included.
?C:.
?H:#$i_sysmode I_SYSMODE /**/
?H:.
?LINT:set i_sysmode
: see if this is a sys/mode.h system
set sys/mode.h i_sysmode
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i_sysmode.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_mmemm: Hasproto Inlibc Setvar d_gnulibc
?MAKE: -pick add $@ %<
?S:d_mmemm:
?S: This variable conditionally defines the HAS_MEMMEM symbol, which
?S: indicates to the C program that the memmem() routine is available
?S: to return a pointer to the start of the first occurrence of a
?S: substring in a memory area (or NULL if not found).
?S:.
?C:HAS_MEMMEM:
?C: This symbol, if defined, indicates that the memmem routine is
?C: available to return a pointer to the start of the first occurrence
?C: of a substring in a memory area (or NULL if not found).
?C: In glibc, memmem is a GNU extension. The function is visible in
?C: libc, but the prototype is only visible if _GNU_SOURCE is #defined.
```

?C: Thus we only define this if both the prototype and symbol are found.

?C:.

?H:#\$d\_memmem

HAS\_MEMMEM /\*\*/

?H:.

?T:d\_memmem\_proto xx1 xx2 xx3 xx4

?LINT:set d\_memmem

: see if memmem exists

: We need both a prototype in string.h and the symbol in libc.

echo " "

d\_memmem\_proto="

xx1="#\$d\_gnulibc HAS\_GNULIBC"

xx2='#if defined(HAS\_GNULIBC) && !defined(\_GNU\_SOURCE)'

xx3='# define \_GNU\_SOURCE'

xx4='#endif'

set d\_memmem\_proto memmem literal "\$xx1" literal "\$xx2" literal "\$xx3" literal "\$xx4" define string.h

eval \$hasproto

case "\$d\_memmem\_proto" in

define) # see if memmem exists

set memmem d\_memmem

eval \$inlibc

::

\*) val=\$undef

set d\_memmem

eval \$setvar

::

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_memmem.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_gmtime\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_gmtime\_r gmtime\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_time i\_systime extern\_C

?MAKE: -pick add \$@ %<

?S:d\_gmtime\_r:

?S: This variable conditionally defines the HAS\_GMTIME\_R symbol,

?S: which indicates to the C program that the gmtime\_r()

?S: routine is available.

```

?S:.
?S:gmtime_r_proto:
?S: This variable encodes the prototype of gmtime_r.
?S: It is zero if d_gmtime_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_gmtime_r
?S: is defined.
?S:.
?C:HAS_GMTIME_R:
?C: This symbol, if defined, indicates that the gmtime_r routine
?C: is available to gmtime re-entrantly.
?C:.
?C:GMTIME_R_PROTO:
?C: This
symbol encodes the prototype of gmtime_r.
?C: It is zero if d_gmtime_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_gmtime_r
?C: is defined.
?C:.
?H:#$d_gmtime_r HAS_GMTIME_R /**/
?H:#define GMTIME_R_PROTO $gmtime_r_proto /**/
?H:.
?T:try hdrs d_gmtime_r_proto
: see if gmtime_r exists
set gmtime_r d_gmtime_r
eval $inlibc
case "$d_gmtime_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_time time.h $i_systime sys/time.h"
case "$d_gmtime_r_proto:$usetthreads" in
":define") d_gmtime_r_proto=define
set d_gmtime_r_proto gmtime_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_gmtime_r_proto" in
define)
case "$gmtime_r_proto" in
"|0) try='struct tm* gmtime_r(const time_t*, struct tm*);'
./protochk "$extern_C $try" $hdrs && gmtime_r_proto=S_TS ;;
esac
case "$gmtime_r_proto" in
"|0) try='int gmtime_r(const time_t*, struct tm*);'
./protochk "$extern_C $try" $hdrs && gmtime_r_proto=I_TS ;;
esac
case
"$gmtime_r_proto" in
"|0) d_gmtime_r=undef
gmtime_r_proto=0

```

```

echo "Disabling gmtime_r, cannot determine prototype." >&4 ;;
*) case "$gmtime_r_proto" in
REENTRANT_PROTO*) ;;
*) gmtime_r_proto="REENTRANT_PROTO_${gmtime_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "gmtime_r has no prototype, not using it." >&4 ;;
esac
d_gmtime_r=undef
gmtime_r_proto=0
;;
esac
;;
*) gmtime_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_gmtime_r.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: MailAuthor.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>
?RCS:
?RCS: $Log: MailAuthor.U,v $
?RCS: Revision 3.0.1.5 1997/02/28 15:04:41 ram
?RCS: patch61: added support for src.U
?RCS:
?RCS: Revision 3.0.1.4 1994/08/29 16:05:09 ram
?RCS: patch32: avoid message sending if they said no previously
?RCS:
?RCS: Revision 3.0.1.3 1993/10/16 13:47:30 ram
?RCS: patch12: now makes sure user-specified address is in Internet format
?RCS:
?RCS: Revision

```



3.0.1.2 1993/09/13 15:48:49 ram

?RCS: patch10: reverted to original intent by the Author himself

?RCS:

?RCS: Revision 3.0.1.1 1993/08/27 14:38:38 ram

?RCS: patch7: now prompts user for its e-mail address

?RCS: patch7: no longer silent when mail has been sent

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:06 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?RCS:

?X:

?X: This unit asks the user to please send a message to the author.

?X: To force inclusion of this unit, you must add it's name to the

?X: dependancies on the MAKE line in your private copy of End.U.

?X: This allows a smart mailagent program to automatically let users know

?X: when their package is out of date, and to allow users to be notified of

?X: any future patches.

?X:

?MAKE:MailAuthor mailpatches notifypatches usermail: test cat mailer \  
package Myread patchlevel baserev rm rsrc Oldconfig Configdir

?MAKE: -pick wipe \$@ %<

?S:mailpatches:

?S: Indicates whether the user would like future patches to be mailed

?S: directly

to them.

?S:.

?S:notifypatches:

?S: Indicates whether the user would like notification of future patches

?S: mailed to them.

?S:.

?S:usermail:

?S: This variable is used internally by Configure to keep track of the

?S: user e-mail address, where notifications or patches should be sent.

?S: A '-' value means the return address will be extracted by parsing

?S: the mail headers.

?S:.

?T:opt mailpatches notifypatches atsh status

: notify author that his package is used

if \$test -f ../config/mailauthor &&

cmp \$rsrc/patchlevel.h ../config/mailauthor >/dev/null 2>&1

then

status="say that you're using \$package";

case "\$mailpatches" in

true) status='have patches mailed to you as they are issued';;

esac

case "\$notifypatches" in

true) status='be notified when new patches are issued';;

```
esac
$cat <<EOM
```

You have already sent the author of \$package (<MAINTLOC>) mail to \$status. If you wish, you may modify your previous request by sending a new mail with different options.

```
EOM
rp='Should
I send a status update to <MAINTLOC>?'
dflt=n
else
$cat <<EOM
```

If you are able to send mail to the Internet, the author of \$package would really appreciate you letting me send off a quick note, just to say that you've tried it. The author is more likely to spend time maintaining \$package if it's known that many people are using it, and you can even ask to get sent new patches automagically this way if you wish. To protect your privacy, all I'll say in the mail is the version of \$package that you're using.

```
EOM
rp='Should I send mail to <MAINTLOC>?'
dflt=y
?X: Ensure default is 'n' if question has been asked already, in case they
?X: run Configure -d next time and answered 'n' the first time. Therefore,
?X: an empty nomail will be created later on even if no mail is sent.
$test -f ../config/nomail && dflt=n
fi
../myread
case "$ans" in
[yY]*)
echo " "
echo "Great! Your cooperation is really appreciated."
$cat <<EOM
```

Some braindead sites do not set a proper return address in the From: header of their outgoing mail, making it impossible to reply to mail they generate. If your site is broken in this way, write to your system administrator and get it fixed!!! In the mean time, you can manually specify the Internet e-mail address by which the author can get back to you, should there be a need to do so. If manually specified, it should be something like "user@domain.top". If your mail system generates addresses correctly, specify "none".

```
EOM
case "$usermail" in
'|') dflt=none;;
```

```

*) dflt="$usermail";;
esac
rp='Manually specify a return address to use:'
. ./myread
case "$ans" in
none|*@*.*)
case "$ans" in
none) usermail='-';;
*) usermail="$ans";;
esac
;;
*)
echo "(Address does not look like an Internet one -- ignoring it.)"
?X:
?X: If we can't trust their mailer or their return address, it's highly
?X: suggested that they only register and don't ask to get anything from
?X: the author, since it's likely to bounce in null-land --
RAM.
?X:
usermail='- '
mailpatches=false
notifypatches=false
;;
esac
echo " "
opt=""
rp='Would you like to have new patches automatically mailed to you?'
case "$mailpatches" in
true) dflt=y;;
*) dflt=n;;
esac
. ./myread
case "$ans" in
[yY]*) opt=' mailpatches'; mailpatches=true;;
*)
mailpatches=false
echo " "
rp='Ok, would you like to simply be notified of new patches?'
case "$notifypatches" in
false) dflt=n;;
*) dflt=y;;
esac
. ./myread
echo " "
case "$ans" in
[yY]*) opt=' notifypatches'; notifypatches=true;;
*)
echo "Fine, I'll simply say that you've tried it then."

```

```
    notifypatches=false
;;
esac
;;
esac
echo "Sending mail to <MAINTLOC>..." >&4
?X: Bizarre hack here. We can't just put @SH in the hereis lines below, because
?X: metaconfig will interpret it as a command, and there's no quoting mechanism.
?X: Do it via a variable instead.
atsh='@SH'
$mailler <MAINTLOC> <<EOM >/dev/null 2>&1
Subject: Command
Precedence: junk
To: <MAINTLOC>
```

```
$atsh
package $usermail $package $baserev $patchlevel$opt
EOM
$rm -f ../config/mailauthor ../config/nomail
cp $src/patchlevel.h ../config/mailauthor
;;
*)
case "$dflt" in
"y")
echo "Oh well, maybe next time."
cp /dev/null ../config/nomail
;;
esac
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/MailAuthor.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_isinfl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_isinfl:

?S: This variable conditionally defines the HAS\_ISINFL symbol, which

?S: indicates to the C program that the isinfl() routine is available.

?S:.

?C:HAS\_ISINFL:

?C: This symbol, if defined, indicates that the isinfl routine is

?C: available to check whether a long double is an infinity.

?C:.

?H:#\$d\_isinfl HAS\_ISINFL /\*\*/

?H:.

?LINT:set d\_isinfl

: see if isinfl exists

set isinfl d\_isinfl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_isinfl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Hasproto.U \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?X: This unit generates a \$hasproto string that is used internally

?X: by Configure to check if this system has a prototype for a

?X: particular function

?X:

?X: To use it, say something like:

?X: set d\_getnetent\_proto getnetent \$i\_netdb netdb.h

?X: eval \$hasproto

?X: Or, for more complicated sets of headers, do something like

?X: hdrs="\$define sys/types.h

?X: \$i\_systime sys/time.h

?X: \$i\_sysselect sys/select.h

?X: \$i\_netdb netdb.h"

?X: set d\_getnetent\_proto getnetent \$hdrs

?X: eval \$hasproto

?X:

?X: There is also an 'escape' hatch built in. If you have a pair

?X: of args 'literal 'stuff' then 'stuff' gets included literally

?X: into the test program. See Protochk.U for more details.

?X:

?MAKE:Hasproto:

Setvar cppstdin cppflags cppminus contains rm\_try test

?MAKE: -pick add \$@ %<

?T:func varname

?F:!try.c

```

?V:hasproto
: Define hasproto macro for Configure internal use
hasproto='varname=$1; func=$2; shift; shift;
while $stest $# -ge 2; do
  case "$1" in
  $define) echo "#include <$2>;";
  literal) echo "$2" ;;
  esac ;
  shift 2;
done > try.c;
$cppstdin $cppflags $cppminus < try.c > tryout.c 2>/dev/null;
if $contains "$func.*( tryout.c >/dev/null 2>&1; then
  echo "$func() prototype found.";
  val="$define";
else
  echo "$func() prototype NOT found.";
  val="$undef";
fi;
set $varname;
eval $setvar;
$rm_try tryout.c'

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/protos/Hasproto.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_drem.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_drem.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:12:14 ram
?RCS: patch36: created by ADO
?RCS:
?MAKE:d_drem: Inlibc
?MAKE: -pick add $@ %<
?S:d_drem:
?S: This variable conditionally defines the HAS_DREM symbol, which
?S: indicates to the C program that the drem() routine is available.

```

?S:.

?C:HAS\_DREM :

?C: This symbol, if defined, indicates that the drem routine is

?C: available.

This routine is roughly the same as fmod, i.e. it

?C: computes the remainder  $r=x-n*y$ , where  $n=rint(x/y)$ , whereas fmod

?C: uses  $n=trunc(x/y)$ .

?C:.

?H:#\$d\_drem HAS\_DREM /\*\*/

?H:.

?LINT:set d\_drem

: see if drem exists

set drem d\_drem

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_drem.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Options.U,v \$

?RCS: Revision 3.0.1.7 1997/02/28 15:08:15 ram

?RCS: patch61: optdef.sh now starts with a "startsh"

?RCS: patch61: moved some code from Head.U

?RCS:

?RCS: Revision 3.0.1.6 1995/09/25 09:14:46 ram

?RCS: patch59: protected option parsing code against 'echo -\*' option failure

?RCS:

?RCS: Revision 3.0.1.5 1995/05/12 12:04:52 ram

?RCS: patch54: added -K option for experts

?RCS:

?RCS: Revision 3.0.1.4 1995/01/30 14:27:52 ram

?RCS: patch49: this unit now exports file optdef.sh,  
not a variable

?RCS:

?RCS: Revision 3.0.1.3 1995/01/11 15:19:00 ram

?RCS: patch45: new -O option allowing -D and -U to override config.sh settings

?RCS: patch45: file optdef.sh is no longer removed after sourcing

```

?RCS:
?RCS: Revision 3.0.1.2 1994/10/29 15:58:06 ram
?RCS: patch36: ensure option definition file is removed before appending
?RCS: patch36: protect variable definitions with spaces in them
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 06:55:44 ram
?RCS: patch30: now uses new me symbol to tag error messages
?RCS: patch30: new -D and -U options to define/undef symbols (JHI)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:14 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: Command line parsing. It is really important that the variables used here
?X: be not listed in the MAKE line, or they will be saved in config.sh and
?X: loading this file to fetch default answers would clobber the values set
?X: herein.
?X:
?MAKE:Options: startsh
?MAKE: -pick wipe $@ %<
?V:reuseval
alldone error realsilent silent extractsh fastread \
override knowitall: config_sh
?T:arg argn symbol config_arg0 config_args config_argc xxx yyy zzz uuu
?T:args_exp args_sep arg_exp
?F:!Configure
?F:/optdef.sh ./cmdline.opt ./posthint.sh ./cmdl.opt
: Save command line options in file UU/cmdline.opt for later use in
: generating config.sh.
?X: This temporary file will be read by Oldsym.U. I used a temporary
?X: file to preserve all sorts of potential command line quotes and
?X: also because we don't know in advance how many variables we'll
?X: need, so I can't actually declare them on the MAKE line.
?X: The config_args variable won't be quite correct if Configure is
?X: fed something like ./Configure -Dcc="gcc -B/usr/ccs/bin/"
?X: since the quotes are gone by the time we see them. You'd have to
?X: reconstruct the command line from the config_arg? lines, but since
?X: I don't imagine anyone actually having to do that, I'm not going
?X: to worry too much.
cat > cmdline.opt
<<EOSH
: Configure command line arguments.
config_arg0='$0'
config_args='$*'
config_argc=$#
EOSH
argn=1
args_exp="

```



```

args_sep="
for arg in "$@"; do
  cat >>cmdline.opt <<EOSH
  config_arg$argn='$arg'
EOSH
?X: Extreme backslashitis: replace each ' by """"
  cat <<EOC | sed -e "s/"/""""""""""/g" > cmdl.opt
$arg
EOC
arg_exp=`cat cmdl.opt`
args_exp="$args_exp$args_sep'$arg_exp'"
argn=`expr $argn + 1`
args_sep=' '
done
?X: args_exp is good for restarting self: eval "set X $args_exp"; shift; $0 "$@"
?X: used by hints/os2.sh in Perl, for instance
rm -f cmdl.opt

```

```

: produce awk script to parse command line options
cat >options.awk <<'EOF'
BEGIN {
  optstr = "A:dD:eEf:hKOrsSU:V"; # getopt-style specification

```

```

  len = length(optstr);
  for (i = 1; i <= len; i++) {
    c = substr(optstr, i, 1);
?X: some older awk's do not have the C ?: construct
    if (i < len) a = substr(optstr, i + 1, 1); else a = "";
    if (a == ":") {
      arg[c] = 1;
      i++;
    }
    opt[c] = 1;
  }
}
{
  expect = 0;
  str = $0;
  if (substr(str,
  1, 1) != "-") {
    printf("%s\n", str);
    next;
  }
  len = length($0);
  for (i = 2; i <= len; i++) {
    c = substr(str, i, 1);
    if (!opt[c]) {
      printf("-%s\n", substr(str, i));

```

```

    next;
}
printf("-%s\n", c);
if (arg[c] {
    if (i < len)
        printf("%s\n", substr(str, i + 1));
    else
        expect = 1;
    next;
}
}
}
END {
    if (expect)
        print "?";
}
EOF

```

: process the command line options

?X: Use "\$@" to keep arguments with spaces in them from being split apart.

?X: For the same reason, awk will output quoted arguments and the final eval

?X: removes them and sets a proper \$\* array. An 'X' is prepended to each

?X: argument before being fed to echo to guard against 'echo -x', where -x

?X: would be understood as an echo option! It is removed before feeding awk.

```
set X `for arg in "$@"; do echo "X$arg"; done |
```

```
sed -e s/X// | awk -f options.awk`
```

```
eval "set $*"
```

```
shift
```

```
rm -f options.awk
```

: set up default values

```
fastread=""
```

```
reuseval=false
```

```
config_sh=""
```

```
alldone=""
```

```
error=""
```

```
silent=""
```

```
extractsh=""
```

```
override=""
```

```
knowitall=""
```

```
rm
```

```
-f optdef.sh posthint.sh
```

```
cat >optdef.sh <<EOS
```

```
$startsh
```

```
EOS
```

?X:

?X: Given that we now have the possibility to execute Configure remotely

?X: thanks to the new src.U support, we have to face the possibility  
 ?X: of having to ask where the source lie, which means we need the Myread.U  
 ?X: stuff and possibly other things that might echo something on the  
 ?X: screen...  
 ?X:  
 ?X: That's not pretty, and might be confusing in 99% of the time. So...  
 ?X: We introduce a new realsilent variable which is set when -s is given,  
 ?X: and we force silent=true if -S is supplied. The Extractall.U unit  
 ?X: will then undo the >&4 redirection based on the value of the  
 ?X: realsilent variable... -- RAM, 18/93/96  
 ?X:

```
: option parsing
while test $# -gt 0; do
case "$1" in
-d) shift; fastread=yes;;
-e) shift; alldone=cont;;
-f)
  shift
  cd ..
  if test -r "$1"; then
    config_sh="$1"
  else
    echo "$me: cannot read config file $1." >&2
    error=true
  fi
  cd UU
  shift;;
-h)
  shift; error=true;;
-r) shift; reuseval=true;;
-s) shift; silent=true; realsilent=true;;
-E) shift; alldone=exit;;
-K) shift; knowitall=true;;
-O) shift; override=true;;
-S) shift; silent=true; extractsh=true;;
-D)
  shift
  case "$1" in
  *=)
    echo "$me: use '-U symbol=', not '-D symbol='." >&2
    echo "$me: ignoring -D $1" >&2
    ;;
  *=*) echo "$1" | \
    sed -e "s/'\"/\"/g" -e "s/=(.*)/=\\1/" >> optdef.sh;;
  *) echo "$1='define'" >> optdef.sh;;
  esac
  shift
```

```

;;
-U)
shift
case "$1" in
*=) echo "$1" >> optdef.sh;;
*=*)
echo "$me: use '-D symbol=val', not '-U symbol=val'." >&2
echo "$me: ignoring -U $1" >&2
;;
*) echo "$1='undef'" >> optdef.sh;;
esac
shift
;;
-A)
shift
xxx=""
yyy="$1"
zzz=""
uuu=undef
case "$yyy" in
*=*) zzz=`echo "$yyy"|sed 's!:. *!!'^
case "$zzz" in
*:* ) zzz=" ";;
*) xxx=append
zzz=" "`echo
"$yyy"|sed 's!^[^=]*=!!'^
yyy=`echo "$yyy"|sed 's!:. *!!'^ ;;
esac
;;
esac
case "$xxx" in
") case "$yyy" in
*:* ) xxx=`echo "$yyy"|sed 's!:. *!!'^
yyy=`echo "$yyy"|sed 's!^[^:]*=!!'^
zzz=`echo "$yyy"|sed 's!^[^=]*=!!'^
yyy=`echo "$yyy"|sed 's!:. *!!'^ ;;
*) xxx=`echo "$yyy"|sed 's!:. *!!'^
yyy=`echo "$yyy"|sed 's!^[^:]*=!!'^ ;;
esac
;;
esac
case "$xxx" in
append)
echo "$yyy=\\"${yyy}$zzz\" >> posthint.sh ;;
clear)
echo "$yyy=" >> posthint.sh ;;
define)
case "$zzz" in

```

```

") zzz=define ;;
esac
echo "$yyy=$zzz" >> posthint.sh ;;
    eval)
echo "eval \"$yyy=$zzz\" >> posthint.sh ;;
    prepend)
echo "$yyy=\"$zzz\${$yyy}\" >> posthint.sh ;;
    undef)
        case "$zzz" in
")
zzz="$uuu" ;;
esac
echo "$yyy=$zzz" >> posthint.sh ;;
    *) echo "$me: unknown -A command '$xxx', ignoring -A $1" >&2 ;;
    esac
    shift
    ;;
-V) echo "$me generated by metaconfig <VERSION> PL<PATCHLEVEL>." >&2
    exit 0;;
--) break;;
-*) echo "$me: unknown option $1" >&2; shift; error=true;;
*) break;;
esac
done

```

```

case "$error" in
true)

```

```

cat >&2 <<EOM

```

```

Usage: $me [-dehrsEKOSV] [-f config.sh] [-D symbol] [-D symbol=value]

```

```

    [-U symbol] [-U symbol=] [-A command:symbol...]

```

```

-d : use defaults for all answers.

```

```

-e : go on without questioning past the production of config.sh.

```

```

-f : specify an alternate default configuration file.

```

```

-h : print this help message and exit (with an error status).

```

```

-r : reuse C symbols value if possible (skips costly nm extraction).

```

```

-s : silent mode, only echoes questions and essential information.

```

```

-D : define symbol to have some value:

```

```

    -D symbol      symbol gets the value 'define'

```

```

    -D symbol=value

```

```

    symbol gets the value 'value'

```

```

-E : stop at the end of questions, after having produced config.sh.

```

```

-K : do not use unless you know what you are doing.

```

```

-O : let -D and -U override definitions from loaded configuration file.

```

```

-S : perform variable substitutions on all .SH files (can mix with -f)

```

```

-U : undefine symbol:

```

```

    -U symbol      symbol gets the value 'undef'

```

```

    -U symbol=      symbol gets completely empty

```

```

-A : manipulate symbol after the platform specific hints have been applied:

```

```

-A symbol=value append " "value to symbol
-A append:symbol=value append value to symbol
-A define:symbol=value define symbol to have value
  -A clear:symbol define symbol to be "
-A define:symbol define symbol to be 'define'
-A eval:symbol=value define symbol to be eval of value
-A prepend:symbol=value prepend value to symbol
-A undef:symbol define symbol to be 'undef'
-A undef:symbol= define symbol to be "
-V : print version number and exit (with
a zero status).

```

EOM

```
exit 1
```

```
::
```

```
esac
```

?X:

?X: Unless they specified either -S or both -d and -e/E, make sure we're

?X: running interactively, i.e. attached to a terminal. Moved from Head.U to

?X: be able to handle batch configurations...

?X:

?X: We have to hardwire the Configure name and cannot use \$me, since if they

?X: said 'sh <Configure', then \$me is 'sh'...

?X:

```
: Sanity checks
```

```
case "$fastread$alldone" in
```

```
yescont|yesexit) ;;
```

```
*)
```

```
case "$extractsh" in
```

```
true) ;;
```

```
*)
```

```
if test ! -t 0; then
```

```
  echo "Say 'sh Configure', not 'sh <Configure'"
```

```
  exit 1
```

```
fi
```

```
::
```

```
esac
```

```
::
```

```
esac
```

?X: In silent mode, the standard output is closed. Questions are asked by

?X: outputting on file descriptor #4, which is the original stdout descriptor.

?X: This filters out all the "junk", since all the needed information is written

?X: on #4. Note that ksh will not let us redirect output if the file descriptor

?X: has not be defined yet, unlike sh, hence the following line...--RAM.

```
exec 4>&1
```

```
case "$silent" in
```

```
true)
```

```
exec 1>/dev/null;;
esac
```

: run the defines and the undefines, if any, but leave the file out there...

```
touch optdef.sh
```

```
./optdef.sh
```

: create the posthint manipulation script and leave the file out there...

?X: this file will be perused by Oldconfig.U

```
touch posthint.sh
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Options.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Configdir.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Configdir.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 14:58:36 ram

?RCS: patch61: have README explicitly mention the package name

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:49 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:Configdir: package

?MAKE: -pick add \$@ %<

: create .config dir to save info across Configure sessions

```
test -d ../.config || mkdir ../.config
```

```
cat >../.config/README <<EOF
```

This directory created by Configure to save

information that should

persist across sessions for \$package.

You may safely delete it if you wish.

EOF

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Configdir.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_poll.U,v $
?RCS:
?RCS: Copyright (c) 1998 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:i_poll: Inhdr Hasfield
?MAKE:-pick add $@ %<
?S:i_poll:
?S: This variable conditionally defines the I_POLL symbol, and indicates
?S: whether a C program should include <poll.h>.
?S:.
?C:I_POLL:
?C: This symbol, if defined, indicates that <poll.h> exists and
?C: should be included. (see also HAS_POLL)
?C:.
?H:#$i_poll I_POLL /**/
?H:.
?LINT:set i_poll
: see if this is a poll.h system
set poll.h i_poll
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i_poll.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: pkgsrc.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?MAKE:pkgsrc: src rsrc
?MAKE:-pick add $@ %<
?S:pkgsrc:
?S: This variable holds the absolute path of the package source.
?S:.
?C:PACKAGE_SOURCE_DIR:
?C: Holds the directory name holding the package source.
```



```
?C:.  
?H:#define PACKAGE_SOURCE_DIR "$pkgsrc"  
?H:.  
: define absolute package source directory  
case "$src" in  
/*) pkgsrc=$src;;  
*) pkgsrc=`cd $rsrc; pwd`;;  
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/pkgsrc.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: prototype.U,v 3.0.1.3 1994/05/06 15:11:49 ram Exp $  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: $Log: prototype.U,v $  
?RCS: Revision 3.0.1.3 1994/05/06 15:11:49 ram  
?RCS: patch23: ensure cc flags used when looking for prototype support  
?RCS:  
?RCS: Revision 3.0.1.2 1994/01/24 14:15:36 ram  
?RCS: patch16: prototype handling macros now appear only when needed  
?RCS:  
?RCS: Revision 3.0.1.1 1993/08/25 14:03:12 ram  
?RCS: patch6: defines were referring to non-existent VOID symbol  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:36 ram  
?RCS: Baseline for dist  
3.0 netwide release.  
?RCS:  
?MAKE:prototype: Nothing  
?S:prototype:  
?S: This variable holds the eventual value of CAN_PROTOTYPE, which  
?S: indicates the C compiler can handle function prototypes.  
?S:.  
: stub, never used  
prototype=nothing
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
```

5.38.0/U/modified/prototype.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_table.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_table.U,v $
?RCS: Revision 3.0.1.2 1993/11/10 17:34:14 ram
?RCS: patch14: wrongly mentionned an obsolete symbol
?RCS:
?RCS: Revision 3.0.1.1 1993/10/16 13:49:29 ram
?RCS: patch12: created
?RCS:
?MAKE:d_table: Inlibc
?MAKE: -pick add $@ %<
?S:d_table:
?S: This variable conditionally defines HAS_TABLE if table() is
?S: available to examine/update elements from a system table.
?S:.
?C:HAS_TABLE:
?C: This symbol, if defined, indicates that the OSF/1
table() system
?C: call is available to examine/update items from a system table.
?C:.
?H:#$d_table HAS_TABLE /**/
?H:.
?LINT:set d_table
: see if table exists
set table d_table
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_table.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_tcstpggrp.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

?RCS: as specified in the README file that comes with the distribution.  
 ?RCS: You may reuse parts of this distribution only within the terms of  
 ?RCS: that same Artistic Licence; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
 ?RCS:  
 ?RCS: \$Log: d\_tcsetgrp.U,v \$  
 ?RCS: Revision 3.0.1.1 1994/08/29 16:12:11 ram  
 ?RCS: patch32: created by ADO  
 ?RCS:  
 ?MAKE:d\_tcsetgrp: Inlibc  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_tcsetgrp:  
 ?S: This variable conditionally defines the HAS\_TCSETPGRP symbol, which  
 ?S: indicates to the C program that the tcsetgrp() routine is available  
 ?S: to set foreground process group ID.  
 ?S:.  
 ?C:HAS\_TCSETPGRP  
 :  
 ?C: This symbol, if defined, indicates that the tcsetgrp routine is  
 ?C: available to set foreground process group ID.  
 ?C:.  
 ?H:#\$d\_tcsetgrp HAS\_TCSETPGRP /\*\*/  
 ?H:.  
 ?LINT:set d\_tcsetgrp  
 : see if tcsetgrp exists  
 set tcsetgrp d\_tcsetgrp  
 eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_tcsetgrp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000, Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:Devel usedevel: Myread rsrc package

?MAKE: -pick wipe \$@ %<

?T:xversion

```

?X: waiver of rights
?S:usedevel:
?S: This variable indicates that Perl was configured with development
?S: features enabled. This should not be done for production builds.
?S:.
?C:PERL_USE_DEVEL:
?C: This symbol, if defined, indicates that Perl was configured with
?C: -Dusedevel, to enable development features. This should not be
?C: done for production builds.
?C:.
?H:#$usedevel PERL_USE_DEVEL /**/
?H:.
?LINT:extern versiononly
?LINT:extern
installusrbinperl
?LINT:change versiononly
?LINT:change installusrbinperl
: See if we are using a devel version and want that
xversion=`awk '/define[ ]+PERL_VERSION/ {print $3}' $src/patchlevel.h`
case "$usedevel" in
$define|true|[yY]*)
    usedevel="$define" ;;
*) case "$xversion" in
    *[13579])
cat >&4 <<EOH
*** WHOA THERE!!! ***

```

This is an UNSTABLE DEVELOPMENT release.  
The version of this \$package distribution is \$xversion, that is, odd,  
(as opposed to even) and that signifies a development release.  
If you want a maintenance release, you want an even-numbered version.

Do \*\*\*NOT\*\*\* install this into production use.  
Data corruption and crashes are possible.

It is most seriously suggested that you do not continue any further  
unless you want to help in developing and debugging Perl.

If you *still* want to build perl, you can answer 'y' now,  
or pass -Dusedevel to Configure.

```

EOH
rp='Do you really want to continue?'
dflt='n'
. ./myread
case
"$ans" in
[yY]) echo >&4 "Okay, continuing."

```

```

    usedevel="$define" ;;
*) echo >&4 "Okay, bye."
    exit 1
    ;;
esac
;;
esac
usedevel="$undef"
;;
esac
case "$usedevel" in
$define|true|[yY]*)
case "$versiononly" in
") versiononly="$define" ;;
esac
case "$installusrbinperl" in
") installusrbinperl="$undef" ;;
esac
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/Devel.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: prefix.U,v \$

?RCS: Revision 3.0.1.2 1995/01/30 14:44:05 ram

?RCS: patch49: new prefixexp variable holding a fully expanded prefix

?RCS: patch49: save off previous prefix value in oldprefix if changed (WED)

?RCS: patch49: added the INSTALLPREFIX define for C programs to use (WED)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:31:34 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:prefix prefixexp +oldprefix: Getfile Loc Oldconfig

```

cat package
?MAKE: -pick add $@ %<
?S:prefix:
?S: This variable holds the name of the directory below which the
?S: user will install the package. Usually, this is /usr/local, and
?S: executables go in /usr/local/bin, library stuff in /usr/local/lib,
?S: man pages in /usr/local/man, etc. It is only used to set defaults
?S: for things in bin.U, mansrc.U, privlib.U, or scriptdir.U.
?S:.
?S:prefixexp:
?S: This variable holds the full absolute path of the directory below
?S: which the user will install the package. Derived from prefix.
?S:.
?S:oldprefix:
?S: This variable is set non-null if the prefix was previously defined
?S: and gets set to a new value. Used internally by Configure only.
?S:.
?C:INSTALLPREFIX:
?C: This symbol contains the name of the install prefix for this package.
?C:.
?H:#define INSTALLPREFIX "$prefix" /**/
?H:.
: determine root of directory hierarchy where package will be installed.
case "$prefix" in
")
dflt=`./loc . /usr/local /usr/local /local /opt
/usr`
;;
*)
dflt="$prefix"
;;
esac
$cat <<EOM

```

By default, \$package will be installed in \$dflt/bin, manual pages under \$dflt/man, etc..., i.e. with \$dflt as prefix for all installation directories. Typically set to /usr/local, but you may choose /usr if you wish to install \$package among your system binaries. If you wish to have binaries under /bin but manual pages under /usr/local/man, that's ok: you will be prompted separately for each of the installation directories, the prefix being only used to set the defaults.

```

EOM
fn=d~
rp='Installation prefix to use?'
./getfile
oldprefix="

```

```

case "$prefix" in
") ;;
*)
case "$ans" in
"$prefix") ;;
*) oldprefix="$prefix";;
esac
;;
esac
prefix="$ans"
prefixexp="$ansexp"

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/prefix.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpagsz.U,v 3.0.1.1 1994/10/29 16:13:10 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_getpagsz.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:13:10 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:14 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_getpagsz: Compile Oldconfig Myread Inlibc Findhdr

?MAKE: -pick add \$@ %<

?S:d\_getpagsz:

?S: This variable conditionally defines HAS\_GETPAGESIZE if getpagesize()

?S: is available to get the system page size.

?S:.

?C:HAS\_GETPAGESIZE

(GETPAGESIZE):

?C: This symbol, if defined, indicates that the getpagesize system call

?C: is available to get system page size, which is the granularity of

?C: many memory management calls.

?C:.

?H:#\$d\_getpagsz HAS\_GETPAGESIZE /\*\*/

?H:.

```
?LINT:set d_getpagsz
: see if getpagesize exists
set getpagesize d_getpagsz
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_getpagsz.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: bitpbyte.U,v $
```

```
?RCS: Revision 3.0.1.1 1994/10/29 16:02:54 ram
```

```
?RCS: patch36: added ?F: line for metalint file checking
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:05:27 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:bitpbyte: cat rm Myread +cc +ccflags
```

```
?MAKE: -pick add $@ %<
```

```
?S:bitpbyte:
```

```
?S: This variable contains the value of the BITS_PER_BYTE symbol, which
```

```
?S: indicates to the C program how many bits there are in a byte.
```

```
?S:.
```

```
?C:BITS_PER_BYTE:
```

```
?C: This symbol contains the number
```

```
of bits in a byte, so that the C
```

```
?C: preprocessor can make decisions based on it.
```

```
?C:.
```

```
?H:#define BITS_PER_BYTE $bitpbyte /**/
```

```
?H:.
```

```
?F:!try
```

```
: check for length of byte
```

```
echo " "
```

```
case "$bitpbyte" in
```

```
")
```

```
echo "Checking to see how many bits there are in a byte..." >&4
```

```
$cat >try.c <<'EOCP'
```

```
#include <stdio.h>
```



?X: Standard C requires a macro CHAR\_BIT in <limits.h>

```
#ifdef __STDC__
#include <limits.h>
#ifndef CHAR_BIT
#define CHAR_BIT 8
#endif
#ifndef BITSPERBYTE
#define BITSPERBYTE CHAR_BIT
#endif
#else
```

?X: On non standard C, try with <values.h>

```
#include <values.h>
#ifndef BITSPERBYTE
#define BITSPERBYTE 8
#endif
#endif
```

```
int main()
{
    printf("%d\n", BITSPERBYTE);
}
```

EOCP

```
if $cc $ccflags -o try try.c >/dev/null 2>&1 ; then
    dflt=`./try`
else
    dflt='8'
    echo "(I can't seem to compile the test program. Guessing...)"
fi
;;
*)
    dflt="$bitpbyte"
;;
esac
rp="What is the length of a byte (in bits)?"
./myread
bitpbyte="$ans"
$rm -f try.c try
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/bitpbyte.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

```

?RCS:
?MAKE:usesocks: Myread Oldconfig Setvar
?MAKE: -pick add $@ %<
?Y:TOP
?S:usesocks:
?S: This variable conditionally defines the USE_SOCKS symbol,
?S: and indicates that Perl should be built to use SOCKS.
?S:.
?C:USE_SOCKS:
?C: This symbol, if defined, indicates that Perl should
?C: be built to use socks.
?C:.
?H:%<:#ifndef USE_SOCKS
?H:%<:#$usesocks USE_SOCKS /**/
?H:%<:#endif
?H:.
?LINT:set usesocks
?INIT:: set usesocks on the Configure command line to enable socks.
: Check is we will use socks
?X: We should really have some explanatory text here, and some
?X: automatic setting of sensible defaults.
case "$usesocks" in
$define|true|[yY]*) dflt='y';
*) dflt='n';;
esac
cat <<EOM

```

Perl can be built to use the SOCKS proxy protocol library. To do so, Configure must be run with `-Dusesocks`. If you use SOCKS you also need to use the PerlIO abstraction layer, this will be implicitly selected.

If this doesn't make any sense to you, just accept the default '\$dflt'.

EOM

```
rp='Build Perl for SOCKS?'
```

```

./myread
case "$ans" in
y|Y) val="$define" ;;
*)   val="$undef" ;;
esac
set usesocks
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/usesocks.U

```

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?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fmin: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fmin:

?S: This variable conditionally defines the HAS\_FMIN symbol, which

?S: indicates to the C program that the fmin() routine is available.

?S:.

?C:HAS\_FMIN:

?C: This symbol, if defined, indicates that the fmin routine is

?C: available to do the minimum function.

?C:.

?H:#\$d\_fmin HAS\_FMIN /\*\*/

?H:.

?LINT:set d\_fmin

: see if fmin exists

set fmin d\_fmin

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_fmin.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_byacc.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_byacc.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:31:14 ram

?RCS: patch61: created

?RCS:

?MAKE:d\_byacc: byacc Setvar

?MAKE: -pick add \$@ %<

?S:d\_byacc:

?S: This variable indicates whether byacc is available.

?S: If the user has specified 'portability', then Makefile.SH

?S: sees \$byacc='byacc' whether or not the user actually has

?S: byacc. This variable allows us to determine in a makefile

?S: if we really

```
have byacc.  
?S:  
?LINT:set d_byacc  
: Check if we really have byacc  
case "$byacc" in  
"|"byacc') val="$undef" ;;  
*) val="$define" ;;  
esac  
set d_byacc  
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_byacc.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: $Log: i_dirent.U,v $  
?RCS: Revision 3.0.1.4 1994/10/29 16:20:01 ram  
?RCS: patch36: failed scanning for 'd_namlen' with missing <dirent.h> (ADO)  
?RCS:  
?RCS: Revision 3.0.1.3 1994/06/20 07:01:25 ram  
?RCS: patch30: added direntrytype for hints, merely for NeXT (ADO)  
?RCS: patch30: now checks for both struct dirent and direct (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/05/13 15:22:37 ram  
?RCS: patch27: new variable direntrytype for proper type setting (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/01/24  
14:11:15 ram  
?RCS: patch16: added new Direntry_t pseudo-type for directory entries  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:08:17 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit looks whether there is a dirent system or not  
?X:  
?MAKE:i_dirent d_dirnamlen direntrytype: test contains Setvar \
```

```

Myread Findhdr cppstdin cppflags cppminus rm_try
?MAKE: -pick add $@ %<
?S:i_dirent:
?S: This variable conditionally defines I_DIRENT, which indicates
?S: to the C program that it should include <dirent.h>.
?S:.
?S:d_dirnamlen:
?S: This variable conditionally defines DIRNAMLEN, which indicates
?S: to the C program that the length of directory entry names is
?S: provided by a d_namelen field.
?S:.
?S:direntrytype:
?S: This symbol is set to 'struct direct' or 'struct dirent' depending on
?S: whether dirent is available or not. You should use this pseudo type to
?S: portably declare your directory entries.
?S:.
?C:I_DIRENT:
?C: This symbol, if defined, indicates to the C program
?C: that it should
?C: include <dirent.h>. Using this symbol also triggers the definition
?C: of the Direntry_t define which ends up being 'struct dirent' or
?C: 'struct direct' depending on the availability of <dirent.h>.
?C:.
?C:DIRNAMLEN:
?C: This symbol, if defined, indicates to the C program that the length
?C: of directory entry names is provided by a d_namlen field. Otherwise
?C: you need to do strlen() on the d_name field.
?C:.
?C:Direntry_t:
?C: This symbol is set to 'struct direct' or 'struct dirent' depending on
?C: whether dirent is available or not. You should use this pseudo type to
?C: portably declare your directory entries.
?C:.
?H:#$i_dirent I_DIRENT /**/
?H:#$d_dirnamlen DIRNAMLEN /**/
?H:%<:@if I_DIRENT && Direntry_t
?H:%<:#define Direntry_t $direntrytype
?H:%<:@end
?H:.
?T:xinc guess1 guess2
?LINT:set i_dirent d_dirnamlen
: see if this is a dirent system
echo " "
if xinc=`./findhdr dirent.h`; $test "$xinc"; then
val="$define"
echo "<dirent.h> found." >&4
else
val="$undef"

```

```

if
xinc=`./findhdr sys/dir.h`; $test "$xinc"; then
echo "<sys/dir.h> found." >&4
echo " "
else
xinc=`./findhdr sys/ndir.h`
fi
echo "<dirent.h> NOT found." >&4
fi
set i_dirent
eval $setvar

?X: Use struct dirent or struct direct? If we're using dirent.h,
?X: it's probably struct dirent, but apparently not always.
?X: Assume $xinc still contains the name of the header file we're using.
@if direntrytype || Direntry_t
: Look for type of directory structure.
echo " "
$cpptest $cpptestflags $cpptestminus < "$xinc" > try.c

case "$direntrytype" in
'| ')
case "$i_dirent" in
$define) guess1='struct dirent' ;;
*) guess1='struct direct' ;;
esac
;;
*) guess1="$direntrytype"
;;
esac

case "$guess1" in
'struct dirent') guess2='struct direct' ;;
*) guess2='struct dirent' ;;
esac

if $contains "$guess1" try.c >/dev/null 2>&1; then
direntrytype="$guess1"
echo "Your directory entries are $direntrytype." >&4
elif $contains "$guess2" try.c >/dev/null 2>&1; then
direntrytype="$guess2"
echo
"Your directory entries seem to be $direntrytype." >&4
else
echo "I don't recognize your system's directory entries." >&4
rp="What type is used for directory entries on this system?"
dflt="$guess1"
. ./myread

```

```

direntrytype="$ans"
fi
$rm_try

@end

@if d_dirnamlen || DIRNAMLEN
: see if the directory entry stores field length
echo " "
$cppstdin $cppflags $cppminus < "$xinc" > try.c
if $contains 'd_namlen' try.c >/dev/null 2>&1; then
echo "Good, your directory entry keeps length information in d_namlen." >&4
val="$define"
else
echo "Your directory entry does not know about the d_namlen field." >&4
val="$undef"
fi
set d_dirnamlen
eval $setvar
$rm_try

@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_dirent.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: nametype.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: nametype.U,v $
?RCS: Revision 3.0.1.3 1994/10/29 16:26:09 ram
?RCS: patch36: call ./usg and ./bsd explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0.1.2 1994/08/29 16:36:48 ram
?RCS: patch32: fixed typo: /etc/password -> /etc/passwd (WED)
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:10:09 ram
?RCS: patch10: made questions more explicit for 'Configure -s' prompting (WAD)
?RCS:

```

```

?RCS: Revision 3.0 1993/08/18 12:09:20 ram
?RCS: Baseline
for dist 3.0 netwide release.
?RCS:
?MAKE:nametype d_passnames d_berknames d_usgnames: Myread Guess Oldconfig cat
?MAKE: -pick add $@ %<
?S:nametype:
?S: This variable indicates how full names are stored on this system.
?S: Values are bsd, usg, and other.
?S:.
?S:d_passnames:
?S: This variable conditionally defines the PASSNAMES symbol,
?S: which indicates to the C program that full names are stored in
?S: the /etc/passwd file.
?S:.
?S:d_berknames:
?S: This variable conditionally defines the PASSNAMES symbol,
?S: which indicates to the C program that full names are stored in
?S: the /etc/passwd file in Berkeley format.
?S:.
?S:d_usgnames:
?S: This variable conditionally defines the PASSNAMES symbol,
?S: which indicates to the C program that full names are stored in
?S: the /etc/passwd file in USG format.
?S:.
?C:PASSNAMES:
?C: This symbol, if defined, indicates that full names are stored in
?C: the /etc/passwd file.
?C:.
?C:BERKNAMES:
?C: This symbol, if defined, indicates that full
names are stored in
?C: the /etc/passwd file in Berkeley format (name first thing, everything
?C: up to first comma, with & replaced by capitalized login id, yuck).
?C:.
?C:USGNAMES:
?C: This symbol, if defined, indicates that full names are stored in
?C: the /etc/passwd file in USG format (everything after - and before ( is
?C: the name).
?C:.
?H:#$d_passnames PASSNAMES /* (undef to take name from ~/.fullname) */
?H:#$d_berknames BERKNAMES /* (that is, ":name,stuff:") */
?H:#$d_usgnames USGNAMES /* (that is, ":stuff-name(stuff):") */
?H:.
: find out how to find out full name
case "$d_berknames" in
"$define")
dflt=y;;

```



```

"$undef")
dflt=n;;
*)
if ./bsd; then
    dflt=y
elif ./xenix; then
    dflt=y
else
    dflt=n
fi
;;
esac
$cat <<'EOM'

```

Does your /etc/passwd file keep full names in Berkeley/V7 format (name first thing after ':' in GCOS field)? In that case, a typical entry in the password file looks like this:

```

guest:**password**:10:100:Mister Guest User:/usr/users:/bin/sh

```

```

^^^^^^^^^^^^^^^^^^^^

```

```

EOM
rp="Berkeley/V7 format for full name in /etc/passwd?"
./myread
case "$ans" in
y*) d_passnames="$define"
    d_berknames="$define"
    d_usgnames="$undef"
    nametype=bsd
    ;;
*)
case "$d_usgnames" in
"$define") dflt=y;;
"$undef") dflt=n;;
*)
if ./usg; then
    dflt=y
else
    dflt=n
fi
;;
esac
$cat <<'EOM'

```

Does your passwd file keep full names in USG format (name sandwiched between a '-' and a '(')? In that case, a typical entry in the password file looks like this:

guest:\*\*password\*\*:10:100:000-Mister Guest User(000):/usr/users:/bin/sh

^^^^^^^^^^^^^^^^^^^^

EOM

```
rp="USG format for full name in /etc/passwd?"
./myread
case "$ans" in
n*) echo "Full name will be taken from ~/.fullname"
d_passnames="$undef"
d_berknames="$undef"
d_usgnames="$undef"
nametype=other
;;
*)
d_passnames="$define"
d_berknames="$undef"
d_usgnames="$define"
nametype=usg
;;
esac;;
esac
```

Found in path(s):

\*

/opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/nametype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2009 H.Merijn Brand

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getaddrinfo: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getaddrinfo:

?S: This variable conditionally defines the HAS\_GETADDRINFO symbol,

?S: which indicates to the C program that the getaddrinfo() function

?S: is available.

?S:.

?C:HAS\_GETADDRINFO:

?C: This symbol, if defined, indicates that the getaddrinfo() function

?C: is available for use.

?C:.

?H:#\$d\_getaddrinfo HAS\_GETADDRINFO /\*\*/

?H:.

?LINT:set d\_getaddrinfo

```
: see if getaddrinfo exists
set getaddrinfo d_getaddrinfo
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_getaddrinfo.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_strtoul.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:46:43 ram

?RCS: patch61: created

?RCS:

?RCS:

?MAKE:d\_strtoul: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_strtoul:

?S: This variable conditionally defines the HAS\_STRTOUL symbol, which

?S: indicates to the C program that the strtoul() routine is available

?S: to provide conversion of strings to unsigned long.

?S:.

?C:HAS\_STRTOUL (STRTOUL):

?C: This symbol, if defined, indicates that the strtoul routine is

?C: available

to provide conversion of strings to unsigned long.

?C:.

?H:#\$d\_strtoul HAS\_STRTOUL /\*\*/

?H:.

?LINT:set d\_strtoul

```
: see if strtoul exists
```

```
set strtoul d_strtoul
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_strtoul.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_isascii.U,v 3.0.1.2 1994/10/29 16:13:39 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_isascii.U,v $
?RCS: Revision 3.0.1.2 1994/10/29 16:13:39 ram
?RCS: patch36: added 'ldflags' to the test compile line (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:09:32 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_isascii: Compile cat rm Setvar i_stdlib
?MAKE: -pick add $@ %<
?S:d_isascii:
?S: This variable conditionally defines the HAS_ISASCII constant,
?S: which indicates
?S: to the C program that isascii() is available.
?S:.
?C:HAS_ISASCII:
?C: This manifest constant lets the C program know that isascii
?C: is available.
?C:.
?H:#$d_isascii HAS_ISASCII /**/
?H:.
?LINT:set d_isascii
?X: Can't use Inlibc because isascii() might be a macro.
: Look for isascii
echo " "
$cat >isascii.c <<EOCP
#include <stdio.h>
#include <ctype.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main() {
int c = 'A';
if (isascii(c))
```

```

    exit(0);
else
    exit(1);
}
EOCP
set isascii
if eval $compile; then
    echo "isascii() found." >&4
    val="$define"
else
    echo "isascii() NOT found." >&4
    val="$undef"
fi
set d_isascii
eval $setvar
$rm -f isascii*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_isascii.U

```

No license file was found, but licenses were detected in source scan.

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fp\_class: Inlibc

?MAKE:-pick add \$@ %<

?S:d\_fp\_class:

?S: This variable conditionally defines the HAS\_FP\_CLASS symbol, which

?S: indicates to the C program that the fp\_class() routine is available.

?S:.

?C:HAS\_FP\_CLASS:

?C: This symbol, if defined, indicates that the fp\_class routine is

?C: available to classify doubles. Available for example in Digital UNIX.

?C: The returned values are defined in <math.h> and are:

?C:

?C: FP\_SNAN        Signaling NaN (Not-a-Number)

?C: FP\_QNAN        Quiet NaN (Not-a-Number)

?C: FP\_POS\_INF     +infinity

?C: FP\_NEG\_INF     -infinity

?C: FP\_POS\_NORM    Positive normalized

?C: FP\_NEG\_NORM    Negative normalized

?C: FP\_POS\_DENORM  Positive denormalized

?C: FP\_NEG\_DENORM

Negative denormalized

```
?C: FP_POS_ZERO    +0.0 (positive zero)
?C: FP_NEG_ZERO    -0.0 (negative zero)
?C:.
?H:#$d_fp_class HAS_FP_CLASS /**/
?H:.
?LINT:set d_fp_class
: see if fp_class exists
set fp_class d_fp_class
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_fp_class.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_safebcpy.U,v 3.0.1.4 1997/02/28 15:40:58 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_safebcpy.U,v $
?RCS: Revision 3.0.1.4 1997/02/28 15:40:58 ram
?RCS: patch61: improved overlapping copy check
?RCS: patch61: comfort them if they have memmove
?RCS: patch61: added ?F: metalint hint
?RCS:
?RCS: Revision 3.0.1.3 1995/07/25 13:58:40 ram
?RCS: patch56: re-arranged compile line to include ldflags before objects
?RCS:
?RCS: Revision 3.0.1.2 1995/01/11 15:29:23 ram
?RCS: patch45: added 'ldflags' to the test compile line (ADO)
?RCS:
?RCS:
Revision 3.0.1.1 1994/05/06 14:49:03 ram
?RCS: patch23: ensure string is not optimized in read-only memory (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:58 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_safebcpy: cat d_bcopy Compile rm_try run \
d_memmove i_memory i_stdlib i_string i_unistd Oldconfig Setvar
?MAKE: -pick add $@ %<
```

?S:d\_safebcpy:  
 ?S: This variable conditionally defines the HAS\_SAFE\_BCOPY symbol if  
 ?S: the bcopy() routine can do overlapping copies. Normally, you  
 ?S: should probably use memmove().  
 ?S:.  
 ?C:HAS\_SAFE\_BCOPY (SAFE\_BCOPY):  
 ?C: This symbol, if defined, indicates that the bcopy routine is available  
 ?C: to copy potentially overlapping memory blocks. Normally, you should  
 ?C: probably use memmove() or memcpy(). If neither is defined, roll your  
 ?C: own version.  
 ?C:.  
 ?H:#\$d\_safebcpy HAS\_SAFE\_BCOPY /\*\*/  
 ?H:.  
 ?F:!try  
 ?LINT: set d\_safebcpy  
 : can bcopy handle overlapping blocks?  
 echo " "  
 ?X: assume the worst.  
 val="\$undef"  
 case "\$d\_memmove" in  
 "\$define")  
 echo "I'll use memmove() instead of bcopy() for overlapping copies." ;;  
 \*) case "\$d\_bcopy" in  
 "\$define")  
 echo "Checking to see if bcopy() can do overlapping copies..." >&4  
 \$cat >try.c <<EOCP  
 #\$\_memory I\_MEMORY  
 #\$\_stdlib I\_STDLIB  
 #\$\_string I\_STRING  
 #\$\_unistd I\_UNISTD  
 EOCP  
 \$cat >>try.c <<'EOCP'  
 #include <stdio.h>  
 #ifdef I\_MEMORY  
 # include <memory.h>  
 #endif  
 #ifdef I\_STDLIB  
 # include <stdlib.h>  
 #endif  
 #ifdef I\_STRING  
 # include <string.h>  
 #else  
 # include <strings.h>  
 #endif  
 #ifdef I\_UNISTD  
 # include <unistd.h> /\* Needed for NetBSD \*/  
 #endif  
 int main()

```

{
char buf[128], abc[128];
char *b;
int len;
int off;
int align;

/* Copy "abcde..." string to char abc[] so that gcc doesn't
   try to store the string in read-only memory. */
bcopy("abcdefghijklmnopqrstuvwxy0123456789", abc, 36);

for (align = 7; align >= 0; align--) {
for (len = 36; len; len--) {
b = buf+align;
bcopy(abc, b, len);
for (off = 1; off <= len; off++) {
bcopy(b, b+off, len);
bcopy(b+off,
b, len);
if (bcmp(b, abc, len))
exit(1);
}
}
}
exit(0);
}
EOCP
set try
if eval $compile_ok; then
if $run ./try 2>/dev/null; then
echo "Yes, it can."
val="$define"
else
echo "It can't, sorry."
fi
else
echo "(I can't compile the test program, so we'll assume not...)"
fi
;;
esac
$rm_try
;;
esac
set d_safebcopy
eval $setvar

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-



5.38.0/U/compline/d\_safebcpy.U

No license file was found, but licenses were detected in source scan.

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getfsstat : Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getfsstat:

?S: This variable conditionally defines the HAS\_GETFSSTAT symbol, which

?S: indicates to the C program that the getfsstat() routine is available.

?S:.

?C:HAS\_GETFSSTAT:

?C: This symbol, if defined, indicates that the getfsstat routine is

?C: available to stat filesystems in bulk.

?C:.

?H:#\$d\_getfsstat HAS\_GETFSSTAT /\*\*/

?H:.

?LINT:set d\_getfsstat

: see if getfsstat exists

set getfsstat d\_getfsstat

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/U/perl/d\_getfsstat.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_socket.U,v 3.0.1.2 1997/02/28 15:46:00 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_socket.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:46:00 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:08:04 ram

?RCS: patch16: can now safely declare private nm\_extract in dependencies

?RCS:  
?RCS: Revision 3.0 1993/08/18 12:07:26 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_socket d\_oldsock d\_sockpair socketlib sockethdr \  
d\_msg\_trunc d\_msg\_dontroute d\_msg\_oob d\_msg\_peek  
d\_msg\_proxy \  
d\_scm\_rights d\_sockaddr\_sa\_len d\_sockaddr\_in6 d\_sin6\_scope\_id \  
d\_ip\_mreq d\_ip\_mreq\_source d\_ipv6\_mreq d\_ipv6\_mreq\_source \  
d\_sockaddr\_storage: \  
contains echo n c ar nm nm\_opt nm\_extract Inlibc Csym\_a \  
Compile cat rm\_try Setvar Hasfield sysroot  
?MAKE: -pick add \$@ %<  
?S:d\_socket:  
?S: This variable conditionally defines HAS\_SOCKET, which indicates  
?S: that the BSD socket interface is supported.  
?S:.  
?S:d\_sockpair:  
?S: This variable conditionally defines the HAS\_SOCKETPAIR symbol, which  
?S: indicates that the BSD socketpair() is supported.  
?S:.  
?S:d\_oldsock:  
?S: This variable conditionally defines the OLDSOCKET symbol, which  
?S: indicates that the BSD socket interface is based on 4.1c and not 4.2.  
?S:.  
?S:d\_msg\_trunc:  
?S: This variable conditionally defines the HAS\_MSG\_CTRUNC symbol,  
?S: which indicates that the MSG\_CTRUNC is available. #ifdef is  
?S: not enough because it may be an enum, glibc has been known to do this.  
?S:.  
?S:d\_msg\_dontroute:  
?S: This variable  
conditionally defines the HAS\_MSG\_DONTRROUTE symbol,  
?S: which indicates that the MSG\_DONTRROUTE is available. #ifdef is  
?S: not enough because it may be an enum, glibc has been known to do this.  
?S:.  
?S:d\_msg\_oob:  
?S: This variable conditionally defines the HAS\_MSG\_OOB symbol,  
?S: which indicates that the MSG\_OOB is available. #ifdef is  
?S: not enough because it may be an enum, glibc has been known to do this.  
?S:.  
?S:d\_msg\_peek:  
?S: This variable conditionally defines the HAS\_MSG\_PEEK symbol,  
?S: which indicates that the MSG\_PEEK is available. #ifdef is  
?S: not enough because it may be an enum, glibc has been known to do this.  
?S:.  
?S:d\_msg\_proxy:  
?S: This variable conditionally defines the HAS\_MSG\_PROXY symbol,

?S: which indicates that the MSG\_PROXY is available. #ifdef is

?S: not enough because it may be an enum, glibc has been known to do this.

?S:.

?S:d\_scm\_rights:

?S: This variable conditionally defines the HAS\_SCM\_RIGHTS symbol,

?S: which indicates that the SCM\_RIGHTS is available.

  #ifdef is

?S: not enough because it may be an enum, glibc has been known to do this.

?S:.

?S:d\_sockaddr\_sa\_len:

?S: This variable conditionally defines the HAS\_SOCKADDR\_SA\_LEN symbol,

?S: which indicates that a struct sockaddr structure has the sa\_len

?S: member.

?S:.

?S:d\_sockaddr\_in6:

?S: This variable conditionally defines the HAS\_SOCKADDR\_IN6 symbol, which

?S: indicates the availability of a struct sockaddr\_in6.

?S:.

?S:d\_sockaddr\_storage:

?S: This variable conditionally defines the HAS\_SOCKADDR\_STORAGE symbol,

?S: which indicates the availability of a struct sockaddr\_storage.

?S:.

?S:d\_sin6\_scope\_id:

?S: This variable conditionally defines the HAS\_SIN6\_SCOPE\_ID symbol, which

?S: indicates that a struct sockaddr\_in6 structure has the sin6\_scope\_id

?S: member.

?S:.

?S:d\_ip\_mreq:

?S: This variable conditionally defines the HAS\_IP\_MREQ symbol, which

?S: indicates the availability of a struct ip\_mreq.

?S:.

?S:d\_ip\_mreq\_source:

?S: This variable conditionally defines the HAS\_IP\_MREQ\_SOURCE

  symbol,

?S: which indicates the availability of a struct ip\_mreq\_source.

?S:.

?S:d\_ipv6\_mreq:

?S: This variable conditionally defines the HAS\_IPV6\_MREQ symbol, which

?S: indicates the availability of a struct ipv6\_mreq.

?S:.

?S:d\_ipv6\_mreq\_source:

?S: This variable conditionally defines the HAS\_IPV6\_MREQ\_SOURCE symbol,

?S: which indicates the availability of a struct ipv6\_mreq\_source.

?S:.

?S:socketlib:

?S: This variable has the names of any libraries needed for socket support.

?S:.

?S:sockethdr:

?S: This variable has any cpp '-I' flags needed for socket support.  
?S:.  
?C:HAS\_SOCKET (SOCKET):  
?C: This symbol, if defined, indicates that the BSD socket interface is  
?C: supported.  
?C:.  
?C:HAS\_SOCKETPAIR (SOCKETPAIR):  
?C: This symbol, if defined, indicates that the BSD socketpair() call is  
?C: supported.  
?C:.  
?C:USE\_OLD\_SOCKET (OLDSOCKET):  
?C: This symbol, if defined, indicates that the 4.1c BSD socket interface  
?C: is supported instead of the 4.2/4.3 BSD socket interface. For instance,  
?C: there  
is no setsockopt() call.  
?C:.  
?C:HAS\_MSG\_CTRUNC:  
?C: This symbol, if defined, indicates that the MSG\_CTRUNC is supported.  
?C: Checking just with #ifdef might not be enough because this symbol  
?C: has been known to be an enum.  
?C:.  
?C:HAS\_MSG\_DONTROUTE:  
?C: This symbol, if defined, indicates that the MSG\_DONTROUTE is supported.  
?C: Checking just with #ifdef might not be enough because this symbol  
?C: has been known to be an enum.  
?C:.  
?C:HAS\_MSG\_OOB:  
?C: This symbol, if defined, indicates that the MSG\_OOB is supported.  
?C: Checking just with #ifdef might not be enough because this symbol  
?C: has been known to be an enum.  
?C:.  
?C:HAS\_MSG\_PEEK:  
?C: This symbol, if defined, indicates that the MSG\_PEEK is supported.  
?C: Checking just with #ifdef might not be enough because this symbol  
?C: has been known to be an enum.  
?C:.  
?C:HAS\_MSG\_PROXY:  
?C: This symbol, if defined, indicates that the MSG\_PROXY is supported.  
?C: Checking just with #ifdef might not be enough because this  
symbol  
?C: has been known to be an enum.  
?C:.  
?C:HAS\_SCM\_RIGHTS:  
?C: This symbol, if defined, indicates that the SCM\_RIGHTS is supported.  
?C: Checking just with #ifdef might not be enough because this symbol  
?C: has been known to be an enum.  
?C:.  
?C:HAS\_SOCKADDR\_SA\_LEN:

?C: This symbol, if defined, indicates that the struct sockaddr  
?C: structure has a member called sa\_len, indicating the length of  
?C: the structure.  
?C:.  
?C:HAS\_SOCKADDR\_IN6:  
?C: This symbol, if defined, indicates the availability of  
?C: struct sockaddr\_in6;  
?C:.  
?C:HAS\_SOCKADDR\_STORAGE:  
?C: This symbol, if defined, indicates the availability of  
?C: struct sockaddr\_storage;  
?C:.  
?C:HAS\_SIN6\_SCOPE\_ID:  
?C: This symbol, if defined, indicates that the struct sockaddr\_in6  
?C: structure has a member called sin6\_scope\_id.  
?C:.  
?C:HAS\_IP\_MREQ:  
?C: This symbol, if defined, indicates the availability of  
?C: struct ip\_mreq;  
?C:.  
?C:HAS\_IP\_MREQ\_SOURCE:  
?C: This symbol, if defined, indicates the availability of  
?C: struct ip\_mreq\_source;  
?C:.  
?C:HAS\_IPV6\_MREQ:  
?C: This  
symbol, if defined, indicates the availability of  
?C: struct ipv6\_mreq;  
?C:.  
?C:HAS\_IPV6\_MREQ\_SOURCE:  
?C: This symbol, if defined, indicates the availability of  
?C: struct ipv6\_mreq\_source;  
?C:.  
?H:#\$d\_socket HAS\_SOCKET /\*\*/  
?H:#\$d\_sockpair HAS\_SOCKETPAIR /\*\*/  
?H:#\$d\_sockaddr\_sa\_len HAS\_SOCKADDR\_SA\_LEN /\*\*/  
?H:#\$d\_oldsock USE\_OLD\_SOCKET /\*\*/  
?H:#\$d\_msg\_ctrunc HAS\_MSG\_CTRUNC /\*\*/  
?H:#\$d\_msg\_dontroute HAS\_MSG\_DONTROUTE /\*\*/  
?H:#\$d\_msg\_oob HAS\_MSG\_OOB /\*\*/  
?H:#\$d\_msg\_peek HAS\_MSG\_PEEK /\*\*/  
?H:#\$d\_msg\_proxy HAS\_MSG\_PROXY /\*\*/  
?H:#\$d\_scm\_rights HAS\_SCM\_RIGHTS /\*\*/  
?H:#\$d\_sockaddr\_in6 HAS\_SOCKADDR\_IN6 /\*\*/  
?H:#\$d\_sockaddr\_storage HAS\_SOCKADDR\_STORAGE /\*\*/  
?H:#\$d\_sin6\_scope\_id HAS\_SIN6\_SCOPE\_ID /\*\*/  
?H:#\$d\_ip\_mreq HAS\_IP\_MREQ /\*\*/  
?H:#\$d\_ip\_mreq\_source HAS\_IP\_MREQ\_SOURCE /\*\*/

```

?H:#$d_ipv6_mreq HAS_IPV6_MREQ /**/
?H:#$d_ipv6_mreq_source HAS_IPV6_MREQ_SOURCE /**/
?H:.
?T:val net ENUM enum
?LINT:set d_sockpair d_sockaddr_sa_len
?LINT:set d_msg_ctrunc d_msg_dontroute
d_msg_oob d_msg_peek d_msg_proxy
?LINT:set d_scm_rights d_sockaddr_in6 d_sin6_scope_id d_ip_mreq
?LINT:set d_ip_mreq_source d_ipv6_mreq d_ipv6_mreq_source d_sockaddr_storage
: see whether socket exists
socketlib=""
sockethdr=""
echo " "
$echo $n "Hmm... $c" >&4
if set socket val -f d_socket; eval $csym; $val; then
    echo "Looks like you have Berkeley networking support." >&4
    d_socket="$define"
?X: now check for advanced features
    if set setsockopt val -f; eval $csym; $val; then
d_oldsock="$undef"
        else
echo "...but it uses the old BSD 4.1c interface, rather than 4.2." >&4
d_oldsock="$define"
            fi
else
?X: HP-UX, for one, puts all the socket stuff in socklib.o. Note that if we
?X: come here on HP-UX, then we must have used nm to get symbols, or we really
?X: don't have sockets anyway...
    if $contains socklib libc.list >/dev/null 2>&1; then
echo "Looks like you have Berkeley networking support." >&4
d_socket="$define"
: we will have to assume that it supports
the 4.2 BSD interface
d_oldsock="$undef"
        else
echo "You don't have Berkeley networking in libc$_a..." >&4
?X: look for optional networking libraries
if test "X$d_socket" = "X$define"; then
    echo "...but you seem to believe that you have sockets." >&4
else
    for net in net socket
    do
if test -f $sysroot/usr/lib/lib$net$_a; then
?X: space between two '(' needed for ksh
        ( ($nm $nm_opt $sysroot/usr/lib/lib$net$_a | eval $nm_extract) || \
        $ar t $sysroot/usr/lib/lib$net$_a 2>/dev/null >> libc.list
        if $contains socket libc.list >/dev/null 2>&1; then
d_socket="$define"

```

```

socketlib="-l$net"
case "$net" in
net)
    echo "...but the Wollongong group seems to have hacked it in." >&4
    sockethdr="-I$sysroot/usr/netinclude"
    ;;
esac
echo "Found Berkeley sockets interface in lib$net." >&4
?X: now check for advanced features
if $contains setsockopt libc.list >/dev/null 2>&1; then
    d_oldsock="$undef"
else
    echo
    "...using the old BSD 4.1c interface, rather than 4.2." >&4
    d_oldsock="$define"
fi
break
fi
done
if test "X$d_socket" != "X$define"; then
    echo "or anywhere else I see." >&4
    d_socket="$undef"
    d_oldsock="$undef"
fi
fi
fi
fi

@if HAS_SOCKETPAIR || d_socketpair
: see if socketpair exists
set socketpair d_socketpair
eval $inlibc

@end

echo "Checking the availability sa_len in the sock struct ..." >&4
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
int main() {
struct sockaddr sa;
return (sa.sa_len);
}
EOF
val="$undef"
set try; if eval $compile; then
    val="$define"

```

```

fi
set d_sockaddr_sa_len; eval $setvar
$rm_try

echo "Checking the availability struct sockaddr_in6 ..." >&4
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
int main() {
struct sockaddr_in6 sin6;
return (sin6.sin6_family);
}
EOF
val="$undef"
set try; if eval $compile; then
    val="$define"
fi
set d_sockaddr_in6;
eval $setvar
$rm_try

echo "Checking the availability struct sockaddr_storage ..." >&4
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
int main() {
struct sockaddr_storage sator;
return (sator.ss_family);
}
EOF
val="$undef"
set try; if eval $compile; then
    val="$define"
fi
set d_sockaddr_storage; eval $setvar
$rm_try

echo "Checking the availability sin6_scope_id in struct sockaddr_in6 ..." >&4
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
int main() {
struct sockaddr_in6 sin6;
return (sin6.sin6_scope_id);
}

```



```

EOF
val="$undef"
set try; if eval $compile; then
    val="$define"
fi
set d_sin6_scope_id; eval $setvar
$rm_try

echo "Checking the availability struct ip_mreq ..." >&4
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
int main() {
struct ip_mreq mreq;
return (mreq.imr_multiaddr.s_addr);
}
EOF
val="$undef"
set try; if eval $compile; then

    val="$define"
fi
set d_ip_mreq; eval $setvar
$rm_try

echo "Checking the availability struct ip_mreq_source ..." >&4
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
int main() {
struct ip_mreq_source mreq;
return (mreq.imr_multiaddr.s_addr);
}
EOF
val="$undef"
set try; if eval $compile; then
    val="$define"
fi
set d_ip_mreq_source; eval $setvar
$rm_try

echo "Checking the availability struct ipv6_mreq ..." >&4
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>

```

```

int main() {
struct ipv6_mreq mreq;
return (mreq.ipv6mr_interface);
}
EOF
val="$undef"
set try; if eval $compile; then
    val="$define"
fi
set d_ipv6_mreq; eval $setvar
$rm_try

```

```

echo "Checking the availability struct ipv6_mreq_source ..." >&4
$cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
int main() {
struct ipv6_mreq_source mreq;
return (mreq.imr_multiaddr.s_addr);
}
EOF
val="$undef"
set try; if eval $compile;
then
    val="$define"
fi
set d_ipv6_mreq_source; eval $setvar
$rm_try

```

?X: these constants are known to be troublesomely defined as enums  
?X: so that ifdef will not work for detecting their presence.

```

echo "Checking the availability of certain socket constants..." >&4
for ENUM in MSG_CTRUNC MSG_DONTROUTE MSG_OOB MSG_PEEK MSG_PROXY SCM_RIGHTS; do
    enum=`$echo $ENUM|./tr '[A-Z]' '[a-z]'`
    $cat >try.c <<EOF
#include <sys/types.h>
#include <sys/socket.h>
int main() {
    int i = $ENUM;
}
EOF
    val="$undef"
    set try; if eval $compile; then
val="$define"
    fi
    set d_${enum}; eval $setvar
$rm_try

```

done

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_socket.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: usrinc.U,v 1.1 2000/06/27 00:20:28 jhi Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: usrinc.U,v \$

?RCS: Revision 1.1 2000/06/27 00:20:28 jhi

?RCS: Initial revision

?RCS:

?RCS: Revision 3.0.1.3 1997/02/28 16:27:12 ram

?RCS: patch61: don't ask for the include path unless they are on a MIPS

?RCS:

?RCS: Revision 3.0.1.2 1995/05/12 12:24:36 ram

?RCS: patch54: ensure that ./mips always exists (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 15:18:31 ram

?RCS: patch23: ensure usrinc value is preserved across sessions (WED)

?RCS:

?RCS: Revision

3.0 1993/08/18 12:09:58 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:usrinc incpath mips\_type: test cat echo n c Getfile Guess \

Oldconfig eunicefix contains rm sysroot cc

?MAKE: -pick add \$@ %<

?S:usrinc:

?S: This variable holds the path of the include files, which is

?S: usually /usr/include. It is mainly used by other Configure units.

?S:.

?S:incpath:

?S: This variable must precede the normal include path to get the

?S: right one, as in "\$incpath/usr/include" or "\$incpath/usr/lib".

?S: Value can be "" or "/bsd43" on mips.

?S:.

?S:mips\_type:

?S: This variable holds the environment type for the mips system.

```

?S: Possible values are "BSD 4.3" and "System V".
?S:.
?D:usrinc='/usr/include'
?LINT:extern cppflags
?LINT:create mips
?T:xxx_prompt
?F:./mips
: What should the include directory be ?
: Use sysroot if set, so findhdr looks in the right place.
echo " "
$echo $n "Hmm... $c"
dflt="$sysroot/usr/include"
incpath=""
?X: mips_type is used later, to add -DSYSTYPE_BSD43
to cppflags if needed.
mips_type=""
?X:
?X: Cannot put the following in Guess, or we get a circular dependency.
?X:
if $test -f /bin/mips && /bin/mips; then
echo "Looks like a MIPS system..."
$cat >usr.c <<'EOCP'
#ifdef SYSTYPE_BSD43
/bsd43
#endif
EOCP
if $cc $cppflags -E usr.c >usr.out && $contains /usr.out >/dev/null 2>&1; then
dflt='/bsd43/usr/include'
incpath='/bsd43'
mips_type='BSD 4.3'
else
mips_type='System V'
fi
$rm -f usr.c usr.out
echo "and you're compiling with the $mips_type compiler and libraries."
xxx_prompt=y
echo "exit 0" >mips
else
echo "Doesn't look like a MIPS system."
xxx_prompt=n
echo "exit 1" >mips
fi
chmod +x mips
$unicefix mips
case "$usrinc" in
") ;;
*) dflt="$usrinc";;
esac

```

```

case "$xxx_prompt" in
y) fn=d/
echo " "
rp='Where are the include files you want to use?'
./getfile
usrinc="$sans"
;;
*) usrinc="$dflt"
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/usrinc.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_strtoul.U,v 3.0.1.1 1997/02/28 15:46:43 ram Exp $
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_strtoul.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:46:43 ram
?RCS: patch61: created
?RCS:
?RCS:
?MAKE:d_strtoul: Inlibc cat longsize Compile run
?MAKE: -pick add $@ %<
?S:d_strtoul:
?S: This variable conditionally defines the HAS_STRTOUL symbol, which
?S: indicates to the C program that the strtoul() routine is available
?S: to provide conversion of strings to unsigned long.
?S:.
?C:HAS_STRTOUL (STRTOUL):
?C: This
symbol, if defined, indicates that the strtoul routine is
?C: available to provide conversion of strings to unsigned long.
?C:.
?H:#$d_strtoul HAS_STRTOUL /**/
?H:.
?F:!try
: see if strtoul exists

```

```

set strtoul d_strtoul
eval $inlibc

case "$d_strtoul" in
"$define")
$cat <<EOM
Checking whether your strtoul() works okay...
EOM
$cat >try.c <<'EOCP'
#include <stdlib.h>
#include <errno.h>
#include <stdio.h>
static int bad = 0;
void check(const char *s, unsigned long eul, int een) {
    unsigned long gul;
    errno = 0;
    gul = strtoul(s, 0, 10);
    if (!(gul == eul) && (errno == een))
        bad++;
}
int main() {
    check(" 1", 1L, 0);
    check(" 0", 0L, 0);
EOCP
case "$longsize" in
8)
    $cat >>try.c <<'EOCP'
check("18446744073709551615", 18446744073709551615UL, 0);
check("18446744073709551616", 18446744073709551615UL, ERANGE);
#if 0 /* strtoul() for /^-/ strings is undefined. */
check("-1", 18446744073709551615UL, 0);
check("-18446744073709551614", 2, 0);
check("-18446744073709551615", 1,
0);
check("-18446744073709551616", 18446744073709551615UL, ERANGE);
check("-18446744073709551617", 18446744073709551615UL, ERANGE);
#endif
EOCP
;;
4)
    $cat >>try.c <<'EOCP'
check("4294967295", 4294967295UL, 0);
check("4294967296", 4294967295UL, ERANGE);
#if 0 /* strtoul() for /^-/ strings is undefined. */
check("-1", 4294967295UL, 0);
check("-4294967294", 2, 0);
check("-4294967295", 1, 0);
check("-4294967296", 4294967295UL, ERANGE);

```

```

check("-4294967297", 4294967295UL, ERANGE);
#endif
EOCP
;;
*)
: Should we write these tests to be more portable by printf-ing
: ~0 and then manipulating that char string as input for strtol?
;;
esac
$cat >>try.c <<'EOCP'
if (!bad)
    printf("ok\n");
return 0;
}
EOCP
set try
if eval $compile; then
    case "$run ./try`" in
    ok) echo "Your strtoul() seems to be working okay." ;;
    *) cat <<EOM >&4
Your strtoul() doesn't seem to be working okay.
EOM
    d_strtoul="$undef"
    ;;
    esac
else
    echo "(I can't seem to compile the test
program--assuming it doesn't)"
    d_strtoul="$undef"
fi
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_strtoul.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: perlsv.U,v 1.1 2000/08/31 17:53:56 jhi Exp jhi \$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:ivtype uvtype nvtype ivsize uvsize nvsize \

i8type u8type i16type u16type i32type u32type i64type u64type \

i8size u8size i16size u16size i32size u32size i64size u64size \

```
d_nv_preserves_uv nv_preserves_uv_bits nv_overflows_integers_at \  
d_nv_zero_is_allbits_zero: \  
echo rm_try use64bitint d_quad quadtype uquadtype usequadmath \  
d_longdbl uselongdouble longdblsize doublesize i_quadmath \  
shortsize intsize longsize i_stdlib libs gccversion \  
cat Compile i_inttypes test signal_t run  
?MAKE: -pick add $@ %<  
?LINT:change libs  
?S:ivtype:  
?S: This variable contains the C type used for Perl's IV.  
?S:.  
?S:uvtype:  
?S: This variable  
contains the C type used for Perl's UV.  
?S:.  
?S:nvtype:  
?S: This variable contains the C type used for Perl's NV.  
?S:.  
?S:i8type:  
?S: This variable contains the C type used for Perl's I8.  
?S:.  
?S:u8type:  
?S: This variable contains the C type used for Perl's U8.  
?S:.  
?S:i16type:  
?S: This variable contains the C type used for Perl's I16.  
?S:.  
?S:u16type:  
?S: This variable contains the C type used for Perl's U16.  
?S:.  
?S:i32type:  
?S: This variable contains the C type used for Perl's I32.  
?S:.  
?S:u32type:  
?S: This variable contains the C type used for Perl's U32.  
?S:.  
?S:i64type:  
?S: This variable contains the C type used for Perl's I64.  
?S:.  
?S:u64type:  
?S: This variable contains the C type used for Perl's U64.  
?S:.  
?S:ivsize:  
?S: This variable is the size of an IV in bytes.  
?S:.  
?S:uvsize:  
?S: This variable is the size of a UV in bytes.  
?S:.
```



?S:i8size:

?S: This variable is the size of an I8 in bytes.

?S:.

?S:u8size:

?S: This variable is the size of an U8 in bytes.

?S:.

?S:i16size:

?S: This

variable is the size of an I16 in bytes.

?S:.

?S:u16size:

?S: This variable is the size of an U16 in bytes.

?S:.

?S:i32size:

?S: This variable is the size of an I32 in bytes.

?S:.

?S:u32size:

?S: This variable is the size of an U32 in bytes.

?S:.

?S:i64size:

?S: This variable is the size of an I64 in bytes.

?S:.

?S:u64size:

?S: This variable is the size of an U64 in bytes.

?S:.

?S:nvsize:

?S: This variable is the size of a Perl NV in bytes.

?S: Note that some floating point formats have unused bytes.

?S:.

?S:d\_nv\_preserves\_uv:

?S: This variable indicates whether a variable of type nvtype

?S: can preserve all the bits a variable of type uvtype.

?S:.

?S:nv\_preserves\_uv\_bits:

?S: This variable indicates how many of bits type uvtype

?S: a variable nvtype can preserve.

?S:.

?S:nv\_overflows\_integers\_at:

?S: This variable gives the largest integer value that NVs can hold

?S: as a constant floating point expression.

?S: If it could not be determined, it holds the value 0.

?S:.

?S:d\_nv\_zero\_is\_allbits\_zero:

?S: This

variable indicates whether a variable of type nvtype

?S: stores 0.0 in memory as all bits zero.

?S:.

?C:IVTYPE:

?C: This symbol defines the C type used for Perl's IV.

?C:.

?C:UVTYPE:

?C: This symbol defines the C type used for Perl's UV.

?C:.

?C:I8TYPE:

?C: This symbol defines the C type used for Perl's I8.

?C:.

?C:U8TYPE:

?C: This symbol defines the C type used for Perl's U8.

?C:.

?C:I16TYPE:

?C: This symbol defines the C type used for Perl's I16.

?C:.

?C:U16TYPE:

?C: This symbol defines the C type used for Perl's U16.

?C:.

?C:I32TYPE:

?C: This symbol defines the C type used for Perl's I32.

?C:.

?C:U32TYPE:

?C: This symbol defines the C type used for Perl's U32.

?C:.

?C:I64TYPE:

?C: This symbol defines the C type used for Perl's I64.

?C:.

?C:U64TYPE:

?C: This symbol defines the C type used for Perl's U64.

?C:.

?C:NVTYPE:

?C: This symbol defines the C type used for Perl's NV.

?C:.

?C:IVSIZE:

?C: This symbol contains the sizeof(IV).

?C:.

?C:UVSIZE:

?C: This symbol  
contains the sizeof(UV).

?C:.

?C:I8SIZE:

?C: This symbol contains the sizeof(I8).

?C:.

?C:U8SIZE:

?C: This symbol contains the sizeof(U8).

?C:.

?C:I16SIZE:

?C: This symbol contains the sizeof(I16).

?C:.

?C:U16SIZE:  
?C: This symbol contains the sizeof(U16).  
?C:.  
?C:I32SIZE:  
?C: This symbol contains the sizeof(I32).  
?C:.  
?C:U32SIZE:  
?C: This symbol contains the sizeof(U32).  
?C:.  
?C:I64SIZE:  
?C: This symbol contains the sizeof(I64).  
?C:.  
?C:U64SIZE:  
?C: This symbol contains the sizeof(U64).  
?C:.  
?C:NVSIZE:  
?C: This symbol contains the sizeof(NV).  
?C: Note that some floating point formats have unused bytes.  
?C: The most notable example is the x86\* 80-bit extended precision  
?C: which comes in byte sizes of 12 and 16 (for 32 and 64 bit  
?C: platforms, respectively), but which only uses 10 bytes.  
?C: Perl compiled with -Duselongsdouble on x86\* is like this.  
?C:.  
?C:NV\_PRESERVES\_UV:  
?C: This symbol, if defined, indicates that a variable of type NVTYPE  
?C: can preserve all the bits of a variable  
?C: of type UVTYPE.  
?C:.  
?C:NV\_PRESERVES\_UV\_BITS:  
?C: This symbol contains the number of bits a variable of type NVTYPE  
?C: can preserve of a variable of type UVTYPE.  
?C:.  
?C:NV\_OVERFLOWES\_INTEGERS\_AT:  
?C: This symbol gives the largest integer value that NVs can hold. This  
?C: value + 1.0 cannot be stored accurately. It is expressed as constant  
?C: floating point expression to reduce the chance of decimal/binary  
?C: conversion issues. If it can not be determined, the value 0 is given.  
?C:.  
?C:NV\_ZERO\_IS\_ALLBITS\_ZERO:  
?C: This symbol, if defined, indicates that a variable of type NVTYPE  
?C: stores 0.0 in memory as all bits zero.  
?C:.  
?H:#define IVTYPE \$ivtype /\*\*/  
?H:#define UVTYPE \$uvtype /\*\*/  
?H:#define I8TYPE \$i8type /\*\*/  
?H:#define U8TYPE \$u8type /\*\*/  
?H:#define I16TYPE \$i16type /\*\*/  
?H:#define U16TYPE \$u16type /\*\*/

```

?H:#define I32TYPE $i32type /**/
?H:#define U32TYPE $u32type /**/
?H:%<:#ifdef HAS_QUAD
?H:%<:#define I64TYPE $i64type /**/
?H:%<:#define U64TYPE $u64type /**/
?H:%<:#endif
?H:#define NVTYPE $nvtype /**/
?H:#define IVSIZE $ivsize /**/
?H:#define UVSIZE $uvsize /**/
?H:#define I8SIZE $i8size /**/
?H:#define U8SIZE $u8size /**/
?H:#define I16SIZE $i16size /**/
?H:#define U16SIZE $u16size /**/
?H:#define I32SIZE $i32size /**/
?H:#define U32SIZE $u32size /**/
?H:%<:#ifdef
HAS_QUAD
?H:%<:#define I64SIZE $i64size /**/
?H:%<:#define U64SIZE $u64size /**/
?H:%<:#endif
?H:#define NVSIZE $nvsize /**/
?H:$d_nv_preserves_uv NV_PRESERVES_UV
?H:#define NV_PRESERVES_UV_BITS $nv_preserves_uv_bits
?H:#define NV_OVERFLOWES_INTEGERS_AT ($nv_overflows_integers_at)
?H:$d_nv_zero_is_allbits_zero NV_ZERO_IS_ALLBITS_ZERO
?H:%<:#if UVSIZE == 8
?H:%<:# ifdef BYTEORDER
?H:%<:# if BYTEORDER == 0x1234
?H:%<:# undef BYTEORDER
?H:%<:# define BYTEORDER 0x12345678
?H:%<:# else
?H:%<:# if BYTEORDER == 0x4321
?H:%<:# undef BYTEORDER
?H:%<:# define BYTEORDER 0x87654321
?H:%<:#
endif
?H:%<:# endif
?H:%<:# endif
?H:%<:#endif
?H:.
?T:xxx
?T:yyy
?T:d
?F:!try
: Check basic sizes
echo " "
$echo "Choosing the C types to be used for Perl's internal types..." >&4

```

```

case "$Suse64bitint:$d_quad:$quadtype" in
define:define:?)
ivtype="$quadtype"
uvtype="$uquadtype"
ivsize=8
uvsize=8
;;
*) ivtype="long"
uvtype="unsigned long"
ivsize=$longsize
uvsize=$longsize
;;
esac

```

```

case "$Suselongdouble:$d_longdbl" in
define:define)
nvtype="long double"
nvsize=$longdblsize
;;
*) nvtype=double
nvsize=$doublesize
;;
esac

```

```

case "$Susequadmath:$i_quadmath" in
define:define)
nvtype="__float128"
nvsize=16
: libquadmath is not in the usual places, and the place
: changes if the compiler is upgraded. So ask the compiler if it
: can find it.
: We do not need to save this, if it fails we abort.
libs="$libs -lquadmath"
set try
$cat >try.c <<EOM
#include <quadmath.h>
#include <stdio.h>
int main(int argc, char *argv[]) {
__float128 x
= 1.0;
if (fabsq(logq(x)) > 1e-6) {
fputs("quadmath is broken\n", stderr);
return 1;
}
puts("define");
return 0;
}
EOM

```

```
yyy="
if eval $compile_ok; then
  yyy=`$run ./try`
  case "$yyy" in
  define) ;;
  *) cat <<EOM >&4
```

\*\*\* You requested the use of the quadmath library, but  
\*\*\* it appears to be nonfunctional.  
\*\*\* Cannot continue, aborting.

```
EOM
  exit 1
  ;;
  esac
else
  $cat <<EOM >&4
```

\*\*\* You requested the use of the quadmath library, but you  
\*\*\* do not seem to have the quadmath library installed.  
\*\*\* Cannot continue, aborting.

```
EOM
  exit 1
fi
;;
define:*) $cat <<EOM >&4
```

\*\*\* You requested the use of the quadmath library, but you  
\*\*\* do not seem to have the required header, <quadmath.h>.

```
EOM
case "$gccversion" in
[23].*|4.[0-5]*)
  $cat <<EOM >&4
```

\*\*\* Your gcc looks a bit old:  
\*\*\* \$gccversion

```
EOM
  ;;
  ")
  $cat <<EOM >&4
```

\*\*\* You are not running a gcc.

```
EOM
  ;;
  esac
  $cat <<EOM >&4
```

\*\*\* For the quadmath library  
you need at least gcc 4.6.  
\*\*\* Cannot continue, aborting.

```
EOM
```

```
exit 1
;;
esac

$echo "(IV will be "$ivtype", $ivsize bytes)"
$echo "(UV will be "$uvtype", $uvsize bytes)"
$echo "(NV will be "$nvtype", $nvsize bytes)"
```

```
$cat >try.c <<EOCP
#i_inttypes I_INTTYPES
#ifdef I_INTTYPES
#include <inttypes.h>
#endif
#include <stdio.h>
int main() {
#ifdef INT8
    int8_t i = INT8_MAX;
    uint8_t u = UINT8_MAX;
    printf("int8_t\n");
#endif
#ifdef INT16
    int16_t i = INT16_MAX;
    uint16_t u = UINT16_MAX;
    printf("int16_t\n");
#endif
#ifdef INT32
    int32_t i = INT32_MAX;
    uint32_t u = UINT32_MAX;
    printf("int32_t\n");
#endif
}
EOCP
```

```
i8type="signed char"
u8type="unsigned char"
i8size=1
u8size=1
```

```
case "$i16type" in
") case "$shortsize" in
2) i16type=short
    u16type="unsigned short"
    i16size=$shortsize
    u16size=$shortsize
;;
esac
;;
esac
```

```

case "$i16type" in
") set try -DINT16
if eval $compile; then
case "`$run ./try`" in
int16_t)
i16type=int16_t
u16type=uint16_t
i16size=2
u16size=2
;;
esac
fi
;;
esac
case
"$i16type" in
") if $test $shortsize -ge 2; then
i16type=short
u16type="unsigned short"
i16size=$shortsize
u16size=$shortsize
fi
;;
esac

```

```

case "$i32type" in
") case "$longsize" in
4) i32type=long
u32type="unsigned long"
i32size=$longsize
u32size=$longsize
;;
*) case "$intsize" in
4) i32type=int
u32type="unsigned int"
i32size=$intsize
u32size=$intsize
;;
esac
;;
esac
;;
esac

```

```

case "$i32type" in
") set try -DINT32
if eval $compile; then
case "`$run ./try`" in
int32_t)

```



```

i32type=int32_t
u32type=uint32_t
i32size=4
u32size=4
;;
esac
fi
;;
esac
case "$i32type" in
") if $test $intsize -ge 4; then
i32type=int
u32type="unsigned int"
i32size=$intsize
u32size=$intsize
fi
;;
esac

case "$i64type" in
") case "$d_quad:$quadtype" in
define:?)
i64type="$quadtype"
u64type="$uquadtype"
i64size=8
u64size=8
;;
esac
;;
esac

```

```

$echo "Checking how many bits of your UVs
your NVs can preserve..." >&4
$cat <<EOP >try.c
#include <stdio.h>
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#ifdef I_INTTYPES
#include <inttypes.h>
#endif
#include <sys/types.h>
#include <signal.h>
#ifdef SIGFPE
/* volatile so that the compiler has to store it out to memory */
volatile int bleached = 0;

```

```

$signal_t blech(int s) { bleched = 1; }
#endif
int main() {
    $svtype u = 0;
    $nvtype d;
    int n = 8 * $svsize;
    int i;
#ifdef SIGFPE
    signal(SIGFPE, blech);
#endif

    for (i = 0; i < n; i++) {
        u = u << 1 | ($svtype)1;
        d = ($nvtype)u;
        if (($svtype)d != u)
            break;
        if (d <= 0)
            break;
        d = ($nvtype)(u - 1);
        if (($svtype)d != (u - 1))
            break;
#ifdef SIGFPE
        if (bleched)
            break;
#endif
    }
    printf("%d\n", ((i == n) ? -n : i));
    exit(0);
}
EOP
set try

d_nv_preserves_uv="$undef"
if eval $compile; then
    nv_preserves_uv_bits="$run ./try`"
fi
case "$nv_preserves_uv_bits"
in
\[1-9]*)
    nv_preserves_uv_bits=`expr 0 - $nv_preserves_uv_bits`
    $echo "Your NVs can preserve all $nv_preserves_uv_bits bits of your UVs." >&4
    d_nv_preserves_uv="$define"
    ;;
[1-9]*) $echo "Your NVs can preserve only $nv_preserves_uv_bits bits of your UVs." >&4
    d_nv_preserves_uv="$undef" ;;
*) $echo "Can't figure out how many bits your NVs preserve." >&4
    nv_preserves_uv_bits="0" ;;
esac

```

\$rm\_try

\$echo "Checking to find the largest integer value your NVs can hold..." >&4

\$cat <<EOP>try.c

```
#include <stdio.h>
```

```
typedef $nvtype NV;
```

```
int
```

```
main() {
```

```
    NV value = 2;
```

```
    int count = 1;
```

```
    while(count < 256) {
```

```
        /* volatile so that the compiler has to store it out to memory */
```

```
        volatile NV up = value + 1.0;
```

```
        volatile NV negated = -value;
```

```
        volatile NV down = negated - 1.0;
```

```
        volatile NV got_up = up - value;
```

```
        int up_good = got_up == 1.0;
```

```
        int got_down = down - negated;
```

```
        int down_good = got_down == -1.0;
```

```
        if (down_good != up_good) {
```

```
            fprintf(stderr,
```

```
                "Inconsistency - up %d %f; down %d %f; for 2**%d (%.20f)\n",
```

```
                up_good, (double) got_up, down_good, (double) got_down,
```

```
                count, (double) value);
```

```
            return 1;
```

```
        }
```

```
        if (!up_good) {
```

```
            while (1) {
```

```
                if (count > 8) {
```

```
                    count -= 8;
```

```
                    fputs("256.0", stdout);
```

```
                } else {
```

```
                    count--;
```

```
                    fputs("2.0", stdout);
```

```
                }
```

```
                if (!count) {
```

```
                    puts("");
```

```
                    return 0;
```

```
                }
```

```
                fputs("2.0", stdout);
```

```
            }
```

```
        }
```

```
        value *= 2;
```

```

    ++count;
}
fprintf(stderr, "Cannot overflow integer range, even at 2**%d (%.20f)\n",
    count, (double) value);
return 1;
}
EOP
set try

```

```

nv_overflows_integers_at='0'
if eval $compile; then
    xxx="$run ./try`"
    case "$?" in
    0)
        case "$xxx" in
        2*) cat >&4 <<EOM
The largest integer your NVs can preserve is equal to $xxx
EOM

```

```

        nv_overflows_integers_at="$xxx"
        ;;
        *) cat >&4 <<EOM
Cannot determine the largest integer value your NVs can hold, unexpected output
'$xxx'
EOM

```

```

        ;;
        esac
        ;;
        *) cat >&4 <<EOM
Cannot determine the largest
integer value your NVs can hold
EOM

```

```

        ;;
        esac
fi
$rm_try

```

```

$echo "Checking whether NV 0.0 is all bits zero in memory..." >&4
$cat <<EOP >try.c
#include <stdio.h>
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <string.h>
#include <sys/types.h>
#include <signal.h>
#ifdef SIGFPE
/* volatile so that the compiler has to store it out to memory */

```

```

volatile int bleched = 0;
$signal_t blech(int s) { bleched = 1; }
#endif

int checkit($nvtpe d, const char *where) {
    void *v = &d;
    unsigned char *p = (unsigned char *)v;
    unsigned char *end = p + sizeof(d);
    int fail = 0;

    while (p < end)
fail += *p++;

    if (!fail)
return 0;

    p = (unsigned char *)v;
    printf("No - %s: 0x", where);
    while (p < end)
printf ("%02X", *p++);
    printf("\n");
    return 1;
}

int main(int argc, char **argv) {
    $nvtpe d = 0.0;
    int fail = 0;
    fail += checkit(d, "0.0");

    /* The compiler shouldn't be assuming that bleched is 0 */
    d = bleched;

    fail += checkit(d, "bleched");

#ifdef SIGFPE
    signal(SIGFPE, blech);
#endif

    /* Paranoia - the compiler should have no way of knowing that ANSI says
       that argv[argc] will always be NULL. Actually, if it did assume this it
       would be buggy, as this is C and main() can be called from elsewhere in
       the program. */
    d = argv[argc] ? 1 : 0;

    if (d) {
printf("Odd argv[argc]=%p, d=%g\n", argv[argc], d);
    }
}

```

```

fail += checkit(d, "ternary");

memset(&d, sizeof(d), argv[argc] ? 1 : 0);

if (d != 0.0) {
printf("No - memset doesn't give 0.0\n");
/* This might just blow up: */
printf("(gives %g)\n", d);
return 1;
}

#ifdef SIGFPE
if (bletched) {
printf("No - something bleched\n");
return 1;
}
#endif
if (fail) {
printf("No - %d fail(s)\n", fail);
return 1;
}
printf("Yes\n");
return 0;
}
EOP
set try

d_nv_zero_is_allbits_zero="$undef"
if eval $compile; then
xxx="$run ./try`"
case "$?"
in
0)
case "$xxx" in
Yes) cat >&4 <<EOM
0.0 is represented as all bits zero in memory
EOM
d_nv_zero_is_allbits_zero="$define"
;;
*) cat >&4 <<EOM
0.0 is not represented as all bits zero in memory
EOM
d_nv_zero_is_allbits_zero="$undef"
;;
esac
;;
*) cat >&4 <<EOM
0.0 is not represented as all bits zero in memory

```

```
EOM
    d_nv_zero_is_allbits_zero="$undef"
    ;;
    esac
fi
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/perlxx.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_dld.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: i_dld.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:20:07 ram
?RCS: patch36: created by ADO
?RCS:
?MAKE:i_dld: Inhdr
?MAKE: -pick add $@ %<
?S:i_dld:
?S: This variable conditionally defines the I_DLD symbol, which
?S: indicates to the C program that <dld.h> (GNU dynamic loading)
?S: exists and should be included.
?S:.
?C:I_DLD:
?C: This symbol, if defined, indicates that <dld.h>
exists and should
?C: be included before using GNU dynamic loading features.
?C:.
?H:#$i_dld I_DLD /**/
?H:.
?LINT:set i_dld
: see if dld is available
set dld.h i_dld
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_dld.U
```

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?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_lgamma\_r: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lgamma\_r:

?S: This variable conditionally defines the HAS\_LGAMMA\_R symbol, which

?S: indicates to the C program that the lgamma\_r() routine is available

?S: for the log gamma function, without using the global signgam variable.

?S:.

?C:HAS\_LGAMMA\_R:

?C: This symbol, if defined, indicates that the lgamma\_r routine is

?C: available to do the log gamma function without using the global

?C: signgam variable.

?C:.

?H:#\$d\_lgamma\_r HAS\_LGAMMA\_R /\*\*/

?H:.

?LINT:set d\_lgamma\_r

: see if lgamma\_r exists

set lgamma\_r d\_lgamma\_r

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_lgamma_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_malloc.U,v 3.5 2008/03/29 14:06:51 merijn Exp \$

?RCS:

?RCS: Copyright (c) 2008, H.Merijn Brand

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?RCS: of the source tree for dist 3.5.

?RCS:

?MAKE:i\_mallocmalloc: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_mallocmalloc:

?S: This variable conditionally defines the I\_MALLOCMALLOCC symbol,

?S: and indicates whether a C program should include <malloc/malloc.h>.

?S:.

?C:I\_MALLOCMALLOCC:



?C: This symbol, if defined, indicates to the C program that it should

?C: include <malloc/malloc.h>.

?C:.

?H:#\$i\_mallocmalloc I\_MALLOCMALLOC /\*\*/

?H:.

?LINT:set i\_mallocmalloc

: see if malloc/malloc.h has to be included

set malloc/malloc.h i\_mallocmalloc

eval

\$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_mallocmalloc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_sigaction.U,v 3.0.1.1 1997/02/28 15:44:29 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_sigaction.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:44:29 ram

?RCS: patch61: created

?RCS:

?RCS:

?MAKE:d\_sigaction: Csym Compile Setvar cat rm\_try i\_stdlib

?MAKE: -pick add \$@ %<

?S:d\_sigaction:

?S: This variable conditionally defines the HAS\_SIGACTION symbol, which

?S: indicates that the Vr4 sigaction() routine is available.

?S:.

?C:HAS\_SIGACTION:

?C: This symbol, if defined, indicates that Vr4's sigaction() routine

?C: is available.

?C:.

?H:#\$d\_sigaction

HAS\_SIGACTION /\*\*/

?H:.

?T:val

?LINT:set d\_sigaction

: see if we have sigaction

echo " "

```
if set sigaction val -f d_sigaction; eval $csym; $val; then
echo 'sigaction() found.' >&4
?X:
?X: Solaris 2.5_x86 with SunWorks Pro C 3.0.1 doesn't have a complete
?X: sigaction structure if compiled with cc -Xc. This compile test
?X: will fail then. <doughera@lafcol.lafayette.edu>
```

```
?X:
$cat > try.c <<EOP
#include <stdio.h>
#include <sys/types.h>
#include <signal.h>
#i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main()
{
    struct sigaction act, oact;
    act.sa_flags = 0;
    oact.sa_handler = 0;
    /* so that act and oact are used */
    exit(act.sa_flags == 0 && oact.sa_handler == 0);
}
```

```
EOP
set try
if eval $compile_ok; then
    val="$define"
else
    echo "But you don't seem to have a usable struct sigaction." >&4
    val="$undef"
fi
else
    echo 'sigaction NOT found.' >&4
    val="$undef"
fi
set d_sigaction; eval $setvar
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_sigaction.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: contains.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

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?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: contains.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:35 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:contains: Nothing

?MAKE: -pick add \$@ %<

?S:contains:

?S: This variable holds the command to do a grep with a proper return

?S: status. On most sane systems it is simply "grep". On insane systems

?S: it is a grep followed by a cat followed by a test. This variable

?S: is primarily for the use of other Configure units.

?S:.

: Some

```
greps do not return status, grrr.
```

```
echo "grimblepritz" >grimble
```

```
if grep blurfldyick grimble >/dev/null 2>&1 ; then
```

```
contains=contains
```

```
elif grep grimblepritz grimble >/dev/null 2>&1 ; then
```

```
contains=grep
```

```
else
```

```
contains=contains
```

```
fi
```

```
rm -f grimble
```

: the following should work in any shell

```
case "$contains" in
```

```
contains*)
```

```
echo " " >&4
```

```
echo "AGH! Grep doesn't return a status. Attempting remedial action." >&4
```

```
cat >contains <<'EOSS'
```

```
grep "$1" "$2" >.greptmp && cat .greptmp && test -s .greptmp
```

```
EOSS
```

```
contains=./contains
```

```
chmod +x $contains
```

```
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/contains.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_socketmark: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_socketmark:  
?S: This variable conditionally defines the HAS\_SOCKETMARK symbol, which  
?S: indicates to the C program that the socketmark() routine is available.  
?S:.  
?C:HAS\_SOCKETMARK:  
?C: This symbol, if defined, indicates that the socketmark routine is  
?C: available to test whether a socket is at the out-of-band mark.  
?C:.  
?H:#\$d\_socketmark HAS\_SOCKETMARK /\*\*/  
?H:.  
?LINT:set d\_socketmark  
: see if socketmark exists  
set socketmark d\_socketmark  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_socketmark.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getsrvby.U,v \$  
?RCS:  
?RCS: Copyright (c) 1998 Andy Dougherty  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_getsrvbyname d\_getsrvbyport: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_getsrvbyname:  
?S: This variable conditionally defines the HAS\_GETSERVBYNAME  
?S: symbol, which indicates to the C program that the  
?S: getsrvbyname() routine is available to look up services  
?S: by their name.  
?S:.  
?S:d\_getsrvbyport:  
?S: This variable conditionally defines the HAS\_GETSERVBYPOR  
?S: symbol, which indicates to the C program that the  
?S: getsrvbyport() routine is available to look up services  
?S: by their port.  
?S:.  
?C:HAS\_GETSERVBYNAME:

?C: This symbol, if defined, indicates that the getservbyname()

?C: routine is available to look up services by their name.

?C:.

?C:HAS\_GETSERVBYPOR:

?C: This symbol, if defined,

indicates that the getservbyport()

?C: routine is available to look up services by their port.

?C:.

?H:#\$d\_getsbyname HAS\_GETSERVBYNAM /\*\*/

?H:#\$d\_getsbyport HAS\_GETSERVBYPOR /\*\*/

?H:.

?LINT:set d\_getsbyname d\_getsbyport

: Optional checks for getsbyname and getsbyport

@if d\_getsbyname || HAS\_GETSERVBYNAM

: see if getservbyname exists

set getservbyname d\_getsbyname

eval \$inlibc

@end

@if d\_getsbyport || HAS\_GETSERVBYPOR

: see if getservbyport exists

set getservbyport d\_getsbyport

eval \$inlibc

@end

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_getsrvby.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setpgrp2.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_setpgrp2.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:10 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setpgrp2: Inlibc

?MAKE:-pick add \$@ %<

?S:d\_setpgrp2:

?S: This variable conditionally defines the HAS\_SETPGRP2 symbol, which  
?S: indicates to the C program that the setpgrp2() (as in DG/UX) routine  
?S: is available to set the current process group.

?S:.

?C:HAS\_SETPGRP2 (SETPGRP2):

?C: This symbol, if defined, indicates that the  
setpgrp2() (as in DG/UX)

?C: routine is available to set the current process group.

?C:.

?H:#\$d\_setpgrp2 HAS\_SETPGRP2 /\*\*/

?H:.

?LINT:set d\_setpgrp2

: see if setpgrp2 exists

set setpgrp2 d\_setpgrp2

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_setpgrp2.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_mbtowc.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_mbtowc.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:30 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_mbtowc: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mbtowc:

?S: This variable conditionally defines the HAS\_MBTOWC symbol, which

?S: indicates to the C program that the mbtowc() routine is available

?S: to convert multibyte to a wide character.

?S:.

?C:HAS\_MBTOWC (MBTOWC):

?C: This symbol, if defined, indicates that the mbtowc routine is available

?C: to

convert a multibyte to a wide character.

?C:.

?H:#\$d\_mbtowc HAS\_MBTOWC /\*\*/

```
?H:
?LINT:set d_mbtowc
: see if mbtowc exists
set mbtowc d_mbtowc
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_mbtowc.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_voidsig.U,v $
```

```
?RCS: Revision 3.0.1.3 1995/05/12 12:12:46 ram
```

```
?RCS: patch54: made cppflags dependency optional
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1994/08/29 16:20:35 ram
```

```
?RCS: patch32: now sets signal_t only once d_voidsig is known (WED)
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1994/06/20 06:59:54 ram
```

```
?RCS: patch30: now properly sets signal_t when re-using previous value
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:07:56 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_voidsig signal_t: rm contains
```

```
cppstdin cppminus +cppflags test Myread \
```

```
Oldconfig Setvar Findhdr
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_voidsig:
```

```
?S: This variable conditionally defines VOIDSIG if this system
```

```
?S: declares "void (*signal(...))()" in signal.h. The old way was to
```

```
?S: declare it as "int (*signal(...))()".
```

```
?S:.
```

```
?S:signal_t:
```

```
?S: This variable holds the type of the signal handler (void or int).
```

```
?S:.
```

```
?C:VOIDSIG:
```

```
?C: This symbol is defined if this system declares "void (*signal(...))()" in
```

```

?C: signal.h. The old way was to declare it as "int (*signal(...))()". It
?C: is up to the package author to declare things correctly based on the
?C: symbol.
?C:.
?C:Signal_t (SIGNAL_T):
?C: This symbol's value is either "void" or "int", corresponding to the
?C: appropriate return type of a signal handler. Thus, you can declare
?C: a signal handler using "Signal_t (*handler())", and define the
?C: handler using "Signal_t handler(sig)".
?C:.
?H:#$d_voidsig VOIDSIG /**/
?H:#define Signal_t $signal_t /* Signal handler's return
type */
?H:.
?T:xxx
?LINT:set d_voidsig
: see if signal is declared as pointer to function returning int or void
echo " "
xxx=`./findhdr signal.h`
$test "$xxx" && $cppstdin $cppminus $cppflags < $xxx >$.tmp 2>/dev/null
if $contains 'int.*\[ ]*signal' $$tmp >/dev/null 2>&1 ; then
echo "You have int (*signal())() instead of void." >&4
val="$undef"
elif $contains 'void.*\[ ]*signal' $$tmp >/dev/null 2>&1 ; then
echo "You have void (*signal())() instead of int." >&4
val="$define"
elif $contains 'extern[ ]*[\(]*signal' $$tmp >/dev/null 2>&1 ; then
echo "You have int (*signal())() instead of void." >&4
val="$undef"
else
case "$d_voidsig" in
")
echo "I can't determine whether signal handler returns void or int..." >&4
dflt=void
rp="What type does your signal handler return?"
./myread
case "$ans" in
v*) val="$define";;
*) val="$undef";;
esac;;
"$define")
echo "As you already told me, signal handler returns void." >&4;;
*)
echo "As you already told
me, signal handler returns int." >&4;;
esac
fi
set d_voidsig

```



```
eval $setvar
case "$d_voidsig" in
"$define") signal_t="void";;
*) signal_t="int";;
esac
$rm -f $$tmp
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_voidsig.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_scandir.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_scandir.U,v \$

?RCS: Revision 3.0.1.1 1994/01/24 14:06:35 ram

?RCS: patch16: created

?RCS:

?MAKE:d\_scandir: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_scandir:

?S: This variable conditionally defines HAS\_SCANDIR if scandir() is

?S: available to scan a directory.

?S:.

?C:HAS\_SCANDIR:

?C: This symbol, if defined, indicates that the scandir routine is

?C: available to scan a directory.

?C:.

?H:#\$d\_scandir HAS\_SCANDIR /\*\*/

?H:.

?LINT:set d\_scandir

: see if

scandir exists

set scandir d\_scandir

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_scandir.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_locale.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_locale.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:48:23 ram
?RCS: patch61: created
?RCS:
?MAKE:i_locale: Inhdr
?MAKE: -pick add $@ %<
?S:i_locale:
?S: This variable conditionally defines the I_LOCALE symbol,
?S: and indicates whether a C program should include <locale.h>.
?S:
?C:I_LOCALE:
?C: This symbol, if defined, indicates to the C program that it should
?C: include <locale.h>.
?C:
?H:#$i_locale I_LOCALE /**/
?H:
?LINT:set
i_locale
: see if locale.h is available
set locale.h i_locale
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_locale.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1999-2016 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_PRIfldbl sPRIfldbl d_PRIgldbl d_PRIFUldbl sPRIGUldbl d_PRIEUldbl \
```

```

sPRIGldbl d_PRIeldbl sPRIeldbl sPRIFUldbl d_PRIGUldbl sPRIEUldbl \
d_SCNfldbl d_double_style_vax d_double_style_ieee \
d_double_style_ibm d_double_style_cray d_double_has_subnormals \
d_double_has_inf d_double_has_nan d_double_has_negative_zero \
sSCNfldbl doublekind: \
d_longdbl longdblsize doublesize uselongdouble test echo cat rm_try \
Setvar Compile run i_stdlib osname gccversion cflags
?MAKE: -pick add $@ %<
?S:doublekind:
?S: This variable, if defined, encodes the type of a double:
?S: 1 = IEEE 754 32-bit little endian,
?S: 2 = IEEE 754 32-bit big endian,
?S: 3 = IEEE 754 64-bit little endian,
?S: 4 = IEEE
754 64-bit big endian,
?S: 5 = IEEE 754 128-bit little endian,
?S: 6 = IEEE 754 128-bit big endian,
?S: 7 = IEEE 754 64-bit mixed endian le-be,
?S: 8 = IEEE 754 64-bit mixed endian be-le,
?S: 9 = VAX 32bit little endian F float format
?S: 10 = VAX 64bit little endian D float format
?S: 11 = VAX 64bit little endian G float format
?S: 12 = IBM 32bit format
?S: 13 = IBM 64bit format
?S: 14 = Cray 64bit format
?S: -1 = unknown format.
?S:.
?S:d_PRIfldbl:
?S: This variable conditionally defines the PERL_PRIfldbl symbol, which
?S: indicates that stdio has a symbol to print long doubles.
?S:.
?S:d_PRIGldbl:
?S: This variable conditionally defines the PERL_PRIfldbl symbol, which
?S: indicates that stdio has a symbol to print long doubles.
?S:.
?S:d_PRIeldbl:
?S: This variable conditionally defines the PERL_PRIfldbl symbol, which
?S: indicates that stdio has a symbol to print long doubles.
?S:.
?S:d_PRIFUldbl:
?S: This variable conditionally defines the PERL_PRIfldbl symbol, which
?S: indicates
that stdio has a symbol to print long doubles.
?S: The 'U' in the name is to separate this from d_PRIfldbl so that even
?S: case-blind systems can see the difference.
?S:.
?S:d_PRIGUldbl:
?S: This variable conditionally defines the PERL_PRIfldbl symbol, which

```

?S: indicates that stdio has a symbol to print long doubles.  
?S: The 'U' in the name is to separate this from d\_PRIgldbl so that even  
?S: case-blind systems can see the difference.  
?S:.  
?S:d\_PRIEUdbl:  
?S: This variable conditionally defines the PERL\_PRIfldbl symbol, which  
?S: indicates that stdio has a symbol to print long doubles.  
?S: The 'U' in the name is to separate this from d\_PRIeldbl so that even  
?S: case-blind systems can see the difference.  
?S:.  
?S:d\_SCNfldbl:  
?S: This variable conditionally defines the PERL\_PRIfldbl symbol, which  
?S: indicates that stdio has a symbol to scan long doubles.  
?S:.  
?S:sPRIfldbl:  
?S: This variable, if defined, contains the string used by stdio to  
?S: format long doubles (format 'f') for  
output.  
?S:.  
?S:sPRIgldbl:  
?S: This variable, if defined, contains the string used by stdio to  
?S: format long doubles (format 'g') for output.  
?S:.  
?S:sPRIeldbl:  
?S: This variable, if defined, contains the string used by stdio to  
?S: format long doubles (format 'e') for output.  
?S:.  
?S:sPRIFUdbl:  
?S: This variable, if defined, contains the string used by stdio to  
?S: format long doubles (format 'F') for output.  
?S: The 'U' in the name is to separate this from sPRIfldbl so that even  
?S: case-blind systems can see the difference.  
?S:.  
?S:sPRIGUdbl:  
?S: This variable, if defined, contains the string used by stdio to  
?S: format long doubles (format 'G') for output.  
?S: The 'U' in the name is to separate this from sPRIgldbl so that even  
?S: case-blind systems can see the difference.  
?S:.  
?S:sPRIEUdbl:  
?S: This variable, if defined, contains the string used by stdio to  
?S: format long doubles (format 'E') for output.  
?S: The 'U' in the name is to separate this from sPRIeldbl so that even  
?S: case-blind  
systems can see the difference.  
?S:.  
?S:sSCNfldbl:  
?S: This variable, if defined, contains the string used by stdio to

?S: format long doubles (format 'f') for input.  
?S:.  
?S:d\_double\_has\_inf:  
?S: This variable conditionally defines the symbol DOUBLE\_HAS\_INF  
?S: which indicates that the double type has an infinity.  
?S:.  
?S:d\_double\_has\_nan:  
?S: This variable conditionally defines the symbol DOUBLE\_HAS\_NAN  
?S: which indicates that the double type has a not-a-number.  
?S:.  
?S:d\_double\_has\_negative\_zero:  
?S: This variable conditionally defines the symbol DOUBLE\_HAS\_NEGATIVE\_ZERO  
?S: which indicates that the double type has a negative zero.  
?S:.  
?S:d\_double\_has\_subnormals:  
?S: This variable conditionally defines the symbol DOUBLE\_HAS\_SUBNORMALS  
?S: which indicates that the double type has subnormals (denormals).  
?S:.  
?S:d\_double\_style\_cray:  
?S: This variable conditionally defines the symbol DOUBLE\_STYLE\_CRAY  
?S: which indicates that the double is the 64-bit CRAY mainframe  
format.  
?S:.  
?S:d\_double\_style\_ibm:  
?S: This variable conditionally defines the symbol DOUBLE\_STYLE\_IBM,  
?S: which indicates that the double is the 64-bit IBM mainframe format.  
?S:.  
?S:d\_double\_style\_ieee:  
?S: This variable conditionally defines the symbol DOUBLE\_STYLE\_IEEE,  
?S: which indicates that the double is the 64-bit IEEE 754.  
?S:.  
?S:d\_double\_style\_vax:  
?S: This variable conditionally defines the symbol DOUBLE\_STYLE\_VAX,  
?S: which indicates that the double is the 64-bit VAX format D or G.  
?S:.  
?C:PERL\_PRIldbl:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format long doubles (format 'f') for output.  
?C:.  
?C:PERL\_PRIgldbl:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format long doubles (format 'g') for output.  
?C:.  
?C:PERL\_PRIeldbl:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format long doubles (format 'e') for output.  
?C:.  
?C:PERL\_PRIFldbl:

?C: This symbol, if defined, contains the string used by stdio to  
to  
?C: format long doubles (format 'f') for output.  
?C:.  
?C:PERL\_PRIGldbl:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format long doubles (format 'g') for output.  
?C:.  
?C:PERL\_PRIEdbl:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format long doubles (format 'e') for output.  
?C:.  
?C:PERL\_SCNfdbl:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format long doubles (format 'f') for input.  
?C:.  
?C:DOUBLEKIND:  
?C: DOUBLEKIND will be one of  
?C: DOUBLE\_IS\_IEEE\_754\_32\_BIT\_LITTLE\_ENDIAN  
?C: DOUBLE\_IS\_IEEE\_754\_32\_BIT\_BIG\_ENDIAN  
?C: DOUBLE\_IS\_IEEE\_754\_64\_BIT\_LITTLE\_ENDIAN  
?C: DOUBLE\_IS\_IEEE\_754\_64\_BIT\_BIG\_ENDIAN  
?C: DOUBLE\_IS\_IEEE\_754\_128\_BIT\_LITTLE\_ENDIAN  
?C: DOUBLE\_IS\_IEEE\_754\_128\_BIT\_BIG\_ENDIAN  
?C: DOUBLE\_IS\_IEEE\_754\_64\_BIT\_MIXED\_ENDIAN\_LE\_BE  
?C: DOUBLE\_IS\_IEEE\_754\_64\_BIT\_MIXED\_ENDIAN\_BE\_LE  
?C: DOUBLE\_IS\_VAX\_F\_FLOAT  
?C: DOUBLE\_IS\_VAX\_D\_FLOAT  
?C: DOUBLE\_IS\_VAX\_G\_FLOAT  
?C: DOUBLE\_IS\_IBM\_SINGLE\_32\_BIT  
?C: DOUBLE\_IS\_IBM\_DOUBLE\_64\_BIT  
?C: DOUBLE\_IS\_CRAY\_SINGLE\_64\_BIT  
?C: DOUBLE\_IS\_UNKNOWN\_FORMAT  
?C:.  
?C:DOUBLE\_HAS\_INF:  
?C: This  
symbol, if defined, indicates that the double has  
?C: the infinity.  
?C:.  
?C:DOUBLE\_HAS\_NAN:  
?C: This symbol, if defined, indicates that the double has  
?C: the not-a-number.  
?C:.  
?C:DOUBLE\_HAS\_NEGATIVE\_ZERO:  
?C: This symbol, if defined, indicates that the double has  
?C: the negative\_zero.  
?C:.  
?C:DOUBLE\_HAS\_SUBNORMALS:

?C: This symbol, if defined, indicates that the double has

?C: the subnormals (denormals).

?C:.

?C:DOUBLE\_STYLE\_CRAY:

?C: This symbol, if defined, indicates that the double is

?C: the 64-bit CRAY mainframe format.

?C:.

?C:DOUBLE\_STYLE\_IBM:

?C: This symbol, if defined, indicates that the double is

?C: the 64-bit IBM mainframe format.

?C:.

?C:DOUBLE\_STYLE\_IEEE:

?C: This symbol, if defined, indicates that the double is

?C: the 64-bit IEEE 754.

?C:.

?C:DOUBLE\_STYLE\_VAX:

?C: This symbol, if defined, indicates that the double is

?C: the 64-bit VAX format D or G.

?C:.

?LINT:known

DOUBLE\_IS\_IEEE\_754\_32\_BIT\_LITTLE\_ENDIAN

?LINT:known DOUBLE\_IS\_IEEE\_754\_32\_BIT\_BIG\_ENDIAN

?LINT:known DOUBLE\_IS\_IEEE\_754\_64\_BIT\_LITTLE\_ENDIAN

?LINT:known DOUBLE\_IS\_IEEE\_754\_64\_BIT\_BIG\_ENDIAN

?LINT:known DOUBLE\_IS\_IEEE\_754\_128\_BIT\_LITTLE\_ENDIAN

?LINT:known DOUBLE\_IS\_IEEE\_754\_128\_BIT\_BIG\_ENDIAN

?LINT:known DOUBLE\_IS\_IEEE\_754\_64\_BIT\_MIXED\_ENDIAN\_LE\_BE

?LINT:known DOUBLE\_IS\_IEEE\_754\_64\_BIT\_MIXED\_ENDIAN\_BE\_LE

?LINT:known DOUBLE\_IS\_VAX\_F\_FLOAT

?LINT:known DOUBLE\_IS\_VAX\_D\_FLOAT

?LINT:known DOUBLE\_IS\_VAX\_G\_FLOAT

?LINT:known DOUBLE\_IS\_IBM\_SINGLE\_32\_BIT

?LINT:known DOUBLE\_IS\_IBM\_DOUBLE\_64\_BIT

?LINT:known DOUBLE\_IS\_CRAY\_SINGLE\_64\_BIT

?LINT:known DOUBLE\_IS\_UNKNOWN\_FORMAT

?H:#define DOUBLEKIND \$doublekind /\*\*/

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_32\_BIT\_LITTLE\_ENDIAN 1

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_32\_BIT\_BIG\_ENDIAN 2

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_64\_BIT\_LITTLE\_ENDIAN 3

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_64\_BIT\_BIG\_ENDIAN 4

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_128\_BIT\_LITTLE\_ENDIAN 5

?H:?DOUBLEKIND:#define

DOUBLE\_IS\_IEEE\_754\_128\_BIT\_BIG\_ENDIAN 6

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_64\_BIT\_MIXED\_ENDIAN\_LE\_BE 7

?H:?DOUBLEKIND:#define DOUBLE\_IS\_IEEE\_754\_64\_BIT\_MIXED\_ENDIAN\_BE\_LE 8

?H:?DOUBLEKIND:#define DOUBLE\_IS\_VAX\_F\_FLOAT 9

?H:?DOUBLEKIND:#define DOUBLE\_IS\_VAX\_D\_FLOAT 10

?H:?DOUBLEKIND:#define DOUBLE\_IS\_VAX\_G\_FLOAT 11

```

?H:?DOUBLEKIND:#define DOUBLE_IS_IBM_SINGLE_32_BIT 12
?H:?DOUBLEKIND:#define DOUBLE_IS_IBM_DOUBLE_64_BIT 13
?H:?DOUBLEKIND:#define DOUBLE_IS_CRAY_SINGLE_64_BIT 14
?H:?DOUBLEKIND:#define DOUBLE_IS_UNKNOWN_FORMAT -1
?H:#$d_PRIfldbl PERL_PRIfldbl $sPRIfldbl /**/
?H:#$d_PRIgldbl PERL_PRIgldbl $sPRIgldbl /**/
?H:#$d_PRIeldbl PERL_PRIeldbl $sPRIeldbl /**/
?H:#$d_PRIFUldbl PERL_PRIFldbl $sPRIFUldbl /**/
?H:#$d_PRIGUldbl PERL_PRIGldbl $sPRIGUldbl /**/
?H:#$d_PRIEUldbl PERL_PRIEldbl $sPRIEUldbl /**/
?H:#$d_SCNfldbl PERL_SCNfldbl $sSCNfldbl /**/
?H:#$d_double_has_inf DOUBLE_HAS_INF
?H:#$d_double_has_nan DOUBLE_HAS_NAN
?H:#$d_double_has_negative_zero
DOUBLE_HAS_NEGATIVE_ZERO
?H:#$d_double_has_subnormals DOUBLE_HAS_SUBNORMALS
?H:#$d_double_style_cray DOUBLE_STYLE_CRAY
?H:#$d_double_style_ibm DOUBLE_STYLE_IBM
?H:#$d_double_style_ieee DOUBLE_STYLE_IEEE
?H:#$d_double_style_vax DOUBLE_STYLE_VAX
?H:.
?T:yyy message saveccflags
?F:!try
?LINT:change ccflags
?LINT:change uselongdouble
: Check what kind of doubles your system has
$echo "Checking the kind of doubles you have..." >&4
$cat >try.c <<EOP
#$i_stdlib I_STDLIB
#define DOUBLESIZE $doublesize
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <stdio.h>
static const double d = -0.1;
int main() {
    unsigned const char* b = (unsigned const char*)&d;
    #if DOUBLESIZE == 4
    if (b[0] == 0xCD && b[3] == 0xBD) {
        /* IEEE 754 32-bit little-endian */
        printf("1\n");
        exit(0);
    }
    if (b[0] == 0xBD && b[3] == 0xCD) {
        /* IEEE 754 32-bit big-endian */
        printf("2\n");
        exit(0);
    }
}

```



```

if (b[0] == 0xCC && b[3] == 0xCC) {
    /* VAX format F, 32-bit
PDP-style mixed endian. */
    printf("9\n");
    exit(0);
}
if (b[0] == 0xC0 && b[3] == 0x9A) {
    /* IBM single 32-bit */
    printf("12\n");
    exit(0);
}
#endif
#if DOUBLESIZE == 8
if (b[0] == 0x9A && b[7] == 0xBF) {
    /* IEEE 754 64-bit little-endian */
    printf("3\n");
    exit(0);
}
if (b[0] == 0xBF && b[7] == 0x9A) {
    /* IEEE 754 64-bit big-endian */
    printf("4\n");
    exit(0);
}
if (b[0] == 0x99 && b[3] == 0xBF && b[4] == 0x9A && b[7] == 0x99) {
    /* ARM mixed endian: two little-endian 32-bit floats, in big endian order:
    * 4 5 6 7 0 1 2 3 (MSB = 7, LSB = 0)
    * 99 99 b9 bf 9a 99 99 99 */
    printf("7\n");
    exit(0);
}
if (b[0] == 0x99 && b[3] == 0x9A && b[4] == 0xBF && b[7] == 0x99) {
    /* The opposite of case 7, mixed endian: two big-endian 32-bit floats,
    * in little endian order: 3 2 1 0 7 6 5 4 (MSB = 7, LSB = 0)
    * 99 99 99 9a bf b9 99 99 */
    printf("8\n");
    exit(0);
}
if (b[0] == 0xCC && b[7] == 0xCC) {
    /* VAX
format D, 64-bit PDP-style mixed endian. */
    printf("10\n");
    exit(0);
}
if (b[0] == 0xD9 && b[7] == 0x99) {
    /* VAX format G, 64-bit PDP-style mixed endian. */
    printf("11\n");
    exit(0);
}

```

```

if (b[0] == 0xC0 && b[7] == 0x9A) {
    /* IBM double 64-bit */
    printf("13\n");
    exit(0);
}
if (b[0] == 0xBF && b[7] == 0xCD) {
    /* CRAY single 64-bit */
    printf("14\n");
    exit(0);
}
#endif
#if DOUBLESIZE == 16
if (b[0] == 0x9A && b[15] == 0xBF) {
    /* IEEE 754 128-bit little-endian */
    printf("5\n");
    exit(0);
}
if (b[0] == 0xBF && b[15] == 0x9A) {
    /* IEEE 754 128-bit big-endian */
    printf("6\n");
    exit(0);
}
#endif
/* Then there are old mainframe/miniframe formats like IBM and CRAY.
 * Whether those environments can still build Perl is debatable. */
printf("-1\n"); /* unknown */
exit(0);
}
EOP
set try
if eval $compile; then
    doublekind=`$run ./try`
else
    doublekind=-1
fi
case "$doublekind" in
1) echo "You have IEEE
754 32-bit little endian doubles." >&4 ;;
2) echo "You have IEEE 754 32-bit big endian doubles." >&4 ;;
3) echo "You have IEEE 754 64-bit little endian doubles." >&4 ;;
4) echo "You have IEEE 754 64-bit big endian doubles." >&4 ;;
5) echo "You have IEEE 754 128-bit little endian doubles." >&4 ;;
6) echo "You have IEEE 754 128-bit big endian doubles." >&4 ;;
7) echo "You have IEEE 754 64-bit mixed endian doubles (32-bit LEs in BE)." >&4 ;;
8) echo "You have IEEE 754 64-bit mixed endian doubles (32-bit BEs in LE)." >&4 ;;
9) echo "You have VAX format F 32-bit PDP-style mixed endian doubles." >&4 ;;
10) echo "You have VAX format D 64-bit PDP-style mixed endian doubles." >&4 ;;
11) echo "You have VAX format G 64-bit PDP-style mixed endian doubles." >&4 ;;

```

```

12) echo "You have IBM short 32-bit doubles." >&4 ;;
13) echo "You have IBM long 64-bit doubles." >&4 ;;
14) echo "You have Cray single 64-bit doubles." >&4 ;;
*) echo "Cannot figure out your double. You Cyber, or something?" >&4 ;;
esac
d_double_style_ieee=$undef
d_double_style_vax=$undef
d_double_style_ibm=$undef
d_double_style_cray=$undef
case
"$doublekind" in
1|2|3|4|5|6|7|8) d_double_style_ieee=$define ;;
9|10|11) d_double_style_vax=$define ;;
12|13) d_double_style_ibm=$define ;;
14) d_double_style_cray=$define ;;
esac
case "$d_double_style_ieee" in
$define)
d_double_has_inf=$define
d_double_has_nan=$define
d_double_has_negative_zero=$define
d_double_has_subnormals=$define
;;
*)
d_double_has_inf=$undef
d_double_has_nan=$undef
d_double_has_negative_zero=$undef
d_double_has_subnormals=$undef
;;
esac
$rm_try

: Check print/scan long double stuff
echo " "

if $test X"$d_longdbl" = X"$define"; then

echo "Checking how to print long doubles..." >&4

if $test X"$sPRIfldbl" = X -a X"$doublesize" = X"$longdblsize"; then
$cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
double d = 123.456;
printf("%.3f\n", d);
}
EOCP

```

```

set try
if eval $compile; then
  yyy=`$run
./try`
case "$yyy" in
123.456)
  sPRIfldbl="f"; sPRIGldbl="g"; sPRIeldbl="e";
  sPRIFUldbl="F"; sPRIGUldbl="G"; sPRIEUldbl="E";
  echo "We will use %f."
  ;;
esac
fi
fi

```

```

if $test X"$sPRIfldbl" = X; then
  $cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
  long double d = 123.456;
  printf("%.3Lf\n", d);
}
EOCP
set try
if eval $compile; then
  yyy=`$run ./try`
case "$yyy" in
123.456)
  sPRIfldbl="Lf"; sPRIGldbl="Lg"; sPRIeldbl="Le";
  sPRIFUldbl="LF"; sPRIGUldbl="LG"; sPRIEUldbl="LE";
  echo "We will use %Lf."
  ;;
esac
fi
fi

```

```

if $test X"$sPRIfldbl" = X; then
  $cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
  long double d = 123.456;
  printf("%.3llf\n", d);
}
EOCP
set try
if eval $compile; then
  yyy=`$run ./try`

```

```

case "$yyy" in
123.456)
sPRIfldbl="lf"; sPRIGldbl="lg"; sPRIeldbl="le";
sPRIFUldbl="lF"; sPRIGUldbl="lG"; sPRIEUldbl="lE";
echo "We
will use %lf."
;;
esac
fi
fi

if $test X"$sPRIfldbl" = X; then
$cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
long double d = 123.456;
printf("%.3lf\n", d);
}
EOCP
set try
if eval $compile; then
yyy=`$run ./try`
case "$yyy" in
123.456)
sPRIfldbl="lf"; sPRIGldbl="lg"; sPRIeldbl="le";
sPRIFUldbl="lF"; sPRIGUldbl="lG"; sPRIEUldbl="lE";
echo "We will use %lf."
;;
esac
fi
fi

if $test X"$sPRIfldbl" = X; then
echo "Cannot figure out how to print long doubles." >&4
else
sSCNfldbl=$sPRIfldbl # expect consistency
fi

$rm_try

fi # d_longdbl

case "$sPRIfldbl" in
") d_PRIfldbl="$undef"; d_PRIGldbl="$undef"; d_PRIeldbl="$undef";
d_PRIFUldbl="$undef"; d_PRIGUldbl="$undef"; d_PRIEUldbl="$undef";
d_SCNfldbl="$undef";
;;

```

```

*) d_PRIfldbl="$define"; d_PRIgldbl="$define"; d_PRIeldbl="$define";
d_PRIFUldbl="$define"; d_PRIGUldbl="$define"; d_PRIEUldbl="$define";
d_SCNfldbl="$define";
;;
esac

: Before committing on uselongdouble,
see whether that looks sane.
if $test "$uselongdouble" = "$define"; then
  message=""
  echo " "
  echo "Checking if your long double math functions work right..." >&4
  $cat > try.c <<EOF
#include <math.h>
#include <stdio.h>
int main() {
  printf("%sPRIgldbl\n", sqrtl(logl(expl(cosl(sinl(0.0L)))))+powl(2.0L, 3.0L));
}
EOF
  case "$osname:$gccversion" in
  aix:*) saveccflags="$ccflags"
  ccflags="$ccflags -qlongdouble" ;; # to avoid core dump
  esac
  set try
  if eval $compile_ok; then
    yyy=`$run ./try`
  fi
  case "$yyy" in
  3) echo "Your long double math functions are working correctly." >&4 ;;
  *) echo "Your long double math functions are broken, not using long doubles." >&4
    uselongdouble=$undef
    ;;
  esac
  $rm_try
  case "$osname:$gccversion" in
  aix:*) ccflags="$saveccflags" ;; # restore
  esac
fi

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/longdblfiio.U

```

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?RCS: \$Id\$

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

```

?RCS:
?MAKE:sysroot: Head
?MAKE: -pick add $@ %<
?S:sysroot:
?S: This variable is empty unless supplied by the Configure user.
?S: It can contain a path to an alternative root directory, under which
?S: headers and libraries for the compilation target can be found. This
?S: is generally used when cross-compiling using a gcc-like compiler.
?S:.
?LINT:extern cc
?LINT:extern cppflags
?LINT:change cppflags
?LINT:extern ccflags
?LINT:change ccflags
?LINT:extern ldflags
?LINT:change ldflags
?LINT:extern cccdlflags
?X: _sysroot is later used in ccflags, but we do not want it in config.sh
?T:var xxx path _sysroot
: Set 'sysroot' to change the logical root directory to your headers and libraries see man gcc
: This is primarily meant for cross-compile environments, and
  may fail to be useful in other cases
if test "X$sysroot" = X; then
  sysroot=""
else
  case "$cc" in
  *gcc*|*g+*+)
    echo "Using $sysroot to find your headers and libraries, adding to ccflags"
    # _sysroot is used in places where we need --sysroot=foo
    # but using the rest of the flags could cause issues.
    _sysroot="--sysroot=$sysroot";
    case "$ccflags" in
    *sysroot*) ;;
    'undef'|*)
      ccflags="$ccflags $_sysroot"
    esac
    case "$ldflags" in
    *sysroot*) ;;
    'undef'|*)
      ldflags="$ldflags $_sysroot"
    esac
    case "$cppflags" in
    *sysroot*) ;;
    'undef'|*)
      cppflags="$cppflags $_sysroot"
    esac
    # lddflags updated below in lddflags section;
    # same with cccdlflags

```

```

;;
esac

# Adjust some defaults to also use $sysroot
for var in xlibpth loclibpth locincpth glibpth; do
eval xxx=\$$var
eval $var=""
for path in $xxx; do
    eval $var="\$$var $sysroot$path\"
done
done

fi

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/Sysroot.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: cpp_stuff.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: cpp_stuff.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:08:24 ram
?RCS: patch36: now uses cppstdin instead of plain cpp for consistency (ADO)
?RCS: patch36: remove temporary files when done
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:36 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:cpp_stuff: cat contains cppstdin cppflags cppminus rm
?MAKE: -pick add $@ %<
?S:cpp_stuff:
?S: This variable contains an identification of the concatenation
    mechanism
?S: used by the C preprocessor.
?S:.
?C:CAT2:
?C: This macro concatenates 2 tokens together.
?C:.
?C:CAT3:

```



?C: This macro concatenates 3 tokens together.  
?C:.  
?C:CAT4:  
?C: This macro concatenates 4 tokens together.  
?C:.  
?C:CAT5:  
?C: This macro concatenates 5 tokens together.  
?C:.  
?C:STRINGIFY:  
?C: This macro surrounds its token with double quotes.  
?C:.  
?C:SCAT2:  
?C: This macro concatenates 2 tokens together and stringifies the result.  
?C: It might not exist, so #ifdef it in your code!  
?C:.  
?C:SCAT3:  
?C: This macro concatenates 3 tokens together and stringifies the result.  
?C: It might not exist, so #ifdef it in your code!  
?C:.  
?C:SCAT4:  
?C: This macro concatenates 4 tokens together and stringifies the result.  
?C: It might not exist, so #ifdef it in your code!  
?C:.  
?C:SCAT5:  
?C: This macro concatenates 5 tokens together and stringifies the result.  
?C: It might not exist, so #ifdef it in your code!  
?C:.  
?X: Dist pl70 included the following, but AIX's xlc compiler  
?X: (which  
is ANSI-ish and has cpp\_stuff == 42)) rejects  
?X: The SQuoTe/EQuoTe stuff because the string literals are on  
?X: separate lines. Sigh.  
?X: Andy Dougherty 24 Feb 1998  
?X: ?H:??<:#if \$cpp\_stuff == 1  
?X: ?H:CAT2:#define CAT2(a,b)a/\*\*/b  
?X: ?H:CAT3:#define CAT3(a,b,c)a/\*\*/b/\*\*/c  
?X: ?H:CAT4:#define CAT4(a,b,c,d)a/\*\*/b/\*\*/c/\*\*/d  
?X: ?H:CAT5:#define CAT5(a,b,c,d,e)a/\*\*/b/\*\*/c/\*\*/d/\*\*/e  
?X: ?H:STRINGIFY:#define STRINGIFY(a)"a"  
?X: ?H:??<:#define SQuoTe(a)"a"  
?X: ?H:??<:#define EQuoTe(a)a"  
?X: ?H:SCAT2:#define SCAT2(a,b)EQuoTe(SQuoTe(a)b)  
?X: ?H:SCAT3:#define SCAT3(a,b,c)EQuoTe(SQuoTe(a)b/\*\*/c)  
?X: ?H:SCAT4:#define SCAT4(a,b,c,d)EQuoTe(SQuoTe(a)b/\*\*/c/\*\*/d)  
?X: ?H:SCAT5:#define SCAT5(a,b,c,d,e)EQuoTe(SQuoTe(a)b/\*\*/c/\*\*/d/\*\*/e)  
?X: ?H:??<:#endif  
?H:??<:#if \$cpp\_stuff == 1  
?H:CAT2:#define CAT2(a,b) a/\*\*/b

```

?H:?CAT3:#define CAT3(a,b,c) a/**/b/**/c
?H:?CAT4:#define CAT4(a,b,c,d) a/**/b/**/c/**/d
?H:?CAT5:#define CAT5(a,b,c,d,e) a/**/b/**/c/**/d/**/e
?H:?STRINGIFY:#define STRINGIFY(a) "a"
?X: If
you can get stringification with catify, tell me how!
?H:?%<:#endif
?H:?%<:#if $cpp_stuff == 42
?H:?%<:#define PeRl_CaTiFy(a, b) a ## b
?H:?%<:#define PeRl_StGiFy(a) #a
?X: The additional level of indirection enables these macros to be
?X: used as arguments to other macros. See K&R 2nd ed., page 231.
?H:?CAT2:#define CAT2(a,b) PeRl_CaTiFy(a,b)
?H:?CAT3:#define CAT3(a,b,c) CAT2(PeRl_CaTiFy(a,b),c)
?H:?CAT4:#define CAT4(a,b,c,d) CAT2(CAT3(a,b,c),d)
?H:?CAT5:#define CAT5(a,b,c,d,e) CAT2(CAT4(a,b,c,d),e)
?H:?%<:#define StGiFy(a) PeRl_StGiFy(a)
?H:?STRINGIFY:#define STRINGIFY(a) PeRl_StGiFy(a)
?H:?SCAT2:#define SCAT2(a,b) PeRl_StGiFy(a) PeRl_StGiFy(b)
?H:?SCAT3:#define SCAT3(a,b,c) PeRl_StGiFy(a) PeRl_StGiFy(b) PeRl_StGiFy(c)
?H:?SCAT4:#define SCAT4(a,b,c,d) PeRl_StGiFy(a) PeRl_StGiFy(b) PeRl_StGiFy(c) PeRl_StGiFy(d)
?H:?SCAT5:#define SCAT5(a,b,c,d,e) PeRl_StGiFy(a) PeRl_StGiFy(b) PeRl_StGiFy(c) PeRl_StGiFy(d)
PeRl_StGiFy(e)
?H:?%<:#endif
?H:?%<:#if $cpp_stuff != 1 && $cpp_stuff
!= 42
?H:?%<:#include "Bleth: How does this C preprocessor concatenate tokens?"
?H:?%<:#endif
?H:.
?W:%<:CAT2 CAT3 CAT4 CAT5 STRINGIFY SCAT2 SCAT3 SCAT4 SCAT5
?F:!cpp_stuff.c
?LINT:known StGiFy
?LINT:known PeRl_CaTiFy
?LINT:known PeRl_StGiFy
: how do we concatenate cpp tokens here?
echo " "
echo "Checking to see how your cpp does stuff like concatenate tokens..." >&4
$cat >cpp_stuff.c <<'EOCP'
#define RCAT(a,b)a/**/b
#define ACAT(a,b)a ## b
RCAT(Rei,ser)
ACAT(Cir,cus)
EOCP
$cppstdin $cppflags $cppminus <cpp_stuff.c >cpp_stuff.out 2>&1
if $contains 'Circus' cpp_stuff.out >/dev/null 2>&1; then
echo "Oh! Smells like ANSI's been here." >&4
echo "We can catify or stringify, separately or together!"
cpp_stuff=42

```

```

elif $contains 'Reiser' cpp_stuff.out >/dev/null 2>&1; then
echo "Ah, yes! The good old days!" >&4
echo "However, in the good old days we don't know how to stringify and"
echo "catify at the same time."
cpp_stuff=1
else
$cat >&4 <<EOM
Hmm, I don't seem to be able to concatenate
tokens with your cpp.
You're going to have to edit the values of CAT[2-5] in config.h...
EOM
?X: It would be nice to have configure remind us at the end that some manual
?X: intervention is needed -- FIXME
cpp_stuff="/* Help! How do we handle cpp_stuff? */*/"
fi
$rm -f cpp_stuff.*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/modified/cpp_stuff.U

```

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?RCS: \$Id\$

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_getprpwnam: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getprpwnam:

?S: This variable conditionally defines HAS\_GETPRPWNAME if getprpwnam() is

?S: available to retrieve protected (shadow) password entries by name.

?S:.

?C:HAS\_GETPRPWNAME:

?C: This symbol, if defined, indicates that the getprpwnam system call is

?C: available to retrieve protected (shadow) password entries by name.

?C:.

?H:#\$d\_getprpwnam HAS\_GETPRPWNAME /\*\*/

?H:.

?LINT:set d\_getprpwnam

: see if getprpwnam exists

set getprpwnam d\_getprpwnam

eval \$inlibc

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_getprpwnam.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: ccflags.U,v \$

?RCS: Revision 3.0.1.9 1997/02/28 15:27:07 ram

?RCS: patch61: removed support for NO\_PROTOTYPE detection on SCO

?RCS: patch61: new locincpth variable

?RCS: patch61: added info on the "additional ld flags" question

?RCS:

?RCS: Revision 3.0.1.8 1995/07/25 13:48:54 ram

?RCS: patch56: re-arranged compile line to include ldflags before objects

?RCS:

?RCS: Revision 3.0.1.7 1995/05/12 12:08:33 ram

?RCS: patch54: now checks for cc/ccflags/ldflags coherency

?RCS:

?RCS: Revision 3.0.1.6

1994/10/29 16:07:02 ram

?RCS: patch36: gcc versioning no longer relies on the C compiler's name

?RCS: patch36: simplified check for gcc version checking (ADO)

?RCS:

?RCS: Revision 3.0.1.5 1994/08/29 16:06:35 ram

?RCS: patch32: propagate -posix flag from ccflags to ldflags

?RCS:

?RCS: Revision 3.0.1.4 1994/05/06 14:28:45 ram

?RCS: patch23: -fpcc-struct-return only needed in gcc 1.x (ADO)

?RCS: patch23: cppflags now computed on an option-by-option basis

?RCS: patch23: magically added cc flags now only done the first time

?RCS:

?RCS: Revision 3.0.1.3 1993/09/13 15:58:29 ram

?RCS: patch10: explicitly mention -DDEBUG just in case they need it (WAD)

?RCS: patch10: removed all the "tans" variable usage (WAD)

?RCS:

?RCS: Revision 3.0.1.2 1993/08/27 14:39:38 ram

?RCS: patch7: added support for OSF/1 machines

?RCS:  
?RCS: Revision 3.0.1.1 1993/08/25 14:00:24 ram  
?RCS: patch6: added defaults for cppflags, ccflags and ldflags  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:31 ram  
?RCS:  
Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:ccflags ldflags lkflags cppflags optimize locincpth: test cat \  
Myread Guess Options Oldconfig gccversion mips\_type +usrinc \  
package contains rm rm\_try +cc cppstdin cppminus cpprun cpplast libpth \  
loclibpth hint  
?MAKE: -pick add \$@ %<  
?S:ccflags:  
?S: This variable contains any additional C compiler flags desired by  
?S: the user. It is up to the Makefile to use this.  
?S:.  
?S:cppflags:  
?S: This variable holds the flags that will be passed to the C pre-  
?S: processor. It is up to the Makefile to use it.  
?S:.  
?S:optimize:  
?S: This variable contains any optimizer/debugger flag that should be used.  
?S: It is up to the Makefile to use it.  
?S:.  
?S:ldflags:  
?S: This variable contains any additional C loader flags desired by  
?S: the user. It is up to the Makefile to use this.  
?S:.  
?S:lkflags:  
?S: This variable contains any additional C partial linker flags desired by  
?S: the user. It is up to the Makefile to use this.  
?S:.  
?S:locincpth:  
?S: This  
variable contains a list of additional directories to be  
?S: searched by the compiler. The appropriate -I directives will  
?S: be added to ccflags. This is intended to simplify setting  
?S: local directories from the Configure command line.  
?S: It's not much, but it parallels the loclibpth stuff in libpth.U.  
?S:.  
?T:inctest thisincl xxx flag inclwanted ftry previous thislibdir  
?F:!cpp.c  
?D:cppflags="  
?D:ccflags="  
?D:ldflags="  
?D:optimize="  
?INIT:: Possible local include directories to search.

```

?INIT:: Set locincpth to "" in a hint file to defeat local include searches.
?INIT:locincpth="/usr/local/include /opt/local/include /usr/gnu/include"
?INIT:locincpth="$locincpth /opt/gnu/include /usr/GNU/include /opt/GNU/include"
?INIT::
?INIT:: no include file wanted by default
?INIT:inclwanted=""
?INIT:
: determine optimize, if desired, or use for debug flag also
case "$optimize" in
'|$undef) dflt='none';;
")
case "$gccversion" in
") dflt='-O';;
*) dflt='-O2 -g';;
esac
;;
*)
dflt="$optimize";;
esac
case "$gccversion" in
") $cat <<EOH

```

Some C compilers have problems with their optimizers. By default, \$package compiles with the -O flag to use the optimizer. Alternately, you might want to use the symbolic debugger, which uses the -g flag (on traditional Unix systems). Either flag can be specified here. To use neither flag, specify the word "none".

```

EOH
;;
*) $cat <<EOH

```

With the GNU C compiler, it is possible to supply both -O2 and -g flags, to be able to reasonably optimize, whilst retaining the ability to use a symbolic debugger. Either flag can be specified here. To use neither flag, specify the word "none".

```

EOH
;;
esac
rp="What optimizer/debugger flag should be used?"
./myread
optimize="$ans"
case "$optimize" in
'none') optimize="" ;;
esac

dflt=""

```

```

: We will not override a previous value, but we might want to
: augment a hint file
case "$hint" in
default|recommended)
case "$gccversion" in
1*) dflt='-fpcc-struct-return' ;;
esac
?X:
check for POSIXized ISC
case "$gccversion" in
2*) if test -d /etc/conf/kconfig.d &&
    $contains _POSIX_VERSION $usrinc/sys/unistd.h >/dev/null 2>&1
then
    dflt="$dflt -posix"
fi
;;
esac
?X: turn warnings on if they're using gcc
case "$gccversion" in
1*|2*) dflt="$dflt -Wall";;
?X: starting with version 3, add "-W -Wall -Wformat=2 -Wshadow" by default
*) dflt="$dflt -W -Wall -Wformat=2 -Wshadow";;
esac
;;
esac

?X: In USG mode, a MIPS system may need some BSD includes
case "$mips_type" in
*BSD*|*) inclwanted="$locincpth $usrinc";;
*) inclwanted="$locincpth $inclwanted $usrinc/bsd";;
esac
for thisincl in $inclwanted; do
if $test -d $thisincl; then
if $test x$thisincl != x$usrinc; then
case "$dflt" in
*$thisincl*);;
*) dflt="$dflt -I$thisincl";;
esac
fi
fi
done

?X: Include test function (header, symbol)
inctest="if $contains $2 $usrinc/$1 >/dev/null 2>&1; then
xxx=true;
elif $contains $2 $usrinc/sys/$1 >/dev/null 2>&1; then
xxx=true;
else

```

```

xxx=false;
fi;
if
  $xxx; then
  case "$dflt" in
  *$2*);;
  *) dflt="$dflt -D$2";;
  esac;
fi'

?X:
?X: OSF/1 uses __LANGUAGE_C__ instead of LANGUAGE_C
?X:
if ./osf1; then
  set signal.h __LANGUAGE_C__; eval $inctest
else
  set signal.h LANGUAGE_C; eval $inctest
fi

case "$hint" in
default|recommended) dflt="$ccflags $dflt" ;;
*) dflt="$ccflags";;
esac

case "$dflt" in
'| ') dflt=none;;
esac
$cat <<EOH

```

Your C compiler may want other flags. For this question you should include -I/whatever and -DWHATEVER flags and any other flags used by the C compiler, but you should NOT include libraries or ld flags like -lwhatever.

To use no flags, specify the word "none".

```

EOH
?X: strip leading space
set X $dflt
shift
dflt=${1+"$@"}
rp="Any additional cc flags?"
./myread
case "$ans" in
none) ccflags="";;
*) ccflags="$ans";;
esac

```

: the following weeds options from ccflags that are of no interest to cpp



```

cppflags="$ccflags"
case "$gccversion" in
1*) cppflags="$cppflags -D__GNUC__"
esac
case "$mips_type" in
");;
*BSD*)
cppflags="$cppflags -DSYSTYPE_BSD43";;
esac
case "$cppflags" in
");;
*)
echo " "
echo "Let me guess what the preprocessor flags are..." >&4
set X $cppflags
shift
cppflags="
$cat >cpp.c <<'EOM'
#define BLURFL foo

BLURFL xx LFRULB
EOM
?X:
?X: For each cc flag, try it out with both cppstdin and cprun, since the
?X: first is almost surely a cc wrapper. We have to try both in case
?X: of cc flags like '-Olimit 2900' that are actually two words...
?X:
previous="
for flag in $*
do
case "$flag" in
-*) ftry="$flag";;
*) ftry="$previous $flag";;
esac
if $cppstdin -DLFRULB=bar $ftry $cppminus <cpp.c \
>cpp1.out 2>/dev/null && \
$cprun -DLFRULB=bar $ftry $cpplast <cpp.c \
>cpp2.out 2>/dev/null && \
$contains 'foo.*xx.*bar' cpp1.out >/dev/null 2>&1 && \
$contains 'foo.*xx.*bar' cpp2.out >/dev/null 2>&1
then
cppflags="$cppflags $ftry"
previous="
else
previous="$flag"
fi
done
set X $cppflags

```

```

shift
cppflags=${1+"$@"}
case "$cppflags"
in
*-* ) echo "They appear to be: $cppflags";;
esac
$rm -f cpp.c cpp?.out
;;
esac

```

: flags used in final linking phase

```

case "$ldflags" in
*) if ./venix; then
dflt='-i -z'
else
dflt=""
fi
case "$ccflags" in
*-posix*) dflt="$dflt -posix" ;;
esac
;;
*) dflt="$ldflags";;
esac

```

: Try to guess additional flags to pick up local libraries.

```

for thislibdir in $libpth; do
case " $loclibpth " in
*" $thislibdir "*)
case "$dflt " in
*" -L$thislibdir "*) ;;
*) dflt="$dflt -L$thislibdir" ;;
esac
;;
esac
done

```

```

case "$dflt" in
*) dflt='none' ;;
*) set X $dflt; shift; dflt="$@";;
esac

```

```
$cat <<EOH
```

Your C linker may need flags. For this question you should include `-L/whatever` and any other flags used by the C linker, but you should NOT include libraries like `-lwhatever`.

Make sure you include the appropriate `-L/path` flags if your C linker

does not normally search all of the directories you specified above,  
namely  
\$libpth  
To use no flags, specify the word "none".

EOH

```
rp="Any
additional ld flags (NOT including libraries)?"
./myread
case "$ans" in
none) ldflags="";
*) ldflags="$ans";;
esac
rmlist="$rmlist pdp11"

@if lkflags
: partial linking may need other flags
case "$lkflags" in
") case "$ldflags" in
") dflt='none';;
*) dflt="$ldflags";;
esac;;
*) dflt="$lkflags";;
esac
echo " "
rp="Partial linking flags to be used (NOT including -r)?"
./myread
case "$ans" in
none) lkflags="";;
*) lkflags="$ans";;
esac

@end
?X:
?X: If the user changes compilers after selecting a hint file, it's
?X: possible that the suggested ccflags/ldflags will be wrong. Try to
?X: compile and run a simple test program. Let the user see all the
?X: error messages. -- ADO and RAM
?X:
: coherency check
echo " "
echo "Checking your choice of C compiler and flags for coherency..." >&4
?X: Strip extra blanks in case some of the following variables are empty
set X $cc $optimize $ccflags $ldflags -o try try.c
shift
$cat >try.msg <<EOM
I've tried to compile and run a simple program
```

with:

```
$*
```

```
./try
```

and I got the following output:

```
EOM
```

```
$cat > try.c <<'EOF'
```

```
#include <stdio.h>
```

```
int main() { exit(0); }
```

```
EOF
```

```
dflt=y
```

```
?X: Use "sh -c" to avoid error messages tagged with leading "Configure:".
```

```
?X: We need to try the resulting executable, because cc might yield a 0 status
```

```
?X: even when ld failed, in which case the executable will not run properly,
```

```
?X: if its x bit is set at all...
```

```
if sh -c "$cc $optimize $ccflags $ldflags -o try try.c" >>try.msg 2>&1; then
```

```
if sh -c './try' >>try.msg 2>&1; then
```

```
    dflt=n
```

```
else
```

```
    echo "The program compiled OK, but exited with status $?." >>try.msg
```

```
    rp="You have a problem. Shall I abort Configure"
```

```
    dflt=y
```

```
fi
```

```
else
```

```
    echo "I can't compile the test program." >>try.msg
```

```
    rp="You have a BIG problem. Shall I abort Configure"
```

```
    dflt=y
```

```
fi
```

```
case "$dflt" in
```

```
y)
```

```
    $cat try.msg >&4
```

```
?X: using -K will prevent default aborting--maybe they're cross compiling?
```

```
case "$knowitall" in
```

```
"
```

```
    echo "(The supplied flags might be incorrect with this C compiler.)"
```

```
;;
```

```
*)
```

```
    dflt=n;;
```

```
esac
```

```
echo " "
```

```
./myread
```

```
case "$ans" in
```

```
n*|N*) ;;
```

```
*) echo "Ok. Stopping Configure." >&4
```

```
exit 1
```

```
;;
```

```
esac
;;
n) echo "OK, that should do.";;
esac
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/ccflags.U
```

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?RCS:

?MAKE:i\_poll: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_poll:

?S: This variable conditionally defines the I\_POLL symbol, which

?S: indicates to the C program that it should include <poll.h>.

?S:.

?C:I\_POLL:

?C: This symbol, if defined, indicates that the program may include

?C: <poll.h>. If there is no <poll.h>, then you may check I\_SYS\_POLL

?C: instead to see whether there is a <sys/poll.h> to include.

?C:.

?H:#\$i\_poll I\_POLL /\*\*/

?H:.

?LINT:set i\_poll

: see if there is a poll.h file

set poll.h i\_poll

eval \$inhdr

Found

in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_poll.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_fp\_class.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:  
 ?RCS: You may distribute under the terms of either the GNU General Public  
 ?RCS: License or the Artistic License, as specified in the README file.  
 ?RCS:  
 ?MAKE:i\_fp\_class: Inhdr Hasfield  
 ?MAKE: -pick add \$@ %<  
 ?S:i\_fp\_class:  
 ?S: This variable conditionally defines the I\_FP\_CLASS symbol, and indicates  
 ?S: whether a C program should include <fp\_class.h>.  
 ?S:.  
 ?C:I\_FP\_CLASS:  
 ?C: This symbol, if defined, indicates that <fp\_class.h> exists and  
 ?C: should be included.  
 ?C:.  
 ?H:#\$i\_fp\_class I\_FP\_CLASS /\*\*/  
 ?H:.  
 ?LINT:set i\_fp\_class  
 : see if this is a fp\_class.h system  
 set fp\_class.h i\_fp\_class  
 eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_fp\_class.U

No license file was found, but licenses were detected in source scan.

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 ?RCS:  
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 ?RCS: that same Artistic License; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: \$Log: Instruct.U,v \$  
 ?RCS: Revision 3.0.1.3 1997/02/28 15:02:55 ram  
 ?RCS: patch61: logname / whoami sequence rewritten to use case  
 ?RCS:  
 ?RCS: Revision 3.0.1.2 1995/02/15 14:11:34 ram  
 ?RCS: patch51: author name now appears at the end of the paragraph (WED)  
 ?RCS:  
 ?RCS: Revision 3.0.1.1 1995/01/11 15:12:05 ram  
 ?RCS: patch45: now documents the & escape to turn -d on at the read prompt  
 ?RCS:  
 ?RCS: Revision 3.0 1993/08/18 12:05:04 ram  
 ?RCS: Baseline for dist 3.0 netwide release.

```

?RCS:
?X:
?X:
This unit spew out the directions that we want everyone to read. I try to
?X: keep the first "pagefull" much less than a page since they don't know it
?X: isn't going to go shooting off the top of the screen, and we don't want
?X: to panic them yet.
?X:
?MAKE:Instruct: Begin Myread Configdir contains
?MAKE: -pick wipe $@ %<
?T:user needman firsttime
: general instructions
needman=true
firsttime=true
user=`(logname) 2>/dev/null`
case "$user" in
") user=`whoami 2>&1`;
esac
if $contains "^$user$" ../.config/instruct >/dev/null 2>&1; then
firsttime=false
echo " "
rp='Would you like to see the instructions?'
dflt=n
. ./myread
case "$ans" in
[yY]*) ;;
*) needman=false;;
esac
fi
if $needman; then
cat <<EOH

```

This installation shell script will examine your system and ask you questions to determine how the <PACKAGENAME> package should be installed. If you get stuck on a question, you may use a ! shell escape to start a subshell or execute a command. Many of the questions will have default answers in square brackets; typing carriage return will give you the default.

On some of the questions which ask for file or directory names you are allowed to use the ~name construct to specify the login directory belonging to "name", even if you don't have a shell which knows about that. Questions where this is allowed will be marked "(~name ok)".

```

EOH
rp="
dflt='Type carriage return to continue'
. ./myread

```

```
cat <<'EOH'
```

The prompter used in this script allows you to use shell variables and backticks in your answers. You may use \$1, \$2, etc... to refer to the words in the default answer, as if the default line was a set of arguments given to a script shell. This means you may also use \$\* to repeat the whole default line, so you do not have to re-type everything to add something to the default.

Everytime there is a substitution, you will have to confirm. If there is an error (e.g. an unmatched backtick), the default answer will remain unchanged and you will be prompted again.

If you are in a hurry, you may run 'Configure -d'. This will bypass nearly all the questions and use the computed defaults (or the previous answers if there was already a config.sh file). Type 'Configure -h' for a list of options. You may also start interactively and then answer '& -d' at any prompt to turn on the non-interactive behaviour for the remainder of the execution.

EOH

```
. ./myread  
cat <<EOH
```

Much effort has been expended to ensure that this shell script will run on any Unix system. If despite that it blows up on yours, your best bet is to edit Configure and run it again. If you can't run Configure for some reason, you'll have to generate a config.sh file by hand. Whatever problems you have, let me (<MAINTLOC>) know how I blew it.

This installation script affects things in two ways:

- 1) it may do direct variable substitutions on some of the files included in this kit.
- 2) it builds a config.h file for inclusion in C programs. You may edit any of these files as the need arises after running this script.

If you make a mistake on a question, there is no easy way to back up to it currently. The easiest thing to do is to edit config.sh and rerun all the SH files. Configure will offer to let you do this before it runs the SH files.

EOH

```
?X: In case they played with the prompter...  
dflt='Type carriage return to continue'  
. ./myread  
case "$firsttime" in  
true) echo $user >>../.config/instruct;;  
esac
```



fi

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Instruct.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Nothing.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Nothing.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:09 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: The purpose of this file is to supply an empty target for the private

?X: Makefile built by metaconfig to order the units.

?X:

?MAKE:Nothing: Head

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Nothing.U

No license file was found, but licenses were detected in source scan.

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: modetype.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:25:07 ram

?RCS: patch36: created by ADO

?RCS:

```

?MAKE:modetype: Myread Typedef
?MAKE: -pick add $@ %<
?S:modetype:
?S: This variable defines modetype to be something like mode_t,
?S: int, unsigned short, or whatever type is used to declare file
?S: modes for system calls.
?S:.
?C:Mode_t:
?C: This symbol holds the type used to declare file modes
?C: for systems calls.
    It is usually mode_t, but may be
?C: int or unsigned short. It may be necessary to include <sys/types.h>
?C: to get any typedef'ed information.
?C:.
?H:#define Mode_t $modetype /* file mode parameter for system calls */
?H:.
: see what type is used for mode_t
set mode_t modetype int stdio.h sys/types.h
eval $typedef
dflt="$modetype"
echo " "
rp="What type is used for file modes?"
./myread
modetype="$ans"

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/modetype.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_dlfcn.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: i_dlfcn.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:21:53 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:i_dlfcn: Inhdr
?MAKE: -pick add $@ %<

```

?S:i\_dlfcn:  
?S: This variable conditionally defines the I\_DLFCN symbol, which  
?S: indicates to the C program that <dlfcn.h> exists and should  
?S: be included.  
?S:.  
?C:I\_DLFCN:  
?C: This symbol, if defined, indicates that <dlfcn.h> exists  
and should  
?C: be included.  
?C:.  
?H:#\$i\_dlfcn I\_DLFCN /\*\*/  
?H:.  
?LINT:set i\_dlfcn  
: see if dlfcn is available  
set dlfcn.h i\_dlfcn  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_dlfcn.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_memccpy.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_memccpy.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:31 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_memccpy: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_memccpy:  
?S: This variable conditionally defines the HAS\_MEMCCPY symbol, which  
?S: indicates to the C program that the memccpy() routine is available  
?S: to copy a character into a block of memory.  
?S:.  
?C:HAS\_MEMCCPY (MEMCCPY):  
?C: This symbol, if defined, indicates that the memccpy routine  
is available  
?C: to copy a character into a block of memory. Otherwise you should  
?C: roll your own.

```
?C:.
?H:#$d_memccpy HAS_MEMCCPY /**/
?H:.
?LINT:set d_memccpy
: see if memccpy exists
set memccpy d_memccpy
eval $inlibc
```

Found in path(s):

```
*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_memccpy.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_ndbm.U,v 3.0.1.1 1995/05/12 12:16:53 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: i_ndbm.U,v $
?RCS: Revision 3.0.1.1 1995/05/12 12:16:53 ram
?RCS: patch54: made more robust by checking both header and lib (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:23 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_ndbm i_gdbmndbm i_gdbm_ndbm d_ndbm d_ndbm_h_uses_prototypes \
d_gdbmndbm_h_uses_prototypes d_gdbm_ndbm_h_uses_prototypes: \
    Inhdr Inlibc Setvar test d_cplusplus extern_C echo Protochk
?MAKE: -pick add $@ %<
?S:i_ndbm:
?S: This
    variable conditionally defines the I_NDBM symbol, which
?S: indicates to the C program that <ndbm.h> exists and should
?S: be included.
?S:.
?C:I_NDBM:
?C: This symbol, if defined, indicates that <ndbm.h> exists and should
?C: be included.
?C:.
?S:i_gdbmndbm:
?S: This variable conditionally defines the I_GDBMNDBM symbol, which
?S: indicates to the C program that <gdbm/ndbm.h> exists and should
?S: be included. This was the location of the ndbm.h compatibility file
```

?S: in RedHat 7.1.

?S:.

?C:I\_GDBMNDBM:

?C: This symbol, if defined, indicates that <gdbm/ndbm.h> exists and should

?C: be included. This was the location of the ndbm.h compatibility file

?C: in RedHat 7.1.

?C:.

?S:i\_gdbm\_ndbm:

?S: This variable conditionally defines the I\_GDBM\_NDBM symbol, which

?S: indicates to the C program that <gdbm-ndbm.h> exists and should

?S: be included. This is the location of the ndbm.h compatibility file

?S: in Debian 4.0.

?S:.

?C:I\_GDBM\_NDBM:

?C: This symbol, if defined, indicates

that <gdbm-ndbm.h> exists and should

?C: be included. This is the location of the ndbm.h compatibility file

?C: in Debian 4.0.

?C:.

?S:d\_ndbm:

?S: This variable conditionally defines the HAS\_NDBM symbol, which

?S: indicates that both the ndbm.h include file and an appropriate ndbm

?S: library exist. Consult the different i\_\*ndbm variables

?S: to find out the actual include location. Sometimes, a system has the

?S: header file but not the library. This variable will only be set if

?S: the system has both.

?S:.

?C:HAS\_NDBM:

?C: This symbol, if defined, indicates that some form of ndbm.h or compatibility

?C: include exists, along with the appropriate library.

?C:.

?S:d\_ndbm\_h\_uses\_prototypes:

?S: This variable conditionally defines the NDBM\_H\_USES\_PROTOTYPES symbol,

?S: which indicates that the ndbm.h include file uses real ANSI C

?S: prototypes instead of K&R style function declarations. K&R style

?S: declarations are unsupported in C++, so the include file requires

?S: special handling

when using a C++ compiler and this variable is

?S: undefined. Consult the different d\_\*ndbm\_h\_uses\_prototypes variables

?S: to get the same information for alternative ndbm.h include files.

?S:.

?C:NDBM\_H\_USES\_PROTOTYPES:

?C: This symbol, if defined, indicates that <ndbm.h> uses real ANSI C

?C: prototypes instead of K&R style function declarations without any

?C: parameter information. While ANSI C prototypes are supported in C++,

?C: K&R style function declarations will yield errors.

?C:.

?S:d\_gdbmndbm\_h\_uses\_prototypes:

?S: This variable conditionally defines the NDBM\_H\_USES\_PROTOTYPES symbol,  
?S: which indicates that the gdbm/ndbm.h include file uses real ANSI C  
?S: prototypes instead of K&R style function declarations. K&R style  
?S: declarations are unsupported in C++, so the include file requires  
?S: special handling when using a C++ compiler and this variable is  
?S: undefined. Consult the different d\_\*ndbm\_h\_uses\_prototypes variables  
?S: to get the same information for alternative  
ndbm.h include files.

?S:.

?C:GDBMNDBM\_H\_USES\_PROTOTYPES:

?C: This symbol, if defined, indicates that <gdbm/ndbm.h> uses real ANSI C  
?C: prototypes instead of K&R style function declarations without any  
?C: parameter information. While ANSI C prototypes are supported in C++,  
?C: K&R style function declarations will yield errors.

?C:.

?S:d\_gdbm\_ndbm\_h\_uses\_prototypes:

?S: This variable conditionally defines the NDBM\_H\_USES\_PROTOTYPES symbol,  
?S: which indicates that the gdbm-ndbm.h include file uses real ANSI C  
?S: prototypes instead of K&R style function declarations. K&R style  
?S: declarations are unsupported in C++, so the include file requires  
?S: special handling when using a C++ compiler and this variable is  
?S: undefined. Consult the different d\_\*ndbm\_h\_uses\_prototypes variables  
?S: to get the same information for alternative ndbm.h include files.

?S:.

?C:GDBM\_NDBM\_H\_USES\_PROTOTYPES:

?C: This symbol, if defined, indicates that <gdbm-ndbm.h> uses real ANSI C  
?C: prototypes  
instead of K&R style function declarations without any  
?C: parameter information. While ANSI C prototypes are supported in C++,  
?C: K&R style function declarations will yield errors.

?C:.

?H:#\$i\_ndbm I\_NDBM /\*\*/

?H:#\$i\_gdbmndbm I\_GDBMNDBM /\*\*/

?H:#\$i\_gdbm\_ndbm I\_GDBM\_NDBM /\*\*/

?H:#\$d\_ndbm HAS\_NDBM /\*\*/

?H:#\$d\_ndbm\_h\_uses\_prototypes NDBM\_H\_USES\_PROTOTYPES /\*\*/

?H:#\$d\_gdbmndbm\_h\_uses\_prototypes GDBMNDBM\_H\_USES\_PROTOTYPES /\*\*/

?H:#\$d\_gdbm\_ndbm\_h\_uses\_prototypes GDBM\_NDBM\_H\_USES\_PROTOTYPES /\*\*/

?H:.

?T:d\_dbm\_open name hdr ihdr ndbm\_hdr\_protochk

?LINT:set d\_ndbm d\_gdbmndbm\_h\_uses\_prototypes d\_gdbm\_ndbm\_h\_uses\_prototypes  
d\_ndbm\_h\_uses\_prototypes

: see if ndbm.h is available

set ndbm.h i\_ndbm

eval \$inhdr

: Compatibility location for RedHat 7.1

set gdbm/ndbm.h i\_gdbmndbm

eval \$inhdr

```

: Compatibility location for Debian 4.0
set gdbm-ndbm.h i_gdbm_ndbm
eval $inhdr

val="$undef"
if $test "$i_ndbm" = "$define" -o "$i_gdbmndbm" = "$define" -o "$i_gdbm_ndbm" = "$define"; then
: see if dbm_open exists
set
dbm_open d_dbm_open
eval $inlibc
case "$d_dbm_open" in
$undef)
i_ndbm="$undef"
i_gdbmndbm="$undef"
i_gdbm_ndbm="$undef"
echo "We won't be including <ndbm.h>"
val="$undef"
;;
*) val="$define"
;;
esac
fi
set d_ndbm
eval $setvar

ndbm_hdr_protochk='name=$1; hdr=$2;
eval "ihdr=\${i}_$name";
val="$undef";
if $test "$ihdr" = "$define"; then
$echo "Checking if your <$hdr> uses prototypes..." >&4;
case "$d_cplusplus" in
$define) ./protochk "$sextern_C void dbm_close(DBM *);" literal "extern \"C\" { \"$ihdr $hdr literal }" &&
val="$define" ;;
*) ./protochk "$sextern_C void dbm_close(int, int);" $ihdr $hdr || val="$define" ;;
esac;
case "$val" in
$define) $echo "Your <$hdr> seems to have prototypes";;
*) $echo "Your <$hdr> does not seem to have prototypes";;
esac;
fi;
set "d_${name}_h_uses_prototypes";
eval $setvar

set ndbm ndbm.h
eval $ndbm_hdr_protochk
set gdbmndbm gdbm/ndbm.h
eval $ndbm_hdr_protochk
set gdbm_ndbm gdbm-ndbm.h

```

```
eval $ndbm_hdr_protochk
```

Found

in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/i_ndbm.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: floatsize.U,v $
```

```
?RCS: Revision 3.0.1.1 1994/10/29 16:17:09 ram
```

```
?RCS: patch36: added ?F: line for metalint file checking
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:08:09 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:floatsize: cat rm Myread +cc +ccflags
```

```
?MAKE: -pick add $@ %<
```

```
?S:floatsize:
```

```
?S: This variable contains the value of the FLOATSIZE symbol, which
```

```
?S: indicates to the C program how many bytes there are in a float.
```

```
?S:.
```

```
?C:FLOATSIZE:
```

```
?C: This symbol contains the size of
```

```
a float, so that the C preprocessor
```

```
?C: can make decisions based on it.
```

```
?C:.
```

```
?H:#define FLOATSIZE $floatsize /**/
```

```
?H:.
```

```
?F:!try
```

```
: check for length of float
```

```
echo " "
```

```
case "$floatsize" in
```

```
)
```

```
echo "Checking to see how big your floating point numbers are..." >&4
```

```
$cat >try.c <<'EOCP'
```

```
#include <stdio.h>
```

```
int main()
```

```
{
```



```

printf("%d\n", sizeof(float));
}
EOCP
if $cc $ccflags -o try try.c >/dev/null 2>&1 ; then
  dflt=`./try`
else
  dflt='4'
  echo "(I can't seem to compile the test program.  Guessing...)"
fi
;;
*)
  dflt="$floatsize"
;;
esac
rp="What is the size of a floating point number (in bytes)?"
./myread
floatsize="$ans"
$rm -f try.c try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/floatsize.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_srand48\_r.U,v ORCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_srand48\_r srand48\_r\_proto: Inlibc Protochk Hasproto i\_systypes \

usethreads i\_stdlib extern\_C

?MAKE: -pick add \$@ %<

?S:d\_srand48\_r:

?S: This variable conditionally defines the HAS\_SRAND48\_R symbol,

?S: which indicates to the C program that the srand48\_r()

?S: routine is available.

?S:.

?S:srand48\_r\_proto:

?S: This variable encodes the prototype of srand48\_r.

?S: It is zero if d\_srand48\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_srand48\_r

?S: is defined.

?S:.

?C:HAS\_SRAND48\_R:

?C: This symbol, if defined, indicates that the srand48\_r routine

```

?C: is available to srand48 re-entrantly.
?C:.
?C:SRAND48_R_PROTO:
?C: This
symbol encodes the prototype of srand48_r.
?C: It is zero if d_srand48_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_srand48_r
?C: is defined.
?C:.
?H:#$d_srand48_r HAS_SRAND48_R /**/
?H:#define SRAND48_R_PROTO $srand48_r_proto /**/
?H:.
?T:try hdrs d_srand48_r_proto
: see if srand48_r exists
set srand48_r d_srand48_r
eval $inlibc
case "$d_srand48_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_stdlib stdlib.h"
case "$d_srand48_r_proto:$usethreads" in
":define") d_srand48_r_proto=define
set d_srand48_r_proto srand48_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_srand48_r_proto" in
define)
case "$srand48_r_proto" in
"|0) try='int srand48_r(long, struct drand48_data*);'
./protochk "$sextern_C $try" $hdrs && srand48_r_proto=I_LS ;;
esac
case "$srand48_r_proto" in
"|0) d_srand48_r=undef
srand48_r_proto=0
echo "Disabling srand48_r, cannot determine prototype." >&4 ;;
* ) case
"$srand48_r_proto" in
REENTRANT_PROTO*) ;;
*) srand48_r_proto="REENTRANT_PROTO_$srand48_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "srand48_r has no prototype, not using it." >&4 ;;
esac
d_srand48_r=undef
srand48_r_proto=0

```

```
;;
esac
;;
*) srand48_r_proto=0
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_srand48_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_difftime.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_difftime.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:07:31 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_difftime: Inlibc
?MAKE: -pick add $@ %<
?S:d_difftime:
?S: This variable conditionally defines the HAS_DIFFTIME symbol, which
?S: indicates to the C program that the difftime() routine is available.
?S:.
?C:HAS_DIFFTIME :
?C: This symbol, if defined, indicates that
the difftime routine is
?C: available.
?C:.
?H:#$d_difftime HAS_DIFFTIME /**/
?H:.
?LINT:set d_difftime
: see if difftime exists
set difftime d_difftime
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
```

5.38.0/dist/U/d\_difftime.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_isless: cat Compile rm\_try Setvar

?MAKE: -pick add \$@ %<

?S:d\_isless:

?S: This variable conditionally defines the HAS\_ISLESS symbol, which

?S: indicates to the C program that the isless() routine is available.

?S:.

?C:HAS\_ISLESS:

?C: This symbol, if defined, indicates that the isless routine is

?C: available to do the isless function.

?C:.

?H:#\$d\_isless HAS\_ISLESS /\*\*/

?H:.

?LINT:set d\_isless

: check for isless

echo "Checking to see if you have isless..." >&4

\$cat >try.c <<EOCP

#include <math.h>

int main() { return isless(2.0, 1.0); }

EOCP

set try

if eval \$compile; then

val="\$define"

echo "You have isless."

else

val="\$undef"

echo "You do not have isless."

fi

\$rm\_try

set d\_isless

eval \$setvar

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/U/perl/d\_isless.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

```

?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: yacc.U,v $
?RCS: Revision 3.0.1.1 1994/05/13 15:28:48 ram
?RCS: patch27: added byacc as another alternative (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:10:03 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:yacc yaccflags: Guess Myread Loc Oldconfig byacc bison cat test
?MAKE: -pick add $@ %<
?S:yacc:
?S: This variable holds the name of the compiler compiler we
?S: want to use in the Makefile. It can be yacc, byacc, or bison -y.
?S:.
?S:yaccflags:
?S: This variable contains any
additional yacc flags desired by the
?S: user. It is up to the Makefile to use this.
?S:.
?T:comp
: determine compiler compiler
echo " "
comp='yacc'
if $test -f "$byacc$_exe"; then
comp="byacc or $comp"
fi
if $test -f "$bison$_exe"; then
comp="$comp or bison -y"
fi
case "$yacc" in
")
yacc=`./loc yacc yacc $pth`
if $test -f "$yacc$_exe"; then
dflt='yacc'
elif $test -f "$byacc$_exe"; then
dflt='byacc'
elif $test -f "$bison$_exe"; then
dflt='bison'
else
dflt=""
fi
;;
*) dflt="$yacc";;
esac
rp="Which compiler compiler ($comp) shall I use?"

```

```

./myread
yacc="$ans"
case "$yacc" in
*bis*)
case "$yacc" in
*_y*) ;;
*)
yacc="$yacc -y"
echo "(Adding -y option to bison to get yacc-compatible behaviour.)"
;;
esac
;;
esac

```

```

@if yaccflags
: see if we need extra yacc flags
dflt="$yaccflags"
case "$dflt" in
") dflt=none;;
esac
$cat <<EOH

```

Your yacc program may need extra flags to normally process the parser sources. Do NOT specify any -d or -v flags here, since those are explicitly known by the various Makefiles. However, if your machine has strange/undocumented options (like -Sr# on SCO to specify the maximum number of grammar rules), then please add them here. To use no flags, specify the word "none".

```

EOH
rp="Any additional yacc flags?"
./myread
case "$ans" in
none) yaccflags="";;
*) yaccflags="$ans";;
esac

```

@end

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/yacc.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getservent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getservent\_r getservent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getservent\_r:

?S: This variable conditionally defines the HAS\_GETSERVENT\_R symbol,  
 ?S: which indicates to the C program that the getservent\_r()  
 ?S: routine is available.

?S:.

?S:getservent\_r\_proto:

?S: This variable encodes the prototype of getservent\_r.  
 ?S: It is zero if d\_getservent\_r is undef, and one of the  
 ?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getservent\_r  
 ?S: is defined.

?S:.

?C:HAS\_GETSERVENT\_R:

?C: This symbol, if defined, indicates that the getservent\_r routine  
 ?C: is  
 available to getservent re-entrantly.

?C:.

?C:GETSERVENT\_R\_PROTO:

?C: This symbol encodes the prototype of getservent\_r.  
 ?C: It is zero if d\_getservent\_r is undef, and one of the  
 ?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getservent\_r  
 ?C: is defined.

?C:.

?H:#\$d\_getservent\_r HAS\_GETSERVENT\_R /\*\*/  
 ?H:#define GETSERVENT\_R\_PROTO \$getservent\_r\_proto /\*\*/  
 ?H:.

?T:try hdrs d\_getservent\_r\_proto  
 : see if getservent\_r exists  
 set getservent\_r d\_getservent\_r  
 eval \$inlibc  
 case "\$d\_getservent\_r" in  
 "\$define")  
 hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"  
 case "\$d\_getservent\_r\_proto:\$usethreads" in  
 ":define") d\_getservent\_r\_proto=define  
 set d\_getservent\_r\_proto getservent\_r \$hdrs  
 eval \$hasproto ;;  
 \*) ;;  
 esac  
 case "\$d\_getservent\_r\_proto" in  
 define)  
 case "\$getservent\_r\_proto" in

```

"|0) try='int getservent_r(struct servent*, char*, size_t, struct servent**);'
./protochk "$extern_C $try" $hdrs && getservent_r_proto=I_SBWR ;;
esac
case "$getservent_r_proto"
in
"|0) try='int getservent_r(struct servent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getservent_r_proto=I_SBI ;;
esac
case "$getservent_r_proto" in
"|0) try='struct servent* getservent_r(struct servent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getservent_r_proto=S_SBI ;;
esac
case "$getservent_r_proto" in
"|0) try='int getservent_r(struct servent*, struct servent_data*);'
./protochk "$extern_C $try" $hdrs && getservent_r_proto=I_SD ;;
esac
case "$getservent_r_proto" in
"|0) d_getservent_r=undef
getservent_r_proto=0
echo "Disabling getservent_r, cannot determine prototype." >&4 ;;
*) case "$getservent_r_proto" in
REENTRANT_PROTO*) ;;
*) getservent_r_proto="REENTRANT_PROTO_$getservent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susethreads" in
define) echo "getservent_r has no prototype, not using it." >&4 ;;
esac
d_getservent_r=undef
getservent_r_proto=0
;;
esac
;;
*) getservent_r_proto=0
;;
esac

```

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_getservent\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_stdbool.U,v \$

?RCS:

?RCS: Copyright (c) 2011 H.Merijn Brand



```

?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:i_stdbool: cat Compile rm_try Setvar
?MAKE: -pick add $@ %<
?S:i_stdbool:
?S: This variable conditionally defines the I_STDBOOL symbol, which
?S: indicates to the C program that <stdbool.h> exists and should
?S: be included.
?S:.
?C:I_STDBOOL:
?C: This symbol, if defined, indicates that <stdbool.h> exists and
?C: can be included.
?C:.
?H:#$i_stdbool I_STDBOOL /**/
?H:.
?LINT:set i_stdbool
: see if stdbool is available
: we want a real compile instead of Inhdr because some Solaris systems
: have stdbool.h, but it can only be used if the compiler indicates it
: is sufficiently c99-compliant.
echo " "
$cat >try.c <<EOCP
#include <stdio.h>
#include <stdbool.h>
int func(bool x)
{
    return
    x ? 1 : 0;
}
int main(int argc, char **argv)
{
    return func(0);
}
EOCP
set try
if eval $compile; then
echo "<stdbool.h> found." >&4
val="$define"
else
echo "<stdbool.h> NOT found." >&4
val="$undef"
fi
$rm_try
set i_stdbool
eval $setvar

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_stdbool.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Begin.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Begin.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 14:56:35 ram

?RCS: patch61: added Extractall dependency

?RCS:

?RCS: Revision 3.0.1.2 1995/01/30 14:25:08 ram

?RCS: patch49: avoid an empty rmlist: systems might choke on it (WED)

?RCS:

?RCS: Revision 3.0.1.1 1994/10/31 09:32:20 ram

?RCS: patch44: created

?RCS:

?X:

?X: This file comes after option processing had been done and after all

?X: the default values have been set up. It marks the beginning

of questions.

?X: It is important that Options be listed \*after\* Myinit to ensure that the

?X: default initializations performed by Init and Myinit will not clobber

?X: any setting done on the command line via -D or -U.

?X:

?MAKE:Begin: Myinit Options package Extractall

?MAKE: -pick add \$@ %<

: Eunice requires " " instead of "", can you believe it

echo " "

: Here we go...

echo "Beginning of configuration questions for \$package."

?X: Make sure the rm below is given a non-empty list for some systems.

?X: This is run only when within the UU directory, hence we can safely

?X: attempt to rm a non-existent 'X' file...

trap 'echo " "; test -d ../UU && rm -rf X \$rmlist; exit 1' 1 2 3 15

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Begin.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_dlopen.U,v 3.0.1.2 1995/07/25 13:52:56 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_dlopen.U,v $
?RCS: Revision 3.0.1.2 1995/07/25 13:52:56 ram
?RCS: patch56: force compile-link test since symbol might lie in crt0.o (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:07:34 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_dlopen: Inlibc runnm d_cplusplus ccflags gccversion
?MAKE: -pick add $@ %<
?S:d_dlopen:
?S: This variable conditionally defines the HAS_DLOPEN
symbol, which
?S: indicates to the C program that the dlopen() routine is available.
?S:.
?C:HAS_DLOPEN :
?C: This symbol, if defined, indicates that the dlopen routine is
?C: available.
?C:.
?H:#$d_dlopen HAS_DLOPEN /**/
?H:.
?T: xxx_runnm
?T: xxx_ccflags
?LINT:set d_dlopen
?X: We don't permanently change runnm and ccflags, but we do temporarily.
?LINT: change runnm
?LINT: change ccflags
: see if dlopen exists
?X: On NetBSD and FreeBSD, dlopen is available, but it is in
?X: /usr/lib/crt0.o, not in any of the libraries. Therefore, do not
?X: use the nm extraction, but use a real compile and link test instead.
xxx_runnm="$runnm"
xxx_ccflags="$ccflags"
runnm=false
: with g++ one needs -shared to get is-in-libc to work for dlopen
```

```

case "$gccversion" in
") ;;
*Clang*) ;;
*) case "$d_cplusplus" in
"$define") ccflags="$ccflags -shared" ;;
esac
;;
esac
set dlopen d_dlopen
eval $inlibc
runnm="$xxx_runnm"
ccflags="$xxx_ccflags"

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_dlopen.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: ccflags.U,v 3.0.1.9 1997/02/28 15:27:07 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: ccflags.U,v $
?RCS: Revision 3.0.1.9 1997/02/28 15:27:07 ram
?RCS: patch61: removed support for NO_PROTOTYPE detection on SCO
?RCS: patch61: new locincpth variable
?RCS: patch61: added info on the "additional ld flags" question
?RCS:
?RCS: Revision 3.0.1.8 1995/07/25 13:48:54 ram
?RCS: patch56: re-arranged compile line to include ldflags before objects
?RCS:
?RCS: Revision 3.0.1.7 1995/05/12 12:08:33 ram
?RCS: patch54: now checks for cc/ccflags/ldflags
coherency
?RCS:
?RCS: Revision 3.0.1.6 1994/10/29 16:07:02 ram
?RCS: patch36: gcc versioning no longer relies on the C compiler's name
?RCS: patch36: simplified check for gcc version checking (ADO)
?RCS:
?RCS: Revision 3.0.1.5 1994/08/29 16:06:35 ram
?RCS: patch32: propagate -posix flag from ccflags to ldflags
?RCS:

```

?RCS: Revision 3.0.1.4 1994/05/06 14:28:45 ram

?RCS: patch23: -fpcc-struct-return only needed in gcc 1.x (ADO)

?RCS: patch23: cppflags now computed on an option-by-option basis

?RCS: patch23: magically added cc flags now only done the first time

?RCS:

?RCS: Revision 3.0.1.3 1993/09/13 15:58:29 ram

?RCS: patch10: explicitly mention -DDEBUG just in case they need it (WAD)

?RCS: patch10: removed all the "tans" variable usage (WAD)

?RCS:

?RCS: Revision 3.0.1.2 1993/08/27 14:39:38 ram

?RCS: patch7: added support for OSF/1 machines

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:00:24 ram

?RCS: patch6: added defaults for cppflags, ccflags and ldflags

?RCS:

?RCS:

Revision 3.0 1993/08/18 12:05:31 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:ccflags ldflags lkflags cppflags optimize locincpth: test cat \  
 Myread Guess Options Oldconfig +gccversion mips\_type +usrinc \  
 package contains rm +cc cppstdin cppminus cprun cpplast libpth \  
 libs loclibpth hint usesocks sh run rm\_try sysroot

?MAKE: -pick add \$@ %<

?S:ccflags:

?S: This variable contains any additional C compiler flags desired by  
 ?S: the user. It is up to the Makefile to use this.

?S:.

?S:cppflags:

?S: This variable holds the flags that will be passed to the C pre-  
 ?S: processor. It is up to the Makefile to use it.

?S:.

?S:optimize:

?S: This variable contains any optimizer/debugger flag that should be used.  
 ?S: It is up to the Makefile to use it.

?S:.

?S:ldflags:

?S: This variable contains any additional C loader flags desired by  
 ?S: the user. It is up to the Makefile to use this.

?S:.

?S:lkflags:

?S: This variable contains any additional C partial linker flags desired  
 by  
 ?S: the user. It is up to the Makefile to use this.

?S:.

?S:locincpth:

?S: This variable contains a list of additional directories to be  
 ?S: searched by the compiler. The appropriate '-I' directives will

```

?S: be added to ccflags. This is intended to simplify setting
?S: local directories from the Configure command line.
?S: It's not much, but it parallels the loclibpth stuff in libpth.U.
?S:.
?T:inctest thisincl xxx inclwanted ftry previous thislibdir
?T:EBUGGING DEBUGGING
?T:check flag callback checkccflag
?F:!cpp.c !gcctest !try
?D:cppflags=""
?D:ccflags=""
?D:ldflags=""
?D:optimize=""
?LINT:extern _sysroot
?INIT:: Possible local include directories to search.
?INIT:: Set locincpth to "" in a hint file to defeat local include searches.
?INIT:locincpth="/usr/local/include /opt/local/include /usr/gnu/include"
?INIT:locincpth="$locincpth /opt/gnu/include /usr/GNU/include /opt/GNU/include"
?INIT::
?INIT:: no include file wanted by default
?INIT:inclwanted=""
?INIT:
?INIT:: Enable
  -DEBUGGING and -DDEBUGGING from the command line
?INIT:EBUGGING=""
?INIT:DEBUGGING=""
?INIT:
: determine optimization, if desired, or use for debug flag also
?X: Allow for Configure -Uoptimize -- it's not strictly sensible, but
?X: it has happened and we know what they mean. AD 2/16/98
case "$optimize" in
'|$undef) dflt='none';;
") dflt='-O';;
*) dflt="$optimize";;
esac
$cat <<EOH

```

By default, \$package compiles with the -O flag to use the optimizer. Alternately, you might want to use the symbolic debugger, which uses the -g flag (on traditional Unix systems). Either flag can be specified here. To use neither flag, specify the word "none".

```

EOH
rp="What optimizer/debugger flag should be used?"
./myread
optimize="$ans"
case "$optimize" in
'none') optimize="" ;;
esac

```

```

: Check what DEBUGGING is required from the command line
: -DEBUGGING or -DDEBUGGING or
: -DEBUGGING=both = -g + -DDEBUGGING
: -DEBUGGING=-g or -Doptimize=-g = -g
: -DEBUGGING=none or -UDEBUGGING =
: -DEBUGGING=old
  or -DEBUGGING=default = ? $optimize
case "$EDEBUGGING" in
") ;;
*) DEBUGGING=$EDEBUGGING ;;
esac

case "$DEDEBUGGING" in
-g|both|$define)
  case "$optimize" in
*-g*) ;;
*) optimize="$optimize -g" ;;
  esac ;;
none|$undef)
  case "$optimize" in
*-g*) set `echo "X $optimize " | sed 's/ -g / /'`
  shift
  optimize="$*"
  ;;
  esac ;;
esac

dflt="
case "$DEDEBUGGING" in
both|$define) dflt='-DDEBUGGING'
esac

: argument order is deliberate, as the flag will start with - which set could
: think is an option
checkccflag='check=$1; flag=$2; callback=$3;
echo " ";
echo "Checking if your compiler accepts $flag" >&4;
[ "X$sysroot" != "X" ] && echo "For sysroot = $sysroot";
echo "int main(void) { return 0; }" > gcctest.c;
if $cc $_sysroot -O2 $flag -o gcctest gcctest.c 2>gcctest.out && $run ./gcctest; then
  echo "Yes, it does." >&4;
  if $test -s gcctest.out ; then
    echo "But your platform does not like it:";
    cat gcctest.out;
  else
  case "$ccflags" in
*$check*)

```

```

    echo "Leaving current flags $ccflags alone." >&4
    ;;
*) dflt="$dflt $flag";
    eval $callback
    ;;
esac
fi
else
    echo "Nope, it does not, but that is ok." >&4;
fi
,

```

: We will not override a previous value, but we might want to

: augment a hint file

```
case "$hint" in
```

```
default|recommended)
```

```
case "$gccversion" in
```

```
1.*) dflt="$dflt -fpcc-struct-return" ;;
```

```
esac
```

```
case "$optimize:$DEBUGGING" in
```

```
*-g*:old) dflt="$dflt -DDEBUGGING";;
```

```
esac
```

?X: check for POSIXized ISC

```
case "$gccversion" in
```

```
2.*) if $test -d /etc/conf/kconfig.d &&
```

```
    $contains _POSIX_VERSION $usrinc/sys/unistd.h >/dev/null 2>&1
```

```
then
```

```
    # Interactive Systems (ISC) POSIX mode.
```

```
    dflt="$dflt -posix"
```

```
fi
```

```
;;
```

```
esac
```

?X: If the user has gcc-2.95 or greater, try adding -fno-strict-alias.

?X: Since the gcc "version" can be non-numeric, e.g.

?X: "2.95.1 19990809 (prerelease)", we'll do the test on any version

?X: greater than 2.8.

?X: --Andy Dougherty 27 Aug 1999

```
case "$gccversion" in
```

```
1.*) ;;
```

```
2.[0-8]*)
```

```
;;
```

```
?*) set strict-aliasing -fno-strict-aliasing
```

```
eval $checkccflag
```

```
;;
```

```
esac
```

?X: HMB 200405

?X: -pipe has shown a compile time speedup of about 40% on Linux and HP-UX



?X: and also worked on cygwin-1.5.9

?X: If a system fails, disable it in the hints. 99% of gcc uses binutils

```
# For gcc, adding -pipe speeds up compilations for some, but apparently
# some assemblers can't read from stdin. (It also slows down compilations
# in other cases, but those are apparently rarer these days.) AD 5/2004.
```

```
case "$gccversion" in
```

```
?*) set pipe -pipe
```

```
eval $checkccflag
```

```
::
```

```
esac
```

?X: NWC 200712

```
# on x86_64 (at least) we require an extra library (libssp) in the
# link command line. This library is not named, so I infer that it is
# an implementation detail that may change. Hence the safest approach
# is to add the flag to the flags passed to the compiler at link time,
# as that way the compiler can do the right implementation dependant
# thing. (NWC)
```

```
case "$ccflags" in
```

```
*-fno-stack-protector*)
```

```
    echo "Do not add -fstack-protector nor -fstack-protector-strong" 2>&1
```

```
    ::
```

```
*) case "$gccversion" in
```

```
    ?*) set stack-protector-strong -fstack-protector-strong
```

```
eval $checkccflag
```

```
case "$dflt" in
```

```
*-fstack-protector-strong*) ;; # It got added.
```

```
*) # Try the plain/older -fstack-protector.
```

```
    set stack-protector -fstack-protector
```

```
    eval $checkccflag
```

```
    ::
```

```
esac
```

```
::
```

```
    esac
```

```
    ::
```

```
esac
```

```
esac
```

?X: In USG mode, a MIPS system may need some BSD includes

```
case "$mips_type" in
```

```
*BSD*|*) inclwanted="$locincpth $usrinc";;
```

```
*) inclwanted="$locincpth $inclwanted $usrinc/bsd";;
```

```
esac
```

```
for thisincl in $inclwanted; do
```

```
if $test -d $thisincl; then
```

```
if $test x$thisincl != x$usrinc; then
```

```
    case "$dflt" in
```

```

*" -I$thisincl "*);;
*) dflt="$dflt -I$thisincl ";;
esac
fi
fi
done

?X: Include test function (header, symbol)
inctest='if $contains $2 $usrinc/$1 >/dev/null 2>&1; then
xxx=true;
elif $contains $2 $usrinc/sys/$1 >/dev/null 2>&1; then
xxx=true;
else
xxx=false;
fi;
if
$xxx; then
case "$dflt" in
*$2*);;
*) dflt="$dflt -D$2";;
esac;
fi'

```

```
set signal.h LANGUAGE_C; eval $inctest
```

```

case "$usesocks" in
$define)
ccflags="$ccflags -DSOCKS"
;;
esac

```

```

case "$hint" in
default|recommended) dflt="$ccflags $dflt" ;;
*) dflt="$ccflags";;
esac

```

```

case "$dflt" in
'| ') dflt=none;;
esac

```

```
$cat <<EOH
```

Your C compiler may want other flags. For this question you should include `-I/whatever` and `-DWHATEVER` flags and any other flags used by the C compiler, but you should NOT include libraries or `ld` flags like `-lwhatever`. If you want `$package` to honor its debug switch, you should include `-DDEBUGGING` here. Your C compiler might also need additional flags, such as `-D_POSIX_SOURCE`.

To use no flags, specify the word "none".

EOH

?X: strip leading space

set X \$dflt

shift

dflt=\${1+"\$@"}

rp="Any additional cc flags?"

./myread

case "\$ans" in

none) ccflags=";;

\*) ccflags="\$ans";;

esac

: the following weeds options from ccflags that are of no interest to cpp

case

"\$cppflags" in

") cppflags="\$ccflags" ;;

\*) set X \$ccflags; shift

case " \$cppflags " in

\*" \$1 "\*" ;; # Try to avoid doubling the cppflags.

\*) cppflags="\$cppflags \$ccflags" ;;

esac

::

esac

case "\$gccversion" in

1.\*) cppflags="\$cppflags -D\_\_GNUG\_\_"

esac

case "\$mips\_type" in

");;

\*BSD\*) cppflags="\$cppflags -DSYSTYPE\_BSD43";;

esac

case "\$cppflags" in

");;

\*)

echo " "

echo "Let me guess what the preprocessor flags are..." >&4

set X \$cppflags

shift

cppflags="

\$cat >cpp.c <<'EOM'

#define BLURFL foo

BLURFL xx LFRULB

EOM

?X:

?X: For each cc flag, try it out with both cppstdin and cprun, since the

?X: first is almost surely a cc wrapper. We have to try both in case

?X: of cc flags like '-Olimit 2900' that are actually two words...

?X:

```
previous=""
for flag in $*
do
  case "$flag" in
  -*) ftry="$flag";;
  *) ftry="$previous $flag";;
  esac
  if $cppstdin -DLFRULB=bar $cppflags $ftry $cppminus <cpp.c \
  >cpp1.out 2>/dev/null && \
  $cpprun -DLFRULB=bar $cppflags
  $ftry $cpplast <cpp.c \
  >cpp2.out 2>/dev/null && \
  $contains 'foo.*xx.*bar' cpp1.out >/dev/null 2>&1 && \
  $contains 'foo.*xx.*bar' cpp2.out >/dev/null 2>&1
  then
    cppflags="$cppflags $ftry"
    previous=""
  else
    previous="$flag"
  fi
done
set X $cppflags
shift
cppflags=${1+"$@"}
case "$cppflags" in
*_**) echo "They appear to be: $cppflags";;
esac
$rm -f cpp.c cpp?.out
;;
esac
```

: flags used in final linking phase

```
case "$ldflags" in
") if ./venix; then
  dflt='-i -z'
else
  dflt=""
fi
case "$ccflags" in
*-posix*) dflt="$dflt -posix" ;;
esac
;;
*) dflt="$ldflags";;
esac
# See note above about -fstack-protector
case "$ccflags" in
```

```

*-fstack-protector-strong*)
case "$dflt" in
*-fstack-protector-strong*) ;; # Don't add it again
*) dflt="$dflt -fstack-protector-strong" ;;
esac
;;
*-fstack-protector*)
case "$dflt" in
*-fstack-protector*) ;; # Don't add it again
*) dflt="$dflt -fstack-protector" ;;
esac
;;
esac

```

: Try to guess additional flags to pick up local libraries.

```

for thislibdir in $libpth; do
case " $loclibpth " in
*" $thislibdir "*)
case "$dflt " in
*" -L$thislibdir "*) ;;
*) dflt="$dflt -L$thislibdir" ;;
esac
;;
esac
done

```

```

case "$dflt" in
") dflt='none' ;;
esac

```

\$cat <<EOH

Your C linker may need flags. For this question you should include -L/whatever and any other flags used by the C linker, but you should NOT include libraries like -lwhatever.

Make sure you include the appropriate -L/path flags if your C linker does not normally search all of the directories you specified above, namely

\$libpth

To use no flags, specify the word "none".

EOH

```

rp="Any additional ld flags (NOT including libraries)?"
. ./myread
case "$ans" in

```

```

none) ldflags=";;
*) ldflags="$ans";;
esac
rmlist="$rmlist pdp11"

```

```

@if lkflags
: partial linking may need other flags
case "$lkflags" in
") case "$ldflags" in
") dflt='none';;
*) dflt="$ldflags";;
esac;;
*) dflt="$lkflags";;
esac
echo " "
rp="Partial linking flags to be used (NOT
including -r)?"
./myread
case "$ans" in
none) lkflags=";;
*) lkflags="$ans";;
esac

```

```

@end
?X:
?X: If the user changes compilers after selecting a hint file, it's
?X: possible that the suggested ccflags/ldflags will be wrong. Try to
?X: compile and run a simple test program. Let the user see all the
?X: error messages. -- ADO and RAM
?X: Sometimes, particularly on Linux systems, there is a bad library
?X: (e.g. a dangling symlink or incompatible library or a "run-time"
?X: version but not a "development" version of a library). This test
?X: will catch those sorts of problems too, though how to fix them
?X: may not be obvious.
?X:
: coherency check
echo " "
echo "Checking your choice of C compiler and flags for coherency..." >&4
$cat >try.c <<'EOF'
#include <stdio.h>
int main() { printf("Ok\n"); return(0); }
EOF
?X: Strip extra blanks in case some of the following variables are empty
set X $cc -o try $optimize $ccflags $ldflags try.c $libs
shift
$cat >try.msg <<'EOM'
I've tried to

```

compile and run the following simple program:

EOM

```
$cat try.c >> try.msg
```

```
$cat >> try.msg <<EOM
```

I used the command:

```
$*
```

```
$run ./try
```

and I got the following output:

EOM

```
dflt=y
```

```
?X: Use "sh -c" to avoid error messages tagged with leading "Configure:".
```

```
?X: We need to try the resulting executable, because cc might yield a 0 status
```

```
?X: even when ld failed, in which case the executable will not run properly,
```

```
?X: if its x bit is set at all...
```

```
if $sh -c "$cc -o try $optimize $ccflags $ldflags try.c $libs" >>try.msg 2>&1; then
```

```
if $sh -c "$run ./try " >>try.msg 2>&1; then
```

```
xxx=`$run ./try`
```

```
case "$xxx" in
```

```
"Ok") dflt=n ;;
```

```
*) echo 'The program compiled OK, but produced no output.' >> try.msg ;;
```

```
esac
```

```
else
```

```
echo "The program compiled OK, but exited with status $?." >>try.msg
```

```
rp="You have a problem. Shall I abort Configure"
```

```
dflt=y
```

```
fi
```

```
else
```

```
echo "I can't compile the test program." >>try.msg
```

```
rp="You have a BIG problem. Shall I abort Configure"
```

```
dflt=y
```

```
fi
```

```
case "$dflt" in
```

```
y)
```

```
$cat
```

```
try.msg >&4
```

```
?X: using -K will prevent default aborting--maybe they're cross compiling?
```

```
case "$knowitall" in
```

```
")
```

```
echo "(The supplied flags or libraries might be incorrect.)"
```

```
::
```

```
*) dflt=n;;
```

```
esac
```

```

echo " "
. ./myread
case "$ans" in
n*[N*]) ;;
*) echo "Ok. Stopping Configure." >&4
exit 1
;;
esac
;;
n) echo "OK, that should do.";;
esac
$rm_try gcctest gcctest.out

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/ccflags.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_shadow.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1998 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:i_shadow: Inhdr Hasfield
```

```
?MAKE: -pick add $@ %<
```

```
?S:i_shadow:
```

```
?S: This variable conditionally defines the I_SHADOW symbol, and indicates
```

```
?S: whether a C program should include <shadow.h>.
```

```
?S:.
```

```
?C:I_SHADOW:
```

```
?C: This symbol, if defined, indicates that <shadow.h> exists and
```

```
?C: should be included.
```

```
?C:.
```

```
?H:#$i_shadow I_SHADOW /**/
```

```
?H:.
```

```
?LINT:set i_shadow
```

```
: see if this is a shadow.h system
```

```
set shadow.h i_shadow
```

```
eval $inhdr
```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i_shadow.U

```

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```
?RCS: $Id: i_execinfo.U 34 2010-11-27 11:55:39Z rmanfredi $
```



?RCS:  
 ?RCS: Copyright (c) 2011, Raphael Manfredi  
 ?RCS:  
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 ?RCS: You may reuse parts of this distribution only within the terms of  
 ?RCS: that same Artistic License; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?MAKE:i\_execinfo: Inhdr  
 ?MAKE: -pick add \$@ %<  
 ?S:i\_execinfo:  
 ?S: This variable conditionally defines the I\_EXECINFO symbol, and indicates  
 ?S: whether a C program may include <execinfo.h>, for backtrace() support.  
 ?S:.  
 ?C:I\_EXECINFO:  
 ?C: This symbol, if defined, indicates to the C program that it should  
 ?C: include <execinfo.h> for backtrace() support.  
 ?C:.  
 ?H:#\$i\_execinfo I\_EXECINFO /\*\*/  
 ?H:.  
 ?LINT:set i\_execinfo  
 : see if this is an execinfo.h system  
 set execinfo.h i\_execinfo  
 eval  
 \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/i\_execinfo.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
 ?RCS:  
 ?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
 ?RCS:  
 ?RCS: You may redistribute only under the terms of the Artistic License,  
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 ?RCS: that same Artistic License; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: \$Log: lseektype.U,v \$  
 ?RCS: Revision 3.0.1.1 1994/08/29 16:30:10 ram  
 ?RCS: patch32: now uses new Typedef unit to compute type information  
 ?RCS:  
 ?RCS: Revision 3.0 1993/08/18 12:09:08 ram  
 ?RCS: Baseline for dist 3.0 netwide release.

?RCS:  
?MAKE:lseektype: Myread Typedef  
?MAKE: -pick add \$@ %<  
?S:lseektype:  
?S: This variable defines lseektype to be something like off\_t, long,  
?S: or whatever type is used to declare lseek offset's type in the  
?S: kernel (which also appears to be lseek's return type).  
?S:.  
?C:Off\_t  
(LSEEKTYPE):  
?C: This symbol holds the type used to declare offsets in the kernel.  
?C: It can be int, long, off\_t, etc... It may be necessary to include  
?C: <sys/types.h> to get any typedef'ed information.  
?C:.  
?H:#define Off\_t \$lseektype /\* <offset> type \*/  
?H:.  
: see what type lseek is declared as in the kernel  
set off\_t lseektype long stdio.h sys/types.h  
eval \$typedef  
echo " "  
dflt="\$lseektype"  
rp="What type is lseek's offset on this system declared as?"  
./myread  
lseektype="\$ans"

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/lseektype.U

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?RCS: \$Id: d\_endpwent\_r.U,v 0RCS:  
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
?RCS:  
?MAKE:d\_endpwent\_r endpwent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_pwd extern\_C  
?MAKE: -pick add \$@ %<  
?S:d\_endpwent\_r:  
?S: This variable conditionally defines the HAS\_ENDPWENT\_R symbol,  
?S: which indicates to the C program that the endpwent\_r()  
?S: routine is available.  
?S:.  
?S:endpwent\_r\_proto:  
?S: This variable encodes the prototype of endpwent\_r.

?S: It is zero if d\_endpwent\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endpwent\_r  
?S: is defined.  
?S:.  
?C:HAS\_ENDPWENT\_R:  
?C: This symbol, if defined, indicates that the endpwent\_r routine  
?C: is available to  
endpwent re-entrantly.  
?C:.  
?C:ENDPWENT\_R\_PROTO:  
?C: This symbol encodes the prototype of endpwent\_r.  
?C: It is zero if d\_endpwent\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endpwent\_r  
?C: is defined.  
?C:.  
?H:#\$d\_endpwent\_r HAS\_ENDPWENT\_R /\*\*/  
?H:#define ENDPWENT\_R\_PROTO \$endpwent\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_endpwent\_r\_proto  
: see if endpwent\_r exists  
set endpwent\_r d\_endpwent\_r  
eval \$inlibc  
case "\$d\_endpwent\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_pwd pwd.h"  
case "\$d\_endpwent\_r\_proto:\$usetthreads" in  
":define") d\_endpwent\_r\_proto=define  
set d\_endpwent\_r\_proto endpwent\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_endpwent\_r\_proto" in  
define)  
case "\$endpwent\_r\_proto" in  
"|0) try='int endpwent\_r(FILE\*\*);'  
./protochk "\$extern\_C \$try" \$hdrs && endpwent\_r\_proto=I\_H ;;  
esac  
case "\$endpwent\_r\_proto" in  
"|0) try='void endpwent\_r(FILE\*\*);'  
./protochk "\$extern\_C \$try" \$hdrs && endpwent\_r\_proto=V\_H ;;  
esac  
case "\$endpwent\_r\_proto"  
in  
"|0) d\_endpwent\_r=undef  
endpwent\_r\_proto=0  
echo "Disabling endpwent\_r, cannot determine prototype." >&4 ;;  
\* ) case "\$endpwent\_r\_proto" in  
REENTRANT\_PROTO\*) ;;

```

*) endpwent_r_proto="REENTRANT_PROTO_${endpwent_r_proto}";
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "endpwent_r has no prototype, not using it." >&4 ;;
esac
d_endpwent_r=undef
endpwent_r_proto=0
;;
esac
;;
*) endpwent_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_endpwent_r.U

```

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?RCS: \$Id\$

?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: man1dir.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:10:29 ram

?RCS: patch61: created

?RCS:

?X:

?X: This was originally specific to perl5. Since perl5 has man pages that

?X: go in both man1/ and man3/ directories, we need both man1dir

?X: and man3dir. This unit is basically dist's mansrc.U with

?X: man1 used instead of man everywhere.

?X:

?MAKE:man1dir man1direxp man1text installman1dir: afs cat nroff Loc Oldconfig \

spackage test Getfile Prefixit prefixexp

Prefixup sysman Myread

?MAKE: -pick add \$@ %<

?Y:TOP

?S:man1dir:  
 ?S: This variable contains the name of the directory in which manual  
 ?S: source pages are to be put. It is the responsibility of the  
 ?S: Makefile.SH to get the value of this into the proper command.  
 ?S: You must be prepared to do the ~name expansion yourself.  
 ?S:.  
 ?S:man1direxp:  
 ?S: This variable is the same as the man1dir variable, but is filename  
 ?S: expanded at configuration time, for convenient use in makefiles.  
 ?S:.  
 ?S:installman1dir:  
 ?S: This variable is really the same as man1direxp, unless you are using  
 ?S: AFS in which case it points to the read/write location whereas  
 ?S: man1direxp only points to the read-only access location. For extra  
 ?S: portability, you should only use this variable within your makefiles.  
 ?S:.  
 ?S:man1ext:  
 ?S: This variable contains the extension that the manual page should  
 ?S: have: one of 'n', 'l', or '1'. The Makefile must supply the '!'.  
 ?S: See man1dir.  
 ?S:.  
 ?T:lookpath  
 : determine  
   where manual pages go  
 set man1dir man1dir none  
 eval \$prefixit  
 \$cat <<EOM

\$spackage has manual pages available in source form.  
 EOM  
 case "\$nroff" in  
 nroff)  
   echo "However, you don't have nroff, so they're probably useless to you."  
 case "\$man1dir" in  
 ") man1dir="none";;  
 esac;;  
 esac  
 echo "If you don't want the manual sources installed, answer 'none'."  
 case "\$man1dir" in  
 ') dflt=none  
 ;;  
 ")  
   lookpath="\$prefixexp/man/man1 \$prefixexp/man/l\_man/man1"  
   lookpath="\$lookpath \$prefixexp/man/p\_man/man1"  
   lookpath="\$lookpath \$prefixexp/man/u\_man/man1"  
   lookpath="\$lookpath \$prefixexp/man/man.1"  
 ?X: Experience has shown people expect man1dir to be under prefix,  
 ?X: so we now always put it there. Users who want other behavior

?X: can answer interactively or use a command line option.

?X: Does user have System V-style man paths.

```
case "$sysman" in
*/?_man*) dflt=`./loc . $prefixexp/l_man/man1 $lookpath` ;;
*) dflt=`./loc . $prefixexp/man/man1 $lookpath` ;;
esac
set dflt
eval $prefixup
;;
*)
dflt="$man1dir"
;;
esac
echo " "
fn=dn+~
rp="Where do the main $spackage manual pages (source) go?"
./getfile
if $test "X$man1direxp" != "X$ansexp"; then
installman1dir="
fi
man1dir="$ans"
man1direxp="$ansexp"
case "$man1dir" in
") man1dir=' '
installman1dir="";;
esac
if $afs; then
$cat <<EOM
```

Since you are running AFS, I need to distinguish the directory in which manual pages reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

EOM

```
case "$installman1dir" in
") dflt=`echo $man1direxp | sed 's#^/afs/#/afs/.#`";;
*) dflt="$installman1dir";;
esac
fn=de~
rp='Where will man pages be installed?'
./getfile
installman1dir="$ans"
else
installman1dir="$man1direxp"
fi
```

: What suffix to use on installed man pages

```

case "$man1dir" in
' ')
man1ext='0'
;;
*)
rp="What suffix should be used for the main $spackage man pages?"
case "$man1ext" in
") case "$man1dir" in
*1) dflt=1 ;;
*1p)
dflt=1p ;;
*1pm) dflt=1pm ;;
*1) dflt=1;;
*n) dflt=n;;
*o) dflt=o;;
*p) dflt=p;;
*C) dflt=C;;
*L) dflt=L;;
*L1) dflt=L1;;
*) dflt=1;;
esac
;;
*) dflt="$man1ext";;
esac
./myread
man1ext="$ans"
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/man1dir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Tr.U,v 3.0.1.2 1994/10/29 18:00:54 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: Tr.U,v \$

?RCS: Revision 3.0.1.2 1994/10/29 18:00:54 ram

?RCS: patch43: forgot to quote \$@ to protect against "evil" characters

?RCS:

```

?RCS: Revision 3.0.1.1 1994/10/29 15:58:35 ram
?RCS: patch36: created
?RCS:
?X:
?X: This unit produces a bit of shell code that must be dotted in in order
?X: to do a character translation. It catches translations to uppercase or
?X: to lowercase, and then invokes the real tr to perform the job.
?X:
?X: This unit is necessary
    on HP machines (HP strikes again!) with non-ascii
?X: ROMAN8-charset, where normal letters are not arranged in a row, so a-z
?X: covers not the whole alphabet but lots of special chars. This was reported
?X: by Andreas Sahlbach <a.sahlbach@tu-bs.de>.
?X:
?X: Units performing a tr '[A-Z]' '[a-z]' or the other way round should include
?X: us in their dependency and use ./tr instead.
?X:
?MAKE:Tr: startsh tr eunicifix
?MAKE:-pick add $@ %<
?F:./tr
?T:up low
: see whether [:lower:] and [:upper:] are supported character classes
echo " "
case ""echo AbyZ | $tr '[:lower:]' '[:upper:]' 2>/dev/null`"-`"echo AbyZ | $tr '[:upper:]' '[:lower:]' 2>/dev/null`" in
ABYZ-abyz)
echo "Good, your tr supports [:lower:] and [:upper:] to convert case." >&4
up='[:upper:]'
low='[:lower:]'
;;
*) # There is a discontinuity in EBCDIC between 'R' and 'S'
# (0xd9 and 0xe2), therefore that is a nice testing point.
if test "X$up" = X -o "X$low" = X; then
    case ""echo RS | $tr '[R-S]' '[r-s]' 2>/dev/null`"
in
    rs) up='[A-Z]'
    low='[a-z]'
    ;;
    esac
fi
if test "X$up" = X -o "X$low" = X; then
    case ""echo RS | $tr R-S r-s 2>/dev/null`" in
    rs) up='A-Z'
    low='a-z'
    ;;
    esac
fi
if test "X$up" = X -o "X$low" = X; then
    case ""echo RS | od -x 2>/dev/null`" in

```



```

*D9E2*|*d9e2*)
echo "Hey, this might be EBCDIC." >&4
if test "X$up" = X -o "X$low" = X; then
    case "`echo RS | $tr '[A-IJ-RS-Z]' '[a-ij-rs-z]' 2>/dev/null`" in
        rs) up='[A-IJ-RS-Z]'
            low='[a-ij-rs-z]'
            ;;
        esac
    fi
if test "X$up" = X -o "X$low" = X; then
    case "`echo RS | $tr A-IJ-RS-Z a-ij-rs-z 2>/dev/null`" in
        rs) up='A-IJ-RS-Z'
            low='a-ij-rs-z'
            ;;
        esac
    fi
;;
esac
fi
;;
esac
fi
esac
case "`echo RS | $tr \"\$up\" \"\$low\" 2>/dev/null`" in
rs)
    echo "Using $up and $low to convert case." >&4
    ;;
*)
    echo "I don't know how to translate letters from upper to lower case." >&4
    echo "Your tr is not acting any way I know of." >&4
    exit 1
    ;;
esac
:
    set up the translation script tr, must be called with ./tr of course
cat >tr <<EOSC
$startsh
case "\$1\$2" in
[A-Z][a-z]) exec $tr '$up' '$low';;
[a-z][A-Z]) exec $tr '$low' '$up';;
esac
exec $tr "\$@"
EOSC
chmod +x tr
$unicefix tr

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Tr.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setgrent.U,v \$  
?RCS:  
?RCS: Copyright (c) 1998 Andy Dougherty  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: \$Log: d\_setgrent.U,v \$  
?RCS:  
?MAKE:d\_setgrent: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_setgrent:  
?S: This variable conditionally defines the HAS\_SETGRENT symbol, which  
?S: indicates to the C program that the setgrent() routine is available  
?S: for initializing sequential access to the group database.  
?S:.  
?C:HAS\_SETGRENT:  
?C: This symbol, if defined, indicates that the setgrent routine is  
?C: available for initializing sequential access of the group database.  
?C:.  
?H:#\$d\_setgrent HAS\_SETGRENT /\*\*/  
?H:.  
?LINT:set d\_setgrent  
: see if setgrent exists  
set setgrent d\_setgrent  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_setgrent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Myinit.U,v 3.0 1993/08/18 12:05:07 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: This file is included with or a derivative work of a file included  
?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.  
?RCS: In accordance with clause 7 of dist's modified Artistic License:  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: \$Log: Myinit.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:05:07 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:

?X: If you want to initialize any default values, copy this unit to your  
?X: personal U directory and add the assignments to the end. This file  
?X: is included after variables are initialized but before any old  
?X: config.sh file is read in and before any Configure switch processing.  
?X:

?MAKE:Myinit

libswanted: Init

?MAKE: -pick add \$@ %<

?S:libswanted:

?S: This variable holds a list of all the libraries we want to

?S: search. The order is chosen to pick up the c library

?S: ahead of ucb or bsd libraries for SVR4.

?S:.

?LINT:extern usevfork glibpth

?LINT:change usevfork glibpth

: List of libraries we want.

?X: Put crypt here, even though I should really fix d\_crypt.U to look

?X: for it correctly, including possible shared library versions.

: If anyone needs extra -lxxx, put those in a hint file.

libswanted="cl pthread socket bind inet ndbm gdbm dbm db malloc dl ld"

libswanted="\$libswanted sun m crypt sec util c cposix posix ucb bsd BSD"

: We probably want to search /usr/shlib before most other libraries.

: This is only used by the lib/ExtUtils/MakeMaker.pm routine extliblist.

glibpth=`echo " \$glibpth " | sed -e 's! /usr/shlib ! !'`

glibpth="/usr/shlib \$glibpth"

: Do not use vfork unless overridden by a hint file.

usevfork=false

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Myinit.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_memalign.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_memalign.U,v \$

?RCS:

?MAKE:d\_memalign: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_memalign:

?S: This variable conditionally defines the HAS\_MEMALIGN symbol, which

?S: indicates to the C program that the memalign() routine is available.

?S:.

?C:HAS\_MEMALIGN :

?C: This symbol, if defined, indicates that the memalign routine is

?C: available to allocate aligned memory.

?C:.

?H:#\$d\_memalign HAS\_MEMALIGN /\*\*/

?H:.

?LINT:set d\_memalign

: see if memalign exists

set

memalign d\_memalign

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_memalign.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fegetround: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fegetround:

?S: This variable conditionally defines HAS\_FEGETROUND if fegetround() is

?S: available to get the floating point rounding mode.

?S:.

?C:HAS\_FEGETROUND:

?C: This symbol, if defined, indicates that the fegetround routine is

?C: available to return the macro corresponding to the current rounding

?C: mode.

?C:.

?H:#\$d\_fegetround HAS\_FEGETROUND /\*\*/

?H:.

?LINT:set d\_fegetround

: see if fegetround exists

set fegetround d\_fegetround

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_fegetround.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_bzero.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_bzero.U,v $
?RCS: Revision 3.0.1.2 1993/10/16 13:48:15 ram
?RCS: patch12: added magic support for bzero()
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:01:33 ram
?RCS: patch10: now only defines HAS_BZERO, no macro remap on memset (WAD)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:46 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_bzero: Inlibc
?MAKE: -pick add $@ %<
?S:d_bzero:
?S: This variable conditionally defines the HAS_BZERO
symbol if
?S: the bzero() routine is available to set memory to 0.
?S:.
?C:HAS_BZERO:
?C: This symbol is defined if the bzero() routine is available to
?C: set a memory block to 0.
?C:.
?H:#$d_bzero HAS_BZERO /**/
?H:.
?M:bzero: HAS_BZERO
?M:#ifndef HAS_BZERO
?M:#ifndef bzero
?M:#define bzero(s,l) memset((s),0,(l))
?M:#endif
?M:#endif
?M:.
?LINT:set d_bzero
: see if bzero exists
set bzero d_bzero
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/d_bzero.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Cppsym.U,v 3.0.1.5 1995/05/12 11:59:11 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: Cppsym.U,v \$

?RCS: Revision 3.0.1.5 1995/05/12 11:59:11 ram

?RCS: patch54: split awk command onto two lines for older awk's (ADO)

?RCS:

?RCS: Revision 3.0.1.4 1995/01/11 14:55:57 ram

?RCS: patch45: new cc vs. cpp symbol checking suggested by JHI

?RCS: patch45: added more cpp symbols (JHI)

?RCS:

?RCS: Revision 3.0.1.3 1994/10/29 15:51:32 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS: patch36: new symbols ardent and titan (ADO)

?RCS:

?RCS:

Revision 3.0.1.2 1994/06/20 06:53:32 ram

?RCS: patch30: extended cpp symbol lookup list (JHI)

?RCS: patch30: renamed attrlist symbol into al for brevity

?RCS:

?RCS: Revision 3.0.1.1 1993/12/15 08:14:14 ram

?RCS: patch15: added new cpp symbols \_\_bsdi\_\_ and BSD\_NET2

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:50 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X: This unit produces a shell script called Cppsym, which can be used to  
?X: determine whether any in a list of symbols is defined by the C compilation  
?X: chain (C preprocessor symbols plus C compiler native ones).  
?X: It can determine the status of any symbol, though the symbols in \$al  
?X: are more easily determined. If you want to add to \$al you can do  
?X: it in Myinit.U.

?MAKE:Cppsym ccsymbols cppsymbols cppccsymbols: run \  
eunicefix Guess awk cat tr sed sort rm rm\_try startsh osname \  
+cc +gccversion test comm uniq echo Options trnl \  
optimize cflags ldflags libs cpp\_stuff cpp

?MAKE: -pick add \$@ %<

?T:also

symbols i postprocess\_cc\_v tHdrH

?X:

?X: The symbol list is in alpha order for ease of maintenance...

?X:  
?X: Lots of new symbols (mostly rummaged from gcc), courtesy of  
?X: Jarkko Hietaniemi <jhi@snakemail.hut.fi> -- RAM, 06/06/94  
?X:  
?S:ccsymbols:  
?S: The variable contains the symbols defined by the C compiler alone.  
?S: The symbols defined by cpp or by cc when it calls cpp are not in  
?S: this list, see cppsymbols and cppcsymbols.  
?S: The list is a space-separated list of symbol=value tokens.  
?S:.  
?S:cppsymbols:  
?S: The variable contains the symbols defined by the C preprocessor  
?S: alone. The symbols defined by cc or by cc when it calls cpp are  
?S: not in this list, see ccymbols and cppcsymbols.  
?S: The list is a space-separated list of symbol=value tokens.  
?S:.  
?S:cppcsymbols:  
?S: The variable contains the symbols defined by the C compiler  
?S: when it calls cpp. The symbols defined by the cc alone or cpp  
?S: alone are not in this list, see ccymbols and cppsymbols.  
?S: The  
list is a space-separated list of symbol=value tokens.  
?S:.  
?F:./Cppsym  
?F:./Cppsym.know  
?F:!Cppsym.true  
?F:!ccsym.com  
?F:!ccsym.cpp  
?F:!ccsym.own  
?X: fake LINT hints  
?LINT:change ccflags  
?LINT:extern s  
?LINT:extern s\_\_  
: Preprocessor symbols  
echo " "  
\$echo "Guessing which symbols your C compiler and preprocessor define..." >&4  
?X: If your symbol is mixed case, just add it as-is.  
?X: All symbols will be transformed to both all-lower and all-upper.  
?X: Also drop any leading/trailing underscores, the scan will try all those.  
\$cat <<'EOSH' > Cppsym.know  
a29k aarch64 ABI64 aegis AES\_SOURCE AIX AIX32 AIX370 AIX41 AIX42  
AIX43 aixpc AIX\_SOURCE alliant ALL\_SOURCE alpha AM29000 am29000  
AMD64 amd64 amiga AMIGAOS AMIX ansi ANSI\_C\_SOURCE apollo arch\_ppc  
arch\_pwr ardent ARM ARM32 atarist att386 att3b  
BeOS BIG\_ENDIAN BIT\_MSF BSD bsd bsd43 bsd4\_2 BSD4\_3 bsd4\_3 bsd4\_4  
BSDCOMPAT bsdi BSD\_4\_3 BSD\_4\_4 BSD\_NET2 BSD\_TIME BSD\_TYPES bull  
byteorder byte\_order  
c cadmus clang clipper CMU COFF COMPILER\_VERSION

concurrent  
convex cpu CRAY cray CRAYMPP ctix CX\_UX CYGWIN  
DECC DGUX DGUX\_SOURCE DJGPP dmert DOLPHIN DPX2 DSO Dynix DynixPTX  
ELF encore EPI EXTENSIONS  
FAVOR\_BSD FILE\_OFFSET\_BITS FORTIFY\_SOURCE FreeBSD  
GCC\_NEW\_VARARGS gcos gcx gimpel GLIBC GLIBC\_MINOR GNUC GNUMINOR  
GNU\_LIBRARY GNU\_SOURCE GO32 gould GOULD\_PN  
H3050R H3050RX hbullx20 hcx host\_mips hp200 hp300 HP700 hp700  
hp800 hp9000 hp9000s200 hp9000s300 hp9000s400  
hp9000s700 hp9000s800 hp9k8 hppa hpux HPUX\_SOURCE hp\_osf  
i186 i286 i386 i486 i586 i686 i8086 i80960 i860 I960 IA32 IA64  
iAPX286 ibm ibm032 ibmesa IBMR2 ibmrt ILP32 ILP64  
INLINE\_INTRINSICS INT64 INTEL interdata INTRINSICS is68k titanium  
ksr1  
LANGUAGE\_C LARGEFILE64\_SOURCE LARGEFILE\_SOURCE LARGE\_FILE\_API  
LFS64\_LARGEFILE LFS\_LARGEFILE LIBCATAMOUNT Linux LITTLE\_ENDIAN  
LONG64 LONGDOUBLE LONGLONG LONG\_DOUBLE LONG\_LONG LP64 luna  
luna88k Lynx  
M68000 m68k m88100 m88k M88KBCS\_TARGET MACH machine MachTen  
MATH\_HAS\_NO\_SIDE\_EFFECTS mc300 mc500 mc68000 mc68010 mc68020  
mc68030 mc68040 mc68060  
mc68k mc68k32 mc700 mc88000 mc88100  
merlin mert MiNT mips MIPSEB MIPSEL MIPS\_FPSET MIPS\_ISA MIPS\_SIM  
MIPS\_SZINT MIPS\_SZLONG MIPS\_SZPTR MODERN\_C motorola MSDOS  
MTXINU MULTIMAX MVS mvs M\_AMD64 M\_ARM M\_ARMT M\_COFF M\_I186 M\_I286  
M\_I386 M\_I8086 M\_I86 M\_I86SM M\_IA64 M\_IX86 M\_PPC M\_SYS3 M\_SYS5  
M\_SYSIII M\_SYSV M\_UNIX M\_X86 M\_XENIX  
n16 ncl\_el ncl\_mr NetBSD news1500 news1700 news1800 news1900  
news3700 news700 news800 news900 NeXT NLS nonstopux ns16000  
ns32000 ns32016 ns32332 ns32k nsc32000  
OCS88 OEMVS OpenBSD os OS2 OS390 osf OSF1 OSF\_SOURCE  
PARAGON parisc pa\_risc PA\_RISC1\_1 PA\_RISC2\_0 pc532 pdp11 PGC PIC  
plexus PORTAR posix POSIX1B\_SOURCE POSIX2\_SOURCE POSIX4\_SOURCE  
POSIX\_C\_SOURCE POSIX\_SOURCE POWER powerpc ppc PROTOTYPES PWB pyr  
QK\_USER QNX  
R3000 REENTRANT RES Rhapsody RISC6000 riscix riscos RT  
S390 S390x SA110 SCO scs sequent sgi SGI\_SOURCE SH SH3 sinix  
SIZE\_INT SIZE\_LONG SIZE\_PTR SOCKETS\_SOURCE SOCKET\_SOURCE sony  
sonyrisic sony\_news sparc sparclite sparcv8 sparcv9 spectrum  
stardent stdc  
STDC\_EXT stratos sun sun3 sun386 Sun386i svr3 svr4  
SVR4\_2 SVR4\_SOURCE svr5 SX system SYSTYPE\_BSD SYSTYPE\_BSD43  
SYSTYPE\_BSD44 SYSTYPE\_SVR4 SYSTYPE\_SVR5 SYSTYPE\_SYSV SYSV SYSV3  
SYSV4 SYSV5 sysV68 sysV88  
Tek4132 Tek4300 thumb thw\_370 thw\_intel thw\_rs6000 titan TM3200  
TM5400 TM5600 tower tower32 tower32\_200 tower32\_600 tower32\_700  
tower32\_800 tower32\_850 tss  
u370 u3b u3b2 u3b20 u3b200 u3b20d u3b5 ultrix UMAXV UnicomPBB



```

UnicomPBD UNICOS UNICOSMK unix UNIX95 UNIX99 unixpc unos USE_BSD
USE_FILE_OFFSET64 USE_GNU USE_ISOC9X USE_LARGEFILE
USE_LARGEFILE64 USE_MISC USE_POSIX USE_POSIX199309
USE_POSIX199506 USE_POSIX2 USE_REENTRANT USE_SVID USE_UNIX98
USE_XOPEN USE_XOPEN_EXTENDED USGr4 USGr4_2 UTek Utek UTS UWIN
uxpm uxps
vax venix VMESA vms
x86_64 xenix Xenix286 XOPEN_SOURCE XOPEN_SOURCE_EXTENDED XPG2
XPG2_EXTENDED XPG3 XPG3_EXTENDED XPG4 XPG4_EXTENDED
z8000 zarch
EOSH
# Maybe put other stuff here too.
?X:Some OS's will have a dash in their $osname
?X:e.g. Android is known as linux-android
?X:The
preprocessor will interpret the dash as a minus
./tr '-' '_' <<EOSH >>Cppsym.know
$osname
EOSH
./tr '[a-z]' '[A-Z]' < Cppsym.know > Cppsym.a
./tr '[A-Z]' '[a-z]' < Cppsym.know > Cppsym.b
$cat Cppsym.know > Cppsym.c
$cat Cppsym.a Cppsym.b Cppsym.c | $tr ' ' $trnl | $sort | $uniq > Cppsym.know
$rm -f Cppsym.a Cppsym.b Cppsym.c
cat <<EOSH > Cppsym
$startsh
if $test $# -gt 0; then
    echo $* | $tr " " "$trnl" | ./Cppsym.try > Cppsym.got
    if $test -s Cppsym.got; then
        $rm -f Cppsym.got
    exit 0
    fi
    $rm -f Cppsym.got
    exit 1
else
    $tr " " "$trnl" | ./Cppsym.try
    exit 0
fi
EOSH
chmod +x Cppsym
$eunicefix Cppsym
?X: The below awk script will die a horrible death if
?X: some of the tested symbols are not long ints.
?X: Also, we do not make difference between just defined and defined zero.
cat <<EOSH > Cppsym.try
$startsh
cat <<'EOCP' > try.c
#include <stdio.h>

```

```

#if cpp_stuff == 1
#define STRINGIFY(a)  "a"
#endif
#if cpp_stuff == 42
#define StGiFy(a) #a
#define STRINGIFY(a)
    StGiFy(a)
#endif
#if $cpp_stuff != 1 && $cpp_stuff != 42
# include "Bleech: How does this C preprocessor stringify macros?"
#endif
int main() {
EOCP
?X: The length($1) command guards against possible empty entries.
?X: The awk snippet is know to give heartburn to UNICOS/mk awk.
$awk \\
EOSH
cat <<'EOSH' >> Cppsym.try
'length($1) > 0 {
    printf "#ifdef %s\nprintf(\"%s=%s\n\", STRINGIFY(%s));\n#endif\n", $1, $1, $1
    printf "#ifdef _%s\nprintf(\"_%s=%s\n\", STRINGIFY(_%s));\n#endif\n", $1, $1, $1
    printf "#ifdef __%s\nprintf(\"__%s=%s\n\", STRINGIFY(__%s));\n#endif\n", $1, $1, $1
    printf "#ifdef __%s__\nprintf(\"__%s__=%s\n\", STRINGIFY(__%s__));\n#endif\n", $1, $1, $1
}' >> try.c
echo 'return 0;}' >> try.c
EOSH
cat <<'EOSH' >> Cppsym.try
ccflags="$ccflags"
case "$osname-$gccversion" in
irix-) ccflags="\$ccflags -woff 1178" ;;
os2-*) ccflags="\$ccflags -Zlinker /PM:VIO" ;;
esac
$cc -o try -Dcpp_stuff=$cpp_stuff $optimize \$ccflags $ldflags try.c $libs 2>/dev/null
&& $run ./try | $sed 's/ /\ \ \ \ /g'
EOSH
chmod +x Cppsym.try
$eunicefix Cppsym.try
./Cppsym < Cppsym.know | $sort | $uniq > Cppsym.true
: Add in any Linux cpp "predefined macros":
case "$osname::$gccversion" in
*linux*:*:*|*gnukfreebsd*:*:*|gnu:*:*)
    tHdrH=_tmpHdr
    rm -f $tHdrH.h' $tHdrH
    touch $tHdrH.h'
    # Filter out macro arguments, such as Linux's __INT8_C(c)
    if $cpp -dM $tHdrH.h' > $tHdrH'_cppsym.h' && [ -s $tHdrH'_cppsym.h' ]; then
        sed -e 's/#define[\ \ ]*//;s/[\ \ ]*$/' -e 's/(.*)' <$tHdrH'_cppsym.h' >$tHdrH'_cppsym.real'
        if [ -s $tHdrH'_cppsym.real' ]; then

```

```

cat $tHdrH'_cppsypm.real' Cppsypm.know | sort | uniq | ./Cppsypm | sort | uniq > Cppsypm.true
fi
fi
rm -f $tHdrH'.h' $tHdrH'_cppsypm.h' $tHdrH'_cppsypm.real'
;;
esac
: now check the C compiler for additional symbols
?X: suggested by Jarkko Hietaniemi <jhi@snakemail.hut.fi>, thanks!
postprocess_cc_v="
case "$osname" in
aix) postprocess_cc_v="|str , ' "' ;;
esac
$cat >ccsym
<<EOS
$startsh
$cat >tmp.c <<EOF
extern int foo;
EOF
for i in ` $cc -v -c tmp.c 2>&1 $postprocess_cc_v `
do
case "$i" in
-D*) echo "$i" | $sed 's/^-D//;s/[\"\\\"]//g';;
-A*) $test "$gccversion" && echo "$i" | $sed 's/^-A// | $sed 's/^(.*)/(.*)\1=2/';;
esac
done
$rm_try
EOS
postprocess_cc_v="
chmod +x ccsym
$eunicefix ccsym
./ccsym > ccsym1.raw
?X: AIX complains if $uniq is passed an empty file. ($sort apparently
?X: doesn't care.) --AD 14 July 1998
if $test -s ccsym1.raw; then
    $sort ccsym1.raw | $uniq >ccsym.raw
else
    mv ccsym1.raw ccsym.raw
fi

?X: canonicalize symbols for easier sort/uniq/comm usage: append =1 if no = sign
?X: the awk script must be on two lines for older awk programs, sigh! -- ADO
$awk '^=/ { print $0; next }
{ print $0 "=1" }' ccsym.raw >ccsym.list
$comm -13 Cppsypm.true ccsym.list >ccsym.own
$comm -12 Cppsypm.true ccsym.list >ccsym.com
$comm -23 Cppsypm.true ccsym.list >ccsym.cpp
also="
if $test -z ccsym.raw; then

```

```

echo "Your C compiler
doesn't seem to define any symbols!" >&4
echo " "
echo "However, your C preprocessor defines the following symbols:"
$cat Cppsym.true
ccsymbols="
cppsymbols=`$cat Cppsym.true`
cppsymbols=`echo $cppsymbols`
cppccsymbols="$cppsymbols"
else
if $test -s ccsym.com; then
echo "Your C compiler and pre-processor define these symbols:"
$sed -e 's/(.*)=.*/\1/' ccsym.com
also='also '
symbols='ones'
cppccsymbols=`$cat ccsym.com`
cppccsymbols=`echo $cppccsymbols`
$test "$$silent" || sleep 1
fi
if $test -s ccsym.cpp; then
$test "$$also" && echo " "
echo "Your C pre-processor ${also}defines the following symbols:"
$sed -e 's/(.*)=.*/\1/' ccsym.cpp
also='further '
cppsymbols=`$cat ccsym.cpp`
cppsymbols=`echo $cppsymbols`
$test "$$silent" || sleep 1
fi
if $test -s ccsym.own; then
$test "$$also" && echo " "
echo "Your C compiler ${also}defines the following cpp symbols:"
$sed -e 's/(.*)=1/\1/' ccsym.own
$sed -e 's/(.*)=.*/\1/' ccsym.own | $uniq
>>Cppsym.true
ccsymbols=`$cat ccsym.own`
ccsymbols=`echo $ccsymbols`
$test "$$silent" || sleep 1
fi
fi

: add -D_FORTIFY_SOURCE if feasible and not already there
case "$gccversion" in
[456789].*[[1-9][0-9]*) case "$optimize$ccflags" in
*-O*) case "$ccflags$cppsymbols" in
*_FORTIFY_SOURCE=*) # Don't add it again.
echo "You seem to have -D_FORTIFY_SOURCE already, not adding it." >&4
;;
*) echo "Adding -D_FORTIFY_SOURCE=2 to ccflags..." >&4

```

```

ccflags="$ccflags -D_FORTIFY_SOURCE=2"
;;
esac
;;
*) echo "You have gcc 4.* or later but not optimizing, not adding -D_FORTIFY_SOURCE." >&4
;;
esac
;;
*) echo "You seem not to have gcc 4.* or later, not adding -D_FORTIFY_SOURCE." >&4
;;
esac

```

Found in path(s):

```

*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Cppsym.U

```

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```

?RCS: $Id: manfmt.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: manfmt.U,v $
?RCS: Revision 3.0.1.5 1997/02/28 16:11:57 ram
?RCS: patch61: don't ask for AFS when they choose to not install pages
?RCS:
?RCS: Revision 3.0.1.4 1995/09/25 09:16:52 ram
?RCS: patch59: unit is now forced to the top of Configure, if possible
?RCS:
?RCS: Revision 3.0.1.3 1995/01/30 14:39:20 ram
?RCS: patch49: new installmanfmt and AFS-lookup for formatted man pages
?RCS: patch49: can now handle installation prefix changes (from WED)
?RCS:
?RCS:
Revision 3.0.1.2 1994/08/29 16:30:31 ram
?RCS: patch32: now uses installation prefix for default setting
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:09:22 ram
?RCS: patch10: allows for L1 man page extension (WAD)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:13 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:

```

```

?MAKE:manfmt manfmtexp installmanfmt: Getfile Loc Oldconfig cat manext \
  spackage Prefixit prefixexp Prefixup afs test
?MAKE: -pick add $@ %<
?Y:TOP
?S:manfmt:
?S: This variable contains the name of the directory in which formatted
?S: manual pages are to be put. It is the responsibility of the
?S: Makefile.SH to get the value of this into the proper command. Note
?S: that you may have to do ~name substitution. Use manfmtexp otherwise.
?S:.
?S:manfmtexp:
?S: This is the same as the manfmt variable, but is filename expanded
?S: at configuration time, for programs not willing to deal with it at
?S: run-time.
?S:.
?S:installmanfmt:
?S: This variable is really
  the same as manfmtexp, unless you are using
?S: AFS in which case it points to the read/write location whereas
?S: mansrcexp only points to the read-only access location. For extra
?S: portability, you should only use this variable within your makefiles.
?S:.
?LINT:change manext
?T:lookpath
: determine where manual pages go
set manfmt manfmt
eval $prefixit
$cat <<EOM

```

\$spackage has pre-formatted manual pages. If you don't want these installed, answer 'none' to the next question.

```

EOM
case "$manfmt" in
")
  lookpath="$prefixexp/catman/man1 $prefixexp/man/cat1"
  lookpath="$lookpath $prefixexp/catman/u_man/man1"
  lookpath="$lookpath $prefixexp/catman/l_man/man1"
  lookpath="$lookpath $prefixexp/catman/cat1 /usr/catman/local/man1"
  lookpath="$lookpath /usr/catman/man1 /usr/man/cat1"
  lookpath="$lookpath /usr/catman/mann /usr/catman/l_man/man1"
  lookpath="$lookpath /usr/catman/u_man/man1 /usr/catman/man1"
  dflt=`./loc . none $lookpath`
  set dflt
  eval $prefixup
  ;;
*) dflt="$manfmt"
  ;;

```

```

esac
fn=dn~
rp='Where
do pre-formatted manual pages go?'
./getfile
if test "$manfmtexp" != "$sansexp"; then
installmanfmt="
fi
manfmt="$sans"
manfmtexp="$sansexp"
if $safs && $test "$manfmt"; then
$cat <<EOM

```

Since you are running AFS, I need to distinguish the directory in which manual pages reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```

EOM
case "$installmanfmt" in
*) dflt=`echo $manfmtexp | sed 's#^/afs/#/afs/#^';`
*) dflt="$installmanfmt";;
esac
fn=de~
rp='Where will pre-formatted man pages be installed?'
./getfile
installmanfmt="$sans"
else
installmanfmt="$manfmtexp"
fi

```

```

case "$manfmt" in
*) manext='0';;
*l) manext=l;;
*n) manext=n;;
*o) manext=l;;
*p) manext=n;;
*C) manext=C;;
*L) manext=L;;
*L1) manext=L1;;
*) manext=1;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/manfmt.U

```

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?MAKE:Assert: cat  
?MAKE: -pick add \$@ %<  
?F:./static\_assert.h  
: static assertion checking include file  
?X:  
?X: C programs can include this file to perform STATIC\_ASSERT() checks  
?X: which are done at compile-time and cause the compilation to fail when  
?X: the expression is false.  
?X:  
?X: It is sufficient to compile with: \$cc -c \$ccflags try.c  
?X: There is no need to link the file to spot the assertion failure.  
?X:  
\$cat >static\_assert.h <<'EOC'  
#define STATIC\_ASSERT(expr) \  
do { switch (0) { case ((expr) ? 1 : 0): case 0: break; } }  
while(0)  
EOC

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Assert.U

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: orderlib.U,v \$  
?RCS: Revision 3.0.1.4 1997/02/28 16:18:18 ram  
?RCS: patch61: replaced .a with \$\_a all over the place  
?RCS: patch61: likewise for .o replaced by \$\_o  
?RCS: patch61: now uses the ar located by Loc.U  
?RCS:  
?RCS: Revision 3.0.1.3 1995/01/11 15:33:04 ram



```

?RCS: patch45: allows hint files to specify their own value for 'ranlib'
?RCS:
?RCS: Revision 3.0.1.2 1994/10/29 16:26:48 ram
?RCS: patch36: now performs a real small compile for accurate checks (ADO)
?RCS:
?RCS: Revision 3.0.1.1
    1994/08/29 16:31:17 ram
?RCS: patch32: use cc variable instead of hardwired 'cc' in 1st compile
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:26 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:orderlib ranlib: Loc ar cat test rm +cc +ccflags +ldflags +libs _a _o
?MAKE: -pick add $@ %<
?S:orderlib:
?S: This variable is "true" if the components of libraries must be ordered
?S: (with `lorder $* | tsort`) before placing them in an archive. Set to
?S: "false" if ranlib or ar can generate random libraries.
?S:.
?S:ranlib:
?S: This variable is set to the pathname of the ranlib program, if it is
?S: needed to generate random libraries. Set to ":" if ar can generate
?S: random libraries or if random libraries are not supported
?S:.
?F:!foobar
: see if ar generates random libraries by itself
echo " "
echo "Checking how to generate random libraries on your machine..." >&4
?X: Some systems (like MIPS) complain when running ar... Others like Ultrix
?X: need an explicit 'ar ts'
    to add the table of contents.
?X: Still others like Linux run ar ts successfully, but still need ranlib.
?X: This set of tests seems the minimum necessary to check out Linux.
?X: We need to explicitly put the entries in out-of-order so that Sun's ld
?X: will fail. (Otherwise it complains, but gives an exit status of 0.)
echo 'int bar1() { return bar2(); }' > bar1.c
echo 'int bar2() { return 2; }' > bar2.c
$cat > foo.c <<'EOP'
int main() { printf("%d\n", bar1()); exit(0); }
EOP
$cc $ccflags -c bar1.c >/dev/null 2>&1
$cc $ccflags -c bar2.c >/dev/null 2>&1
$cc $ccflags -c foo.c >/dev/null 2>&1
$ar rc bar$_a bar2$_o bar1$_o >/dev/null 2>&1
if $cc $ccflags $ldflags -o foobar foo$_o bar$_a $libs > /dev/null 2>&1 &&
./foobar >/dev/null 2>&1; then
echo "ar appears to generate random libraries itself."
orderlib=false

```

```

ranlib=":"
elif $ar ts bar$_a >/dev/null 2>&1 &&
$cc $cflags $ldflags -o foobar foo$_o bar$_a $libs >/dev/null 2>&1 &&
./foobar >/dev/null 2>&1; then
echo "a table of contents
needs to be added with 'ar ts'."
orderlib=false
ranlib="$ar ts"
else
?X: Allow hints to specify their own ranlib "script". For instance, on
?X: some NeXT machines, the timestamp put by ranlib is not correct, and this
?X: may raise tedious recompiles for nothing. Therefore, NeXT may add the
?X: ranlib='sleep 5; /bin/ranlib' line in their hints to "fix" that.
?X: (reported by Andreas Koenig <k@franz.ww.tu-berlin.de>)
case "$ranlib" in
:) ranlib="";
")
ranlib=`./loc ranlib X /usr/bin /bin /usr/local/bin`
$test -f $ranlib || ranlib="
;;
esac
if $test -n "$ranlib"; then
echo "your system has '$ranlib'; we'll use that."
orderlib=false
else
echo "your system doesn't seem to support random libraries"
echo "so we'll use lorder and tsort to order the libraries."
orderlib=true
ranlib=":"
fi
fi
$rm -f foo* bar*

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/orderlib.U
```

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_prctl d\_prctl\_set\_name: Inlibc cat Compile run rm\_try

?MAKE:-pick add \$@ %<

?S:d\_prctl:

?S: This variable conditionally defines the HAS\_PRCTL symbol, which

?S: indicates to the C program that the prctl() routine is available.

?S: Note that there are at least two prctl variants: Linux and Irix.

?S: While they are somewhat similar, they are incompatible.

?S:.

?S:d\_prctl\_set\_name:

?S: This variable conditionally defines the HAS\_PRCTL\_SET\_NAME symbol,

?S: which indicates to the C program that the prctl() routine supports

?S: the PR\_SET\_NAME option.

?S:.

?C:HAS\_PRCTL:

?C: This symbol, if defined, indicates that the prctl routine is

?C: available to set process title.

?C: Note that there are at least two

prctl variants: Linux and Irix.

?C: While they are somewhat similar, they are incompatible.

?C:.

?C:HAS\_PRCTL\_SET\_NAME:

?C: This symbol, if defined, indicates that the prctl routine is

?C: available to set process title and supports PR\_SET\_NAME.

?C:.

?H:#\$d\_prctl HAS\_PRCTL /\*\*/

?H:#\$d\_prctl\_set\_name HAS\_PRCTL\_SET\_NAME /\*\*/

?H:.

?F:!try

?LINT:set d\_prctl

: see if prctl exists

set prctl d\_prctl

eval \$inlibc

: see if prctl supports PR\_SET\_NAME

d\_prctl\_set\_name=\$undef

case \$d\_prctl in

  \$define)

  \$cat >try.c <<EOM

#ifdef \_\_ANDROID\_\_

#include <unistd.h>

#endif

#include <sys/prctl.h>

int main (int argc, char \*argv[])

{

  return (prctl (PR\_SET\_NAME, "Test"));

  } /\* main \*/

EOM

set try

if eval \$compile\_ok && \$run ./try; then

  echo "Your prctl (PR\_SET\_NAME, ...) works"

```
d_prctl_set_name=$define
fi
$rm_try
;;
esac
```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_prctl.U

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?RCS: \$Id: d\_setprior.U 1 2006-08-24 12:32:52Z rmanfredi \$

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?RCS:

?RCS: \$Log: d\_setprior.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:11 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setprior: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setprior:

?S: This variable conditionally defines HAS\_SETPRIORITY if setpriority()

?S: is available to set a process's priority.

?S:.

?C:HAS\_SETPRIORITY (SETPRIORITY):

?C: This symbol, if defined, indicates that the setpriority routine is

?C: available to set a process's priority.

?C:.

?H:#\$d\_setprior

HAS\_SETPRIORITY /\*\*/

?H:.

?LINT:set d\_setprior

: see if setpriority exists

set setpriority d\_setprior

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_setprior.U

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```

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?RCS:
?MAKE:d_strtouq: Inlibc cat Compile run
?MAKE: -pick add $@ %<
?S:d_strtouq:
?S: This variable conditionally defines the HAS_STRTOUQ symbol, which
?S: indicates to the C program that the strtouq() routine is available.
?S:.
?C:HAS_STRTOUQ:
?C: This symbol, if defined, indicates that the strtouq routine is
?C: available to convert strings to unsigned long longs (quads).
?C:.
?H:#$d_strtouq HAS_STRTOUQ /**/
?H:.
?F:!try
: see if strtouq exists
set strtouq d_strtouq
eval $inlibc

case "$d_strtouq" in
"$define")
$cat <<EOM
Checking whether your strtouq() works okay...
EOM
$cat >try.c <<'EOCP'
#include <stdlib.h>
#include <errno.h>
#include <stdio.h>
static int bad = 0;
void check(const char *s, unsigned
long long eull, int een) {
unsigned long long gull;
errno = 0;
gull = strtouq(s, 0, 10);
if (!(gull == eull) && (errno == een))
bad++;
}
int main() {
check(" 1", 1LL, 0);
check(" 0", 0LL, 0);
check("18446744073709551615", 18446744073709551615ULL, 0);
check("18446744073709551616", 18446744073709551615ULL, ERANGE);
#if 0 /* strtouq() for ^-/ strings is undefined. */

```

```

check("-1",          18446744073709551615ULL, 0);
check("-18446744073709551614",          2LL, 0);
check("-18446744073709551615",          1LL, 0);
check("-18446744073709551616", 18446744073709551615ULL, ERANGE);
check("-18446744073709551617", 18446744073709551615ULL, ERANGE);
#endif
if (!bad)
    printf("ok\n");
return 0;
}
EOCP
set try
if eval $compile; then
    case "`$run ./try`" in
        ok) echo "Your strtouq() seems to be working okay." ;;
        *) cat <<EOM >&4
Your strtouq() doesn't seem to be working
okay.
EOM
        d_strtouq="$undef"
        ;;
    esac
else
    echo "(I can't seem to compile the test program--assuming it doesn't)"
    d_strtouq="$undef"
fi
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_strtouq.U
```

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?RCS:

?MAKE:d\_aintl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_aintl:

?S: This variable conditionally defines the HAS\_AINTL symbol, which

?S: indicates to the C program that the aintl() routine is available.

?S: If copysignl is also present we can emulate modfl.

?S:.

?C:HAS\_AINTL:

?C: This symbol, if defined, indicates that the aintl routine is

?C: available. If copysignl is also present we can emulate modfl.

?C:.

?H:#\$d\_aintl HAS\_AINTL /\*\*/

?H:.

?LINT:set d\_aintl

: see if aintl exists

set aintl d\_aintl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_aintl.U

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: fpu.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:10 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:fpu: test cat cc Myread

?MAKE: -pick add \$@ %<

?S:fpu (fpunit):

?S: Set to be the compile flag for the local floating point unit.

?S:.

?C:FPU (FPUNIT):

?C: String containing the flags for the local floating point unit.

?C:.

?H:#define FPU "\$fpu" /\*\*/

?H:.

: see what floating point compile flags should be used.

fpu=""

if \$test -r /dev/fpa; then

\$cat>fpa.c << GOOP

main(){return(1);}

GOOP

\$cc

```
-ffpa -o fpa fpa.c
fpa > fpa.out 2>&1
if $test ! -s fpa.out; then
  dflt='y'
$cat <<'EOM'
```

You seem to have a sun fpa... I can compile the code to use the fpa but it will mean that the code can ONLY run on a machine with a fpa...

EOM

```
rp="Should I compile for fpa?"
. ./myread
if $test $ans = "n"; then
  fpu=""
else
  fpu='-ffpa'
fi
else
$cat <<'EOM'
```

You have the fpa device but I can't seem to use it. Maybe you should talk to your sysadmin about this. For now, I am not going to compile it in.

EOM

```
fi
fi
if $test "$fpu" = "; then
if $test -r /usr/etc/mc68881version; then
  dflt='y'
$cat <<'EOM'
```

There also seems to be the pieces for a 68881. If I compile this in, it will work on almost all Sun 3's except for a few Sun-3/50s without a 68881...

EOM

```
rp="Should I compile for a 68881?"
. ./myread
if $test $ans = "y"; then
  fpu='-f68881'
fi
fi
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/fpu.U
```

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?RCS:

?MAKE:d\_llrintl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_llrintl:

?S: This variable conditionally defines the HAS\_LLRLNTL symbol, which

?S: indicates to the C program that the llrintl() routine is available

?S: to return the long long value closest to a long double (according

?S: to the current rounding mode).

?S:.

?C:HAS\_LLRLNTL:

?C: This symbol, if defined, indicates that the llrintl routine is

?C: available to return the long long value closest to a long double

?C: (according to the current rounding mode).

?C:.

?H:#\$d\_llrintl HAS\_LLRLNTL /\*\*/

?H:.

?LINT:set d\_llrintl

: see if llrintl exists

set llrintl d\_llrintl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_llrintl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS:

?MAKE:d\_fpos64\_t: \

Inlibc Setvar Compile rm\_try cat fposize

?MAKE: -pick add \$@ %<

?S:d\_fpos64\_t:

?S: This symbol will be defined if the C compiler supports fpos64\_t.

?S:.

?C:HAS\_FPOS64\_T:

?C: This symbol will be defined if the C compiler supports fpos64\_t.

?C:.

?H:#\$d\_fpos64\_t HAS\_FPOS64\_T /\*\*/

?H:.

?LINT:set d\_fpos64\_t

: check for fpos64\_t

```

echo " "
echo "Checking to see if you have fpos64_t..." >&4
$cat >try.c <<EOCP
#include <stdio.h>
int main() { fpos64_t x = 7; }
EOCP
set try
if eval $compile; then
  val="$define"
  echo "You have fpos64_t."
else
  val="$undef"
  echo "You do not have fpos64_t."
  case "$fposize" in
    8) echo "(Your fpos_t is 64 bits, so you could use that.)" ;;
  esac
fi
$rm_try
set
  d_fpos64_t
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_fpos64_t.U
```

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```

?RCS: $Id: orderlib.U,v 3.0.1.4 1997/02/28 16:18:18 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: orderlib.U,v $
?RCS: Revision 3.0.1.4 1997/02/28 16:18:18 ram
?RCS: patch61: replaced .a with $_a all over the place
?RCS: patch61: likewise for .o replaced by $_o
?RCS: patch61: now uses the ar located by Loc.U
?RCS:
?RCS: Revision 3.0.1.3 1995/01/11 15:33:04 ram
?RCS: patch45: allows hint files to specify their own value for 'ranlib'
?RCS:
?RCS: Revision 3.0.1.2 1994/10/29 16:26:48 ram
?RCS: patch36: now performs a real small compile for accurate

```

```

checks (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:31:17 ram
?RCS: patch32: use cc variable instead of hardwired 'cc' in 1st compile
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:26 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:orderlib ranlib: Loc ar cat test rm +cc +ccflags +ldflags +libs i_stdlib _a _o run
?MAKE: -pick add $@ %<
?S:orderlib:
?S: This variable is "true" if the components of libraries must be ordered
?S: (with `lorder $* | tsort`) before placing them in an archive. Set to
?S: "false" if ranlib or ar can generate random libraries.
?S:.
?S:ranlib:
?S: This variable is set to the pathname of the ranlib program, if it is
?S: needed to generate random libraries. Set to ":" if ar can generate
?S: random libraries or if random libraries are not supported
?S:.
?F:!foobar
: see if ar generates random libraries by itself
echo " "
echo "Checking how to generate random libraries on your machine..." >&4
?X: Some systems (like MIPS) complain when running
ar... Others like Ultrix
?X: need an explicit 'ar ts' to add the table of contents.
?X: Still others like Linux run ar ts successfully, but still need ranlib.
?X: This set of tests seems the minimum necessary to check out Linux.
?X: We need to explicitly put the entries in out-of-order so that Sun's ld
?X: will fail. (Otherwise it complains, but gives an exit status of 0.)
echo 'extern int bar2(); int bar1() { return bar2(); }' > bar1.c
echo 'int bar2() { return 2; }' > bar2.c
$cat > foo.c <<EOP
#i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <stdio.h>
extern int bar1();
int main() { printf("%d\n", bar1()); exit(0); }
EOP
$cc $ccflags -c bar1.c >/dev/null 2>&1
$cc $ccflags -c bar2.c >/dev/null 2>&1
$cc $ccflags -c foo.c >/dev/null 2>&1
$ar rc bar$_a bar2$_o bar1$_o >/dev/null 2>&1
if $cc -o foobar $ccflags $ldflags foo$_o bar$_a $libs > /dev/null 2>&1 &&
$run ./foobar >/dev/null 2>&1; then

```

```

echo "$ar appears to generate random libraries itself."
orderlib=false
if
[ "X$ranlib" = "X" ]; then
    ranlib=":"
fi
elif $ar s bar$_a >/dev/null 2>&1 &&
$cc -o foobar $ccflags $ldflags foo$_o bar$_a $libs >/dev/null 2>&1 &&
$run ./foobar >/dev/null 2>&1; then
    echo "a table of contents needs to be added with '$ar s'."
    orderlib=false
    ranlib="$ar s"
elif $ar ts bar$_a >/dev/null 2>&1 &&
$cc -o foobar $ccflags $ldflags foo$_o bar$_a $libs >/dev/null 2>&1 &&
$run ./foobar >/dev/null 2>&1; then
    echo "a table of contents needs to be added with '$ar ts'."
    orderlib=false
    ranlib="$ar ts"
else
?X: Allow hints to specify their own ranlib "script". For instance, on
?X: some NeXT machines, the timestamp put by ranlib is not correct, and this
?X: may raise tedious recompiles for nothing. Therefore, NeXT may add the
?X: ranlib='sleep 5; /bin/ranlib' line in their hints to "fix" that.
?X: (reported by Andreas Koenig <k@franz.ww.tu-berlin.de>)
case "$ranlib" in
:) ranlib="";
")
    ranlib=`./loc ranlib X /usr/bin /bin /usr/local/bin`
$test -f
$ranlib || ranlib="
;;
esac
if $test -n "$ranlib"; then
    echo "your system has '$ranlib'; we'll use that."
    orderlib=false
else
    echo "your system doesn't seem to support random libraries"
    echo "so we'll use lorder and tsort to order the libraries."
    orderlib=true
    ranlib=":"
fi
fi
$rm -f foo* bar*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/orderlib.U

```

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```
?RCS: $Id: libpth.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: libpth.U,v $
?RCS: Revision 3.0.1.6 1997/02/28 16:08:49 ram
?RCS: patch61: new loclibpth variable
?RCS:
?RCS: Revision 3.0.1.5 1995/01/11 15:31:30 ram
?RCS: patch45: call ./mips instead of just mips (WED)
?RCS:
?RCS: Revision 3.0.1.4 1994/08/29 16:29:15 ram
?RCS: patch32: added /lib/pa1.1 for HP-UX specially tuned PA-RISC libs (ADO)
?RCS: patch32: fixed information message, making it clearer (ADO)
?RCS:
?RCS: Revision 3.0.1.3 1994/06/20 07:03:54
ram
?RCS: patch30: added /usr/shlib to glibpth for shared-only libraries
?RCS:
?RCS: Revision 3.0.1.2 1994/05/13 15:26:57 ram
?RCS: patch27: fixed a typo (libpth -> glibpth)
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 15:07:53 ram
?RCS: patch23: now asks for library directories to be searched (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:02 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit initializes the path for C library lookup.
?X:
?MAKE:libpth glibpth xlibpth plibpth loclibpth incpth: \
usrinc incpath test cat Myread Oldconfig sysroot osname \
ccname echo cppstdin awk grep sed rm usecrosscompile
?MAKE: -pick add $@ %<
?S:libpth:
?S: This variable holds the general path (space-separated) used to find
?S: libraries. It is intended to be used by other units.
?S:.
?S:glibpth:
```

?S: This variable holds the general path (space-separated) used to find libraries. It may contain directories that do not exist on this platform, libpth is the cleaned-up version.

?S:.

?S:xlibpth:

?S: This variable holds extra path (space-separated) used to find libraries on this platform, for example CPU-specific libraries (on multi-CPU platforms) may be listed here.

?S:.

?S:loclibpth:

?S: This variable holds the paths (space-separated) used to find local libraries. It is prepended to libpth, and is intended to be easily set from the command line.

?S:.

?S:plibpth:

?S: Holds the private path used by Configure to find out the libraries. Its value is prepended to libpth. This variable takes care of special machines, like the mips. Usually, it should be empty.

?S:.

?S:incpth:

?S: This variable must precede the normal include path to get the right one, as in "\$incpath/usr/include" or "\$incpath/usr/lib".

?S: Value can be "" or "/bsd43" on mips.

?S:.

?T: xxx dlist i j croak realpath inclibpth

?LINT:extern incpth

?LINT:change usrinc

?INIT:: change the next line if compiling for Xenix/286 on Xenix/386

?INIT:xlibpth='/usr/lib/386  
/lib/386'

?INIT:: Possible local library directories to search.

?INIT:loclibpth="/usr/local/lib /opt/local/lib /usr/gnu/lib"

?INIT:loclibpth="\$loclibpth /opt/gnu/lib /usr/GNU/lib /opt/GNU/lib"

?INIT:

?INIT:: general looking path for locating libraries

?INIT:glibpth="/lib /usr/lib \$xlibpth"

?INIT:glibpth="\$glibpth /usr/ccs/lib /usr/ucblib /usr/local/lib"

?X: /shlib is for Digital Unix 4.0

?X: /usr/shlib is for OSF/1 systems.

?INIT:test -f /usr/shlib/libc.so && glibpth="/usr/shlib \$glibpth"

?INIT:test -f /shlib/libc.so && glibpth="/shlib \$glibpth"

?INIT:test -d /usr/lib64 && glibpth="\$glibpth /lib64 /usr/lib64 /usr/local/lib64"

?INIT:

?INIT:: Private path used by Configure to find libraries. Its value is prepended to libpth. This variable takes care of special machines, like the mips. Usually, it should be empty.

?INIT:plibpth="

```

?INIT:
?X:cppfilter is later used in Findhdr.U, but we not want to expose it to config.h
?T:cppfilter
: Adjust cppfilter for path
component separator
case "$osname" in
vos) cppfilter="tr '\\|>' '/' '|' ;; # path component separator is >
os2) cppfilter="sed -e 's|\\\\\\\\\\\\\\\\|/g'|" ;; # path component separator is \
*) cppfilter=" ;;
esac

: Use gcc to determine libpth and incpth
# If using gcc or clang, we can get better values for libpth, incpth
# and usrinc directly from the compiler.
# Note that ccname for clang is also gcc.
case "$ccname" in
gcc)
realpath=`which realpath 2>/dev/null | sed 's/no realpath in.*//'^
$echo 'extern int foo;' > try.c
set X `$cppstdinc -v try.c 2>&1 | $awk '/^#include </,/^End of search /|^$cppfilter $grep '/include'^
shift
inclubpth=""
if $test $# -gt 0; then
for i in $*; do
case $realpath in
*/realpath) i=`$realpath $i` ;;
esac
incpth="$incpth $i"
j=""$echo $i | $sed 's,/include[^\]*/lib,^"
if $test -d $j; then
inclubpth="$inclubpth $j"
fi
done
incpth=""$echo $incpth | $sed 's/^ //'^
for xxx in $inclubpth $loclubpth $plibpth
$glibpth; do
if $test -d $xxx; then
case $realpath in
*/realpath) xxx=`$realpath $xxx` ;;
esac
case " $libpth " in
*" $xxx ") ;;
*) libpth="$libpth $xxx";;
esac
fi
done
libpth=""$echo $libpth | $sed 's/^ //'^
fi

```

```

$rm -f try.c
case "$usrinc" in
") for i in $incpth; do
if $test -f $i/errno.h -a -f $i/stdio.h -a -f $i/time.h; then
    usrinc="$i"
    break
fi
done
;;
esac

case "$usecrosscompile" in
$define|true|[yY]*)
    case "$incpth" in
") echo "Incpth not defined." >&4; croak=y ;;
*) echo "Using incpth '$incpth'." >&4 ;;
    esac
    case "$libpth" in
") echo "Libpth not defined." >&4; croak=y ;;
*) echo "Using libpth '$libpth'." >&4 ;;
    esac
    case "$usrinc" in
") echo "Usrinc not defined." >&4; croak=y ;;
*) echo "Using usrinc $usrinc." >&4 ;;
    esac
    case "$croak" in
y)
if test "X$sysroot" = X; then
    echo "Cannot continue, aborting." >&4; exit 1
else

    echo "Cross-compiling using sysroot $sysroot, failing to guess inc/lib paths is not fatal" >&4
fi
;;
    esac
;;
esac
;;
esac

: Default value for incpth is just usrinc
case "$incpth" in
") incpth="$usrinc";;
esac

: Set private lib path
case "$plibpth" in
") if ./mips; then

```



```

?X: on mips, we DO NOT want /lib, and we want $incpath/usr/lib
plibpth="$incpath/usr/lib $sysroot/usr/local/lib $sysroot/usr/ccs/lib"
fi;;
esac
case "$libpth" in
' ') dlist="";;
") dlist="$loclibpth $plibpth $glibpth";;
*) dlist="$libpth";;
esac

```

: Now check and see which directories actually exist, avoiding duplicates  
for xxx in \$dlist

```

do
if $test -d $xxx; then
case " $libpth " in
*" $xxx "*) ;;
*) libpth="$libpth $xxx";;
esac
fi
done
$cat <<'EOM'

```

Some systems have incompatible or broken versions of libraries. Among the directories listed in the question below, please remove any you know not to be holding relevant libraries, and add any that are needed. Say "none" for none.

EOM

```

if
test "X$sysroot" != X; then
$cat <<EOM

```

You have set sysroot to \$sysroot, please supply the directories excluding sysroot

EOM

fi

```

case "$libpth" in
") dflt='none';;
*)
?X: strip leading space
set X $libpth
shift
dflt=${1+"$@"}
;;
esac
rp="Directories to use for library searches?"
./myread

```

```
case "$ans" in
none) libpth='';
*) libpth="$ans";;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/libpth.U
```

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?RCS:

?MAKE:d\_strerror\_l: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_strerror\_l:

?S: This variable conditionally defines the HAS\_STRERROR\_L symbol, which

?S: indicates to the C program that the strerror\_l() routine is available

?S: to return the error message for a given errno value in a particular

?S: locale (identified by a locale\_t object).

?S:.

?C:HAS\_STRERROR\_L:

?C: This symbol, if defined, indicates that the strerror\_l routine is

?C: available to return the error message for a given errno value in

?C: a particular locale (identified by a locale\_t object).

?C:.

?H:#\$d\_strerror\_l HAS\_STRERROR\_L /\*\*/

?H:.

?LINT:set d\_strerror\_l

: see if strerror\_l exists

set strerror\_l d\_strerror\_l

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_strerror_l.U
```

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?RCS: \$Id: d\_endsent.U,v 3.0 1993/08/18 12:06:09 ram Exp \$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_endsent.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:09 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_endsent: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_endsent:  
?S: This variable conditionally defines HAS\_ENDSERVENT if endservent() is  
?S: available to close whatever was being used for service queries.  
?S:.  
?C:HAS\_ENDSERVENT:  
?C: This symbol, if defined, indicates that the endservent() routine is  
?C: available to close whatever was being used for  
service queries.  
?C:.  
?H:#\$d\_endsent HAS\_ENDSERVENT /\*\*/  
?H:.  
?LINT:set d\_endsent  
: see if endservent exists  
set endservent d\_endsent  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_endsent.U

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_eofpipe.U,v \$  
?RCS: Revision 3.0.1.1 1994/10/29 16:12:40 ram  
?RCS: patch36: call ./bsd explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:57 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_eofpipe: cat +cc +ccflags +libs rm Oldconfig Guess echo n c  
?MAKE: -pick add \$@ %<  
?S:d\_eofpipe:  
?S: This variable conditionally defines the EOFPIPE symbol, which

?S: indicates to the C program that select will correctly detect the EOF

?S: condition when pipe  
is closed from the other end.

?S:.

?C:EOFPIPE:

?C: This symbol, if defined, indicates that EOF condition will be detected

?C: by the reader of the pipe when it is closed by the writing process.

?C: That is, a select() call on that file descriptor will not block when

?C: only an EOF remains (typical behaviour for BSD systems).

?C:.

?H:#\$d\_eofpipe EOFPIPE /\*\*/

?H:.

?F:!mpipe

: see if pipe correctly gives the EOF condition

echo " "

case "\$d\_eofpipe" in

")

echo "Let's see if your pipes return EOF to select() upon closing..." >&4

\$cat >pipe.c <<'EOP'

int main()

{

int pd[2];

int mask;

pipe(pd);

if (0 == fork()) {

close(pd[0]);

close(pd[1]);

exit(0);

}

close(pd[1]);

mask = 1 << pd[0];

alarm(2);

select(32, &mask, (int \*) 0, (int \*) 0, (char \*) 0);

if (0 == read(pd[0], &mask, 1))

exit(0);

exit(1);

}

EOP

if \$cc \$ccflags -o pipe pipe.c \$libs >/dev/null 2>&1; then

?X: Use a script to avoid the possible 'alarm call' message

echo "./pipe || exit 1" > mpipe

chmod +x

mpipe

./mpipe >/dev/null 2>&1

case \$? in

```

0) d_eofpipe="$define";;
*) d_eofpipe="$undef";;
esac
else
echo "(The test program did not compile correctly -- Guessing.)"
if ./bsd; then
d_eofpipe="$define"
else
d_eofpipe="$undef"
fi
fi
case "$d_eofpipe" in
"$define") echo "Yes, they do.";;
*) echo "No, they don't! (sigh)";;
esac
;;
*)
$echo $n "Your pipes $c"
case "$d_eofpipe" in
"$define") echo "allow select() to see EOF upon closing.";;
*) echo "won't let select() see EOF on closing.";;
esac
;;
esac
$rm -f *pipe* core

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_eofpipe.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: models.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: models.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 16:13:17 ram

?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:02:39 ram

?RCS: patch6: added default for large

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:17 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:models split small medium large huge: test cat Myread sysman Oldconfig \  
Loc contains rm  
?MAKE: -pick add \$@ %<  
?S:models:  
?S: This variable contains  
the list of memory models supported by this  
?S: system. Possible component values are none, split, unsplit, small,  
?S: medium, large, and huge. The component values are space separated.  
?S:.  
?S:split:  
?S: This variable contains a flag which will tell the C compiler and loader  
?S: to produce a program that will run in separate I and D space, for those  
?S: machines that support separation of instruction and data space. It is  
?S: up to the Makefile to use this.  
?S:.  
?S:small:  
?S: This variable contains a flag which will tell the C compiler and loader  
?S: to produce a program running with a small memory model. It is up to  
?S: the Makefile to use this.  
?S:.  
?S:medium:  
?S: This variable contains a flag which will tell the C compiler and loader  
?S: to produce a program running with a medium memory model. If the  
?S: medium model is not supported, contains the flag to produce large  
?S: model programs. It is up to the Makefile to use this.  
?S:.  
?S:large:  
?S: This variable contains a flag  
which will tell the C compiler and loader  
?S: to produce a program running with a large memory model. It is up to  
?S: the Makefile to use this.  
?S:.  
?S:huge:  
?S: This variable contains a flag which will tell the C compiler and loader  
?S: to produce a program running with a huge memory model. If the  
?S: huge model is not supported, contains the flag to produce large  
?S: model programs. It is up to the Makefile to use this.  
?S:.  
?T:unsplit tans modelcc  
?F:!pdp11  
?D:large="  
?LINT:extern cc  
: see what memory models we can support  
case "\$models" in  
")

?X: We may not use Cppsym or we get a circular dependency through cc.

?X: But this should work regardless of which cc we eventually use.

```
$cat >pdp11.c <<'EOP'
```

```
int main() {  
#ifdef pdp11  
    exit(0);  
#else  
    exit(1);  
#endif  
}
```

```
EOP
```

?X: Run cc in a subshell in case they don't have a 'cc' command.

?X: Presumably they do have gcc or something.

```
case "$cc" in  
    ") modelcc="$cc" ;;  
    *) modelcc="cc" ;;  
esac  
( $modelcc -o pdp11 pdp11.c ) >/dev/null 2>&1  
if  
$test -f pdp11 && ./pdp11 2>/dev/null; then  
    dflt='unsplit split'  
else  
    tans=`./loc . X /lib/small /lib/large /usr/lib/small /usr/lib/large /lib/medium /usr/lib/medium /lib/huge`  
    case "$tans" in  
        X) dflt='none';;  
        *) if $test -d /lib/small || $test -d /usr/lib/small; then  
            dflt='small'  
        else  
            dflt="  
        fi  
        if $test -d /lib/medium || $test -d /usr/lib/medium; then  
            dflt="$dflt medium"  
        fi  
        if $test -d /lib/large || $test -d /usr/lib/large; then  
            dflt="$dflt large"  
        fi  
        if $test -d /lib/huge || $test -d /usr/lib/huge; then  
            dflt="$dflt huge"  
        fi  
    esac  
fi;;  
*) dflt="$models";;  
esac  
$cat <<EOM
```

Some systems have different model sizes. On most systems they are called small, medium, large, and huge. On the PDP11 they are called unsplit and split. If your system doesn't support different memory models, say "none".

If you wish to force everything to one memory model, say "none" here and put the appropriate flags later when it asks you for other cc and ld flags.

Venix systems may wish to put "none" and let the compiler figure things out. (In the following question multiple model names should be space separated.)

The default for most systems is "none".

EOM

```
rp="Which memory models are supported?"
```

```
./myread
```

```
models="$ans"
```

```
case "$models" in
```

```
none)
```

```
small="
```

```
medium="
```

```
large="
```

```
huge="
```

```
unsplit="
```

```
split="
```

```
::
```

```
*split)
```

```
case "$split" in
```

```
") if $contains \-i' $sysman/ld.1 >/dev/null 2>&1 || \
```

```
  $contains \-i' $sysman/cc.1 >/dev/null 2>&1; then
```

```
  dflt='-i'
```

```
else
```

```
  dflt='none'
```

```
fi;;
```

```
*) dflt="$split";;
```

```
esac
```

```
rp="What flag indicates separate I and D space?"
```

```
./myread
```

```
tans="$ans"
```

```
case "$tans" in
```

```
none) tans="";;
```

```
esac
```

```
split="$tans"
```

```
unsplit="";;
```

```
*large*|*small*|*medium*|*huge*)
```

```
case "$models" in
```

```
*large*)
```

```
case "$large" in
```

```
") dflt='-M';;
```

```
*) dflt="$large";;
```

```
esac
```

```
rp="What flag indicates large model?"
```



```

./myread
tans="$ans"
case "$tans" in
none) tans="";
esac
large="$tans";;
*) large="";;
esac
case "$models"
in
*huge*) case "$huge" in
") dflt='-Mh';;
*) dflt="$huge";;
esac
rp="What flag indicates huge model?"
./myread
tans="$ans"
case "$tans" in
none) tans="";
esac
huge="$tans";;
*) huge="$large";;
esac
case "$models" in
*medium*) case "$medium" in
") dflt='-Mm';;
*) dflt="$medium";;
esac
rp="What flag indicates medium model?"
./myread
tans="$ans"
case "$tans" in
none) tans="";
esac
medium="$tans";;
*) medium="$large";;
esac
case "$models" in
*small*) case "$small" in
") dflt='none';;
*) dflt="$small";;
esac
rp="What flag indicates small model?"
./myread
tans="$ans"
case "$tans" in
none) tans="";
esac

```

```

    small="$stans";;
*) small="";;
esac
;;
*)
echo "Unrecognized memory models--you may have to edit Makefile.SH" >&4
;;
esac
$rm -f pdp11.* pdp11

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/models.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_crypt.U,v \$

?RCS:

?RCS: Copyright (c) 2002 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_crypt: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_crypt:

?S: This variable conditionally defines the I\_CRYPT symbol, and indicates

?S: whether a C program should include <crypt.h>.

?S:.

?C:I\_CRYPT:

?C: This symbol, if defined, indicates that <crypt.h> exists and

?C: should be included.

?C:.

?H:#\$i\_crypt I\_CRYPT /\*\*/

?H:.

?LINT:set i\_crypt

: see if this is a crypt.h system

set crypt.h i\_crypt

eval \$inhdr

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i_crypt.U

```

No license file was found, but licenses were detected in source scan.

/\*

\* \$Id: scandir.C,v 3.0.1.1 1994/01/24 13:58:45 ram Exp ram \$

\*

\* Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

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* that same Artistic Licence; a copy of which may be found at the root
* of the source tree for dist 4.0.
*
* $Log: scandir.C,v $
* Revision 3.0.1.1 1994/01/24 13:58:45 ram
* patch16: created
*
*/

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/lib/C/fake/scandir.C

```

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?RCS: \$Id\$

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: sockopt.U,v \$

?RCS: Revision 3.0.1.1 1995/07/25 14:16:14 ram

?RCS: patch56: obsoleted KEEPALIVE in favor of CAN\_KEEPALIVE for consistency

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:48 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_keepalive: cat rm contains +cc +ccflags socketlib sockethdr \

d\_oldsock libs Oldconfig Setvar Findhdr

?MAKE: -pick add \$@ %<

?S:d\_keepalive:

?S: This symbol conditionally defines CAN\_KEEPALIVE which indicates to the C

?S: program that setsockopt

SO\_KEEPALIVE will work properly.

?S:.

?C:CAN\_KEEPALIVE (KEEPALIVE):

?C: This symbol if defined indicates to the C program that the SO\_KEEPALIVE

?C: option of setsockopt() will work as advertised in the manual.

?C:.

?H:#\$d\_keepalive CAN\_KEEPALIVE /\*\*/

```

?H:
?F:!socket
?LINT:set d_keepalive
: see if setsockopt with SO_KEEPALIVE works as advertised
echo " "
case "$d_oldsock" in
"$undef")
if $contains SO_KEEPALIVE `./findhdr sys/socket.h` \
/dev/null >/dev/null 2>&1
then
echo "OK, let's see if SO_KEEPALIVE works as advertised..." >&4
$cat > socket.c <<EOP
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
#include <netdb.h>

int main()
{
int s = socket(AF_INET, SOCK_STREAM, 0);
if (s == -1)
exit(1);
if (-1 == setsockopt(s, SOL_SOCKET, SO_KEEPALIVE, 0, 0))
exit(2);
exit(0);
}
EOP
if $cc $ccflags $sockethdr -o socket socket.c $libs \
$socketlib >/dev/null 2>&1; then
./socket >/dev/null 2>&1
case $? in
0) echo "Yes, it does!"
val="$define";;
1)
$cat <<EOM
(Something went wrong -- Assuming SO_KEEPALIVE is broken)
EOM
val="$undef";;
2) echo "No, it doesn't. Don't trust your manuals!!"
val="$undef";;
esac
else
cat <<EOM
(I can't compile the test program -- Assuming SO_KEEPALIVE is broken)
EOM
val="$undef"
fi
else

```

```

echo "Strange!! You have BSD 4.2 sockets but no SO_KEEPAIVE option."
val="$undef"
fi;;
*) cat <<EOM
As you have an old socket interface, you can't have heard of SO_KEEPAIVE.
EOM
val="$undef";;
esac
set d_keealive
eval $setvar
$rm -f socket socket.c

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/sockopt.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: vendorhtml1dir.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1999, Andy Dougherty

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: vendorhtml1dir.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?MAKE:vendorhtml1dir vendorhtml1direxp installvendorhtml1dir: html1dir Getfile \

Setprefixvar Oldconfig Prefixit test vendorprefix prefix sed

?MAKE: -pick add \$@ %<

?Y:TOP

?S:vendorhtml1dir:

?S: This variable contains the name of the directory for html

?S: pages. It may have a ~ on the front.

?S: The standard distribution will put nothing in this directory.

?S: Vendors who distribute perl may wish to place their own

?S: html pages in this directory with

?S: MakeMaker Makefile.PL INSTALLDIRS=vendor

?S: or equivalent. See INSTALL for details.

?S:.

?S:vendorhtml1direxp:

?S: This variable is the ~name expanded version of vendorhtml1dir, so that you

?S: may use it directly in Makefiles or shell scripts.

```

?S:.
?D:installvendorhtml1dir="
?S:installvendorhtml1dir:
?S: This variable is really the same as vendorhtml1direxp but may differ on
?S: those systems using AFS. For extra portability, only this variable
?S: should be used in makefiles.
?S:.
?LINT:change prefixvar
?LINT:set installvendorhtml1dir
: Set the vendorhtml1dir variables
case "$vendorprefix" in
") vendorhtml1dir="
vendorhtml1direxp="
;;
*) : determine where vendor-supplied html pages go.
: There is no standard location, so try to copy the previously-selected
: directory structure for the core html pages.
: XXX Better default suggestions would be welcome.
case "$vendorhtml1dir"
in
") dflt=`echo "$html1dir" | $sed "s#^$prefix#$vendorprefix#"` ;;
*) dflt=$vendorhtml1dir ;;
esac
case "$dflt" in
"| ") dflt=none ;;
esac
fn=dn+~
rp='Pathname for the vendor-supplied html pages?'
./getfile
vendorhtml1dir="$ans"
vendorhtml1direxp="$ansexp"
;;
esac
: Use ' ' for none so value is preserved next time through Configure
$test X"$vendorhtml1dir" = "X" && vendorhtml1dir=' '
prefixvar=vendorhtml1dir
./installprefix

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/vendorhtml1dir.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_shmctl.U 1 2006-08-24 12:32:52Z rmanfredi $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

```

?RCS:

```

```

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 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: \$Log: d\_shmctl.U,v \$  
 ?RCS: Revision 3.0 1993/08/18 12:07:18 ram  
 ?RCS: Baseline for dist 3.0 netwide release.  
 ?RCS:  
 ?MAKE:d\_shmctl: Inlibc  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_shmctl:  
 ?S: This variable conditionally defines the HAS\_SHMCTL symbol, which  
 ?S: indicates to the C program that the shmctl() routine is available.  
 ?S:.  
 ?C:HAS\_SHMCTL:  
 ?C: This symbol, if defined, indicates that the shmctl() routine is  
 ?C: available to perform shared memory control operations.  
 ?C:.  
 ?H:#\$d\_shmctl  
 HAS\_SHMCTL /\*\*/  
 ?H:.  
 ?LINT:set d\_shmctl  
 : see if shmctl exists  
 set shmctl d\_shmctl  
 eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_shmctl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
 ?RCS:  
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 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
 ?RCS:  
 ?RCS: \$Log: d\_casti32.U,v \$  
 ?RCS: Revision 3.0.1.3 1995/05/12 12:10:45 ram  
 ?RCS: patch54: made sure cc and cflags are conditional dependencies  
 ?RCS:

```

?RCS: Revision 3.0.1.2 1994/10/29 16:09:37 ram
?RCS: patch36: declare signal handler correctly (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:07:06 ram
?RCS: patch32: created by ADO
?RCS:
?X:
?X: Can the compiler cast large floats to 32-bit integers?
?X:
?MAKE:d_casti32: cat
+cc +ccflags rm_try intsize Setvar test signal_t
?MAKE: -pick add $@ %<
?S:d_casti32:
?S: This variable conditionally defines CASTI32, which indicates
?S: whether the C compiler can cast large floats to 32-bit ints.
?S:.
?C:CASTI32:
?C: This symbol is defined if the C compiler can cast negative
?C: or large floating point numbers to 32-bit ints.
?C:.
?T:xxx yyy
?H:#$d_casti32 CASTI32 /**/
?H:.
?F:!try
?LINT:set d_casti32
: check for ability to cast large floats to 32-bit ints.
echo " "
echo 'Checking whether your C compiler can cast large floats to int32.'>&4
if $test "$intsize" -eq 4; then
xxx=int
else
xxx=long
fi
$cat >try.c <<EOCP
#include <sys/types.h>
#include <signal.h>
$signal_t blech() { exit(3); }
int main()
{
$xxx i32;
double f;
int result = 0;
signal(SIGFPE, blech);

f = (double) 0x7fffffff;
f = 10 * f;
i32 = ($xxx) f;

```



```

if (i32 != ($xxx) f)
  result |= 1;
exit(result);
}
EOCP
if $cc $ccflags -o try try.c >/dev/null 2>&1; then
  ./try
  yyy=$?
else
  echo "(I can't
  seem to compile the test program--assuming it can't)"
  yyy=1
fi
case "$yyy" in
0) val="$define"
  echo "Yup, it can."
  ;;
*) val="$undef"
  echo "Nope, it can't."
  ;;
esac
set d_casti32
eval $setvar
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_casti32.U
```

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```
?RCS: $Id: ssize_type.U,v 3.0.1.3 1997/02/28 16:24:21 ram Exp $
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: ssize_type.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 16:24:21 ram
?RCS: patch61: integrated perl5 concerns for mis-configured sfio
?RCS:
?RCS: Revision 3.0.1.2 1994/10/29 16:30:28 ram
?RCS: patch36: added ?F: line for metalint file checking

```

```

?RCS: patch36: added 'ldflags' to the test compile line (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:33:06 ram
?RCS: patch32: created
    by ADO
?RCS:
?MAKE:ssizetype: Myread Typedef sizetype cat rm_try Compile run i_stdlib
?MAKE: -pick add $@ %<
?S:ssizetype:
?S: This variable defines ssizetype to be something like ssize_t,
?S: long or int. It is used by functions that return a count
?S: of bytes or an error condition. It must be a signed type.
?S: We will pick a type such that sizeof(SSize_t) == sizeof(Size_t).
?S:.
?C:SSize_t:
?C: This symbol holds the type used by functions that return
?C: a count of bytes or an error condition. It must be a signed type.
?C: It is usually ssize_t, but may be long or int, etc.
?C: It may be necessary to include <sys/types.h> or <unistd.h>
?C: to get any typedef'ed information.
?C: We will pick a type such that sizeof(SSize_t) == sizeof(Size_t).
?C:.
?H:#define SSize_t $ssizetype /* signed count of bytes */
?H:.
?F:!try
: see what type is used for signed size_t
set ssize_t ssizetype int stdio.h sys/types.h
eval $typedef
dflt="$ssizetype"
?X: Now check out whether sizeof(SSize_t)
    == sizeof(Size_t)
$cat > try.c <<EOM
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <sys/types.h>
#define Size_t $sizetype
#define SSize_t $dflt
int main()
{
if (sizeof(Size_t) == sizeof(SSize_t))
    printf("$dflt\n");
else if (sizeof(Size_t) == sizeof(int))
    printf("int\n");
else
    printf("long\n");
}

```

```

exit(0);
}
EOM
echo " "
set try
if eval $compile_ok && $run ./try > /dev/null; then
    ssize_t=`$run ./try`
    echo "I'll be using $$ssize_t for functions returning a byte count." >&4
else
    $cat >&4 <<EOM
Help! I can't compile and run the ssize_t test program: please enlighten me!
(This is probably a misconfiguration in your system or libraries, and
you really ought to fix it. Still, I'll try anyway.)

```

I need a type that is the same size as \$ssize\_t, but is guaranteed to be signed. Common values are ssize\_t, int and long.

```

EOM
rp="What signed type is the same size as $ssize_t?"
. ./myread
ssize_t="$ans"
fi
$rm_try

```

Found in path(s):

```

*
/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/ssize_t.U

```

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```

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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_shm.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:17 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_shm: test d_shmctl d_shmget d_shmat d_shmdt Setvar Findhdr
?MAKE: -pick add $@ %<
?S:d_shm:
?S: This variable conditionally defines the HAS_SHM symbol, which

```

```

?S: indicates that the entire shm*(2) library is present.
?S:.
?C:HAS_SHM:
?C: This symbol, if defined, indicates that the entire shm*(2) library is
?C: supported.
?C:.
?H:#$d_shm HAS_SHM /**/
?H:.
?T:h_shm
?LINT:set d_shm
:
  see how much of the 'shm*(2)' library is present.
h_shm=true
echo " "
case "$d_shmctl$d_shmget$d_shmat$d_shmdt" in
*"$undef"*) h_shm=false;;
esac
: we could also check for sys/ipc.h ...
if $h_shm && $test `./findhdr sys/shm.h`; then
  echo "You have the full shm*(2) library." >&4
  val="$define"
else
  echo "You don't have the full shm*(2) library." >&4
  val="$undef"
fi
set d_shm
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/d_shm.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_msgrcv.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_msgrcv.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:40 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_msgrcv: Inlibc

```

?MAKE: -pick add \$@ %<  
?S:d\_msgrcv:  
?S: This variable conditionally defines the HAS\_MSGRCV symbol, which  
?S: indicates to the C program that the msgrcv() routine is available.  
?S:.  
?C:HAS\_MSGRCV:  
?C: This symbol, if defined, indicates that the msgrcv() routine is  
?C: available to extract a message from the message queue.  
?C:.  
?H:#\$d\_msgrcv  
HAS\_MSGRCV /\*\*/  
?H:.  
?LINT:set d\_msgrcv  
: see if msgrcv exists  
set msgrcv d\_msgrcv  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_msgrcv.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: intsize.U,v 3.0.1.2 1997/02/28 15:55:26 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: intsize.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:55:26 ram  
?RCS: patch61: avoid prompting the user if the test runs ok  
?RCS: patch61: moved code from longsize.U into there  
?RCS: patch61: new tests for shortsize as well  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:21:06 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:08:52 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:intsize longsize  
shortsize: Compile Myread cat run i\_stdlib rm\_try  
?MAKE: -pick add \$@ %<  
?S:intsize:

?S: This variable contains the value of the INTSIZE symbol, which

?S: indicates to the C program how many bytes there are in an int.

?S:.

?S:longsize:

?S: This variable contains the value of the LONGSIZE symbol, which

?S: indicates to the C program how many bytes there are in a long.

?S:.

?S:shortsize:

?S: This variable contains the value of the SHORTSIZE symbol which

?S: indicates to the C program how many bytes there are in a short.

?S:.

?C:INTSIZE:

?C: This symbol contains the value of sizeof(int) so that the C

?C: preprocessor can make decisions based on it.

?C:.

?C:LONGSIZE:

?C: This symbol contains the value of sizeof(long) so that the C

?C: preprocessor can make decisions based on it.

?C:.

?C:SHORTSIZE:

?C: This symbol contains the value of sizeof(short) so that the C

?C: preprocessor can make decisions based on it.

?C:.

?H:#define INTSIZE \$intsize /\*\*/

?H:#define LONGSIZE \$longsize /\*\*/

?H:#define

SHORTSIZE \$shortsize /\*\*/

?H:.

?F:!try

: check for lengths of integral types

echo " "

case "\$intsize" in

")

echo "Checking to see how big your integers are..." >&4

\$cat >try.c <<EOCP

#include <stdio.h>

#\$i\_stdlib I\_STDLIB

#ifdef I\_STDLIB

#include <stdlib.h>

#endif

#include <stdio.h>

int main()

{

@if INTSIZE || intsize

printf("intsize=%d;\n", (int)sizeof(int));

@end

@if LONGSIZE || longsize

printf("longsize=%d;\n", (int)sizeof(long));

```

@end
@if SHORTSIZE || shortsize
printf("shortsize=%d;\n", (int)sizeof(short));
@end
exit(0);
}
EOCP
set try
if eval $compile_ok && $run ./try > /dev/null; then
eval ` $run ./try `
@endif INTSIZE || intsize
echo "Your integers are $intsize bytes long."
@end
@if LONGSIZE || longsize
echo "Your long integers are $longsize bytes long."
@end
@if SHORTSIZE || shortsize
echo "Your short integers are $shortsize bytes long."
@end
else
$cat >&4 <<EOM
!
Help! I can't compile and run the intsize test program: please enlighten me!
(This is probably
a misconfiguration in your system or libraries, and
you really ought to fix it. Still, I'll try anyway.)
!
EOM
@if INTSIZE || intsize
dflt=4
rp="What is the size of an integer (in bytes)?"
./myread
intsize="$ans"
@end
@if LONGSIZE || longsize
dflt=$intsize
rp="What is the size of a long integer (in bytes)?"
./myread
longsize="$ans"
@end
@if SHORTSIZE || shortsize
dflt=2
rp="What is the size of a short integer (in bytes)?"
./myread
shortsize="$ans"
@end
fi
;;

```

esac

\$rm\_try

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/a\_dvisory/intsize.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setregid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_setregid.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:12 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setregid d\_setresgid: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setregid:

?S: This variable conditionally defines HAS\_SETREGID if setregid() is

?S: available to change the real and effective gid of the current

?S: process.

?S:.

?S:d\_setresgid:

?S: This variable conditionally defines HAS\_SETRESGID if setresgid() is

?S: available to change

the real, effective and saved gid of the current

?S: process.

?S:.

?C:HAS\_SETREGID (SETREGID):

?C: This symbol, if defined, indicates that the setregid routine is

?C: available to change the real and effective gid of the current

?C: process.

?C:.

?C:HAS\_SETRESGID (SETRESGID):

?C: This symbol, if defined, indicates that the setresgid routine is

?C: available to change the real, effective and saved gid of the current

?C: process.

?C:.

?H:#\$d\_setregid HAS\_SETREGID /\*\*/

?H:#\$d\_setresgid HAS\_SETRESGID /\*\*/

?H:.



```
?LINT: set d_setregid d_setresgid
: see if setregid exists
set setregid d_setregid
eval $inlibc
set setresgid d_setresgid
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_setregid.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_endgrent_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_endgrent_r endgrent_r_proto: Inlibc Protochk Hasproto i_systypes \
  usethreads i_grp extern_C
?MAKE:-pick add $@ %<
?S:d_endgrent_r:
?S: This variable conditionally defines the HAS_ENDGRENT_R symbol,
?S: which indicates to the C program that the endgrent_r()
?S: routine is available.
?S:.
?S:endgrent_r_proto:
?S: This variable encodes the prototype of endgrent_r.
?S: It is zero if d_endgrent_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_endgrent_r
?S: is defined.
?S:.
?C:HAS_ENDGRENT_R:
?C: This symbol, if defined, indicates that the endgrent_r routine
?C: is available to
  endgrent re-entrantly.
?C:.
?C:ENDGRENT_R_PROTO:
?C: This symbol encodes the prototype of endgrent_r.
?C: It is zero if d_endgrent_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_endgrent_r
?C: is defined.
?C:.
?H:#$d_endgrent_r HAS_ENDGRENT_R /**/
?H:#define ENDGRENT_R_PROTO $endgrent_r_proto /**/
?H:.
```

```

?T:try hdrs d_endgrent_r_proto
: see if endgrent_r exists
set endgrent_r d_endgrent_r
eval $inlibc
case "$d_endgrent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_grp grp.h"
case "$d_endgrent_r_proto:$usethreads" in
":define") d_endgrent_r_proto=define
set d_endgrent_r_proto endgrent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_endgrent_r_proto" in
define)
case "$endgrent_r_proto" in
"|0) try='int endgrent_r(FILE**);'
./protochk "$extern_C $try" $hdrs && endgrent_r_proto=I_H ;;
esac
case "$endgrent_r_proto" in
"|0) try='void endgrent_r(FILE**);'
./protochk "$extern_C $try" $hdrs && endgrent_r_proto=V_H ;;
esac
case "$endgrent_r_proto"
in
"|0) d_endgrent_r=undef
endgrent_r_proto=0
echo "Disabling endgrent_r, cannot determine prototype." >&4 ;;
* ) case "$endgrent_r_proto" in
REENTRANT_PROTO*) ;;
*) endgrent_r_proto="REENTRANT_PROTO_$endgrent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "endgrent_r has no prototype, not using it." >&4 ;;
esac
d_endgrent_r=undef
endgrent_r_proto=0
;;
esac
;;
*) endgrent_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_endgrent\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getmnt: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getmnt:

?S: This variable conditionally defines the HAS\_GETMNT symbol, which

?S: indicates to the C program that the getmnt() routine is available

?S: to retrieve one or more mount info blocks by filename.

?S:.

?C:HAS\_GETMNT:

?C: This symbol, if defined, indicates that the getmnt routine is

?C: available to get filesystem mount info by filename.

?C:.

?H:#\$d\_getmnt HAS\_GETMNT /\*\*/

?H:.

?LINT:set d\_getmnt

: see if getmnt exists

set getmnt d\_getmnt

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_getmnt.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strerror.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_strerror.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:33 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_strcspn: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strcspn:  
?S: This variable conditionally defines the HAS\_STRCSPN symbol, which  
?S: indicates to the C program that the strcspn() routine is available  
?S: to scan strings.  
?S:.  
?C:HAS\_STRCSPN (STRCSPN):  
?C: This symbol, if defined, indicates that the strcspn routine is  
?C: available to scan  
strings.  
?C:.  
?H:#\$d\_strcspn HAS\_STRCSPN /\*\*/  
?H:.  
?LINT:set d\_strcspn  
: see if strcspn exists  
set strcspn d\_strcspn  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_strcspn.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Compile.U,v \$  
?RCS:  
?RCS: Copyright (c) 1998 Andy Dougherty  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS:  
?X:  
?X: This unit is just a quick shorthand for the compile command  
?X: to be used in all the other metaconfig units.  
?X:  
?MAKE:Compile: +cc +optimize +ccflags +ldflags +libs test  
?MAKE: -pick wipe \$@ %<  
?LINT:extern usedevel maintloc  
?LINT:define compile compile\_ok  
?V:compile compile\_ok mc\_file  
?S:compile:  
?S: This shell variable is used internally by Configure to provide  
?S: a convenient shorthand for the typical compile command, namely  
?S: \$cc \$optimize \$ccflags \$ldflags -o \$1 \$1.c \$libs > /dev/null 2>&1  
?S: Note that the output filename does not include the \_exe  
?S: extension. Instead we assume that the linker will be  
?S: "helpful" and automatically appending the correct suffix.

?S: OS/2  
 users will apparently need to supply the -Zexe flag to  
 ?S: get this behavior.  
 ?S:  
 ?S: To use this variable, say something like:  
 ?S: echo 'int main() { exit(0); }' > try.c  
 ?S: set try  
 ?S: if eval \$compile; then  
 ?S: echo "success" # and do whatever . . .  
 ?S: else  
 ?S: echo "failure" # and do whatever . . .  
 ?S: fi  
 ?S: To add extra flags cc flags (e.g. -DWHATEVER) just put them  
 ?S: in \$\*, e.g.  
 ?S: set try -DTRY\_THIS\_FLAG  
 ?S:.  
 ?S:compile\_ok:  
 ?S: This shell variable is used internally by Configure to provide  
 ?S: a convenient shorthand for the typical compile command that you  
 ?S: expect to work ok. It is the same as \$compile, except we  
 ?S: deliberately let the user see any error messages.  
 ?S:.  
 : define a shorthand compile call  
 compile='  
 mc\_file=\$1;  
 shift;  
 case "\$usedevel" in \$define|true|[yY]\*) if \$test ! -f "\${mc\_file}.c"; then  
 echo "Internal Configure script bug - compiler test file \${mc\_file}.c is missing. Please report this to <\$maintloc>"  
 >&4;  
 exit 1;  
 fi;  
 esac;  
 \$cc  
 -o \${mc\_file} \$optimize \$ccflags \$ldflags \$\* \${mc\_file}.c \$libs > /dev/null 2>&1;  
 : define a shorthand compile call for compilations that should be ok.  
 compile\_ok='  
 mc\_file=\$1;  
 shift;  
 \$cc -o \${mc\_file} \$optimize \$ccflags \$ldflags \$\* \${mc\_file}.c \$libs > /dev/null 2>&1;

Found in path(s):  
 \* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/Compile.U  
 No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
 ?RCS:  
 ?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_volatile.U,v $
?RCS: Revision 3.0.1.2 1995/07/25 14:08:49 ram
?RCS: patch56: made cc and ccflags optional dependencies
?RCS:
?RCS: Revision 3.0.1.1 1993/09/09 11:49:51 ram
?RCS: patch9: volatile definition was swapped over with undef
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:57 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_volatile: cat +cc +ccflags rm_try Setvar
?MAKE: -pick add $@ %<
?S:d_volatile:
?S: This variable conditionally defines the HASVOLATILE symbol, which
?S: indicates
to the C program that this C compiler knows about the
?S: volatile declaration.
?S:.
?C:HASVOLATILE ~ %<:
?C: This symbol, if defined, indicates that this C compiler knows about
?C: the volatile declaration.
?C:.
?H:%<:#$d_volatile HASVOLATILE /**/
?H:%<:#ifndef HASVOLATILE
?H:%<:#define volatile
?H:%<:#endif
?H:.
?W:%<:volatile
?LINT:set d_volatile
?LINT:known volatile
: check for volatile keyword
echo " "
echo 'Checking to see if your C compiler knows about "volatile"...' >&4
$cat >try.c <<'EOCP'
int main()
{
?X:
?X: The following seven lines added by Bill Campbell <billc@sierra.com>
?X: detect that MIPS compilers do not handle volatile in all situations.
?X:
typedef struct _goo_struct goo_struct;

```

```

goo_struct * volatile goo = ((goo_struct *)0);
struct _goo_struct {
    long long_int;
    int reg_int;
    char char_var;
};
typedef unsigned short foo_t;
char *volatile foo;
volatile int bar;
volatile foo_t blech;
foo = foo;
}

```

EOCP

```

if $cc -c $ccflags try.c >/dev/null
2>&1 ; then
val="$define"
echo "Yup, it does."
else
val="$undef"
echo "Nope, it doesn't."
fi
set d_volatile
eval $setvar
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_volatile.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_popen.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_popen.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:47 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_popen: Inlibc
?MAKE: -pick add $@ %<
?S:d_popen:
?S: This variable conditionally defines HAS_POPEN if popen() is

```

```

?S: available to open a pipe from a process.
?S:.
?C:HAS_POPEN (POPEN):
?C: This symbol, if defined, indicates that the popen routine is
?C: available to open a pipe from a process.
?C:.
?H:#$d_popen HAS_POPEN /**/
?H:.
?LINT:set
d_popen
: see if popen exists
set popen d_popen
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_popen.U

```

No license file was found, but licenses were detected in source scan.

```

;#####

```

```

;# Jmake rules for building libraries, programs, scripts, and data files
;# $Id: Jmake.rules 18 2006-12-27 10:35:09Z rmanfredi $

```

```

/*
* MACHINE-INDEPENDENT RULES -- DO NOT MODIFY
*/

```

```

/* $Id: Jmake.rules 18 2006-12-27 10:35:09Z rmanfredi $
*
* Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
*
* You may redistribute only under the terms of the Artistic Licence,
* as specified in the README file that comes with the distribution.
* You may reuse parts of this distribution only within the terms of
* that same Artistic Licence; a copy of which may be found at the root
* of the source tree for dist 4.0.
*

```

```

* $Log: Jmake.rules,v $
* Revision 3.0.1.7 2004/08/22 08:28:58 ram
* patch71: random cleanup
*
* Revision 3.0.1.6 1997/02/28 14:56:01 ram
* patch61: now handles USRINC for dependencies
* patch61: smarter about dependencies
computation
*
* Revision 3.0.1.5 1995/09/25 09:07:19 ram
* patch59: smarter sed command to strip /usr/include dependencies

```



```

*
* Revision 3.0.1.4 1995/07/25 13:33:59 ram
* patch56: install of script man pages can now cope with missing files
* patch56: the clobber target now removes the .config directory as well
*
* Revision 3.0.1.3 1995/03/21 08:35:28 ram
* patch52: suppressed extra argument to NormalProgramTarget call
*
* Revision 3.0.1.2 1995/01/11 14:49:55 ram
* patch45: new macros ShellScriptTargetExt and SimpleShellScriptTargetExt
* patch45: directory installation is now made via INSTALLDIR (Configure)
*
* Revision 3.0.1.1 1994/10/29 15:46:30 ram
* patch36: added RemoteDependency rule
*
* Revision 3.0 1993/08/18 12:04:14 ram
* Baseline for dist 3.0 netwide release.
*
*/

```

```

/* Please, edit only with tabstops = 4 (":set ts=4" under vi) */

```

```

/*
* AddedByConfigure:
* Gives name of the files generated by Configure that can safely
* be removed
* when a "make clobber" is issued. Not that it is useless
* to name config.h or config.sh because these are already taken care
* of by jmake.
*/

```

```

#define AddedByConfigure(files) @!\
local_clobber::  @@\
$(RM) files

```

```

/*
* AddSuffix:
* Adds a suffix to the .SUFFIXES: list.
*/

```

```

#define AddSuffix(ext) @!\
|suffix ext

```

```

/*
* AllTarget:
* Generate rules to build necessary things during make all.
*/

```

```

#define AllTarget(depends) @!\
all:: depends  @!\

```

```

    @!\
local_realclean::  @@\
$(RM) depends

/*
* RemoveTargetProgram:
* This is used in some other macros in order to remove the target
* before starting its building (saves disk space). There should be
* no '@!' at the end of the '#define' line, because this macro is
* used *inside* building rules.
*/
#define RemoveTargetProgram(program) \
$(RM) program @@\
if test -f program^^^$_EXE; then \ @@\
$(MV) program^^^$_EXE program^^~^^$_EXE; fi

/*
* NormalProgramTarget:
* Generate rules to compile and link the
indicated program; since
* it does not use any default object files, it may be used for
* multiple programs in the same Jmakefile.
*/
#define NormalProgramTarget(program,sources,objects) @!\
++OBJECTS objects @!\
++SOURCES sources @!\
NormalObjectRule() @!\
AllTarget(program) @!\
    @!\
program: objects  @@\
RemoveTargetProgram($@) @@\
$(CC) -o $@ objects $(JLDFLAGS) $(LIBS) @!\

/*
* SingleProgramTarget:
* Obsolete version of NormalProgramTarget that doesn't have
* deplibs.
*/
#define SingleProgramTarget(program,objects,libs) \
NormalProgramTarget(program,objects,libs)

/*
* SimpleProgramTarget:
* Generate rules for compiling and linking programs that only have
* one C source file. It should only be used in Jmakefiles that
* describe a single program.
*/

```

```

#define SimpleProgramTarget(program) @!\
NormalProgramTarget(program,program.c,program.o)

/*
 * ComplexProgramTarget:
 * Generate rules for compiling and linking the program specified by
 * $(OBJS) and
 * $(SRCS), installing the program and its man page, and
 * generating dependencies. It should only be used in Jmakefiles
 * that describe a single program.
 */
#define ComplexProgramTarget(program) @!\
++OBJECTS $(OBJS) @!\
++SOURCES $(SRCS) @!\
NormalObjectRule() @!\
AllTarget(program) @!\
    @!\
program: $(OBJS) @@\
RemoveTargetProgram($@) @@\
$(CC) -o $@ $(OBJS) $(JLDFLAGS) $(LIBS) @!\
    @!\
InstallProgram(program,$(BINDIR)) @!\
InstallManPage(program,$(MANSRC)) @!\
DependTarget() @!\
LintTarget()

/*
 * ComplexProgramTarget_1:
 * Generate rules for compiling and linking the program specified by
 * $(OBJS1) and $(SRCS1), installing the program and its man page,
 * and generating dependencies for it and any programs described by
 * $(SRCS2) and $(SRCS3). It should be used to build the primary
 * program in Jmakefiles that describe multiple programs.
 */
#define ComplexProgramTarget_1(program) @!\
++OBJECTS $(OBJS1) @!\
++SOURCES $(SRCS1) @!\
NormalObjectRule() @!\
AllTarget(program) @!\
    @!\
program:
$(OBJS1) @@\
RemoveTargetProgram($@) @@\
$(CC) -o $@ $(OBJS1) $(JLDFLAGS) $(LIBS) @!\
    @!\

```

```

InstallProgram(program,$(BINDIR)) @!\
InstallManPage(program,$(MANSRC)) @!\
    @!\
DependTarget()    @!\
LintTarget()

/*
* ComplexProgramTarget_2:
* Generate rules for compiling and linking the program specified by
* $(OBJS2) and $(SRCS2) and installing the program and man page.
* It should be used to build the second program in Jmakefiles
* describing more than one program.
*/
#define ComplexProgramTarget_2(program) @!\
++OBJECTS $(OBJS2) @!\
++SOURCES $(SRCS2) @!\
NormalObjectRule()    @!\
AllTarget(program)    @!\
    @!\
program: $(OBJS2)    @@\
RemoveTargetProgram($@)    @@\
$(CC) -o $@ $(OBJS2) $(JLDFLAGS) $(LIBS) @!\
    @!\
InstallProgram(program,$(BINDIR)) @!\
InstallManPage(program,$(MANSRC))

/*
* ComplexProgramTarget_3:
* Generate rules for compiling and linking the
program specified by
* $(OBJS3) and $(SRCS3) and installing the program and man page. It
* should be used to build the third program in Jmakefiles describing
* more than one program.
*/
#define ComplexProgramTarget_3(program) @!\
++OBJECTS $(OBJS3) @!\
++SOURCES $(SRCS3) @!\
NormalObjectRule()    @!\
AllTarget(program)    @!\
    @!\
program: $(OBJS3)    @@\
RemoveTargetProgram($@)    @@\
$(CC) -o $@ $(OBJS3) $(JLDFLAGS) $(LIBS) @!\
    @!\
InstallProgram(program,$(BINDIR)) @!\
InstallManPage(program,$(MANSRC))

```

```

/*
* ComplexShellManualTarget:
* Builds manual pages that are to be extracted from .SH files into
* .$manext files.
*/
#define ComplexShellManualTarget(manpages) @!\
++MANPAGE manpages @!\
|once _ShellManualRule_ @!\
|rule:.SH.$manext: @!\
|rule: /bin/sh $< @!\
|rule: @!\
-once @!\
AddSuffix(.SH) @!\
AddSuffix($manext) @!\
AllTarget(manpages) @!\
    @!\
local_install.man:: @@\
    _MakeInstallDirIgnore($(MANSRC)) \    @@\
for
file in manpages; do \    @@\
    (set -x; $(INSTALL) -c -m 444 $$file \    @@\
    $(INSTALL_PREFIX)$(MANSRC)) || exit 1; \    @@\
done @!\
    @!\
local_deinstall.man:: @@\
    @case '${MFLAGS}' in *[i]*) set +e;; esac; \    @@\
for file in manpages; do \    @@\
    (set -x; $(RM) $(INSTALL_PREFIX)$(MANSRC)/$$file); \    @@\
done

/*
* Initialize:
* Puts the line symbol = value in the initialization section of
* Makefile.SH (the one that is subject to parameter substitutions).
*/
#define Initialize(symbol,value) @!\
+symbol = value

/*
* InstallLibrary:
* Generate rules to install the indicated library.
*/
#define InstallLibrary(libname,dest) @!\
local_install:: lib^^libname.a @@\

```

```

_MakeInstallDirIgnore(dest) \ @@\
$(INSTALL) -c -m 644 lib^^libname.a $(INSTALL_PREFIX)^^dest @@\
$(RANLIB) dest/lib^^libname.a @@\
chmod 444 dest/lib^^libname.a @!\
    @!\
local_deinstall::  @@\
$(RM) $(INSTALL_PREFIX)^^dest/lib^^libname.a

/*
* InstallSharedLibrary:
* Generate rules to install
the shared library.
*/
#define InstallSharedLibrary(libname,rev,dest) @!\
local_install:: lib^^libname.so.rev @@\
_MakeInstallDirIgnore(dest) \ @@\
$(INSTALL) -c -m 444 lib^^libname.so.rev $(INSTALL_PREFIX)^^dest @!\
    @!\
local_deinstall::  @@\
$(RM) $(INSTALL_PREFIX)^^dest/lib^^libname.so.rev

/*
* InstallSharedLibraryData:
* Generate rules to install the shared library data
*/
#define InstallSharedLibraryData(libname,rev,dest) @!\
local_install:: lib^^libname.sa.rev @@\
_MakeInstallDirIgnore(dest) \ @@\
$(INSTALL) -c -m 444 lib^^libname.sa.rev $(INSTALL_PREFIX)^^dest @!\
    @!\
local_deinstall::  @@\
$(RM) $(INSTALL_PREFIX)^^dest/lib^^libname.sa.rev

/*
* InstallLibraryAlias:
* Generate rules to create a link from one library name to another
* for the purposes of aliasing.
*/
#define InstallLibraryAlias(libname,alias,dest) @!\
local_install:: lib^^libname.a @@\
$(RM) lib^^alias.a @@\
-(cd dest; $(LN) lib^^libname.a lib^^alias.a)
@!\
    @!\
local_deinstall::  @@\

```

```
$(RM) dest/lib^^alias.a
```

```
/*
```

```
* InstallLintLibrary:
```

```
* Generate rules to install the indicated lint library.
```

```
*/
```

```
#define InstallLintLibrary(libname,dest) @!\
```

```
install.ln:: llib-l^^libname.ln @@\
```

```
_MakeInstallDirIgnore(dest) \ @@\
```

```
$(INSTALL) -c -m 444 llib-l^^libname.ln $(INSTALL_PREFIX)^^dest @!\
```

```
@!\
```

```
deinstall.ln:: @@\
```

```
$(RM) $(INSTALL_PREFIX)^^dest/llib-l^^libname.ln
```

```
/*
```

```
* InstallManPageLong:
```

```
* Generate rules to install the indicated manual page, giving it an  
* alternate name. This is used for installing man pages whose base  
* name without the .man suffix would normally be longer than 8  
* characters (the limit for using source code control systems on  
* files systems with short file names).
```

```
*/
```

```
#define InstallManPageLong(file,destdir,dest) @!\
```

```
local_install.man:: file.man @@\
```

```
_MakeInstallDirIgnore(destdir) \ @@\
```

```
$(INSTALL) -c -m 444 file.man $(INSTALL_PREFIX)^^destdir/dest.$(L) @!\
```

```
@!\
```

```
local_deinstall.man:: @@\
```

```
$(RM)
```

```
$(INSTALL_PREFIX)^^destdir/dest.$(L) @!\
```

```
/*
```

```
* InstallManPage:
```

```
* Generate rules to install the indicated manual page.
```

```
*/
```

```
#define InstallManPage(file,dest) @!\
```

```
InstallManPageLong(file,dest,file)
```

```
/*
```

```
* InstallNonExec:
```

```
* Generate rules to install a data file using any special  
* install flags.
```

```
*/
```

```
#define InstallNonExec(file,dest) @!\
```

```

local_install:: file  @@\
  _MakeInstallDirIgnore(dest) \ @@\
  $(INSTALL) -c -m 444 file $(INSTALL_PREFIX)^^^dest @!\
  @!\
local_deinstall::  @@\
  $(RM) $(INSTALL_PREFIX)^^^dest/file

/*
* InstallProgramWithFlags:
* Generate rules to install an executable program using given
* install flags.
*/
#define InstallProgramWithFlags(program,dest,flags) @!\
local_install:: program  @@\
  _MakeInstallDirIgnore(dest) \ @@\
  $(INSTALL) -c -s -m 555 flags program^^^$_EXE $(INSTALL_PREFIX)^^^dest @!\
  @!\
local_deinstall::  @@\
  $(RM) $(INSTALL_PREFIX)^^^dest/program^^^$_EXE

/*
* InstallProgramNoStripWithFlags:
* Generate rules to install an executable program using given
* install flags.
*/
#define InstallProgramNoStripWithFlags(program,dest,flags) @!\
local_install:: program  @@\
  _MakeInstallDirIgnore(dest) \ @@\
  $(INSTALL) -c -m 555 flags program^^^$_EXE $(INSTALL_PREFIX)^^^dest @!\
  @!\
local_deinstall::  @@\
  $(RM) $(INSTALL_PREFIX)^^^dest/program^^^$_EXE

/*
* InstallProgram:
* Generate rules to install an executable program using any special
* install flags set in $(INSTALLFLAGS).
*/
#define InstallProgram(program,dest) @!\
InstallProgramWithFlags(program,dest,^^)

/*
* InstallProgramNoStrip:
* Generate rules to install an executable program using any special

```



```

* install flags set in $(INSTALLFLAGS), but without stripping the
* executable from debugging symbols.
*/
#define InstallProgramNoStrip(program,dest) @!\
InstallProgramNoStripWithFlags(program,dest,^^)

/*
* InstallScriptWithFlags:
* Generate rules to install an executable script using given
* install
* flags.
*/
#define InstallScriptWithFlags(script,dest,flags) @!\
local_install:: script  @@\
_MakeInstallDirIgnore(dest) \ @@\
$(INSTALL) -c -m 555 flags script $(INSTALL_PREFIX)^^^dest @!\
    @!\
local_deinstall::  @@\
$(RM) $(INSTALL_PREFIX)^^^dest/script

/*
* InstallScript:
* Generate rules to install an executable script using any special
* install flags set in $(INSTALLFLAGS).
*/
#define InstallScript(script,dest) @!\
InstallScriptWithFlags(script,dest,^^)

/*
* InstallScripts:
* Generate rules to install all the scripts listed in the generated
* $(SCRIPTS) and $(LSCRIPTS) macros.
*/
#define InstallScripts() @!\
|once _InstallScripts_ @!\
local_install:: $(SCRIPTS) $(LSCRIPTS)  @@\
_MakeInstallDirIgnore($(SCRIPTDIR)) \ @@\
for file in $(SCRIPTS) $(LSCRIPTS); do \ @@\
(set -x; \ @@\
$(INSTALL) -c -m 555 $$file $(INSTALL_PREFIX)$(SCRIPTDIR) || \ @@\
exit 1; \ @@\
done  @!\
    @!\
local_deinstall::  @@\
@for file in $(SCRIPTS)

```

```

$(LSCRIPTS); do \ @@\
  case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
  (set -x; $(RM) $(INSTALL_PREFIX)$(SCRIPTDIR)/$$file); \ @@\
done  @!\
-once

/*
* InstallManScripts:
* Generate rule to install/deinstall manual pages for scripts listed
* in the automatically generated $(SCRIPTS) macro.
*/
#define InstallManScripts() @!\
|once _InstallManScripts_ @!\
?NOMAN:|skip  @!\
local_install.man::  @@\
  _MakeInstallDirIgnore($(MANSRC)) \ @@\
  for file in $(SCRIPTS); do \  @@\
  if test -f $$file.man; then \  @@\
    (set -x; \  @@\
      $(INSTALL) -c -m 444 $$file.man \ @@\
      $(INSTALL_PREFIX)$(MANSRC)/$$file.$(L)) || \ @@\
    exit 1; \ @@\
  fi; \  @@\
done  @!\
  @!\
local_deinstall.man::  @@\
  case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
  for file in $(SCRIPTS); do \  @@\
    (set -x; $(RM) $(INSTALL_PREFIX)$(MANSRC)/$$file.$(L)); \ @@\
  done  @!\
  @!\
-skip  @!\
-once

/*
* LinkFileList:
* Link a list of list of files from one place to another
*/
#define LinkFileList(step,list,dir,sub) @!\
step:: list  @@\
  @case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
  echo " cd" dir; cd dir; for i in list; do (set -x; $(LN) sub/$$i .); done

/*
* InstallMultipleDestFlags:

```

```

* Generate rules to install multiple files at once during a particular
* step in the build using a specific set of install flags.
*/
#define InstallMultipleDestFlags(step,list,dest,flags) @!\
step:: list    @@\
  _MakeInstallDirIgnore(dest) \ @@\
  for i in list; do \    @@\
    (set -x; $(INSTALL) -c flags \ @@\
     $$i $(INSTALL_PREFIX)^^^dest) || exit 1;\    @@\
  done

/*
* DeinstallMultipleDest:
* Generate rules to deinstall multiple files at once during a particular
* step in the build.
*/
#define DeinstallMultipleDest(step,list,dest) @!\
step::    @@\
  @case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
  for i in list; do \    @@\
    (set -x; $(RM) $(INSTALL_PREFIX)^^^dest/$$i); \    @@\
  done

/*
* InstallMultiple:
* Generate rules to install multiple
  files at once during the install
* step of the build using any install flags set in $(INSTALLFLAGS)
* and deinstall them.
*/
#define InstallMultiple(list,dest) @!\
InstallMultipleDestFlags(local_install,list,dest,$(INSTALLFLAGS)) @!\
DeinstallMultipleDest(local_deinstall,list,dest)

/*
* InstallMultipleFlags:
* Generate rules to install multiple files at once during the
* install step of the build using the given install flags.
*/
#define InstallMultipleFlags(list,dest,flags) @!\
InstallMultipleDestFlags(local_install,list,dest,flags) @!\
DeinstallMultipleDest(local_deinstall,list,dest)

/*
* InstallMultipleMan:
* Generate rules to install a variety of manual pages

```

```

* during the install.man step of the build.
*/
#define InstallMultipleMan(list,dest) @!\
InstallMultipleDestFlags(local_install.man,list,dest,$(INSTALLFLAGS)) @!\
DeinstallMultipleDest(local_deinstall.man,list,dest)

/*
* DependDependency:
* Generate rules to build the makedepend program.
*/
#define DependDependency()
    @!\
depend:: TOPDIR/mkdep    @!\
    @!\
TOPDIR/mkdep:    @!\
?TOP: @echo "You have to run Configure first."; exit 1 @!\
%TOP: @echo "You have to run Configure in $(TOP) first."; exit 1

/*
* DependTarget:
* Generate rules to compute dependencies for all files listed
* in $(SOURCES) (automatically generated macro).
*/
#define DependTarget() @!\
+USRINC = $usrinc @!\
|once _DependTarget_ @!\
DependDependency() @!\
    @!\
depend::    @@\
($ (SED) /^# DO NOT DELETE/q' Makefile && \ @ @\
$(MKDEP) $(SOURCES) | \ @ @\
$(SED) -e 's:/usr/lib[^ ]*::g; s:$(USRINC)[^ ]*::g;' \ @ @\
-e '/: / b print' -e '$$ b print' -e 'H; d; n; : print' \ @ @\
-e 'x; s/\$\$/; s/\n//g; s/ ^ ^ * / /g; s/ :/:;' -e '/: *$$/d' \ @ @\
) > Makefile.new    @@\
cp Makefile Makefile.bak    @@\
cp Makefile.new Makefile    @@\
$(RM) Makefile.new    @!\
    @!\
-once

/*
* CleanTarget:
* Generate rules to remove any garbage files.
*/

```

```

#define CleanTarget() @!\
?SUBDIRS:clean:
  sub_clean local_clean @!\
%SUBDIRS:clean: local_clean @!\
?SUBDIRS:realclean: sub_realclean local_realclean @!\
%SUBDIRS:realclean: local_realclean @!\
?SUBDIRS:clobber: sub_clobber local_clobber @!\
%SUBDIRS:clobber: local_clobber @!\
  @!\
local_clean:: @@\
if test -f core; then $(RM) core; fi @@\
$(RM) *~*.o @!\
  @!\
local_realclean:: local_clean @!\
?TOP: $(RM) -r UU @!\
  @!\
local_clobber:: local_realclean @!\
%TOP: $(RM) Makefile config.sh @!\
?TOP: $(RM) config.sh config.h @!\
?TOP: $(RM) -r .config @!\
?TOP: $(RM) Makefile @!\

/*
* InstallTarget:
* Generate rules to recursively install files
*/
#define InstallTarget() @!\
?SUBDIRS:install:: local_install sub_install @!\
%SUBDIRS:install:: local_install @!\
?SUBDIRS:install.man:: maybe_install.man sub_install.man @!\
%SUBDIRS:install.man:: maybe_install.man @!\
?SUBDIRS:deinstall:: sub_deinstall local_deinstall @!\
%SUBDIRS:deinstall::
  local_deinstall @!\
?SUBDIRS:deinstall.man:: sub_deinstall.man maybe_deinstall.man @!\
%SUBDIRS:deinstall.man:: maybe_deinstall.man @!\
  @!\
?MANSRC:install.man-yes: local_install.man @!\
install.man-no: @!\
?MANSRC:deinstall.man-yes: local_deinstall.man @!\
deinstall.man-no: @!\

/*
* TagsTarget:
* Generate rules to compute tags files for C source code.
*/

```

```

#define TagsTarget() @!\
tags::    @@\
$(CTAGS) -w *. [ch]  @@\
$(CTAGS) -xw *. [ch] > tags @!\
        @!\
local_clobber::    @@\
$(RM) tags

/*
* BuildMakefileSH:
* Generate rules to build a Makefile.SH from an Jmakefile and any
* special jmake flags. This is generally done automatically by the
* template or by any special Jmakefiles.
* This function will simply touch Makefile.SH if no $(TOP)/.package
* exists, assuming the Jmakefile is not in a production environment.
*/
#define BuildMakefileSH(jmakeflags) @!\
Makefile.SH:
Jmakefile    @@\
-@if test -f $(TOP)/.package; then \ @@\
if test -f Makefile.SH; then \ @@\
    echo "$(RM) Makefile.SH~; $(MV) Makefile.SH Makefile.SH~"; \ @@\
    $(RM) Makefile.SH~; $(MV) Makefile.SH Makefile.SH~; \ @@\
fi; \    @@\
echo " $(JMAKE) -DTOPDIR=$(TOP) -DCURDIR=$(CURRENT)" jmakeflags; \ @@\
$(JMAKE) -DTOPDIR=$(TOP) -DCURDIR=$(CURRENT) jmakeflags; \ @@\
else touch $@; fi

/*
* BuildMakefile:
* Generate rules to build a Makefile from a Makefile.SH.
*/
#define BuildMakefile() @!\
Makefile: Makefile.SH    @@\
/bin/sh Makefile.SH

/*
* MakefileTarget:
* Generate rules to build a normal Makefile.
*/
#define MakefileTarget() @!\
BuildMakefileSH(^) @!\
BuildMakefile()

```

```

/*
* NormalObjectRule:
* Generate make rule to build usual object files.
*/
#define NormalObjectRule() @!\
|once _ObjectRule_ @!\
|rule:.c.o: @!\
|rule: $(CC) -c $(JCFLAGS) $< @!\
|rule: @!\
-once

/*
* NormalLibraryObjectRule:
* Generate make rules to build
"normal" objects.
*/
#define NormalLibraryObjectRule() @!\
|once _ObjectRule_ @!\
|rule:.c.o: @!\
|rule: $(RM) $@ @!\
|rule: $(CC) -c $(JCFLAGS) $< @!\
|rule: @!\
-once

/*
* ProfiledLibraryObjectRule:
* Generate make rules to build both profiled and "normal" objects.
*/
#define ProfiledLibraryObjectRule() @!\
all:: @@\
    @if [ ! -d profiled ]; then mkdir profiled; fi @!\
    @!\
|rule:.c.o: @!\
|rule: $(RM) $@ profiled/$@ @!\
|rule: $(CC) -pg -c $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o profiled/$*.o @!\
|rule: $(CC) -c $(JCFLAGS) $*.c @!\
|rule: @!\
local_clean:: @@\
    -@if [ -d profiled ]; then echo " $(RM) profiled/*.*"; \ @!\
    $(RM) profiled/*.*; fi

/*
* DebuggedLibraryObjectRule:
* Generate make rules to build both debuggable and "normal"
* objects.

```

```

*/
#define DebuggedLibraryObjectRule() @!\
all:: @!\
@if [ ! -d debugger ]; then mkdir debugger; fi @!\
    @!\
|rule:.c.o: @!\
|rule: $(RM) $@
debugger/$@ @!\
|rule: $(CC) -g -c $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o debugger/$*.o @!\
|rule: $(CC) -c $(JCFLAGS) $*.c @!\
|rule: @!\
local_clean:: @!\
-@if [ -d debugger ]; then echo " $(RM) debugger/?*.o"; \ @!\
$(RM) debugger/?*.o; fi

```

```

/*
* DebuggedAndProfiledLibraryObjectRule:
* Generate make rules to build debuggable, profiled, and "normal"
* objects.
*/

```

```

#define DebuggedAndProfiledLibraryObjectRule() @!\
all:: @!\
@if [ ! -d profiled ]; then mkdir profiled; fi @!\
@if [ ! -d debugger ]; then mkdir debugger; fi @!\
    @!\
|rule:.c.o: @!\
|rule: $(RM) $@ profiled/$@ debugger/$@ @!\
|rule: $(CC) -pg -c $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o profiled/$*.o @!\
|rule: $(CC) -g -c $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o debugger/$*.o @!\
|rule: $(CC) -c $(JCFLAGS) $*.c @!\
|rule: @!\
local_clean:: @!\
-@if [ -d profiled ]; then echo " $(RM) profiled/?*.o"; \ @!\
$(RM) profiled/?*.o; fi @!\
-@if [ -d debugger ];
then echo " $(RM) debugger/?*.o"; \ @!\
$(RM) debugger/?*.o; fi

```

```

/*
* SharedLibraryObjectRule:
* Generate make rules to build shared and "normal" object files.
*/
#define SharedLibraryObjectRule() @!\

```



```

all::    @@\
@if [ ! -d shared ]; then mkdir shared; fi @!\
    @!\
|rule:.c.o:    @!\
|rule: $(RM) $@ shared/$@ @!\
|rule: $(CC) -pic -c $(SHARED_CODEDEF) $(SHLIBDEF) $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o shared/$*.o @!\
|rule: $(CC) -c $(SHLIBDEF) $(JCFLAGS) $*.c @!\
|rule:    @!\
local_clean::    @@\
-@if [ -d shared ]; then echo " $(RM) shared/?*.o"; \ @@\
$(RM) shared/?*.o; fi

```

```

/*
* SharedAndDebuggedLibraryObjectRule:
* Generate make rules to build shared, debuggable, and "normal"
* object files.
*/

```

```

#define SharedAndDebuggedLibraryObjectRule() @!\
all::    @@\
@if [ ! -d shared ]; then mkdir shared; fi @@\
@if [ ! -d debugger ]; then mkdir debugger; fi @!\
    @!\
|rule:.c.o:    @!\
|rule: $(RM) $@ shared/$@ debugger/$@ @!\
|rule:
$(CC) -pic -c $(SHARED_CODEDEF) $(SHLIBDEF) $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o shared/$*.o @!\
|rule: $(CC) -g -c $(SHLIBDEF) $(JCFLAGS) $*.c @!\
|rule: $(MV) $*.o debugger/$*.o @!\
|rule: $(CC) -c $(SHLIBDEF) $(JCFLAGS) $*.c @!\
|rule:    @!\
local_clean::    @@\
-@if [ -d shared ]; then echo " $(RM) shared/?*.o"; \ @@\
$(RM) shared/?*.o; fi @@\
-@if [ -d debugger ]; then echo " $(RM) debugger/?*.o"; \ @@\
$(RM) debugger/?*.o; fi

```

```

/*
* SpecialSharedAndDebuggedObjectRule:
* Generate rules to compile a file with special flags and to make
* shared and debuggable versions.
*/

```

```

#define SpecialSharedAndDebuggedObjectRule(objs,depends,options) @!\
all::    @@\
@if [ ! -d shared ]; then mkdir shared; fi @@\
@if [ ! -d debugger ]; then mkdir debugger; fi @!\
    @!\

```

```

objs: depends    @@\
$(RM) $@ shared/$@  @@\
$(CC) -pic -c $(SHARED_CODEDEF) $(SHLIBDEF) $(JCFLAGS) options $*.c @@\
$(MV) $*.o shared/$*.o  @@\
$(CC)
-g -c $(SHLIBDEF) $(JCFLAGS) options $*.c  @@\
$(MV) $*.o debugger/$*.o  @@\
$(CC) -c $(SHLIBDEF) $(JCFLAGS) options $*.c

/*
* SpecialSharedObjectRule:
* Generate rules to compile a file with special flags and to make
* shared and debuggable versions.
*/
#define SpecialSharedObjectRule(objs,depends,options) @!\
all::    @@\
@if [ ! -d shared ]; then mkdir shared; fi @!\
    @!\
objs: depends    @@\
$(RM) $@ shared/$@  @@\
$(CC) -pic -c $(SHARED_CODEDEF) $(SHLIBDEF) $(JCFLAGS) options $*.c @@\
$(MV) $*.o shared/$*.o  @@\
$(CC) -c $(SHLIBDEF) $(JCFLAGS) options $*.c

/*
* SpecialObjectRule:
* Generate rules to compile a file with special flags.
*/
#define SpecialObjectRule(objs,depends,options) @!\
objs: depends    @@\
$(RM) $@    @@\
$(CC) -c $(JCFLAGS) options $*.c

/*
* SpecialProfiledObjectRule:
* Generate rules to compile a file with special flags and to make a
* profiled version.
*/
#define SpecialProfiledObjectRule(objs,depends,options) @!\
all::    @@\
@if
[ ! -d profiled ]; then mkdir profiled; fi @!\
    @!\
objs: depends    @@\
$(RM) $@ profiled/$@  @@\
$(CC) -pg -c $(JCFLAGS) options $*.c @@\

```

```

$(MV) $*.o profiled/$*.o @@\
$(CC) -c $(JCFLAGS) options $*.c

/*
* SpecialDebuggedObjectRule:
* Generate rules to compile a file with special flags and to make a
* debuggable version.
*/
#define SpecialDebuggedObjectRule(objs,depends,options) @!\
all::    @@\
    @if [ ! -d debugger ]; then mkdir debugger; fi @!\
        @!\
objs: depends    @@\
$(RM) $@ debugger/$@    @@\
$(CC) -g -c $(JCFLAGS) options $*.c @@\
$(MV) $*.o debugger/$*.o    @@\
$(CC) -c $(JCFLAGS) options $*.c

/*
* SpecialDebuggedAndProfiledObjectRule:
* Generate rules to compile a file with special flags and to make
* debuggable and profiled versions.
*/
#define SpecialDebuggedAndProfiledObjectRule(objs,depends,options) @!\
all::    @@\
    @if [ ! -d profiled ]; then mkdir profiled; fi @@\
    @if [ ! -d
debugger ]; then mkdir debugger; fi @!\
        @!\
objs: depends    @@\
$(RM) $@ profiled/$@ debugger/$@    @@\
$(CC) -pg -c $(JCFLAGS) options $*.c @@\
$(MV) $*.o profiled/$*.o    @@\
$(CC) -g -c $(JCFLAGS) options $*.c @@\
$(MV) $*.o debugger/$*.o    @@\
$(CC) -c $(JCFLAGS) options $*.c

/*
* NormalLibraryTarget:
* Generate rules to create a library. The 'srclist' and 'objlist'
* parameters are added to SOURCES and OBJECTS macros. The 'srclist'
* is not otherwise used by this rule, but is necessary for make depend.
*/
#define NormalLibraryTarget(libname,srclist,objlist) @!\
++OBJECTS objlist @!\

```

```

++SOURCES srclist @!\
NormalLibraryObjectRule() @!\
AllTarget(lib^^libname.a) @!\
    @!\
lib^^libname.a: objlist @@\
$(RM) $@  @@\
$(AR) $@ objlist  @@\
$(RANLIB) $@

/*
* NormalSharedLibraryTarget:
* Generate rules to create a shared library; build it into a
* different name so that the we don't hose people by having the
* library gone for long periods.
*/
#define
NormalSharedLibraryTarget(libname,rev,so) @!\
AllTarget(lib^^libname.so.rev) @!\
    @!\
lib^^libname.so.rev: so  @@\
$(RM) $@~  @@\
(cd shared; $(LD) -o ../$@~ -assert pure-text so)  @@\
$(RM) $@  @@\
$(MV) $@~ $@

/*
* NormalSharedLibraryDataTarget:
* Generate rules to create shlib data file; build it into a
* different name so that the we don't hose people by having the
* library gone for long periods.
*/
#define NormalSharedLibraryDataTarget(libname,rev,salist) @!\
AllTarget(lib^^libname.sa.rev) @!\
    @!\
lib^^libname.sa.rev: salist  @@\
$(RM) $@  @@\
$(AR) $@ salist  @@\
$(RANLIB) $@

/*
* NormalLibraryTarget2:
* Generate rules to create a library in two steps. This is used to
* create libraries with large numbers of files.
*/
#define NormalLibraryTarget2(libname,srclist,objlist1,objlist2) @!\
++SOURCES srclist @!\

```

```

++OBJECTS objlist1 @!\
++OBJECTS objlist2 @!\
NormalLibraryObjectRule() @!\
AllTarget(lib^^libname.a) @!\
    @!\
lib^^libname.a:
objlist1 objlist2 @@\
$(RM) $@    @@\
$(AR) $@ objlist1    @@\
$(AR) $@ objlist2    @@\
$(RANLIB) $@

/*
* ProfiledLibraryTarget:
* Generate rules to create a profiled library.
*/
#define ProfiledLibraryTarget(libname,srclist,objlist) @!\
++SOURCES srclist @!\
++OBJECTS objlist @!\
AllTarget(lib^^libname^^_p.a) @!\
    @!\
lib^^libname^^_p.a: objlist    @@\
$(RM) $@    @@\
cd profiled; $(AR) ../$@ objlist @@\
$(RANLIB) $@

/*
* DebuggedLibraryTarget:
* Generate rules to create a debuggable library.
*/
#define DebuggedLibraryTarget(libname,srclist,objlist) @!\
++SOURCES srclist @!\
++OBJECTS objlist @!\
AllTarget(lib^^libname^^_d.a) @!\
    @!\
lib^^libname^^_d.a: objlist    @@\
$(RM) $@    @@\
cd debugger; $(AR) ../$@ objlist @@\
$(RANLIB) $@

/*
* AliasedLibraryTarget:
* Generate rules to link one library to another.
*/
#define AliasedLibraryTarget(libname,alias) @!\

```

```
AllTarget(lib^^alias.a) @!\
    @!\
lib^^alias.a:
lib^^libname.a @@\
$(RM) $@    @@\
$(LN) lib^^libname.a $@
```

```
/*
```

```
* PrelinkedRelocatableTarget:
* Generate rules to produce a relocatable object file instead of a
* library.
*/
```

```
#define PrelinkedRelocatableTarget(objname,objlist,libs) @!\
AllTarget(objname.o) @!\
    @!\
objname.o: objlist    @@\
$(RM) $@    @@\
$(LD) $(JLDFLAGS) -r objlist -o $@ libs
```

```
/*
```

```
* NormalObjectTarget:
* Generate rules to produce a single object file.o from a file.c.
*/
```

```
#define NormalObjectTarget(file) @!\
++SOURCES file^^.c    @!\
AllTarget(file^^.o) @!\
NormalObjectRule()
```

```
/*
```

```
* NormalRelocatableTarget:
* Generate rules to produce a relocatable object file instead of a
* library.
*/
```

```
#define NormalRelocatableTarget(objname,objlist) @!\
AllTarget(objname.o) @!\
    @!\
objname.o: objlist    @@\
$(RM) $@    @@\
$(LD) $(JLDFLAGS) -r objlist -o $@
```

```
/*
```

```
* ProfiledRelocatableTarget:
* Generate rules to produce a profiled relocatable object file
* instead
```

```

of a library.
*/
#define ProfiledRelocatableTarget(objname,objlist) @!\
AllTarget(objname^^_p.o) @!\
    @!\
objname^^_p.o: objlist  @@\
$(RM) $@  @@\
$(LD) -X -r objlist -o $@

/*
* DebuggedRelocatableTarget:
* Generate rules to produce a debuggable relocatable object file
* instead of a library.
*/
#define DebuggedRelocatableTarget(objname,objlist) @!\
AllTarget(objname^^_d.o) @!\
    @!\
objname^^_d.o: objlist  @@\
$(RM) $@  @@\
$(LD) -X -r objlist -o $@

/*
* LintLibraryTarget:
* Generate rules to create a lint library. Note that the lint
* library is always forced to be newer than the library itself.
*/
#define LintLibraryTarget(libname,srclist) @!\
lintlib:: llib-l^^libname.ln @!\
    @!\
llib-l^^libname.ln: srclist  @@\
$(RM) $@  @@\
$(LINT) $(LINTLIBFLAG)^^libname $(LINTFLAGS) srclist

/*
* NormalLintTarget:
* Generate rules to lint a set of sources.
*/
#define NormalLintTarget(srclist) @!\
lint:  @@\
$(LINT) $(LINTFLAGS) srclist
$(LINTLIBS)

/*
* LintTarget:
* Generate rules to lint $(SOURCES) (automatically generated)

```

```

*/
#define LintTarget() @!\
|once _LintTarget_ @!\
NormalLintTarget($(SOURCES)) @!\
-once

/*
* LinkSourceFile:
* Snag source file from some other directory
*/
#define LinkSourceFile(src,dir) @!\
src: dir/src @@\
$(RM) $@ @@\
$(LN) $? $@ @!\

/*
* MakeSubincludesForBuild:
* Make includes in sub directories.
*/
#define MakeSubincludesForBuild(step,dir,srclist) @!\
step:: dir srclist @@\
@-(list=`echo srclist | sed -e 's/[^ ]*///g^'; \ @@\
set -x; cd dir; $(RM) $$list) @@\
@for i in srclist; do \ @@\
(set -x; cd dir; $(LN) ../$$i .) || exit 1; \ @@\
done @!\
@!\
MakeDirectories(dir,dir) @!\
@!\
local_realclean:: @@\
@-(if [ -d dir ]; then \ @@\
list=`echo srclist | sed -e 's/[^ ]*///g^'; \ @@\
set -x; cd dir; $(RM) $$list; fi)

/*
* CommonSubdirsRule:
* Rule for making $(TARGET) in
every subdirectory, with $(VERB) as
* verbose message and $(FLAGS) as additional flags.
*/
#define CommonSubdirsRule(dirs) @!\
subdirs: @@\
@case '${MFLAGS}' in *[ik]*) set +e;; esac; \ @@\
for i in dirs ;\ @@\
do \ @@\

```



```
(cd $$i ; echo $(VERB) "in $(DIR)$$i..."; \ @@\
$(MAKE) $(MFLAGS) $(FLAGS) $(TARGET)) || exit 1; \ @@\
done
```

```
/*
* NamedTargetSubdirsRule:
* Recursively make a series of steps in the specified directories.
*/
```

```
#define NamedTargetSubdirsRule(dirs,name,verb,flags) @!\
name::    @@\
    @case '{MFLAGS}' in *[ik]*) set +e;; esac; \ @@\
for i in dirs ;\    @@\
do \    @@\
    (cd $$i ; echo verb "in $(DIR)$$i..."; \ @@\
    $(MAKE) $(MFLAGS) flags name) || exit 1; \ @@\
done
```

```
/*
* NamedTargetSubdirs:
* Recursively make a series of steps.
*/
```

```
#define NamedTargetSubdirs(name,verb,flags) @!\
name::    @@\
    @$(MAKE) subdirs TARGET=name VERB=verb FLAGS=flags
```

```
/*
* NamedSubTargetSubdirs:
* Recursively make a series of steps,
like NamedTargetSubdirs.
* However, the supplied "name" has "sub_" prefixed to it.
*/
```

```
#define NamedSubTargetSubdirs(name,verb,flags) @!\
sub_^^name::    @@\
    @$(MAKE) subdirs TARGET=name VERB=verb FLAGS=flags
```

```
/*
* NamedDepthTargetSubdirs:
* Recursively make a series of steps. We first enter the
* subdirectories, then perform the local entries.
* The supplied "name" has "sub_" prefixed to it.
*/
```

```
#define NamedDepthTargetSubdirs(name,verb,flags) @!\
sub_^^name::    @@\
    @$(MAKE) subdirs TARGET=name VERB=verb FLAGS=flags @@\
    @echo "Back to $(CURRENT) for "name^^...
```

```

/*
* MakeSubdirs:
* Generate rules to do makes in the given subdirectories.
*/
#define MakeSubdirs() \
NamedTargetSubdirs(all,"Making all",^^)

/*
* DependDirs:
* Generate rules to recursively compute dependencies as part of the
* make depend step.
*/
#define DependDirs(dirs) \
NamedTargetSubdirsRule(dirs,depend,"Depending",^^)

/*
* DependSubdirs:
* Generate rules to recursively compute dependencies
as part of the
* make depend step.
*/
#define DependSubdirs() \
DependDirs($(SUBDIRS))

/*
* InstallSubdirs:
* Generate rules to recursively install and deinstall programs and
* files.
*/
#define InstallSubdirs() \
NamedSubTargetSubdirs(install,"Installing",^^) @!\
NamedDepthTargetSubdirs(deinstall,"Deinstalling",^^)

/*
* InstallManSubdirs:
* Generate rules to recursively install and deinstall manual pages.
*/
#define InstallManSubdirs() \
NamedSubTargetSubdirs(install.man,"Installing man pages",^^) @!\
NamedDepthTargetSubdirs(deinstall.man,"Deinstalling man pages",^^)

```

```

/*
* IncludesSubdirs:
* Generate rules to recursively put include files in build
*/
#define IncludesSubdirs() \
NamedTargetSubdirs(includes,including,^^)

/*
* CleanSubdirs:
* Generate rules to recursively clean out garbage files.
*/
#define CleanSubdirs() \
NamedDepthTargetSubdirs(clean,"Cleaning",^^) @!\
NamedDepthTargetSubdirs(realclean,"Real cleaning",^^) @!\
NamedDepthTargetSubdirs(clobber,"Clobbering",^^)

/*
* TagSubdirs:
* Generate rules to recursively create tags files.
*/
#define TagSubdirs(dirs) \
NamedTargetSubdirsRule(dirs,tag,"Tagging",^^)

/*
* MakeLintSubdirs:
* Generate rules to recursively lint directories as part of the
* named step.
*/
#define MakeLintSubdirs(dirs,target) \
NamedTargetSubdirsRule(dirs,target,"Linting",^^)

/*
* LintDirs:
* Generate rules to recursively lint directories as part of the
* make lint step.
*/
#define LintDirs(dirs) \
MakeLintSubdirs(dirs,lint)

/*
* LintSubdirs:
* Generate rules to recursively lint directories as part of the
* make lint step.
*/

```

```

#define LintSubdirs() \
LintDirs($(SUBDIRS))

/*
* MakeDirs:
* Creates a set of directories, even if some directories in the path
* do not already exist. There should be no '@!' at the end of the
* '#define' line, because this macro is used *inside* building rules.
*/
#define MakeDirs(dirs) \
@case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
for dir in dirs;
do \    @@\
(set -x; test -d $$dir || $(INSTALLDIR) $$dir) || \ @@\
exit 1; \ @@\
done

/*
* _MakeInstallDirs:
* Creates a set of intall directories, even if some directories in the path
* do not already exist. There should be no '@!' at the end of the
* '#define' line, because this macro is used *inside* building rules.
*/
#define _MakeInstallDirs(dirs) \
@case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
for dir in dirs; do \    @@\
_MakeInstallDir($$dir) \    @@\
done

/*
* _MakeInstallDir:
* Internal macro to create a missing install directory.
*/
#define _MakeInstallDir(dir) \
(set -x; test -d $(INSTALL_PREFIX)^^^dir || \ @@\
$(INSTALLDIR) $(INSTALL_PREFIX)^^^dir);

/*
* _MakeInstallDirIgnore:
* Same as _MakeInstallDir but handles "make -i" as well.
*/
#define _MakeInstallDirIgnore(dir) \
@case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
_MakeInstallDir(dir)

/*
* _RmInstallDirs:

```

```

* Removes a set of intall directories.
* There should be no '@!'
  at the end of the '#define' line, because this
* macro is used *inside* building rules.
*/
#define _RmInstallDirs(dirs) \
  @case '${MFLAGS}' in *[i]*) set +e;; esac; \ @@\
  for dir in dirs; do \    @@\
    (set -x; test -d $$dir && $(RM) -r $(INSTALL_PREFIX)$$dir); \ @@\
  done

/*
* MakeDirectories:
* Generate rules to create a hierarchy of directories.
*/
#define MakeDirectories(step,dirs) @!\
step::    @@\
  MakeDirs(dirs)

/*
* MakeInstallDirectories:
* Generate a rule to create a set of directories at installation
* time (removed by deinstall).
*/
#define MakeInstallDirectories(dirs) @!\
local_install::  @@\
  _MakeInstallDirs(dirs) @!\
    @!\
local_deinstall:: @@\
  _RmInstallDirs(dirs)

/*
* MakeLintLibSubdirs:
* Generate rules to recursively create lint libraries.
*/
#define MakeLintLibSubdirs(dirs) @!\
MakeLintSubdirs(dirs,lintlib)

/*
* MakeMakeSubdirs:
* Generate rules to recursively recreate target as part of the
* specified step in the build.
  This assumes Makefile.SH has
* already been built (which is the case for a delivery), but does
* not rely on the existence of a Makefile.

```

```

*/
#define MakeMakeSubdirs(target) @!\
target::    @@\
    @case '${MFLAGS}' in *[ik]*) set +e;; esac; \ @@\
    for i in $(SUBDIRS); \ @@\
    do \    @@\
    echo "Making "target" in $(DIR)$$i..."; \ @@\
    (cd $$i || exit 1; \ @@\
    if test ! -f Makefile; then /bin/sh Makefile.SH; fi; \ @@\
    $(MAKE) $(MFLAGS) target) || exit 1; \ @@\
    done

/*
* MakeMakefilesSH:
* Generate rules to recursively recreate target as part of the
* specified step in the build. If $(TOP) is set to an absolute
* path, don't prepend the ../ prefix. This makes running things
* outside of the source tree to be much easier.
*/
#define MakeMakefilesSH() @!\
Makefiles.SH:: Makefile.SH    @@\
    @case '${MFLAGS}' in *[ik]*) set +e;; esac; \ @@\
    for i in $(SUBDIRS); \    @@\
    do \    @@\
    case "$(DIR)$$i/" in \    @@\
    ^^*^^/^^*^^/^^*^^/^^*^^) newtop=../...;; \
    \ @@\
    ^^*^^/^^*^^/^^*^^) newtop=../...;; \    @@\
    ^^*^^/^^*^^) newtop=../...;; \    @@\
    *^^) newtop=...;; \    @@\
    esac; \    @@\
    case "$(TOP)" in \    @@\
    /^^*) newtop="$(TOP)" ;; \    @@\
    esac; \    @@\
    echo "Making Makefiles.SH in $(DIR)$$i..."; \ @@\
    (cd $$i || exit 1; \    @@\
    if test -f Jmakefile; then \    @@\
    $(MAKE) $(MFLAGS) -f ../Makefile \    @@\
    Makefile TOP=$$newtop CURRENT=$(DIR)$$i && \    @@\
    $(MAKE) $(MFLAGS) Makefiles.SH; \    @@\
    fi; \    @@\
    ) || exit 1; \    @@\
    done

/*
* MakefileSubdirs:

```

```

* Generate rules to create Makefiles.
*/
#define MakefileSubdirs() @!\
MakeMakeSubdirs(Makefiles) @!\
MakeMakefilesSH()

/*
* CppScriptTarget:
* Generate rules to create a shell script by running the input
* through cpp.
*/
#define CppScriptTarget(dst,src,defs,deplist) @!\
dst:: src deplist  @@\
$(RM) $@  @@\
$(CPP) defs <src | \  @@\
sed -e '/^# *[0-9][0-9]* *.*$$/d' >$@  @@\
chmod a+x $@

/*
* MakeScriptFromCpp:
* Generate rules to create a script from a file with a
* .cpp suffix.
*/
#define MakeScriptFromCpp(name,defs) @!\
CppScriptTarget(name,name.cpp,defs,^^)

/*
* ShellScriptTargetExt:
* Generate rules to create and install a set of scripts from
* ext files (.sh and .SH are the most common examples). Man pages
* derived from the name of the scripts are also installed unless
* NoManPages() is specified.
*/
#define ShellScriptTargetExt(scripts,ext) @!\
++SCRIPTS scripts @!\
SimpleShellScriptTargetExt(scripts,ext) @!\
InstallScripts()  @!\
InstallManScripts()

/*
* ShellScriptTarget:
* Generate rules to create and install a set of scripts from
* .SH files. Man pages derived from the name of the scripts are
* also installed unless NoManPages() is specified.

```

```

*/
#define ShellScriptTarget(scripts) @!\
ShellScriptTargetExt(scripts,.SH)

/*
* SimpleShellScriptTargetExt:
* Generate rules to create a set of scripts from ext files where
* ext is usually
* something like .sh or .SH, or whatever file
* extension you like..
*/
#define SimpleShellScriptTargetExt(scripts,ext) @!\
AllTarget(scripts) @!\
    @!\
|expand s!scripts! @!\
!s: !s^^ext @@\
/bin/sh !s^^ext @!\
    @!\
-expand

/*
* SimpleShellScriptTarget:
* Generate rules to create a set of scripts from .SH files.
*/
#define SimpleShellScriptTarget(scripts) @!\
SimpleShellScriptTargetExt(scripts,.SH)

/*
* ShellScriptLongTarget:
* Generate rules to create a set of scripts from .SH files where
* the name of the generated file is different from the basename of
* the .SH file (when, for instance, the total length with the .SH
* extension would not leave enough space for RCS ,v extension).
*/
#define ShellScriptLongTarget(basename,scriptname) @!\
++LSCRIPTS scriptname @!\
AllTarget(scriptname) @!\
    @!\
scriptname: basename^^.SH @@\
/bin/sh basename^^.SH @!\
    @!\
InstallScripts() @!\
?NOMAN:|skip @!\
InstallManPageLong(basename,$(MANSRC),scriptname) @!\
-skip

```



```

/*
 * ForceTarget:
 * The force target will force reconstruction of all the other
 * targets which include .FORCE in their own dependencies.
 */
#define ForceTarget() @!\
|once _force_ @!\
.FORCE: @!\
    @!\
-once

/*
 * RemoteTargetDependency:
 * A local target may rely on a remote dependency (e.g. a library)
 * made in a separate directory. This rule explicits the dependency
 * and forces a make of that dependency in the remote directory.
 */
#define RemoteTargetDependency(target,directory,dependency) @!\
RemoteDependency(directory,dependency) @!\
target: directory/^^^dependency @!\

/*
 * RemoteDependency:
 * Specify rules for making a remote dependency.
 */
#define RemoteDependency(directory,dependency) @!\
ForceTarget() @!\
|once =directory/^^^dependency= @!\
directory/^^^dependency: .FORCE @@\
    @echo "Checking "^^^dependency" in "^^^directory"..." @@\
    cd ^^^directory; $(MAKE) ^^^dependency @@\
    @echo "Continuing in $(CURRENT)..." @!\
    @!\
-once

/*
 * SetSubdirs:
 * Actually forces the definition of SUBDIRS, and lets the user
 * specify what the sub-directories are. This will be added to the
 * customization part.
 */
#define SetSubdirs(subdirs) @!\
>SUBDIRS @!\
+SUBDIRS = subdirs

```

```
/*
* NoManPages:
* Actually forces the definition of NOMAN, which tells the jmake
* program to not generate rules for installing manual pages.
*/
#define NoManPages() @!\
>NOMAN
```

```
/*
* Expand:
* This powerful macro expands the `rule' given a `pattern'. It
* relies on a built-in command in jmake. The expansion is
* documented in the short notes file that comes with jmake and
* gives some insights on the internal syntax.
*/
#define Expand(rule, pattern) @!\
|expand pattern @!\
rule @!\
-expand
```

```
/*
* Lex and yacc stuff.
*/
```

```
/*
* YaccRule:
* This is the rule which is used to build a .c file from a .y file.
*/
#define YaccRule() @!\
AddSuffix(.y) @!\
|once _YaccRule_ @!\
|rule:.y.c: @!\
|rule: $(YACC) $(JYFLAGS)
$< @!\
|rule: $(MV) y.tab.c $@ @!\
|rule: @!\
-once
```

```
/*
* SimpleYaccTarget:
* Declare a yacc base.y file to be used in the building of the
* specified target program. The source file must be given without
* its final .y extension. The name of the .c and .o will be
* derived from the source file basename provided.
```

```

*/
#define SimpleYaccTarget(program,base) @!\
++SOURCES base.y @!\
++OBJECTS base.o @!\
YaccRule() @!\
program: base.c @!\
    @!\
local_realclean:: @@\
$(RM) base.c @!\

/*
* ComplexYaccTarget:
* Declare a yacc base.y file to be used in the building of the
* specified target program. The source file must be given without
* its final .y extension. The name of the .c and .o will be
* derived from the source file basename provided.
* The difference with SimpleYaccTarget is the identifying process
* where all the 'yy' are replaced by the specified prefix.
*/
#define ComplexYaccTarget(program,base,prefix) @!\
++SOURCES base.y @!\
++OBJECTS base.o
    @!\
program: base.c @!\
    @!\
base.c: base.y    @@\
$(YACC) $(JYFLAGS) base.y @@\
$(SED) -e 's/yy\(.)/prefix\1/g' < y.tab.c > base.c @@\
$(SED) -e 's/yy\(.)/prefix\1/g' < y.tab.h > base.h @@\
$(RM) y.tab.c y.tab.h @!\
    @!\
local_realclean:: @@\
$(RM) base.c @!\

/*
* SimpleYaccInclude:
* Declare that program will need an include file produced by
* the output of yacc on base.y, which typically produces a file
* named y.tab.h, which will be renamed as base.h.
* The only problem is that the dependencies towards base.h have
* to be manually given in the Jmakefile.
*/
#define SimpleYaccInclude(base) @!\
base.h: base.c @@\
@if test -f y.tab.h; then \ @@\
    echo " $(MV) y.tab.h $@"; \ @@\

```

```

$(MV) y.tab.h $@; \ @@\
fi    @!\
    @!\
local_realclean::  @@\
$(RM) base.h

/*
* ComplexYaccInclude:
* Declare that program will need an include file produced by
* the output of yacc on base.y, which typically produces a file
* named y.tab.h, which will
* be renamed as base.h.
* The difference with SimpleYaccInclude is the identifying process
* of the y.tab.h file where all 'yy' are renamed to prefix.
* The only problem is that the dependencies towards base.h have
* to be manually given in the Jmakefile.
*/
#define ComplexYaccInclude(base,prefix) @!\
base.h: base.c  @@\
    @if test -f y.tab.h; then \ @@\
    echo "$(SED) -e 's/yy\(.)/prefix\1/g' < y.tab.h > base.h"; \ @@\
    $(SED) -e 's/yy\(.)/prefix\1/g' < y.tab.h > base.h; \ @@\
    echo "$(RM) y.tab.h"; \ @@\
    $(RM) y.tab.h; \ @@\
    elif test -f base.h; then \ @@\
    echo "$(CP) base.h base.ht"; \ @@\
    $(CP) base.h base.ht; \ @@\
    echo "$(SED) -e 's/yy\(.)/prefix\1/g' < base.ht > base.h"; \ @@\
    $(SED) -e 's/yy\(.)/prefix\1/g' < base.ht > base.h; \ @@\
    echo "$(RM) base.ht"; \ @@\
    $(RM) base.ht; \ @@\
fi    @!\
    @!\
local_realclean::  @@\
$(RM) base.h

/*
* NormalYaccTarget:
* Declare a yacc base.y file which should produce a base.c and
* base.h file
* as derived from the output of yacc, to be used by
* the specified program.
*/
#define NormalYaccTarget(program,base) @!\
SimpleYaccTarget(program,base) @!\
SimpleYaccInclude(base)

```

```

/*
* IdentifiedYaccTarget:
* Declare a yacc base.y file which should produce a base.c and
* base.h file as derived from the output of yacc, to be used by
* the specified program. The specified prefix is used to replace
* all the 'yy' in the generated file, for use when more than a
* single parser is needed in one executable.
*/
#define IdentifiedYaccTarget(program,base,prefix) @!\
ComplexYaccTarget(program,base,prefix) @!\
ComplexYaccInclude(base,prefix)

```

```

/*
* SimpleLexTarget:
* This declares a lex base.l file which is to be ran through
* lex to produce a base.c file.
*/
#define SimpleLexTarget(program,base) @!\
++SOURCES base.l @!\
++OBJECTS base.o @!\
|once _LexRule_ @!\
|rule:.l.c: @!\
|rule: $(LEX) $(JLFLAGS) $< @!\
|rule: $(MV) lex.yy.c $@ @!\
|rule: @!\
-once @!\
AddSuffix(.l) @!\
program:
base.c @!\
    @!\
local_realclean:: @@\
$(RM) base.c @!\

```

```

/*
* IdentifiedLexTarget:
* This declares a lex base.l file which is to be ran through
* lex to produce a base.c file. The prefix is used to replace
* the 'yy', so that the lexical analyzer may be identified.
*/
#define IdentifiedLexTarget(program,base,prefix) @!\
++SOURCES base.l @!\
++OBJECTS base.o @!\
program: base.c @!\
    @!\
base.c: base.l @@\

```

```

$(LEX) $(JLFLAGS) base.l @@\
$(SED) -e 's/yy\(.)/prefix\1/g' < lex.yy.c > base.c @@\
$(RM) lex.yy.c @!\
    @!\
local_realclean:: @@\
$(RM) base.c @!\

/*
 * NormalLexDependTarget:
 * Declare that program will need an include file produced by
 * the output of lex on base.l, which typically produces a file
 * named lex.yy.c which will be renamed as base.c. Besides, the
 * lexical analyzer needs the file parser.h produced by running
 * parser.y through yacc and renaming y.tab.h as parser.h.
 */
#define NormalLexDependTarget(program,base,parser)
    @!\
base.o: parser.h @!\
    @!\
SimpleLexTarget(program,base)

/*
 * IdentifiedLexDependTarget:
 * Declare that program will need an include file produced by
 * the output of lex on base.l, which typically produces a file
 * named lex.yy.c which will be renamed as base.c. Besides, the
 * lexical analyzer needs the file parser.h produced by running
 * parser.y through yacc and renaming y.tab.h as parser.h.
 * The lexical analyzer is identified with the supplied prefix,
 * which replaces the regular 'yy' prefix in the symbol names.
 */
#define IdentifiedLexDependTarget(program,base,parser,prefix) @!\
base.o: parser.h @!\
    @!\
IdentifiedLexTarget(program,base,prefix)

/*
 * NormalParserTarget:
 * Specify that program is using the lex/yacc combination to
 * produce a parser. The lexic and parser parameters are the
 * base name of the .l and .y file, respectively.
 */
#define NormalParserTarget(program,lexic,parser) @!\
NormalLexDependTarget(program,lexic,parser)

```

@!\

NormalYaccTarget(program,parser)

/\*

\* IdentifiedParserTarget:

\* Specify that program is using the lex/yacc combination to

\* produce a parser. The lexic and parser parameters are the

\* base name of the .l and .y file, respectively. The parser

\* produced is identified via its prefix, which replaces all

\* the normally supplied 'yy' prefix, hence making it possible

\* to have multiple parsers in a single executable.

\*/

#define IdentifiedParserTarget(program,lexic,parser,prefix) @!\

IdentifiedLexDependTarget(program,lexic,parser,prefix) @!\

IdentifiedYaccTarget(program,parser,prefix)

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/dist/files/Jmake.rules

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setpwent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_setpwent\_r setpwent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \

usethreads i\_pwd extern\_C

?MAKE: -pick add \$@ %<

?S:d\_setpwent\_r:

?S: This variable conditionally defines the HAS\_SETPWENT\_R symbol,

?S: which indicates to the C program that the setpwent\_r()

?S: routine is available.

?S:.

?S:setpwent\_r\_proto:

?S: This variable encodes the prototype of setpwent\_r.

?S: It is zero if d\_setpwent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setpwent\_r

?S: is defined.

?S:.

?C:HAS\_SETPWENT\_R:

?C: This symbol, if defined, indicates that the setpwent\_r routine

?C: is available to

```

setpwent re-entrantly.
?C:.
?C:SETPWENT_R_PROTO:
?C: This symbol encodes the prototype of setpwent_r.
?C: It is zero if d_setpwent_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_setpwent_r
?C: is defined.
?C:.
?H:#$d_setpwent_r HAS_SETPWENT_R /**/
?H:#define SETPWENT_R_PROTO $setpwent_r_proto /**/
?H:.
?T:try hdrs d_setpwent_r_proto
: see if setpwent_r exists
set setpwent_r d_setpwent_r
eval $inlibc
case "$d_setpwent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_pwd pwd.h"
case "$d_setpwent_r_proto:$usethreads" in
":define") d_setpwent_r_proto=define
set d_setpwent_r_proto setpwent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_setpwent_r_proto" in
define)
case "$setpwent_r_proto" in
"|0) try='int setpwent_r(FILE**);'
./prochck "$extern_C $try" $hdrs && setpwent_r_proto=I_H ;;
esac
case "$setpwent_r_proto" in
"|0) try='void setpwent_r(FILE**);'
./prochck "$extern_C $try" $hdrs && setpwent_r_proto=V_H ;;
esac
case "$setpwent_r_proto"
in
"|0) d_setpwent_r=undef
setpwent_r_proto=0
echo "Disabling setpwent_r, cannot determine prototype." >&4 ;;
* ) case "$setpwent_r_proto" in
REENTRANT_PROTO*) ;;
*) setpwent_r_proto="REENTRANT_PROTO_$setpwent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "setpwent_r has no prototype, not using it." >&4 ;;

```



```

esac
d_setpwent_r=undef
setpwent_r_proto=0
;;
esac
;;
*) setpwent_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_setpwent_r.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Copyright (c) 2000, Jarkko Hietaniemi
?RCS:
?X:
?X: This unit allows the duplication of the source tree to the current
?X: directory via symbolic links. This must be requested explicitly
?X: by them issuing a -Dmksymlinks on the command line.
?X:
?MAKE:Mksymlinks: Mkdirp lns issymlink src rsrc pkgsrc
?MAKE: -pick add $@ %<
?F:!UU
?T: dir filename tmppwd filelist
?LINT:extern mksymlinks
@if {test -f ../MANIFEST}
: Duplicate the tree with symbolic links if -Dmksymlinks was supplied
case "$mksymlinks"
in
$define|true|[yY]*)
echo " "
case "$src" in
"|.") echo "Cannot create symlinks in the original directory." >&4
exit 1
;;
*) case "$lns:$issymlink" in

```

```

*"ln"*" -s:"*"test -"?)
echo "Creating the symbolic links..." >&4
echo "(First creating the subdirectories...)" >&4
cd ..
awk '{print $1}' $src/MANIFEST | grep / | sed 's:[^/]*$::' | \
sort -u | while true
do
read dir
test -z "$dir" && break
./UU/mkdirp $dir 2>/dev/null
if test -d $dir; then
: ok
else
echo "Failed to create '$dir'. Aborting." >&4
exit 1
fi
done
echo "(Now creating the symlinks...)" >&4
awk '{print $1}' $src/MANIFEST | while true; do
read filename
test -z "$filename" && break
if test -f $filename; then
if $sissymlink $filename; then
rm -f $filename
fi
fi
if test -f $filename; then
echo "$filename already exists, not symlinking."
else
?X: Note that the following works because "$pkgsrc" is absolute
ln
-s $pkgsrc/$filename $filename
fi
done
?X: Check that everything was correctly copied
echo "(Checking current directory...)" >&4
cd UU
awk '$1 !~ /PACK[A-Z]+/ {print $1}' "$rsrc/MANIFEST" | \
(split -l 50 2>/dev/null || split -50)
rm -f missing
tmppwd=`pwd`
for filelist in x??; do
(cd ..; ls `cat "$tmppwd/$filelist" ` \
>/dev/null 2>>"$tmppwd/missing")
done
if test -s missing; then
echo "Failed duplication of source tree. Aborting." >&4
exit 1

```

```

fi
;;
*) echo "(I cannot figure out how to do symbolic links, ignoring!)" >&4
;;
esac
;;
esac
;;
esac

@end

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Mksymlinks.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_setprotoent_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_setprotoent_r setprotoent_r_proto: Inlibc Protochk Hasproto \
i_systypes usethreads i_netdb extern_C
?MAKE: -pick add $@ %<
?S:d_setprotoent_r:
?S: This variable conditionally defines the HAS_SETPROTOENT_R symbol,
?S: which indicates to the C program that the setprotoent_r()
?S: routine is available.
?S:.
?S:setprotoent_r_proto:
?S: This variable encodes the prototype of setprotoent_r.
?S: It is zero if d_setprotoent_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_setprotoent_r
?S: is defined.
?S:.
?C:HAS_SETPROTOENT_R:
?C: This symbol, if defined, indicates that the setprotoent_r
routine
?C: is available to setprotoent re-entrantly.
?C:.
?C:SETPROTOENT_R_PROTO:
?C: This symbol encodes the prototype of setprotoent_r.
?C: It is zero if d_setprotoent_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_setprotoent_r

```

```

?C: is defined.
?C:.
?H:#$d_setprotoent_r HAS_SETPROTOENT_R /**/
?H:#define SETPROTOENT_R_PROTO $setprotoent_r_proto /**/
?H:.
?T:try hdrs d_setprotoent_r_proto
: see if setprotoent_r exists
set setprotoent_r d_setprotoent_r
eval $inlibc
case "$d_setprotoent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_setprotoent_r_proto:$usethreads" in
":define") d_setprotoent_r_proto=define
set d_setprotoent_r_proto setprotoent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_setprotoent_r_proto" in
define)
case "$setprotoent_r_proto" in
"|0) try='int setprotoent_r(int, struct protoent_data*);'
./protochk "$$extern_C $try" $hdrs && setprotoent_r_proto=I_ID ;;
esac
case "$setprotoent_r_proto"
in
"|0) try='void setprotoent_r(int, struct protoent_data*);'
./protochk "$$extern_C $try" $hdrs && setprotoent_r_proto=V_ID ;;
esac
case "$setprotoent_r_proto" in
"|0) d_setprotoent_r=undef
setprotoent_r_proto=0
echo "Disabling setprotoent_r, cannot determine prototype." >&4 ;;
* ) case "$setprotoent_r_proto" in
REENTRANT_PROTO*) ;;
*) setprotoent_r_proto="REENTRANT_PROTO_$$setprotoent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "setprotoent_r has no prototype, not using it." >&4 ;;
esac
d_setprotoent_r=undef
setprotoent_r_proto=0
;;
esac
;;

```

```
*) setprotoent_r_proto=0
```

```
::
```

```
esac
```

Found in path(s):

```
*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_setprotoent_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: vendorman3dir.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1999-2000, Andy Dougherty
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: vendorman3dir.U,v $
```

```
?RCS: Revision 1.1 1999/07/08 18:32:57 doughera
```

```
?RCS: Initial revision
```

```
?RCS:
```

```
?MAKE:vendorman3dir vendorman3direxp installvendorman3dir: man3dir Getfile \  
Oldconfig Setprefixvar Prefixit test vendorprefix prefix sed
```

```
?MAKE: -pick add $@ %<
```

```
?Y:TOP
```

```
?S:vendorman3dir:
```

```
?S: This variable contains the name of the directory for man3
```

```
?S: pages. It may have a ~ on the front.
```

```
?S: The standard distribution will put nothing in this directory.
```

```
?S: Vendors
```

```
who distribute perl may wish to place their own
```

```
?S: man3 pages in this directory with
```

```
?S: MakeMaker Makefile.PL INSTALLDIRS=vendor
```

```
?S: or equivalent. See INSTALL for details.
```

```
?S:.
```

```
?S:vendorman3direxp:
```

```
?S: This variable is the ~name expanded version of vendorman3dir, so that you
```

```
?S: may use it directly in Makefiles or shell scripts.
```

```
?S:.
```

```
?D:installvendorman3dir="
```

```
?S:installvendorman3dir:
```

```
?S: This variable is really the same as vendorman3direxp but may differ on
```

```
?S: those systems using AFS. For extra portability, only this variable
```

```
?S: should be used in makefiles.
```

```
?S:.
```

```
?LINT:change prefixvar
```

```

?LINT:set installvendorman3dir
: Set the vendorman3dir variables
case "$vendorprefix" in
") vendorman3dir="
vendorman3direxp="
;;
*) : determine where vendor-supplied module manual pages go.
case "$vendorman3dir" in
") dflt=`echo "$man3dir" | $sed "s#^$prefix#$vendorprefix#" ` ;;
*) dflt=$vendorman3dir ;;
esac
case "$dflt" in
"|' ') dflt=none ;;
esac
fn=nd~+
rp='Pathname
for the vendor-supplied manual section 3 pages?'
./getfile
vendorman3dir="$ans"
vendorman3direxp="$ansexp"
;;
esac
: Use ' ' for none so value is preserved next time through Configure
$test X"$vendorman3dir" = "X" && vendorman3dir=' '
prefixvar=vendorman3dir
./installprefix

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/vendorman3dir.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: pidtype.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:31:27 ram

?RCS: patch32: now uses new Typedef unit to compute type information

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:33 ram

?RCS: Baseline for dist 3.0 netwide release.

```

?RCS:
?MAKE:pidtype: Myread Typedef
?MAKE: -pick add $@ %<
?S:pidtype:
?S: This variable defines PIDTYPE to be something like pid_t, int,
?S: ushort, or whatever type is used to declare process ids in the kernel.
?S:.
?C:Pid_t (PIDTYPE):
?C: This symbol holds the type
used to declare process ids in the kernel.
?C: It can be int, uint, pid_t, etc... It may be necessary to include
?C: <sys/types.h> to get any typedef'ed information.
?C:.
?H:#define Pid_t $pidtype /* PID type */
?H:.
: see what type pids are declared as in the kernel
set pid_t pidtype int stdio.h sys/types.h
eval $typedef
dflt="$pidtype"
echo " "
rp="What type are process ids on this system declared as?"
. ./myread
pidtype="$ans"

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/pidtype.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: cppfilecom.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Orginal Author: Graham Stoney <greyham@research.canon.oz.au>
?RCS:
?RCS: $Log: cppfilecom.U,v $
?RCS: Revision 3.0 1993/08/18 12:05:37 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:cppfilecom cppstdinflags d_cppignhdrs d_cppcanstdin: \
contains package test Myread Oldconfig Loc Setvar cpp cc cat rm
?MAKE: -pick add $@ %<

```

```

?S:cppfilecom:
?S: This variable contains the first part of the string which will invoke
?S: the C preprocessor a file
and produce to standard output, preserving
?S: comments. Typical value of "cc -E -C" or "/lib/cpp -C".
?S:.
?S:cppstdinflags:
?S: This variable contains any flags necessary to get cppfilecom to read
?S: from the standard input.
?S:.
?S:d_cppignhdrs:
?S: This symbol conditionally defines CPP_IGN_HDRS if CPP_FILE_COM ignores
?S: *.h files.
?S:.
?S:d_cppcanstdin:
?S: This symbol conditionally defines CPP_CAN_STDIN if CPP_FILE_COM can
?S: read standard input directly.
?S:.
?C:CPP_FILE_COM (CPPFILECOM):
?C: This symbol contains the first part of the string which will invoke
?C: the C preprocessor a file and produce to standard output, preserving
?C: comments. Typical value of "cc -E -C" or "/lib/cpp -C".
?C:.
?C:CPP_STDIN_FLAGS (CPPSTDINFLAGS):
?C: This variable contains any flags necessary to get CPP_FILE_COM to
?C: read from the standard input.
?C:.
?C:CPP_IGN_HDRS (CPPIGNHDRS):
?C: This symbol is defined if CPP_FILE_COM ignores *.h files.
?C:.
?C:CPP_CAN_STDIN (CPPCANSTDIN):
?C: This
symbol is defined if CPP_FILE_COM can read standard input
?C: directly.
?C:.
?H:#define CPP_FILE_COM "$cppfilecom"
?H:#define CPP_STDIN_FLAGS "$cppstdinflags"
?H:#$d_cppignhdrs CPP_IGN_HDRS /* does CPP ignore .h files? */
?H:#$d_cppcanstdin CPP_CAN_STDIN /* can CPP read stdin directly? */
?H:.
?T:cont
?F:!testcpp.c !testcpp.h !testcpp.out
?LINT:set d_cppcanstdin d_cppignhdrs
?LINT:usefile testcpp.c testcpp.out
: see how we invoke the C preprocessor
$cat <<EOM

```

\$package needs to be able to preprocess its input files in a mode which



preserves comments, which is often not the default behaviour. It should run the C preprocessor you will use when compiling your own source code, which should be ISO/ANSI C compliant if you want \$package to handle the latest standard C. I will try to guess, but I might guess wrongly because it is not necessarily the same preprocessor used to build \$package.

EOM

```
$cat <<'EOT' >testcpp.c
#define ABC abc
#define XYZ xyz
ABC.XYZ
/* comment */
EOT
:
if $test "X$cppfilecom"
  != "X" && \
  $cppfilecom testcpp.c </dev/null >testcpp.out 2>/dev/null && \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
  $contains comment testcpp.out >/dev/null 2>&1
then
  echo "You used to use $cppfilecom so we'll use that again."
  elif echo 'Maybe ""$cc' -E -C" will work...' && \
  $cc -E -C testcpp.c </dev/null >testcpp.out 2>/dev/null && \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
  $contains comment testcpp.out >/dev/null 2>&1
then
  echo "It works!"
  cppfilecom="$cc -E -C"
  elif echo 'Nope...maybe ""$cc"' -P -C" will work...' && \
  $cc -P -C testcpp.c </dev/null >testcpp.out 2>/dev/null && \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
  $contains comment testcpp.out >/dev/null 2>&1
then
  echo "Yup, that does."
  cppfilecom="$cc -P -C"
  elif echo 'No such luck, maybe ""$cpp"' -C" will work...' && \
  $cpp -C testcpp.c </dev/null >testcpp.out 2>/dev/null && \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
  $contains comment testcpp.out
  >/dev/null 2>&1
then
  echo "Yup, it does."
  cppfilecom="$cpp -C"
else
  cppfilecom="
  $cat <<'EOM'
```

I can't find a C preprocessor that will preserve comments. Please name one.

EOM

```

fi
:
dflt="$scppfilecom"
cont=true
while $stest "$scout" ; do
echo " "
rp="How should $package run your preprocessor preserving comments?"
./myread
cppfilecom="$ans"
$scppfilecom testcpp.c >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
$contains comment testcpp.out >/dev/null 2>&1
then
echo "OK, that will do."
cont=""
else
echo "Sorry, I can't get that to work."
fi
done

```

```

@if CPP_IGN_HDRS || d_cppignhdrs
: Now see if it ignores header files.
cp testcpp.c testcpp.h
$scppfilecom testcpp.h >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
$contains comment testcpp.out >/dev/null 2>&1
then
echo "Terrific; it processes .h files passed on the command line too."
val="$sundef"
else
echo "It ignores .h files on the command line; pity."
val="$sdefine"
fi
set
d_cppignhdrs
eval $setvar

```

```

@end
@if CPP_STDIN_FLAGS || CPP_CAN_STDIN || cppstdinflags || d_cppcanstdin
: Now see how to send stdin to it.
echo " "
cp testcpp.c testcpp.h
$scppfilecom <testcpp.h >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
$contains comment testcpp.out >/dev/null 2>&1
then
echo "Great; and it will read stdin if passed no arguments."
val="$sdefine"

```

```

cppstdinflags="
else
$cpptestfilecom - <testcpp.h >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
$contains comment testcpp.out >/dev/null 2>&1
then
echo "Great; and it can read stdin by passing it '-!'"
val="$define"
cppstdinflags='-!
else
$cat <<FOO

```

Unfortunately, I can't find an easy way to get that preprocessor to read from standard input. Do you know any flags I can pass it to get it to do so?

If that preprocessor can't read directly from standard input, answer 'none'.

FOO

```

val='dunno'
while $test "$val" = "dunno"; do
rp='Flags to get preprocessor
to read stdin?'
dflt='none'
./myread
if $test $ans = 'none'; then
echo "Oh well, if $package wants it done, it will do it for itself."
val="$undef"
else
$cpptestfilecom $ans <testcpp.h >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 && \
$contains comment testcpp.out >/dev/null 2>&1
then
echo "Good; that works fine."
val="$define"
cppstdinflags="$ans"
else
echo "Sorry, I couldn't get that to work."
fi
fi
done
fi
fi
set d_cppcanstdin
eval $setvar

@end
: cleanup cpp test files anyway
$rm -f testcpp.*

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/cppfilecom.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_\_fwalk: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_\_fwalk:

?S: This variable conditionally defines HAS\_\_FWALK if \_fwalk() is

?S: available to apply a function to all the file handles.

?S:.

?C:HAS\_\_FWALK:

?C: This symbol, if defined, indicates that the \_fwalk system call is

?C: available to apply a function to all the file handles.

?C:.

?H:#\$d\_\_fwalk HAS\_\_FWALK /\*\*/

?H:.

?LINT:set d\_\_fwalk

: see if \_fwalk exists

set fwalk d\_\_fwalk

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_\_fwalk.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: gidtype.U,v 3.0.1.3 1994/08/29 16:21:44 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: gidtype.U,v \$

?RCS: Revision 3.0.1.3 1994/08/29 16:21:44 ram

```

?RCS: patch32: now uses new Typedef unit to compute type information
?RCS: patch32: removed useless usage of Setvar (for now)
?RCS:
?RCS: Revision 3.0.1.2 1994/05/13 15:21:07 ram
?RCS: patch27: added lint hint
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 15:01:51 ram
?RCS: patch23: protected gidtype setting via setvar (ADO)
?RCS: patch23: made Gid_t comment more explicit (ADO)
?RCS:
?RCS: Revision
3.0 1993/08/18 12:08:11 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:gidtype: Myread Typedef Findhdr
?MAKE: -pick add $@ %<
?S:gidtype:
?S: This variable defines Gid_t to be something like gid_t, int,
?S: ushort, or whatever type is used to declare the return type
?S: of getgid(). Typically, it is the type of group ids in the kernel.
?S:
?C:Gid_t (GIDTYPE):
?C: This symbol holds the return type of getgid() and the type of
?C: argument to setrgid() and related functions. Typically,
?C: it is the type of group ids in the kernel. It can be int, ushort,
?C: gid_t, etc... It may be necessary to include <sys/types.h> to get
?C: any typedef'ed information.
?C:
?H:#define Gid_t $gidtype /* Type for getgid(), etc... */
?H:
?T:xxx
: see what type gids are declared as in the kernel
echo " "
echo "Looking for the type for group ids returned by getgid()."
set gid_t gidtype xxx stdio.h sys/types.h
eval $typedef
case "$gidtype" in
xxx)
xxx=`./findhdr sys/user.h`
set `grep
'groups\[NGROUPS\];' "$xxx" 2>/dev/null` unsigned short
case $1 in
unsigned) dflt="$1 $2" ;;
*) dflt="$1" ;;
esac
;;
*) dflt="$gidtype";;
esac

```

```

case "$gidtype" in
gid_t) echo "gid_t found." ;;
*) rp="What is the type for group ids returned by getgid()?"
  ./myread
  gidtype="$ans"
  ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/gidtype.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_pidcheck.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_pidcheck.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:37:55 ram
?RCS: patch61: replaced .o with $_o all over the place
?RCS: patch61: added ?F: metalint hint
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:46 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_pidcheck: cat rm +cc _o
?MAKE: -pick add $@ %<
?S:d_pidcheck:
?S: This variable conditionally defines the variable PIDCHECK
?S: which indicates that kill(pid, 0) will check for an
  active pid.
?S:.
?C:PIDCHECK:
?C: This symbol, if defined, means that the kill(pid, 0) will
?C: check for an active pid (i.e. the kernel will run all the
?C: necessary pid checks, but no signal is actually sent).
?C:.
?H:#$d_pidcheck PIDCHECK /**/
?H:.
?F:!try
: check for "kill(pid, 0)"
echo " "

```

```

case "$d_pidcheck" in
"$define")
echo "I already know your system supports kill(pid, 0) for pid checks." >&4
;;
"$undef")
echo "We both know your system does not support signal #0 for pid checks." >&4
;;
*)
echo "Checking to see if kill(pid, 0) works..." >&4
$cat >try.c <<'EOCP'
int main()
{
int pid, status0, status9;

if ((pid = fork()) == 0)
{
sleep(30);
exit(1);
}
status0 = kill(pid, 0);
status9 = kill(pid, 9);
exit(status0 == status9);
}
EOCP
if $cc -o try try.c >/dev/null 2>&1 ; then
if ./try >/dev/null 2>&1 ; then
echo "Yes, it does marvels."
d_pidcheck="$undef"
else
d_pidcheck="$define"
echo "No, it doesn't."
fi
else
echo "(I was unable to compile
the test program.)"
echo "Your system does not appear to support kill(pid, 0)."

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_pidcheck.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_endnent.U,v 3.0 1993/08/18 12:06:09 ram Exp $
```

?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: d\_endnent.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:09 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_endnent: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_endnent:  
?S: This variable conditionally defines HAS\_ENDNETENT if endnent() is  
?S: available to close whatever was being used for network queries.  
?S:.  
?C:HAS\_ENDNETENT:  
?C: This symbol, if defined, indicates that the endnent() routine is  
?C: available to close whatever was being used for network  
queries.  
?C:.  
?H:#\$d\_endnent HAS\_ENDNETENT /\*\*/  
?H:.  
?LINT:set d\_endnent  
: see if endnent exists  
set endnent d\_endnent  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_endnent.U

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2017, Karl Williamson  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
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?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?MAKE:d\_mbrlen: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_mbrlen:  
?S: This variable conditionally defines the HAS\_MBRLLEN symbol if the



?S: mbrlen() routine is available to be used to get the length of

?S: multi-byte character strings.

?S:.

?C:HAS\_MBRLLEN:

?C: This symbol, if defined, indicates that the mbrlen routine is

?C: available to get the length of multi-byte character strings.

?C:.

?H:#\$d\_mbrlen HAS\_MBRLLEN /\*\*/

?H:.

?LINT: set d\_mbrlen

: see if mbrlen exists

set mbrlen d\_mbrlen

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_mbrlen.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_select.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_select.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:02 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_select: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_select:

?S: This variable conditionally defines HAS\_SELECT if select() is

?S: available to select active file descriptors. A <sys/time.h>

?S: inclusion may be necessary for the timeout field.

?S:.

?C:HAS\_SELECT:

?C: This symbol, if defined, indicates that the select routine is

?C: available

to select active file descriptors. If the timeout field

?C: is used, <sys/time.h> may need to be included.

?C:.

?H:#\$d\_select HAS\_SELECT /\*\*/

?H:.

```
?LINT:set d_select
: see if select exists
set select d_select
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_select.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: startperl.U,v 3.0 1993/08/18 12:09:50 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: This file is included with or a derivative work of a file included
```

```
?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.
```

```
?RCS: In accordance with clause 7 of dist's modified Artistic License:
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?RCS: $Log: startperl.U,v $
```

```
?RCS: Perl5 version -- I always have d_portable=define.
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:09:50 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:startperl: cat Myread sharpbang initialinstalllocation test \
versiononly version
```

```
?MAKE: -pick add $@ %<
```

```
?Y:TOP
```

```
?X: This is different from dist's standard startperl.U unit because
```

```
?X: we can't directly test #!/usr/local/bin/perl (or
whatever) because
```

```
?X: we haven't built and installed perl yet.
```

```
?S:startperl:
```

```
?S: This variable contains the string to put on the front of a perl
```

```
?S: script to make sure (hopefully) that it runs with perl and not some
```

```
?S: shell. Of course, that leading line must be followed by the classical
```

```
?S: perl idiom:
```

```
?S: eval 'exec perl -S $0 ${1+"$@"}'
```

```
?S: if $running_under_some_shell;
```

```
?S: to guarantee perl startup should the shell execute the script. Note
```

```
?S: that this magic incantation is not understood by csh.
```

```
?S:.
```

```
?C:STARTPERL:
```

```
?C: This variable contains the string to put in front of a perl
```

```
?C: script to make sure (one hopes) that it runs with perl and not
```

```

?C: some shell.
?C:.
?H:#define STARTPERL "$startperl" /**/
?H:.
: figure out how to guarantee perl startup
: XXX Note that this currently takes advantage of the bug that binexp ignores
:   the Configure -Dinstallprefix setting, which in turn means that under
:   relocatable @INC, initialinstalllocation is what binexp started as.
case
"$startperl" in
")
case "$sharpbang" in
*)
$cat <<EOH

```

I can use the #! construct to start perl on your system. This will make startup of perl scripts faster, but may cause problems if you want to share those scripts and perl is not in a standard place (\$initialinstalllocation/perl) on all your platforms. The alternative is to force a shell by starting the script with a single ':' character.

```

EOH
case "$versiononly" in
"$define")   dflt="$initialinstalllocation/perl$version";
*)           dflt="$initialinstalllocation/perl";
esac
rp='What shall I put after the #! to start up perl ("none" to not use #!)?'
. ./myread
case "$ans" in
none) startperl=": # use perl";
*) startperl="!$ans"
if $test 30 -lt `echo "$ans" | wc -c`; then
$cat >&4 <<EOM

```

**WARNING:** Some systems limit the #! command to 32 characters. If you experience difficulty running Perl scripts with #!, try installing Perl in a directory with a shorter pathname.

```

EOM
fi ;;
esac
;;
*)
startperl=": # use perl"
;;
esac
;;
esac

```

echo "I'll use \$startperl to start perl scripts."

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/startperl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getservbyname\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getservbyname\_r getservbyname\_r\_proto: Inlibc Protochk Hasproto \  
i\_systypes usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getservbyname\_r:

?S: This variable conditionally defines the HAS\_GETSERVBYNAME\_R symbol,

?S: which indicates to the C program that the getservbyname\_r()

?S: routine is available.

?S:.

?S:getservbyname\_r\_proto:

?S: This variable encodes the prototype of getservbyname\_r.

?S: It is zero if d\_getservbyname\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getservbyname\_r

?S: is defined.

?S:.

?C:HAS\_GETSERVBYNAME\_R:

?C: This symbol, if defined, indicates  
that the getservbyname\_r routine

?C: is available to getservbyname re-entrantly.

?C:.

?C:GETSERVBYNAME\_R\_PROTO:

?C: This symbol encodes the prototype of getservbyname\_r.

?C: It is zero if d\_getservbyname\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getservbyname\_r

?C: is defined.

?C:.

?H:#\$d\_getservbyname\_r HAS\_GETSERVBYNAME\_R /\*\*/

?H:#define GETSERVBYNAME\_R\_PROTO \$getservbyname\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getservbyname\_r\_proto

: see if getservbyname\_r exists

set getservbyname\_r d\_getservbyname\_r

eval \$inlibc

case "\$d\_getservbyname\_r" in

```

"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_getservbyname_r_proto:$susetheads" in
":define") d_getservbyname_r_proto=define
set d_getservbyname_r_proto getservbyname_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getservbyname_r_proto" in
define)
case "$getservbyname_r_proto" in
"|0) try='int getservbyname_r(const char*, const char*, struct servent*, char*,
size_t, struct servent**);'
./protochk "$extern_C $try" $hdrs && getservbyname_r_proto=I_CCSD ;
esac
case "$getservbyname_r_proto" in
"|0) try='struct servent* getservbyname_r(const char*, const char*, struct servent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getservbyname_r_proto=S_CCSD ;
esac
case "$getservbyname_r_proto" in
"|0) try='int getservbyname_r(const char*, const char*, struct servent*, struct servent_data*);'
./protochk "$extern_C $try" $hdrs && getservbyname_r_proto=I_CCSD ;
esac
case "$getservbyname_r_proto" in
"|0) d_getservbyname_r=undef
getservbyname_r_proto=0
echo "Disabling getservbyname_r, cannot determine prototype." >&4 ;;
* ) case "$getservbyname_r_proto" in
REENTRANT_PROTO*) ;;
*) getservbyname_r_proto="REENTRANT_PROTO_$getservbyname_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susetheads" in
define) echo "getservbyname_r has no prototype, not using it." >&4 ;;
esac
d_getservbyname_r=undef
getservbyname_r_proto=0
;;
esac
;;
*) getservbyname_r_proto=0
;;
esac

```

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_getservbyname\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_endpwent.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_endpwent.U,v \$

?RCS:

?MAKE:d\_endpwent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_endpwent:

?S: This variable conditionally defines the HAS\_ENDPWENT symbol, which

?S: indicates to the C program that the endpwent() routine is available

?S: for sequential access of the passwd database.

?S:.

?C:HAS\_ENDPWENT:

?C: This symbol, if defined, indicates that the endpwent routine is

?C: available for finalizing sequential access of the passwd database.

?C:.

?H:#\$d\_endpwent HAS\_ENDPWENT /\*\*/

?H:.

?LINT:set d\_endpwent

: see if endpwent exists

set endpwent d\_endpwent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_endpwent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?X: This unit generates a \$hasstruct string that is used internally

?X: by Configure to check if this system has a field for a

?X: particular struct (of if this system has a particular struct!)

?X:

```

?X: To use it, say something like:
?X: set d_statblocks stat i_sysstat sys/stat.h
?X: eval $hasstruct
?X: Or, for more complicated sets of headers, do something like
?X: hdrs="$define sys/foo.h
?X: $i_sysbar sys/bar.h
?X: $i_syszot sys/zot.h
?X: $i_zappa zappa.h"
?X: set d_statblocks stat $hdrs
?X: eval $hasstruct
?X:
?MAKE:Hasstruct: Setvar rm_try test Compile
?MAKE: -pick add $@ %<
?T:varname struct
?V:hasstruct
: Define hasstruct macro for Configure internal use
hasstruct='varname=$1; struct=$2; shift;
shift;
while $test $# -ge 2; do
case "$1" in
$define) echo "#include <$2>;";
esac ;
shift 2;
done > try.c;
echo "int main () { struct $struct foo; }" >> try.c;
set try;
if eval $compile; then
val="$define";
else
val="$undef";
fi;
set $varname;
eval $setvar;
$rm_try'

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/protos/Hasstruct.U

```

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?RCS:

?MAKE:d\_tgamma: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_tgamma:

?S: This variable conditionally defines the HAS\_TGAMMA symbol, which

?S: indicates to the C program that the tgamma() routine is available

?S: for the gamma function. See also d\_lgamma.

?S:.

?C:HAS\_TGAMMA:

?C: This symbol, if defined, indicates that the tgamma routine is

?C: available to do the gamma function. See also HAS\_LGAMMA.

?C:.

?H:#\$d\_tgamma HAS\_TGAMMA /\*\*/

?H:.

?LINT:set d\_tgamma

: see if tgamma exists

set tgamma d\_tgamma

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_tgamma.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_socks.U,v \$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_socks: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_socks:

?S: This variable conditionally defines the I\_SOCKS symbol, and indicates

?S: whether a C program should include <socks.h>.

?S:.

?C:I\_SOCKS:

?C: This symbol, if defined, indicates that <socks.h> exists and

?C: should be included.

?C:.

?H:#\$i\_socks I\_SOCKS /\*\*/

?H:.

?LINT:set i\_socks

: see if this is a socks.h system

set socks.h i\_socks

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_socks.U

No license file was found, but licenses were detected in source scan.

?RCS:



```

?RCS: Copyright (c) 1999, Jarkko Hietaniemi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:uidsize: Myread Typedef uidtype Compile run i_stdlib
?MAKE: -pick add $@ %<
?S:uidsize:
?S: This variable contains the size of a uidtype in bytes.
?S:.
?C:Uid_t_size:
?C: This symbol holds the size of a Uid_t in bytes.
?C:.
?H:#define Uid_t_size $uidsize /* UID size */
?H:.
?T:yyy zzz
?F:!try
: Check size of UID
echo " "
case "$uidtype" in
*_t) zzz="$uidtype" ;;
*) zzz="uid" ;;
esac
echo "Checking the size of $zzz..." >&4
cat > try.c <<EOCP
#include <sys/types.h>
#include <stdio.h>
#i_stdlib I_STDLIB
#ifdef I_STDLIB
#include
<stdlib.h>
#endif
int main() {
    printf("%d\n", (int)sizeof($uidtype));
    exit(0);
}
EOCP
set try
if eval $compile_ok; then
yyy=`$run ./try`
case "$yyy" in
") uidsize=4
echo "(I can't execute the test program--guessing $uidsize.)" >&4
;;
*) uidsize=$yyy

```

```

echo "Your $zzz is $uidsize bytes long."
;;
esac
else
uidsize=4
echo "(I can't compile the test program--guessing $uidsize.)" >&4
fi

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/uidsize.U

```

No license file was found, but licenses were detected in source scan.

```

# $Id: errnolist.a,v 3.0 1993/08/18 12:04:35 ram Exp ram $
#
# Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
#
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# as specified in the README file that comes with the distribution.
# You may reuse parts of this distribution only within the terms of
# that same Artistic Licence; a copy of which may be found at the root
# of the source tree for dist 4.0.
#
# Original Author: Harlan Stenn <harlan@mumps.pfcs.com>
#
# $Log: errnolist.a,v $
# Revision 3.0 1993/08/18 12:04:35 ram
# Baseline for dist 3.0 netwide release.
#
#
# This is a simple-minded awk script to generate an initialization for
# sys_errnolist on systems that don't have it.
# This file now depends only on sys/errno.h error numbers under maxerr being
# in order. It will complain and die if not. NOTE: It will still produce
# a compilable output file, even with errors, so you
# must check the output.

```

```

BEGIN {
    format = "\t\"%s\", \n"
    printf("/*\n** This is a generated file. Do NOT edit it unless you really have to...\n*/\n")
    printf("char *sys_errnolist[] = {\n")
    maxerr = 89
}

```

```

$1=="#define" {
    if(count > maxerr || substr($2,1,1) != "E")
        next # we're not interested
}

```

```

if($3 < count) { # this is bad
  printf("Fatal error: %s out of order at %s\n",\
  FILENAME, $2)>"/dev/tty"
  exit 1
}
# fill in the blanks
while($3 > count) {
  dummy=sprintf("EDUMMY%d",count)
  printf(format,dummy)
  count++
}
printf(format,$2)
count++
}

END {
  printf("\t0\n");\n")
}

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/lib/errnolist.a
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: lib.U,v 3.0.1.3 1995/09/25 09:16:47 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: lib.U,v $
?RCS: Revision 3.0.1.3 1995/09/25 09:16:47 ram
?RCS: patch59: unit is now forced to the top of Configure, if possible
?RCS:
?RCS: Revision 3.0.1.2 1995/01/30 14:38:08 ram
?RCS: patch49: can now handle installation prefix changes (from WED)
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:27:40 ram
?RCS: patch32: now uses installation prefix to set the default
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:56 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?LINT:
```

```

empty
?X:?MAKE:lib libexp: Getfile Loc Oldconfig Prefixit Prefixup prefixexp
?X:?MAKE: -pick add $@ %<
?X:?Y:TOP
?X:?S:lib:
?X:?S: This variable holds the name of the directory in which the user wants
?X:?S: to put public library files for the package in question. It is most
?X:?S: often a local directory such as /usr/local/lib. Programs using this
?X:?S: variable must be prepared to deal with filename expansion.
?X:?S:.
?X:?S:libexp:
?X:?S: This variable is the same as the lib variable, but is filename expanded
?X:?S: at configuration time, for convenient use in your makefiles.
?X:?S:.
?X:: determine where public libraries go
?X:set lib lib
?X:eval $prefixit
?X:case "$lib" in
?X:*)
?X: dflt=`./loc . ." $prefixexp/lib /usr/local/lib /usr/lib /lib`
?X: set dflt
?X: eval $prefixup
?X: ;;
?X:*) dflt="$lib";;
?X:esac
?X:echo " "
?X:fn=d~
?X:rp='Where do you want to put the public libraries?'
?X:. /getfile
?X:lib="$ans"
?X:libexp="$ansexp"

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/nullified/lib.U
```

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?RCS:

?MAKE:d\_erf: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_erf:

?S: This variable conditionally defines the HAS\_ERF symbol, which

?S: indicates to the C program that the erf() routine is available.

?S:.

?C:HAS\_ERF:

?C: This symbol, if defined, indicates that the erf routine is

?C: available to do the error function.

?C:.

?H:#\$d\_erf HAS\_ERF /\*\*/

?H:.

?LINT:set d\_erf

: see if erf exists

set erf d\_erf

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_erf.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_wctomb.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_wctomb.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:20:43 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_wctomb: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_wctomb:

?S: This variable conditionally defines the HAS\_WCTOMB symbol, which

?S: indicates to the C program that the wctomb() routine is available

?S: to convert a wide character to a multibyte.

?S:.

?C:HAS\_WCTOMB (WCTOMB):

?C: This

symbol, if defined, indicates that the wctomb routine is available

?C: to convert a wide character to a multibyte.

?C:.

?H:#\$d\_wctomb HAS\_WCTOMB /\*\*/

?H:.

?LINT:set d\_wctomb

: see if wctomb exists

set wctomb d\_wctomb

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_wctomb.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: myhostname.U,v 3.0.1.3 1997/02/28 16:15:55 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: myhostname.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 16:15:55 ram

?RCS: patch61: improved hostname lookup by using ypmatch when NIS is used

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:25:43 ram

?RCS: patch36: call ./xenix explicitly instead of relying on PATH

?RCS: patch36: now uses new Tr unit to convert to/from lowercase

?RCS:

?RCS: Revision 3.0.1.1 1994/06/20 07:06:20 ram

?RCS: patch30: now a little more clever for domain name guessing

?RCS:

?RCS:

Revision 3.0 1993/08/18 12:09:18 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:myhostname phostname mydomain: contains sed test Myread Oldconfig \

Guess Loc awk echo sort uniq +usrinc rm hostcat Tr

?MAKE: -pick add \$@ %<

?S:myhostname (hostname):

?S: This variable contains the eventual value of the MYHOSTNAME symbol,

?S: which is the name of the host the program is going to run on.

?S: The domain is not kept with hostname, but must be gotten from mydomain.

?S: The dot comes with mydomain, and need not be supplied by the program.

?S:.

?S:mydomain:

?S: This variable contains the eventual value of the MYDOMAIN symbol,

?S: which is the domain of the host the program is going to run on.

?S: The domain must be appended to myhostname to form a complete host name.

?S: The dot comes with mydomain, and need not be supplied by the program.

?S:.

?S:phostname:

?S: This variable contains the eventual value of the PHOSTNAME symbol,

?S: which is a command that can be fed to popen()  
to get the host name.

?S: The program should probably not presume that the domain is or isn't  
there already.

?S:.

?C:MYHOSTNAME (HOSTNAME):

?C: This symbol contains name of the host the program is going to run on.

?C: The domain is not kept with hostname, but must be gotten from MYDOMAIN.

?C: The dot comes with MYDOMAIN, and need not be supplied by the program.

?C: If gethostname() or uname() exist, MYHOSTNAME may be ignored. If MYDOMAIN  
?C: is not used, MYHOSTNAME will hold the name derived from PHOSTNAME.

?C:.

?C:MYDOMAIN:

?C: This symbol contains the domain of the host the program is going to  
?C: run on. The domain must be appended to HOSTNAME to form a complete  
?C: host name. The dot comes with MYDOMAIN, and need not be supplied by  
?C: the program. If the host name is derived from PHOSTNAME, the domain  
?C: may or may not already be there, and the program should check.

?C:.

```
?H:#define MYHOSTNAME "$myhostname" /**/
?H:#define MYDOMAIN "$mydomain" /**/
?H:.
```

```
?LINT:extern osname
?T:cont
i tans tmp_re
: now get the host name
echo " "
echo "Figuring out host name..." >&4
case "$myhostname" in
") cont=true
echo 'Maybe "hostname" will work...'
if tans=`sh -c hostname 2>&1` ; then
myhostname=$tans
phostname=hostname
cont="
fi
;;
*) cont="";
esac
if $test "$cont"; then
if ./xenix; then
echo 'Oh, dear. Maybe "/etc/systemid" is the key...'
if tans=`cat /etc/systemid 2>&1` ; then
myhostname=$tans
phostname='cat /etc/systemid'
echo "Whadyaknow. Xenix always was a bit strange..."
cont="
fi
```

```

elif $test -r /etc/systemid; then
    echo "(What is a non-Xenix system doing with /etc/systemid?)"
fi
fi
if $test "$cont"; then
    echo 'No, maybe "uname -l" will work...'
    if tans=`sh -c 'uname -l' 2>&1` ; then
        myhostname=$tans
        phostname='uname -l'
    else
        echo 'Strange. Maybe "uname -n" will work...'
        if tans=`sh -c 'uname -n' 2>&1` ; then
            myhostname=$tans
            phostname='uname -n'
        else
            echo 'Oh well, maybe I can mine it out of whoami.h...'
            if
tans=`sh -c $contains' sysname $usrinc/whoami.h' 2>&1` ; then
                myhostname=`echo "$tans" | $sed 's/^(.*)$/1/'`
                phostname="sed -n -e ""'/sysname/s/^(.*)$/1/{' -e p -e q -e '}' <$usrinc/whoami.h"
            else
                case "$myhostname" in
                    *) echo "Does this machine have an identity crisis or something?"
                        phostname="";
                    *)
                        echo "Well, you said $myhostname before..."
                        phostname='echo $myhostname';
                    esac
                fi
            fi
            fi
            fi
            case "$myhostname" in
                *) myhostname=noname ;;
            esac
            : you do not want to know about this
            set $myhostname
            myhostname=$1

            : verify guess
            if $test "$myhostname" ; then
                dflt=y
                rp='Your host name appears to be "$myhostname". Right?'
                ./myread
                case "$ans" in
                    y*) ;;
                    *) myhostname="";
                esac
            fi

```



fi

```
: bad guess or no guess
while $test "X$myhostname" = X ; do
  dflt="
  rp="Please type the (one word) name of your host:"
  . ./myread
  myhostname="$ans"
done
```

```
: translate upper to lower if necessary
case "$myhostname" in
*[A-Z]*)
  echo
  "(Normalizing case in your host name)"
  myhostname=`echo $myhostname | ./tr '[A-Z]' '[a-z]'`
;;
esac
```

?X: Do not ask for domain name if this is not used later on. In that

?X: case, the hostname may keep its domain name, but it doesn't matter.

```
@if MYDOMAIN || mydomain
```

```
case "$myhostname" in
*,*)
  dflt=`expr "X$myhostname" : "X[^.]*\(\..*\)"`
  myhostname=`expr "X$myhostname" : "X\([^.*]\)\."`
  echo "(Trimming domain name from host name--host name is now $myhostname)"
;;
*) case "$mydomain" in
")
```

?X:

?X: There is currently no way to say we do not want hostcat if mydomain is not

?X: used. One way to achieve that would be to put that code in a mydomain.U

?X: unit. However, we want to stick the sanity checks right after the domain

?X: name computation, or if none is done, right after the hostname computation.

?X:

```
{
```

?X: If we use NIS, try ypmatch.

```
test "X$hostcat" = "Xypcat hosts" &&
ypmatch "$myhostname" hosts 2>/dev/null |\
  $sed -e 's/[ ]*#.*//; s/$/ /' > hosts
&& \
  $test -s hosts
} || {
```

?X: Extract only the relevant hosts, reducing file size,

?X: remove comments, insert trailing space for later use.

?X: Test to be sure we \*have\* a hostcat command. os390 doesn't.

```
test "X$hostcat" != "X" &&
```

```

$hostcat | $sed -n -e "s/[ ]*#.*//; s/\$/ /
/[ ]$myhostname[.]p" > hosts
}
tmp_re="[.]"
if $test -f hosts; then
$test x`$awk "/[0-9].*[ ]$myhostname$tmp_re/ { sum++ }
END { print sum }" hosts` = x1 || tmp_re="[ ]"
dflt=`$awk "/[0-9].*[ ]$myhostname$tmp_re/ {for(i=2; i<=NF;i++) print \\$i}" \
hosts | $sort | $uniq | \
$sed -n -e "s/$myhostname\.\([-a-zA-Z0-9_]\)/\1/p"
case ` $echo X$dflt` in
X*\ *) echo "(Several hosts in the database matched hostname)"
dflt=.
;;
X.) echo "(You do not have fully-qualified names in the hosts database)"
;;
esac
else
echo "(I cannot locate a hosts database anywhere)"
dflt=.
fi
case "$dflt" in
.)
tans=`./loc resolv.conf X /etc /usr/etc`
if
$test -f "$tans"; then
echo "(Attempting domain name extraction from $tans)"
?X: Look for either a search or a domain directive.
dflt=`$sed -n -e 's// /g' \
-e 's/^search *([ ]*)*\1/p' $tans \
-e 1q 2>/dev/null`
case "$dflt" in
.) dflt=`$sed -n -e 's// /g' \
-e 's/^domain *([ ]*)*\1/p' $tans \
-e 1q 2>/dev/null`
;;
esac
fi
;;
esac
case "$dflt" in
.) echo "(No help from resolv.conf either -- attempting clever guess)"
dflt=`sh -c domainname 2>/dev/null`
case "$dflt" in
") dflt='.';
.nis.*|.yp.*|.main.*) dflt=`echo $dflt | $sed -e 's/^\.[^.]*/'`;;
esac
;;

```

```

esac
case "$dflt$osname" in
.os390) echo "(Attempting domain name extraction from //SYS1.TCPPARMS(TCPDATA))"
dflt=`awk '/^DOMAINORIGIN/ {print $2}' "//SYS1.TCPPARMS(TCPDATA)" 2>/dev/null`
;;
esac
case "$dflt" in
.) echo "(Lost all hope -- silly guess then)"
dflt='.nonet'
;;
esac
$rm -f hosts
;;
*)
dflt="$mydomain";;
esac;;
esac
echo " "
rp="What is your domain name?"
./myread
tans="$ans"
case "$ans" in
") ;;
.*) ;;
*) tans=".$tans";;
esac
mydomain="$tans"

: translate upper to lower if necessary
case "$mydomain" in
*[A-Z]*)
echo "(Normalizing case in your domain name)"
mydomain=`echo $mydomain | ./tr '[A-Z]' '[a-z]`
;;
esac

@end
: a little sanity check here
case "$phostname" in
") ;;
*)
case ` $phostname | ./tr '[A-Z]' '[a-z]^` in
$myhostname$mydomain|$myhostname) ;;
*)
case "$phostname" in
sed*)
echo "(That doesn't agree with your whoami.h file, by the way.)"
;;

```

```
*)
echo "(That doesn't agree with your $phostname command, by the way.)"
;;
esac
;;
esac
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/myhostname.U
```

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 1996, Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:perladmin: cf\_email Oldconfig Myread cat

?MAKE: -pick add @\$ %<

?Y:TOP

?S:perladmin:

?S: Electronic mail address of the perl5 administrator.

?S:.

: Ask e-mail of administrator

\$cat <<EOM

If you or somebody else will be maintaining perl at your site, please fill in the correct e-mail address here so that they may be contacted if necessary. You may enter "none" for no administrator.

EOM

```
case "$perladmin" in
```

```
  *) dflt="$cf_email";;
```

```
  *) dflt="$perladmin";;
```

```
esac
```

```
rp='Perl administrator e-mail address'
```

```
./myread
```

```
perladmin="$ans"
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/perladmin.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: cc.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: cc.U,v \$

?RCS: Revision 3.0.1.4 1995/05/12 12:06:47 ram

?RCS: patch54: may now abort Configure when cc does not work

?RCS:

?RCS: Revision 3.0.1.3 1995/01/11 15:20:11 ram

?RCS: patch45: changed gcc checking message to a more explicit one (WED)

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:04:29 ram

?RCS: patch36: detect gcc even when not called as 'gcc' (ADO)

?RCS: patch36: simplified gcc version checking (ADO)

?RCS: patch36: added ?F: line for metalint  
file checking

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 14:26:06 ram

?RCS: patch23: added support for gcc version (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:30 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:cc: Myread Oldconfig Checkcc test

?MAKE: -pick add \$@ %<

?S:cc:

?S: This variable holds the name of a command to execute a C compiler which  
?S: can resolve multiple global references that happen to have the same  
?S: name. Usual values are 'cc' and 'gcc'.  
?S: Ferrent ANSI compilers may be called 'c89'. AIX has xlc.

?S:.

?F:!cc.cbu

?D:cc='cc'

: Determine the C compiler to be used

echo " "

case "\$cc" in

) dflt=cc;;

\*) dflt="\$cc";;

esac

rp="Use which C compiler?"

./myread

cc="\$ans"

: See whether they have no cc but they do have gcc

```
./trygcc
?X: Look for a hint-file generated 'call-back-unit'. Now that the
?X: user has specified the compiler, we may need to set or change some
?X: other defaults.
if $test -f cc.cbu; then
  ./cc.cbu
fi
./checkcc
```

#### Found

in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/cc.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_termio.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: i_termio.U,v $
```

```
?RCS: Revision 3.0.1.4 1994/10/29 16:20:54 ram
```

```
?RCS: patch36: call ./usg and ./Cpplib explicitly instead of relying on PATH
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.3 1994/08/29 16:26:38 ram
```

```
?RCS: patch32: don't include all three I_* symbols in config.h
```

```
?RCS: patch32: (had forgotten to undo this part last time)
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1994/05/13 15:25:03 ram
```

```
?RCS: patch27: undone ADO's fix in previous patch since it was useless
```

```
?RCS:
```

```
?RCS:
```

```
Revision 3.0.1.1 1994/05/06 15:05:23 ram
```

```
?RCS: patch23: now include all three defines in config.h (ADO)
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:08:44 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:i_termio i_sgty i_termios: test Inlibc Cpplib Guess Setvar Findhdr Warn run
```

```
?MAKE: -pick add $@ %<
```

```
?S:i_termio:
```

```
?S: This variable conditionally defines the I_TERMIO symbol, which
```

```
?S: indicates to the C program that it should include <termio.h> rather
```

?S: than <sgtty.h>.

?S:.

?S:i\_termios:

?S: This variable conditionally defines the I\_TERMIOS symbol, which

?S: indicates to the C program that the POSIX <termios.h> file is

?S: to be included.

?S:.

?S:i\_sgtty:

?S: This variable conditionally defines the I\_SGTTY symbol, which

?S: indicates to the C program that it should include <sgtty.h> rather

?S: than <termio.h>.

?S:.

?C:I\_TERMIO:

?C: This symbol, if defined, indicates that the program should include

?C: <termio.h> rather than <sgtty.h>. There are also differences in

?C: the

ioctl() calls that depend on the value of this symbol.

?C:.

?C:I\_TERMIOS:

?C: This symbol, if defined, indicates that the program should include

?C: the POSIX termios.h rather than sgtty.h or termio.h.

?C: There are also differences in the ioctl() calls that depend on the

?C: value of this symbol.

?C:.

?C:I\_SGTTY:

?C: This symbol, if defined, indicates that the program should include

?C: <sgtty.h> rather than <termio.h>. There are also differences in

?C: the ioctl() calls that depend on the value of this symbol.

?C:.

?H:#\$i\_termio I\_TERMIO /\*\*/

?H:#\$i\_termios I\_TERMIOS /\*\*/

?H:#\$i\_sgtty I\_SGTTY /\*\*/

?H:.

?T:val2 val3

?LINT:set i\_termio i\_sgtty i\_termios

: see if this is a termio system

val="\$undef"

val2="\$undef"

val3="\$undef"

?X: Prefer POSIX-approved termios.h over all else

if \$test `./findhdr termios.h`; then

    set tcsetattr i\_termios

    eval \$inlibc

    val3="\$i\_termios"

fi

echo " "

case "\$val3" in

    "\$define") echo "You have POSIX termios.h... good!" >&4;;

```

*)
if ./Cppsymb pyr; then
    case "$run /bin/universe" in
ucb) if $test `./findhdr sgTTY.h`; then
    val2="$define"
    echo "<sgTTY.h> found." >&4
        else
    echo "System is pyramid with BSD universe."
    ./warn "<sgTTY.h> not found--you could have problems."
        fi;;
*) if $test `./findhdr termio.h`; then
    val="$define"
    echo "<termio.h> found." >&4
        else
    echo "System is pyramid with USG universe."
    ./warn "<termio.h> not found--you could have problems."
        fi;;
esac

?X: Start with USG to avoid problems if both usg/bsd was guessed
elif ./usg; then
    if $test `./findhdr termio.h`; then
    echo "<termio.h> found." >&4
    val="$define"
        elif $test `./findhdr sgTTY.h`; then
    echo "<sgTTY.h> found." >&4
    val2="$define"
        else
    ./warn "Neither <termio.h> nor <sgTTY.h> found--cross fingers!"
        fi
else
    if $test `./findhdr sgTTY.h`; then
    echo "<sgTTY.h> found." >&4
    val2="$define"
        elif $test `./findhdr termio.h`; then
    echo "<termio.h>
found." >&4
    val="$define"
        else
    ./warn "Neither <sgTTY.h> nor <termio.h> found--cross fingers!"
        fi
fi;;
esac
set i_termio; eval $setvar
val=$val2; set i_sgTTY; eval $setvar
val=$val3; set i_termios; eval $setvar

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-



5.38.0/U/modified/i\_termio.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_castneg.U,v 3.0.1.2 1995/05/12 12:11:21 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: d\_castneg.U,v \$  
?RCS: Revision 3.0.1.2 1995/05/12 12:11:21 ram  
?RCS: patch54: made sure cc and cflags are conditional dependencies  
?RCS: patch54: added improved test case for Interactive Unix  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:10:50 ram  
?RCS: patch36: don't forget to tell user about compilation failures (ADO)  
?RCS: patch36: declare signal handler correctly using 'signal\_t' (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:47 ram  
?RCS: Baseline  
for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: Can the compiler cast negative / odd floats to unsigned values.  
?X:  
?MAKE:d\_castneg castflags: cat Compile rm\_try Setvar signal\_t run i\_stdlib  
?MAKE:-pick add \$@ %<  
?S:d\_castneg:  
?S: This variable conditionally defines CASTNEG, which indicates  
?S: whether the C compiler can cast negative float to unsigned.  
?S:.  
?S:castflags:  
?S: This variable contains a flag that precise difficulties the  
?S: compiler has casting odd floating values to unsigned long:  
?S: 0 = ok  
?S: 1 = couldn't cast < 0  
?S: 2 = couldn't cast >= 0x80000000  
?S: 4 = couldn't cast in argument expression list  
?S:.  
?C:CASTNEGFLOAT:  
?C: This symbol is defined if the C compiler can cast negative  
?C: numbers to unsigned longs, ints and shorts.  
?C:.  
?C:CASTFLAGS:

```

?C: This symbol contains flags that say what difficulties the compiler
?C: has casting odd floating values to unsigned long:
?C: 0 = ok
?C: 1 = couldn't cast < 0
?C: 2 = couldn't cast >= 0x80000000
?C: 4 = couldn't
    cast in argument expression list
?C:
?H:#$d_castneg CASTNEGFLOAT /**/
?H:#define CASTFLAGS $castflags /**/
?H:
?F:!try
?LINT:set d_castneg
: check for ability to cast negative floats to unsigned
echo " "
echo 'Checking whether your C compiler can cast negative float to unsigned.' >&4
$cat >try.c <<EOCP
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <sys/types.h>
#include <signal.h>
$signal_t blech(int s) { exit(7); }
$signal_t blech_in_list(int s) { exit(4); }
unsigned long dummy_long(unsigned long p) { return p; }
unsigned int dummy_int(unsigned int p) { return p; }
unsigned short dummy_short(unsigned short p) { return p; }
int main()
{
    double f;
    unsigned long along;
    unsigned int aint;
    unsigned short ashort;
    int result = 0;
    char str[16];

    /* Frustrate gcc-2.7.2's optimizer which failed this test with
       a direct f = -123. assignment. gcc-2.8.0 reportedly
       optimized the whole file away
    */
    /* Store the number in a writable
       string for gcc to pass to
       sscanf under HP-UX.
    */
    sprintf(str, "-123");
    sscanf(str, "%lf", &f); /* f = -123.; */

```

```

signal(SIGFPE, blech);
along = (unsigned long)f;
aint = (unsigned int)f;
ashort = (unsigned short)f;
if (along != (unsigned long)-123)
    result |= 1;
if (aint != (unsigned int)-123)
    result |= 1;
if (ashort != (unsigned short)-123)
    result |= 1;
sprintf(str, "1073741824.");
sscanf(str, "%lf", &f); /* f = (double)0x40000000; */
f = f + f;
along = 0;
along = (unsigned long)f;
if (along != 0x80000000)
    result |= 2;
f -= 1.;
along = 0;
along = (unsigned long)f;
if (along != 0x7fffffff)
    result |= 1;
f += 2.;
along = 0;
along = (unsigned long)f;
if (along != 0x80000001)
    result |= 2;
if (result)
    exit(result);

```

?X:

?X: The following is a test for Interactive Unix Version 4.1, which

?X: has an 'improved' compiler which can correctly cast negative

?X: floats in expression lists, but apparently not in argument lists.

?X: Contributed by Winfried Koenig

<win@incom.rhein-main.de>

?X:

```

signal(SIGFPE, blech_in_list);
sprintf(str, "123.");
sscanf(str, "%lf", &f); /* f = 123.; */
along = dummy_long((unsigned long)f);
aint = dummy_int((unsigned int)f);
ashort = dummy_short((unsigned short)f);
if (along != (unsigned long)123)
    result |= 4;
if (aint != (unsigned int)123)
    result |= 4;
if (ashort != (unsigned short)123)

```

```

    result |= 4;
    exit(result);

}
EOCP
set try
if eval $compile_ok; then
    $run ./try 2>/dev/null
    castflags=$?
else
    echo "(I can't seem to compile the test program--assuming it can't)"
    castflags=7
fi
case "$castflags" in
0) val="$define"
    echo "Yup, it can."
    ;;
*) val="$undef"
    echo "Nope, it can't."
    ;;
esac
set d_castneg
eval $setvar
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_castneg.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_lstat.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_lstat.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:28 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_lstat: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lstat:

?S: This variable conditionally defines HAS\_LSTAT if lstat() is

?S: available to do file stats on symbolic links.

?S:.

?C:HAS\_LSTAT (LSTAT):

?C: This symbol, if defined, indicates that the lstat routine is

?C: available to do file stats on symbolic links.

?C:.

?H:#\$d\_lstat HAS\_LSTAT /\*\*/

?H:.

?LINT:set

d\_lstat

: see if lstat exists

set lstat d\_lstat

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_lstat.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: useithreads.U,v \$

?RCS:

?RCS: Copyright (c) 1998-2000 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: useithreads.U,v \$

?RCS:

?MAKE:useithreads useithreads d\_oldpthreads usereentrant: \

Myread Oldconfig Setvar test cat

?MAKE: -pick add \$@ %<

?Y:TOP

?S:useithreads:

?S: This variable conditionally defines the USE\_THREADS symbol,

?S: and indicates that Perl should be built to use threads.

?S:.

?S:useithreads:

?S: This variable conditionally defines the USE\_ITHREADS symbol,

?S: and indicates that Perl should be built to use the interpreter-based

?S: threading implementation.

?S:.

?X: I'm putting old\_pthreads in this unit because it might eventually

?X: be part of an automatic determination to see if we can use threads

?X: at all.

?S:d\_oldpthreads:

?S: This variable conditionally

defines the OLD\_PTHREADS\_API symbol,

?S: and indicates that Perl should be built to use the old

?S: draft POSIX threads API. This is only potentially meaningful if  
?S: usethreads is set.  
?S:.  
?S:usereentrant:  
?S: This variable conditionally defines the USE\_REENTRANT\_API symbol,  
?S: which indicates that the thread code may try to use the various  
?S: \_r versions of library functions. This is only potentially  
?S: meaningful if usethreads is set and is very experimental, it is  
?S: not even prompted for.  
?S:.  
?C:USE\_ITHREADS:  
?C: This symbol, if defined, indicates that Perl should be built to  
?C: use the interpreter-based threading implementation.  
?C:.  
?C:USE\_THREADS:  
?C: This symbol, if defined, indicates that Perl should  
?C: be built to use threads. At present, it is a synonym for  
?C: and USE\_ITHREADS, but eventually the source ought to be  
?C: changed to use this to mean \_any\_ threading implementation.  
?C:.  
?C:OLD\_PTHREADS\_API:  
?C: This symbol, if defined, indicates that Perl should  
?C: be  
built to use the old draft POSIX threads API.  
?C:.  
?C:USE\_REENTRANT\_API:  
?C: This symbol, if defined, indicates that Perl should  
?C: try to use the various \_r versions of library functions.  
?C: This is extremely experimental.  
?C:.  
?H:#\$useithreads USE\_ITHREADS /\*\*/  
?H:#\$usethreads USE\_THREADS /\*\*/  
?H:#\$d\_oldpthreads OLD\_PTHREADS\_API /\*\*/  
?H:#\$usereentrant USE\_REENTRANT\_API /\*\*/  
?H:.  
?LINT:set usethreads d\_oldpthreads  
?INIT:: set usethreads on the Configure command line to enable threads.  
?INIT:usereentrant='undef'  
?F:!usethreads.cbu  
: Do we want threads support and if so, what type  
?X: We should really have some explanatory text here, and some  
?X: automatic setting of sensible defaults.  
case "\$usethreads" in  
\$define|true|[yY]\*) dflt='y';;  
\*) # Catch case where user specified itthreads but  
# forgot -Dusethreads (A.D. 4/2002)  
case "\$useithreads" in  
\*\$define\*) dflt='y';;

```

*) dflt='n';
esac
;;
esac
cat <<EOM

```

Perl can be built to offer a form of threading support on some systems. To do so, Configure can be run with `-Dusethreads`.

Note that Perl built with threading support runs slightly slower and uses slightly more memory than plain Perl.

If this doesn't make any sense to you, just accept the default `'$dflt'`.

```

EOM
rp='Build a threading Perl?'
./myread
case "$ans" in
y|Y) val="$define" ;;
*) val="$undef" ;;
esac
set usethreads
eval $setvar

```

```

useithreads="$usethreads"

```

```

?X: Check out what kind of threads API we have
case "$d_oldpthreads" in
") : Configure tests would be welcome here. For now, assume undef.
val="$undef" ;;
*) val="$d_oldpthreads" ;;
esac
set d_oldpthreads
eval $setvar

```

```

?X: In general, -lpthread needs to come before -lc but after other
?X: libraries such as -lgdbm and such like. We assume here that -lc
?X: is present in libswanted. If that fails to be true, then this
?X: can be changed to add pthread to the very end of libswanted.

```

```

: Look for a hint-file generated 'call-back-unit'. If the
:
: user has specified that a threading perl is to be built,
: we may need to set or change some other defaults.
if $test -f usethreads.cbu; then
    echo "Your platform has some specific hints regarding threaded builds, using them..."
    ./usethreads.cbu
else

```

```

    case "$usethreads" in
"$define"|true|[yY]*)
    $cat <<EOM
(Your platform does not have any specific hints for threaded builds.
Assuming POSIX threads, then.)
EOM
;;
    esac
fi

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/usethreads.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_getsent.U,v 3.0 1993/08/18 12:06:09 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_getsent.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:09 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_getsent: Inlibc
?MAKE: -pick add $@ %<
?S:d_getsent:
?S: This variable conditionally defines HAS_GETSERVENT if getservernt() is
?S: available to look up network services in some data base or another.
?S:.
?C:HAS_GETSERVENT:
?C: This symbol, if defined, indicates that the getservernt() routine is
?C: available to look up network services in some
?C: data base or another.
?C:.
?H:#$d_getsent HAS_GETSERVENT /**/
?H:.
?LINT:set d_getsent
: see if getservernt exists
set getservernt d_getsent
eval $inlibc

```

Found in path(s):



```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_getsent.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: doublesize.U,v 3.0.1.1 1994/10/29 16:17:06 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: doublesize.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:17:06 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:06 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:doublesize: cat rm_try Myread Compile run i_stdlib
?MAKE:-pick add $@ %<
?S:doublesize:
?S: This variable contains the value of the DOUBLESIZE symbol, which
?S: indicates to the C program how many bytes there are in a double.
?S:.
?C:DOUBLESIZE:
?C: This
symbol contains the size of a double, so that the C preprocessor
?C: can make decisions based on it.
?C:.
?H:#define DOUBLESIZE $doublesize /**/
?H:.
?F:!try
: check for length of double
echo " "
case "$doublesize" in
")
echo "Checking to see how big your double precision numbers are..." >&4
$cat >try.c <<EOCP
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <stdio.h>
int main()
```

```

{
    printf("%d\n", (int)sizeof(double));
    exit(0);
}
EOCP
set try
if eval $compile_ok; then
    doublesize=`$run ./try`
    echo "Your double is $doublesize bytes long."
else
    dflt='8'
    echo "(I can't seem to compile the test program. Guessing...)"
    rp="What is the size of a double precision number (in bytes)?"
    ./myread
    doublesize="$ans"
fi
;;
esac
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/doublesize.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: packadmin.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?MAKE:packadmin: cf_email Oldconfig Myread cat spackage package
?MAKE: -pick add $@ %<
?Y:TOP
?S:packadmin:
?S: Electronic mail address of the package administrator.
?S:.
: check wehther they will act as local admin for the package
$cat <<EOM

```

If you or somebody else will be maintaining \$package at your site, please fill in the correct e-mail address here so that they may be contacted if necessary. You may enter "none"

for no administrator.

EOM

```
case "$packadmin" in
") dflt="$cf_email";;
*) dflt="$packadmin";;
esac
rp="$spackage administrator e-mail address"
./myread
packadmin="$ans"
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/packadmin.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: cpp_trad.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: cpp_stuff.U,v $
?MAKE:cpp_trad: cpp cat contains rm
?MAKE: -pick add $@ %<
?S:cpp_trad:
?S: This variable contains the program to run to get traditional C
?S: preprocessor semantics and not ISO C semantics: we want something
?S: that knows as little about C as possible to use as a more general
?S: purpose preprocessor.
?S:.
?F:!foo.c !foo.cpp
: how do we get traditional cpp semantics?
echo " "
echo "Checking to see how to get traditional cpp semantics..."
>&4
$cat >foo.c <<'EOF'
#define A(x) x
#define B(y) y
A(a)B(b)
EOF
if $cpp foo.c >foo.cpp; $contains ab foo.cpp >/dev/null 2>&1; then
echo "Plain '$cpp' works just fine."
cpp_trad="$cpp"
```

```

elif $c++ -traditional foo.c >foo.cpp; \
$contains ab foo.cpp >/dev/null 2>&1; then
echo "We'll use 'c++ -traditional' to get proper semantics."
c++_trad="$c++ -traditional"
else
echo "I don't know how to get traditional semantics with 'c++'." >&4
c++_trad="$c++"
fi
$rm -f foo.c foo.cpp

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/c++_trad.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1996, Cygnus Support

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Tom Tromey <tromey@cygnus.com>

?RCS:

?RCS: \$Log: src.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:23:54 ram

?RCS: patch61: created

?RCS:

?MAKE:src +rsrc: Options package contains

?MAKE: -pick add \$@ %<

?Y:TOP

?S:src (srcdir):

?S: This variable holds the (possibly relative) path of the package source.

?S: It is up to the Makefile to use this variable and set VPATH accordingly

?S: to find the sources remotely. Use \$pkgsrc to have an absolute path.

?S:.

?S:rsrc

(relsrcdir):

?S: This variable holds a potentially relative path to the package

?S: source. The contents are correct for the configuration environment,

?S: i.e. there might be an extra .. prepended to get out of the UU dir.

?S: Configure units should use this, not the src variable.

?S:.

: Find the path to the source tree

```

case "$src" in
") case "$0" in
  /*) src=`echo $0 | sed -e 's%/[^\[]*%%`
    case "$src" in
/*) ;;
.) ;;
  *) src=`cd ../$src && pwd` ;;
esac
;;
*) src='.';;
esac;;

```

```

esac
case "$src" in
") src=/
  rsrc=/
  ;;
/*) rsrc="$src";;
*) rsrc="../$src";;
esac

```

?X:

?X: Now check whether we have found the right source tree (i.e. the one for the  
?X: package we're about to configure). The original unit from Tom Tromeu forced  
?X: the user to pick a unique file from his distribution, and we were merely  
?X: checking the existence of that file. I prefer to rely on Configure (which  
?X: we know `*is*` present since this unit is  
part of it!) and look for the

?X: definition of the package variable, making sure it's the same as ours.

?X: If it matches, we know we found the right source tree. -- RAM, 15/03/96

?X:

```

if test -f $rsrc/Configure && \
  $contains "^package=$package$" $rsrc/Configure >/dev/null 2>&1
then
  : found it, so we are ok.

```

else

?X: Otherwise try "." and up to 4 parent directories...

?X: Note that we prepend a ".." to get out of the configuration environment.

```

rsrc=""
for src in . .. ../.. ../../.. ../../../..; do
  if test -f ../$src/Configure && \
    $contains "^package=$package$" ../$src/Configure >/dev/null 2>&1
  then
    rsrc=../$src
    break
  fi
done
fi

```

case "\$rsrc" in

")

```
cat <<EOM >&4
```

Sorry, I can't seem to locate the source dir for \$package. Please start Configure with an explicit path -- i.e. /some/path/Configure.

```
EOM
```

```
exit 1
```

```
::
```

```
?X: Don't echo anything if the sources are in . -- they should know already ;-)
```

```
?X: In that case, rsrc is ../. since we lookup from within UU
```

```
../.) rsrc='..';;
```

```
*)
```

```
echo
```

```
" "
```

```
echo "Sources for $package found in \"${src}\"." >&4
```

```
::
```

```
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/src.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_chroot.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
```

```
?RCS:
```

```
?RCS: $Log: d_chroot.U,v $
```

```
?RCS: Revision 3.0.1.1 1994/08/29 16:07:17 ram
```

```
?RCS: patch32: created by ADO
```

```
?RCS:
```

```
?MAKE:d_chroot: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_chroot:
```

```
?S: This variable conditionally defines the HAS_CHROOT symbol, which
```

```
?S: indicates to the C program that the chroot() routine is available.
```

```
?S:.
```

```
?C:HAS_CHROOT :
```

```
?C: This symbol, if defined, indicates that the chroot routine
```

```
is
?C: available.
?C:.
?H:#$d_chroot HAS_CHROOT /**/
?H:.
?LINT:set d_chroot
: see if chroot exists
set chroot d_chroot
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_chroot.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: fpu.U,v 3.0 1993/08/18 12:08:10 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: fpu.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:10 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?LINT: empty
?X:?MAKE:fpu: test cat cc Myread
?X:?MAKE: -pick add $@ %<
?X:?S:fpu (fpunit):
?X:?S: Set to be the compile flag for the local floating point unit.
?X:?S:.
?X:?C:FPU (FPUNIT):
?X:?C: String containing the flags for the local floating point unit.
?X:?C:.
?X:?H:#define FPU "$fpu" /**/
?X:?H:.
?X: see what floating point compile flags should be used.
?X:fpu=""
?X:if
    $test -r /dev/fpa; then
?X: $cat>fpa.c << GOOP
?X: main(){return(1);}
?X:GOOP
?X: $cc -ffpa -o fpa fpa.c
```

```

?X: fpa > fpa.out 2>&1
?X: if $test ! -s fpa.out; then
?X: dflt='y'
?X: $cat <<'EOM'
?X:
?X:You seem to have a sun fpa... I can compile the code to use the fpa but it will
?X:mean that the code can ONLY run on a machine with a fpa...
?X:
?X:EOM
?X: rp="Should I compile for fpa?"
?X: . ./myread
?X: if $test $ans = "n"; then
?X: fpu="
?X: else
?X: fpu='-ffpa'
?X: fi
?X: else
?X: $cat <<'EOM'
?X:
?X:You have the fpa device but I can't seem to use it. Maybe you should talk to
?X:your sysadmin about this. For now, I am not going to compile it in.
?X:
?X:EOM
?X: fi
?X:fi
?X:if $test "$fpu" = ""; then
?X: if $test -r /usr/etc/mc68881version; then
?X: dflt='y'
?X: $cat <<'EOM'
?X:
?X:There also seems to be the pieces for a 68881. If I compile this in, it will
?X:work on almost all Sun 3's except for a few Sun-3/50s without a 68881...
?X:
?X:EOM
?X: rp="Should
I compile for a 68881?"
?X: . ./myread
?X: if $test $ans = "y"; then
?X: fpu='-f68881'
?X: fi
?X: fi
?X:fi
?X:

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/nullified/fpu.U

```



No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Findhdr.U,v 3.0.1.2 1994/10/29 15:53:08 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Thomas Neumann <tom@smart.bo.open.de>
?RCS:
?RCS: $Log: Findhdr.U,v $
?RCS: Revision 3.0.1.2 1994/10/29 15:53:08 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 14:03:56 ram
?RCS: patch23: cppminus must be after other cppflags, not before
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:54 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit produces a findhdr script which
?X: is used to locate the header
?X: files in $usrinc or other stranger places using cpp capabilities. The
?X: script is given an include file base name, like 'stdio.h' or 'sys/file.h'
?X: and it returns the full path of the include file and a zero status or an
?X: empty string with an error status if the file could not be located.
?X:
?MAKE:Findhdr: grep test tr rm incpth awk cat startsh \
?MAKE: cppstdin cppminus +cppflags osname
?MAKE: -pick add $@ %<
?LINT:extern cppfilter
?LINT:define fieldn
?S:fieldn:
?S: This variable is used internally by Configure. It contains the position
?S: of the included file name in cpp output. That is to say, when cpp
?S: pre-processes a #include <file> line, it replaces it by a # line which
?S: contains the original position in the input file and the full name of
?S: included file, between "quotes".
?S:.
?V:fieldn
?F:./findhdr !fieldn
?T:cline pos wanted name awkprg usrincdir status testaccess
: determine filename position in cpp output
```

```

echo " "
echo "Computing
filename position in cpp output for #include directives..." >&4
case "$osname" in
amigaos) fieldn=3 ;; # Workaround for a bug in abc (pdksh).
esac
case "$fieldn" in
")
case "$osname" in
vos) testaccess=-e ;;
*) testaccess=-r ;;
esac
echo '#include <stdio.h>' > foo.c
$cat >fieldn <<EOF
$startsh
$cpptest $cpptestflags $cpptestminus <foo.c 2>/dev/null | \
$grep '^[ ]*#.*stdio.h' | \
while read cline; do
pos=1
set $cline
while $test $# -gt 0; do
if $test $testaccess \`echo $1 | $tr -d "'"; then
echo "\$pos"
exit 0
fi
shift
pos=\`expr $pos + 1\`
done
done
EOF
chmod +x fieldn
fieldn=`./fieldn`
$rm -f foo.c fieldn
;;
esac
case $fieldn in
") pos='???';;
1) pos=first;;
2) pos=second;;
3) pos=third;;
*) pos="{fieldn}th";;
esac
echo "Your cpp writes the filename in the $pos field of the line."

```

?X: To locate a header file, we cannot simply check for \$usrinc/file.h, since  
?X: some machine have the headers in weird places and our only hope is that  
?X: the C pre-processor

will know how to find those headers. Thank you Next!

```
: locate header file
$cat >findhdr <<EOF
$startsh
wanted=\$1
name=""
for usrinmdir in $incpth
do
if test -f \$usrinmdir/\$wanted; then
echo "\$usrinmdir/\$wanted"
exit 0
fi
done
awkprg='{ print \$$fieldn }'
echo "#include <\"$wanted>" > foo\$\$.c
$cpptest $cpptestminus $cpptestflags < foo\$\$.c 2>/dev/null | \
$cpptestfilter $grep "^[ ]*#.*\"$wanted" | \
while read cline; do
name=\`echo \$cline | $awk "\$awkprg" | $str -d ""\`
case "\$name" in
*[/\\\\]\"$wanted) echo "\$name"; exit 1;;
*[\\\\]\"$wanted) echo "\$name"; exit 1;;
*) exit 2;;
esac;
done;
#
# status = 0: grep returned 0 lines, case statement not executed
# status = 1: headerfile found
# status = 2: while loop executed, no headerfile found
#
status=\$?
$rm -f foo\$\$.c;
if test \$status -eq 1; then
exit 0;
fi
exit 1
EOF
chmod +x findhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Findhdr.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: lns.U,v \$

?RCS: Revision 3.0.1.1 1994/06/20 07:05:52 ram

?RCS: patch30: created by ADO

?RCS:

?X:

?X: This unit checks whether symbolic links are really supported.

?X: We can't rely on d\_symlink because that may be listed in the

?X: C library but unimplemented.

?X:

?MAKE:lns: ln rm touch test

?MAKE: -pick add \$@ %<

?S:lns:

?S: This variable holds the name of the command to make

?S: symbolic links (if they are supported).

It can be used

?S: in the Makefile. It is either 'ln -s' or 'ln'

?S:.

: determine whether symbolic links are supported

echo " "

\$rm -f blurfl sym

\$touch blurfl

if \$ln -s blurfl sym > /dev/null 2>&1 && \$test -f sym; then

echo "Symbolic links are supported." >&4

lns="\$ln -s"

else

echo "Symbolic links are NOT supported." >&4

lns="\$ln"

fi

\$rm -f blurfl sym

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/lns.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_varhdr.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_varhdr.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:54:42 ram

?RCS: patch61: varargs script now starts with leading "startsh"

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:21:02 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0.1.1 1994/05/13 15:26:05 ram

?RCS: patch27: this unit now supersedes old i\_stdarg.U and i\_varargs.U

?RCS: patch27: modified to avoid spurious Whoa warnings (ADO)

?RCS:

?RCS: Revision 3.0

1993/08/18 12:08:49 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_stdarg i\_varargs i\_varhdr: cat +cc +ccflags rm test Setvar \  
Findhdr startsh \_o

?MAKE: -pick add \$@ %<

?S:i\_stdarg:

?S: This variable conditionally defines the I\_STDARG symbol, which

?S: indicates to the C program that <stdarg.h> exists and should

?S: be included.

?S:.

?S:i\_varargs:

?S: This variable conditionally defines I\_VARARGS, which indicates

?S: to the C program that it should include <varargs.h>.

?S:.

?S:i\_varhdr:

?S: Contains the name of the header to be included to get va\_dcl definition.

?S: Typically one of varargs.h or stdarg.h.

?S:.

?C:I\_STDARG:

?C: This symbol, if defined, indicates that <stdarg.h> exists and should

?C: be included.

?C:.

?C:I\_VARARGS:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <varargs.h>.

?C:.

?H:#\$i\_stdarg I\_STDARG /\*\*/

?H:#\$i\_varargs I\_VARARGS /\*\*/

?H:.

?W:%<:va\_dcl

?F:!varargs

?T:valstd

?LINT:set i\_stdarg i\_varargs

?X:

?X:

Don't use setvar because the varargs test below might override these.

?X: Actually, the messages here are just informative. We don't wish to set

?X: i\_varargs or i\_stdarg to their final value before knowing which of the

?X: two we'll include.

?X:

: see if stdarg is available

echo " "

if \$test `./findhdr stdarg.h`; then

echo "<stdarg.h> found." >&4

valstd="\$define"

else

echo "<stdarg.h> NOT found." >&4

valstd="\$undef"

fi

: see if varargs is available

echo " "

if \$test `./findhdr varargs.h`; then

echo "<varargs.h> found." >&4

else

echo "<varargs.h> NOT found, but that's ok (I hope)." >&4

fi

?X:

?X: if you have stdarg.h, you need to support prototypes to actually use it;

?X: but if stdarg.h exists and the compiler doesn't support prototypes (for some

?X: bizarre reason), we'll fall back to varargs.h anyway so it's not so bad.

?X:

: set up the varargs testing programs

\$cat > varargs.c <<EOP

#ifdef I\_STDARG

#include <stdarg.h>

#endif

#ifdef I\_VARARGS

#include <varargs.h>

#endif

#ifdef

I\_STDARG

int f(char \*p, ...)

#else

int f(va\_alist)

va\_dcl

```

#endif
{
    va_list ap;
#ifndef I_STDARG
    char *p;
#endif
#ifdef I_STDARG
    va_start(ap,p);
#else
    va_start(ap);
    p = va_arg(ap, char *);
#endif
    va_end(ap);
    return 0;
}
EOP
$cat > varargs <<EOP
$startsh
if $cc -c $ccflags -D$1 varargs.c >/dev/null 2>&1; then
    echo "true"
else
    echo "false"
fi
$rm -f varargs$_o
EOP
chmod +x varargs

```

: now check which varargs header should be included

```

echo " "
i_varhdr="
val="
case "$valstd" in
"$define")
    if `./varargs I_STDARG`; then
        val='stdarg.h'
    elif `./varargs I_VARARGS`; then
        val='varargs.h'
    fi
    ;;
*)
    if `./varargs I_VARARGS`; then
        val='varargs.h'
    fi
    ;;
esac
case "$val" in
")
    echo " "

```

```

echo "*** WHOA THERE!!! ***" >&4
echo "  Your C compiler \"$cc\" doesn't seem to support stdarg or varargs!" >&4
case "$knowitall" in
")
echo "  I'm giving up; maybe you can try again with a different compiler?" >&4
exit 1
;;
esac
echo "I could not find the definition for va_dcl...
You have problems..." >&4
val="$undef"; set i_stdarg; eval $setvar
val="$undef"; set i_varargs; eval $setvar
;;
*)
set i_varhdr
eval $setvar
case "$i_varhdr" in
stdarg.h)
val="$define"; set i_stdarg; eval $setvar
val="$undef"; set i_varargs; eval $setvar
;;
varargs.h)
val="$undef"; set i_stdarg; eval $setvar
val="$define"; set i_varargs; eval $setvar
;;
esac
echo "We'll include <$i_varhdr> to get va_dcl definition." >&4;;
esac
$rm -f varargs*

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/i_varhdr.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: make.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1996, Andy Dougherty
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
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```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: make.U,v $
```

```
?RCS: Revision 3.0.1.1 1997/02/28 16:09:40 ram
```



```

?RCS: patch61: created
?RCS:
?MAKE:make_set_make : Loc rm sed make
?MAKE: -pick add $@ %<
?S:make_set_make:
?S: Some versions of 'make' set the variable MAKE. Others do not.
?S: This variable contains the string to be included in Makefile.SH
?S: so that MAKE is set if needed, and not if not needed.
?S: Possible values are:
?S:
?S: make_set_make='#' #
If your make program handles this for you,
?S:
?S: make_set_make="MAKE=$make" # if it doesn't.
?S:
?S: This uses a comment character so that we can distinguish a
?S: 'set' value (from a previous config.sh or Configure -D option)
?S: from an uncomputed value.
?S:.
?LINT: extern MAKE
?LINT: change MAKE
?X: This test is based on one from an autoconf-generated configure
?X: script. Autoconf stole a lot from Configure, but now it's our
?X: turn to do so... ;-) -- RAM, 21/02/97
: check whether make sets MAKE
echo " "
echo "Checking if your $make program sets \$(MAKE)..." >&4
case "$make_set_make" in
")
?X: Use sed so we don't have a line beginning with @echo. Metaconfig
?X: will think that's a command like @if or @end.
$sed 's/^X //' > testmake.mak << 'EOF'
Xall:
X @echo 'maketemp="\$(MAKE)'"
EOF
?X: GNU make sometimes prints "make[1]: Entering...", which would confuse us
case "`$make -f testmake.mak 2>/dev/null`" in
*maketemp=*) make_set_make='#' ;;
*) make_set_make="MAKE=$make" ;;
esac
$rm
-f testmake.mak
;;
esac
case "$make_set_make" in
'#) echo "Yup, it does.";;
*) echo "Nope, it doesn't.";;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/make.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_syssselct.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

?RCS: \$Log: i\_syssselct.U,v \$

?RCS: Revision 3.0.1.1 1993/08/25 14:01:33 ram

?RCS: patch6: added default for i\_syssselct

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:35 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: Look wether <sys/select.h> exists

?X:

?MAKE:i\_syssselct: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_syssselct:

?S: This variable conditionally defines I\_SYS\_SELECT, which indicates

?S: to the C program that it should include <sys/select.h> in  
order to

?S: get the definition of struct timeval.

?S:.

?C:I\_SYS\_SELECT (I\_SYSSSELECT):

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/select.h> in order to get definition of struct timeval.

?C:.

?H:#\$i\_syssselct I\_SYS\_SELECT /\*\*/

?H:.

?D:i\_syssselct="

?LINT:set i\_syssselct

: see if sys/select.h has to be included

set sys/select.h i\_syssselct

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/dist/U/i\_syssselct.U

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?RCS:

?MAKE:sitehtml1dir sitehtml1direxp installsitehtml1dir: Getfile \

Setprefixvar prefix siteprefix html1dir sed

?MAKE: -pick add \$@ %<

?Y:TOP

?D:sitehtml1dir="

?S:sitehtml1dir:

?S: This variable contains the name of the directory in which site-specific

?S: html source pages are to be put. It is the responsibility of the

?S: Makefile.SH to get the value of this into the proper command.

?S: You must be prepared to do the ~name expansion yourself.

?S: The standard distribution will put nothing in this directory.

?S: After perl

has been installed, users may install their own local

?S: html pages in this directory with

?S: MakeMaker Makefile.PL

?S: or equivalent. See INSTALL for details.

?S:.

?D:sitehtml1direxp="

?S:sitehtml1direxp:

?S: This variable is the same as the sitehtml1dir variable, but is filename

?S: expanded at configuration time, for convenient use in makefiles.

?S:.

?D:installsitehtml1dir="

?S:installsitehtml1dir:

?S: This variable is really the same as sitehtml1direxp, unless you are using

?S: AFS in which case it points to the read/write location whereas

?S: html1direxp only points to the read-only access location. For extra

?S: portability, you should only use this variable within your makefiles.

?S:.

?LINT:change prefixvar

?LINT:set installsitehtml1dir

?LINT:set sitehtml1dir

?LINT:set sitehtml1direxp

: determine where add-on html pages go

: There is no standard location, so try to copy the previously-selected

```

: directory structure for the core html pages.
case "$sitehtml1dir" in
")
  dflt=`echo "$html1dir" | $sed "s#^$prefix#$siteprefix#"` ;;
*) dflt=$sitehtml1dir ;;
esac
case "$dflt" in
"|' ') dflt=none ;;
esac
fn=dn+~
rp='Pathname where the site-specific html pages should be installed?'
./getfile
prefixvar=sitehtml1dir
./setprefixvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/sitehtml1dir.U

```

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?RCS: \$Id\$

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?RCS:

?MAKE:usemorebits: Setvar

?MAKE: -pick add \$@ %<

?Y:TOP

?S:usemorebits:

?S: This variable conditionally defines the USE\_MORE\_BITS symbol,

?S: and indicates that explicit 64-bit interfaces and long doubles

?S: should be used when available.

?S:.

?C:USE\_MORE\_BITS:

?C: This symbol, if defined, indicates that 64-bit interfaces and

?C: long doubles should be used when available.

?C:.

?H:%<:#ifndef USE\_MORE\_BITS

?H:%<:#\$usemorebits USE\_MORE\_BITS /\*\*/

?H:%<:#endif

?H:.

?LINT:extern use64bitint

?LINT:change use64bitint

?LINT:extern uselongdouble

?LINT:change uselongdouble

: Check if morebits is requested

```
case "$usemorebits" in
"$define"|true[[yY]*)
  use64bitint="$define"
  uselongdouble="$define"
  usemorebits="$define"
  ;;
*) usemorebits="$undef"
  ;;
esac
```

Found

in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/usemorebits.U
```

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?RCS:

?MAKE:d\_fstatfs : Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fstatfs:

?S: This variable conditionally defines the HAS\_FSTATFS symbol, which

?S: indicates to the C program that the fstatfs() routine is available.

?S:.

?C:HAS\_FSTATFS:

?C: This symbol, if defined, indicates that the fstatfs routine is

?C: available to stat filesystems by file descriptors.

?C:.

?H:#\$d\_fstatfs HAS\_FSTATFS /\*\*/

?H:.

?LINT:set d\_fstatfs

: see if fstatfs exists

set fstatfs d\_fstatfs

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_fstatfs.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setgrent\_r.U,v 0RCS:

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?RCS:

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?RCS:  
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
?RCS:  
?MAKE:d\_setgrent\_r setgrent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_grp extern\_C  
?MAKE: -pick add \$@ %<  
?S:d\_setgrent\_r:  
?S: This variable conditionally defines the HAS\_SETGRENTR symbol,  
?S: which indicates to the C program that the setgrent\_r()  
?S: routine is available.  
?S:.  
?S:setgrent\_r\_proto:  
?S: This variable encodes the prototype of setgrent\_r.  
?S: It is zero if d\_setgrent\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setgrent\_r  
?S: is defined.  
?S:.  
?C:HAS\_SETGRENTR:  
?C: This symbol, if defined, indicates that the setgrent\_r routine  
?C: is available to  
setgrent re-entrantly.  
?C:.  
?C:SETGRENTR\_PROTO:  
?C: This symbol encodes the prototype of setgrent\_r.  
?C: It is zero if d\_setgrent\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setgrent\_r  
?C: is defined.  
?C:.  
?H:#\$d\_setgrent\_r HAS\_SETGRENTR /\*\*/  
?H:#define SETGRENTR\_PROTO \$setgrent\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_setgrent\_r\_proto  
: see if setgrent\_r exists  
set setgrent\_r d\_setgrent\_r  
eval \$inlibc  
case "\$d\_setgrent\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_grp grp.h"  
case "\$d\_setgrent\_r\_proto:\$usethreads" in  
":define") d\_setgrent\_r\_proto=define  
set d\_setgrent\_r\_proto setgrent\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_setgrent\_r\_proto" in  
define)

```

case "$setgrent_r_proto" in
"|0) try='int setgrent_r(FILE**);'
./protochk "$extern_C $try" $hdrs && setgrent_r_proto=I_H ;;
esac
case "$setgrent_r_proto" in
"|0) try='void setgrent_r(FILE**);'
./protochk "$extern_C $try" $hdrs && setgrent_r_proto=V_H ;;
esac
case "$setgrent_r_proto"
in
"|0) d_setgrent_r=undef
setgrent_r_proto=0
echo "Disabling setgrent_r, cannot determine prototype." >&4 ;;
*) case "$setgrent_r_proto" in
REENTRANT_PROTO*) ;;
*) setgrent_r_proto="REENTRANT_PROTO_${setgrent_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "setgrent_r has no prototype, not using it." >&4 ;;
esac
d_setgrent_r=undef
setgrent_r_proto=0
;;
esac
;;
*) setgrent_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_setgrent_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_sgnchr.U,v 3.0.1.2 1997/02/28 15:44:25 ram Exp \$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_sgnchr.U,v \$

```

?RCS: Revision 3.0.1.2 1997/02/28 15:44:25 ram
?RCS: patch61: added a ?F: metalint hint
?RCS:
?RCS: Revision 3.0.1.1 1995/07/25 14:00:24 ram
?RCS: patch56: made cc and ccflags optional dependencies
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:16 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_sgnchr: cat rm Compile Setvar run
?MAKE: -pick add $@ %<
?S:d_sgnchr:
?S: This variable conditionally defines the SIGNEDCHAR
symbol, which
?S: indicates to the C program that signed characters are available.
?S:.
?C:SIGNEDCHAR:
?C: This symbol, if defined, indicates that characters are a signed type.
?C: If not defined, things declared as signed characters (and that make
?C: use of negative values) should probably be declared as shorts instead.
?C:.
?H:#$d_sgnchr SIGNEDCHAR /**/
?H:.
?F:!try
?LINT:set d_sgnchr
: check for signed chars
echo " "
echo "Checking to see if your C compiler can do signed chars..." >&4
$cat >try.c <<'EOCP'
int main()
{
char c = 0;

c--;
exit(c >= 0);
}
EOCP
set try
if eval $compile && $run ./try; then
if $run ./try; then
val="$define"
echo "It certainly can."
else
val="$undef"
echo "It can't. I'll have to make some things type short."
fi
set d_sgnchr
eval $setvar

```



\$rm -f try\*

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d\_sgndchr.U

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?RCS:

?MAKE:d\_fdclose: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fdclose:

?S: This variable conditionally defines the HAS\_FDCLOSE symbol, which

?S: indicates to the C program that the fdclose() routine is available.

?S:.

?C:HAS\_FDCLOSE:

?C: This symbol, if defined, indicates that the fdclose routine is

?C: available to free a FILE structure without closing the underlying

?C: file descriptor. This function appeared in FreeBSD 10.2.

?C:.

?H:#\$d\_fdclose HAS\_FDCLOSE /\*\*/

?H:.

?LINT:set d\_fdclose

: see if fdclose exists

set fdclose d\_fdclose

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_fdclose.U

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_lseekproto: Hasproto i\_systypes i\_unistd

?MAKE: -pick add \$@ %<

?S:d\_lseekproto:

?S: This variable conditionally defines the HAS\_LSEEK\_PROTO symbol,

?S: which indicates to the C program that the system provides

?S: a prototype for the lseek() function. Otherwise, it is  
 ?S: up to the program to supply one.  
 ?S:.  
 ?C:HAS\_LSEEK\_PROTO:  
 ?C: This symbol, if defined, indicates that the system provides  
 ?C: a prototype for the lseek() function. Otherwise, it is up  
 ?C: to the program to supply one. A good guess is  
 ?C: extern  
 off\_t lseek(int, off\_t, int);  
 ?C:.  
 ?H:#\$d\_lseekproto HAS\_LSEEK\_PROTO /\*\*/  
 ?H:.  
 ?LINT:set d\_lseekproto  
 : see if prototype for lseek is available  
 echo " "  
 set d\_lseekproto lseek \$i\_systypes sys/types.h \$i\_unistd unistd.h  
 eval \$hasproto

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/protos/d\_lseekproto.U

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?RCS: \$Id: d\_getwd.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_getwd.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:18 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_getwd: Csym Setvar

?MAKE: -pick add \$@ %<

?S:d\_getwd:

?S: This variable conditionally defines HAS\_GETWD if getwd() is

?S: available to get working directory. If not, you should

?S: probably use getcwd().

?S:.

?C:HAS\_GETWD (GETWD):

?C: This symbol, if defined, indicates that the getwd routine is

?C: available to get working directory.

```

If not, you should
?C: probably use getcwd().
?C:.
?H:#$d_getwd HAS_GETWD /**/
?H:.
?LINT:set d_getwd
: see if getwd exists
echo " "
if set getwd val -f d_getwd; eval $csym; $val; then
echo 'getwd() found.' >&4
val="$define"
else
echo 'getwd() not found. Assuming getcwd() exists.' >&4
val="$undef"
fi
set d_getwd
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_getwd.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_time.U,v 3.0 1993/08/18 12:08:45 ram Exp $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

```

```

?RCS:

```

```

?RCS: You may redistribute only under the terms of the Artistic License,

```

```

?RCS: as specified in the README file that comes with the distribution.

```

```

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```

?RCS: of the source tree for dist 3.0.

```

```

?RCS:

```

```

?RCS: $Log: i_time.U,v $

```

```

?RCS: Revision 3.0 1993/08/18 12:08:45 ram

```

```

?RCS: Baseline for dist 3.0 netwide release.

```

```

?RCS:

```

```

?X:

```

```

?X: This unit finds which "time" include to use. If 'timezone' is used by the

```

```

?X: program, we also try to find which header should be included. Eventually,

```

```

?X: we look for <sys/select.h> if I_SYSSSELECT is used, to get struct timeval.

```

```

?X:

```

```

?MAKE:i_time i_systime i_systimek timeincl d_tm_tm_zone d_tm_tm_gmtoff: \

```

```

Compile cat \

```

```

contains rm_try echo n

```

```

c +i_sysselect Findhdr Hasfield i_stdlib

```

```

?MAKE: -pick add $@ %<

```

```

?S:i_time:

```

?S: This variable unconditionally defines I\_TIME, which indicates  
?S: to the C program that it should include <time.h>.  
?S:.  
?S:i\_sysstime:  
?S: This variable conditionally defines I\_SYS\_TIME, which indicates  
?S: to the C program that it should include <sys/time.h>.  
?S:.  
?S:i\_systimek:  
?S: This variable conditionally defines I\_SYS\_TIME\_KERNEL, which  
?S: indicates to the C program that it should include <sys/time.h>  
?S: with KERNEL defined.  
?S:.  
?S:timeincl:  
?S: This variable holds the full path of the included time header(s).  
?S:.  
?S:d\_tm\_tm\_zone:  
?S: This variable conditionally defines HAS\_TM\_TM\_ZONE, which indicates  
?S: to the C program that the struct tm has the tm\_zone field.  
?S:.  
?S:d\_tm\_tm\_gmtoff:  
?S: This variable conditionally defines HAS\_TM\_TM\_GMTOFF, which indicates  
?S: to the C program that the struct tm has the tm\_gmtoff field.  
?S:.  
?C:I\_TIME (USE\_TIME\_H):  
?C: This symbol is always defined, and indicates  
to the C program that  
?C: it should include <time.h>.  
?C:.  
?C:I\_SYS\_TIME (I\_SYSTIME USE\_SYS\_TIME\_H NO\_TIME\_WITH\_SYS\_TIME):  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <sys/time.h>.  
?C:.  
?C:I\_SYS\_TIME\_KERNEL (I\_SYSTIMEKERNEL):  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <sys/time.h> with KERNEL defined.  
?C:.  
?C:HAS\_TM\_TM\_ZONE:  
?C: This symbol, if defined, indicates to the C program that  
?C: the struct tm has a tm\_zone field.  
?C:.  
?C:HAS\_TM\_TM\_GMTOFF:  
?C: This symbol, if defined, indicates to the C program that  
?C: the struct tm has a tm\_gmtoff field.  
?C:.  
?H:#\$i\_time I\_TIME /\*\*/  
?H:#\$i\_sysstime I\_SYS\_TIME /\*\*/  
?H:#\$i\_systimek I\_SYS\_TIME\_KERNEL /\*\*/  
?H:#\$d\_tm\_tm\_zone HAS\_TM\_TM\_ZONE /\*\*/

```

?H:#$d_tm_tm_gmtoff HAS_TM_TM_GMTOFF /**/
?H:.
?W::timezone
?T:xselect flags sysselect s_timeval s_timezone
?LINT:change i_sysselect
?LINT:set d_tm_tm_zone
?LINT:set d_tm_tm_gmtoff
: see if we should include sys/time.h
echo
" "
i_time='define'
if test "X$timeincl" = X; then
echo "Testing to see if we should include <sys/time.h>." >&4
$echo $n "I'm now running the test program...$c"
$cat >try.c <<EOCP
#include <sys/types.h>
#include <time.h>
#ifdef I_SYSTIME
#ifdef SYSTIMEKERNEL
#define KERNEL
#endif
#include <sys/time.h>
#endif
#ifdef I_SYSSSELECT
#include <sys/select.h>
#endif
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main()
{
struct tm foo;
#ifdef S_TIMEVAL
struct timeval bar;
#endif
#ifdef S_TIMEZONE
struct timezone tzp;
#endif
if (foo.tm_sec == foo.tm_sec)
exit(0);
#ifdef S_TIMEVAL
if (bar.tv_sec == bar.tv_sec)
exit(0);
#endif
exit(1);
}
EOCP

```

```

flags="
@if I_SYSSELECT
if $contains 'timeval.*{'`./findhdr sys/select.h` >/dev/null 2>&1; then
xselect='-DI_SYSSELECT'
else
xselect=""
fi
@end
@if timezone
for s_timezone in '-DS_TIMEZONE' "; do
@else
s_timezone=""
@end
?X: Every package is given a try with 'struct timeval'
@if I_SYSSELECT
for sysselect in $xselect
"; do
@else
sysselect=""
@end
for s_timeval in '-DS_TIMEVAL' "; do
for i_systimek in "'-DSYSTIMEKERNEL'; do
for i_systime in '-DI_SYSTIME' "; do
case "$flags" in
") $echo $n ". $c"
set try $i_systime $i_systimek $sysselect $s_timeval $s_timezone
if eval $compile; then
set X $i_systime $i_systimek $sysselect $s_timeval
shift
flags="$*"
echo " "
$echo $n "Succeeded with $flags$c"
fi
;;
esac
done
done
done
@if I_SYSSELECT
done
@end
@if timezone
done
@end
timeincl=""
echo " "
case "$flags" in
*SYSTIMEKERNEL*) i_systimek="$define"

```

```

timeincl=`./findhdr sys/time.h`
echo "We'll include <sys/time.h> with KERNEL defined." >&4;;
*) i_systimek="$undef";;
esac
case "$flags" in
*I_SYSTIME*) i_systime="$define"
timeincl=`./findhdr sys/time.h`" $timeincl"
echo "We'll include <sys/time.h>." >&4;;
*) i_systime="$undef";;
esac
@if I_SYSSELECT
case "$flags" in
*I_SYSSELECT*) i_syssselct="$define"
timeincl=`./findhdr sys/select.h`"
$timeincl"
echo "We'll also include <sys/select.h> to get struct timeval." >&4;;
*) case "$i_syssselct" in
") i_syssselct="$undef";;
esac
esac
@end
$rm_try
fi
: see if struct tm knows about tm_zone
case "$i_systime$i_time" in
*$define*)
echo " "
echo "Checking to see if your struct tm has tm_zone field..." >&4
set d_tm_tm_zone tm tm_zone $i_systime sys/time.h $i_time time.h
eval $hasfield
;;
*) val="$undef"
set d_tm_tm_zone
eval $setvar
;;
esac
case "$d_tm_tm_zone" in
"$define") echo "Yes, it does." ;;
*) echo "No, it doesn't." ;;
esac
: see if struct tm knows about tm_gmtoff
case "$i_systime$i_time" in
*$define*)
echo " "
echo "Checking to see if your struct tm has tm_gmtoff field..." >&4
set d_tm_tm_gmtoff tm tm_gmtoff $i_systime sys/time.h $i_time time.h
eval $hasfield
;;

```

```

*)    val="$undef"
      set d_tm_tm_gmtoff
      eval $setvar

      ;;
esac
case "$d_tm_tm_gmtoff" in
"$define")    echo "Yes, it does." ;;
*)            echo "No, it doesn't." ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/i_time.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_gethostbyaddr\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_gethostbyaddr\_r gethostbyaddr\_r\_proto: Inlibc Protochk Hasproto \  
i\_systypes usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_gethostbyaddr\_r:

?S: This variable conditionally defines the HAS\_GETHOSTBYADDR\_R symbol,

?S: which indicates to the C program that the gethostbyaddr\_r()

?S: routine is available.

?S:.

?S:gethostbyaddr\_r\_proto:

?S: This variable encodes the prototype of gethostbyaddr\_r.

?S: It is zero if d\_gethostbyaddr\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_gethostbyaddr\_r

?S: is defined.

?S:.

?C:HAS\_GETHOSTBYADDR\_R:

?C: This symbol, if defined, indicates

that the gethostbyaddr\_r routine

?C: is available to gethostbyaddr re-entrantly.

?C:.

?C:GETHOSTBYADDR\_R\_PROTO:

?C: This symbol encodes the prototype of gethostbyaddr\_r.

?C: It is zero if d\_gethostbyaddr\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_gethostbyaddr\_r

?C: is defined.



```

?C:.
?H:#$d_gethostbyaddr_r HAS_GETHOSTBYADDR_R /**/
?H:#define GETHOSTBYADDR_R_PROTO $gethostbyaddr_r_proto /**/
?H:.
?T:try hdrs d_gethostbyaddr_r_proto
: see if gethostbyaddr_r exists
set gethostbyaddr_r d_gethostbyaddr_r
eval $inlibc
case "$d_gethostbyaddr_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_gethostbyaddr_r_proto:$usetreads" in
":define") d_gethostbyaddr_r_proto=define
set d_gethostbyaddr_r_proto gethostbyaddr_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_gethostbyaddr_r_proto" in
define)
case "$gethostbyaddr_r_proto" in
"|0) try='int gethostbyaddr_r(const char*, size_t, int, struct hostent*, char*,
size_t, struct hostent**, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=I_CWISBWRE ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='struct hostent* gethostbyaddr_r(const char*, size_t, int, struct hostent*, char*, size_t, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=S_CWISBWIE ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='struct hostent* gethostbyaddr_r(const char*, size_t, int, struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=S_CWISBIE ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='struct hostent* gethostbyaddr_r(const void*, size_t, int, struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=S_TWISBIE ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='struct hostent* gethostbyaddr_r(const char*, int, int, struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=S_CIISBIE ;;
esac
case
"$gethostbyaddr_r_proto" in
"|0) try='struct hostent* gethostbyaddr_r(const char*, struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=S_CSIBIE ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='struct hostent* gethostbyaddr_r(const void*, struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=S_TSBIE ;;

```

```

esac
case "$gethostbyaddr_r_proto" in
"|0) try='int gethostbyaddr_r(const char*, size_t, int, struct hostent*, struct hostent_data*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=I_CWISD ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='int gethostbyaddr_r(const char*, int, int, struct hostent*, struct hostent_data*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=I_CIIISD ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) try='int gethostbyaddr_r(const char*, int, int);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=I_CII ;;
esac
case
"$gethostbyaddr_r_proto" in
"|0) try='int gethostbyaddr_r(const void*, socklen_t, int, struct hostent*, char*, size_t, struct hostent**, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyaddr_r_proto=I_TsISBWRE ;;
esac
case "$gethostbyaddr_r_proto" in
"|0) d_gethostbyaddr_r=undef
gethostbyaddr_r_proto=0
echo "Disabling gethostbyaddr_r, cannot determine prototype." >&&4 ;;
*) case "$gethostbyaddr_r_proto" in
REENTRANT_PROTO*) ;;
*) gethostbyaddr_r_proto="REENTRANT_PROTO_${gethostbyaddr_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "gethostbyaddr_r has no prototype, not using it." >&&4 ;;
esac
d_gethostbyaddr_r=undef
gethostbyaddr_r_proto=0
;;
esac
;;
*) gethostbyaddr_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_gethostbyaddr\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: mailfile.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: mailfile.U,v $
?RCS: Revision 3.0.1.2 1994/10/29 16:24:57 ram
?RCS: patch36: the Loc unit was missing from the dependency line
?RCS:
?RCS: Revision 3.0.1.1 1993/12/15 08:22:08 ram
?RCS: patch15: now also looks under /var/mail for BSD/386
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:11 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:mailfile: Myread Oldconfig Filexp Loc
?MAKE: -pick add $@ %<
?S:mailfile:
?S: This variable contains
the eventual value of the MAILFILE symbol,
?S: which contains an interpretable name of the mail spool file for the
?S: current user.
?S:.
?C:MAILFILE:
?C: This symbol contains the interpretable name of the mail spool file
?C: for the current user. The program must be prepared to substitute
?C: the HOME directory for %~, and the login id for %L.
?C:.
?H:#define MAILFILE "$mailfile" /**/
?H:.
: determine where mail is spooled
case "$mailfile" in
")
dflt=`./loc . XXX /usr/spool/mail /usr/mail /var/mail`
case "$dflt" in
XXX) dflt=%~/mailbox';;
*) dflt="$dflt/%L";;
esac
;;
*) dflt="$mailfile"
;;
esac
cat <<'EOM'

```

In the following question, you may use %~ to represent the user's home

directory, and %L to represent a users name.

EOM

```
rp='In which file is yet-to-be-read mail spooled? (~name ok)'  
./myread  
mailfile=`./filexp "$ans"``
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/mailfile.U
```

No license file was found, but licenses were detected in source scan.

?RCS:

?RCS: Copyright (c) 1999, Jarkko Hietaniemi

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:sizesize: Myread Typedef sizetype Compile run i\_stdlib

?MAKE: -pick add \$@ %<

?S:sizesize:

?S: This variable contains the size of a sizetype in bytes.

?S:.

?C:Size\_t\_size:

?C: This symbol holds the size of a Size\_t in bytes.

?C:.

?H:#define Size\_t\_size \$sizesize /\*\*/

?H:.

?T:yyy zzz

?F:!try

: Check size of size

echo " "

case "\$sizetype" in

\*\_t) zzz="\$sizetype" ;;

\*) zzz="filesize" ;;

esac

echo "Checking the size of \$zzz..." >&4

cat > try.c <<EOCP

#include <sys/types.h>

#include <stdio.h>

#\$i\_stdlib I\_STDLIB

#ifdef I\_STDLIB

#include

<stdlib.h>

#endif

```

int main() {
    printf("%d\n", (int)sizeof($sizetype));
    exit(0);
}
EOCP
set try
if eval $compile_ok; then
    yyy=`$run ./try`
    case "$yyy" in
        *) sizesize=4
            echo "(I can't execute the test program--guessing $sizesize.)" >&4
            ;;
        *) sizesize=$yyy
            echo "Your $zzz size is $sizesize bytes."
            ;;
    esac
else
    sizesize=4
    echo "(I can't compile the test program--guessing $sizesize.)" >&4
fi

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/sizesize.U

```

No license file was found, but licenses were detected in source scan.

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS:

?MAKE:i\_stdint: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_stdint:

?S: This variable conditionally defines the I\_STDINT symbol, which

?S: indicates to the C program that <stdint.h> exists and should

?S: be included.

?S:.

?C:I\_STDINT:

?C: This symbol, if defined, indicates that <stdint.h> exists and

?C: should be included.

?C:.

?H:#\$i\_stdint I\_STDINT /\*\*/

?H:.

?LINT:set i\_stdint

: see if stdint is available

set stdint.h i\_stdint

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_stdint.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_getopt.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_getopt.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:13 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_getopt: Inlibc
?MAKE: -pick add $@ %<
?S:d_getopt:
?S: This variable conditionally defines the HAS_GETOPT symbol, which
?S: indicates that the getopt() routine exists. The getopt() routine
?S: parses command line options in a standard fashion.
?S:.
?C:HAS_GETOPT (GETOPT):
?C: This symbol, if defined, indicates that the getopt() routine
exists.
?C:.
?H:#$d_getopt HAS_GETOPT /**/
?H:.
?LINT:set d_getopt
: see if getopt exists
set getopt d_getopt
eval $inlibc
```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_getopt.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
```

?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Cppsym.U,v \$  
?RCS: Revision 3.0.1.5 1995/05/12 11:59:11 ram  
?RCS: patch54: split awk command onto two lines for older awks (ADO)  
?RCS:  
?RCS: Revision 3.0.1.4 1995/01/11 14:55:57 ram  
?RCS: patch45: new cc vs. cpp symbol checking suggested by JHI  
?RCS: patch45: added more cpp symbols (JHI)  
?RCS:  
?RCS: Revision 3.0.1.3 1994/10/29 15:51:32 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS: patch36: new symbols ardent and titan (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/06/20  
06:53:32 ram  
?RCS: patch30: extended cpp symbol lookup list (JHI)  
?RCS: patch30: renamed attrlist symbol into al for brevity  
?RCS:  
?RCS: Revision 3.0.1.1 1993/12/15 08:14:14 ram  
?RCS: patch15: added new cpp symbols \_\_bsdi\_\_ and BSD\_NET2  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:50 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit produces a shell script called Cppsym, which can be used to  
?X: determine whether any in a list of symbols is defined by the C compilation  
?X: chain (C preprocessor symbols plus C compiler native ones).  
?X: It can determine the status of any symbol, though the symbols in \$al  
?X: are more easily determined. If you want to add to \$al you can do  
?X: it in Myinit.U.  
?X:  
?MAKE:Cppsym ccsymbols cppsymbols cppccsymbols: run \  
eunicefix Guess awk cat tr sed sort rm startsh osname \  
+cc gccversion test comm uniq echo Options trnl \  
optimize ccflags ldflags libs  
?MAKE: -pick add \$@ %<  
?S:ccsymbols:  
?S: The variable contains the symbols  
defined by the C compiler alone.  
?S: The symbols defined by cpp or by cc when it calls cpp are not in  
?S: this list, see cppsymbols and cppccsymbols.  
?S: The list is a space-separated list of symbol=value tokens.  
?S:.  
?S:cppsymbols:  
?S: The variable contains the symbols defined by the C preprocessor

?S: alone. The symbols defined by cc or by cc when it calls cpp are  
?S: not in this list, see ccsymbols and cppccsymbols.  
?S: The list is a space-separated list of symbol=value tokens.  
?S:.  
?S:cppccsymbols:  
?S: The variable contains the symbols defined by the C compiler  
?S: when it calls cpp. The symbols defined by the cc alone or cpp  
?S: alone are not in this list, see ccsymbols and cppsymbols.  
?S: The list is a space-separated list of symbol=value tokens.  
?S:.  
?T:also symbols i postprocess\_cc\_v flags  
?F:./Cppsym  
?F:!Cppsym.true !Cppsym.know !ccsym.com !ccsym.cpp !ccsym.own  
: determine known pre-processor and compiler symbols  
echo " "  
\$echo "Guessing which symbols your C compiler and preprocessor  
define..." >&4  
?X:  
?X: The symbol list is in alpha order for ease of maintenance...  
?X:  
?X: Lots of new symbols (mostly rummaged from gcc), courtesy of  
?X: Jarkko Hietaniemi <jhi@snakemail.hut.fi> -- RAM, 06/06/94  
?X:  
?X: If your symbol is mixed case, just add it as-is.  
?X: All symbols will be transformed to both all-lower and all-upper.  
?X: Also drop any leading/trailing underscores, the scan will try all those.  
?X:  
\$cat <<'EOSH' > Cppsym.know  
a29k ABI64 aegis AES\_SOURCE AIX AIX32 AIX370  
AIX41 AIX42 AIX43 AIX\_SOURCE aixpc ALL\_SOURCE  
alliant alpha am29000 AM29000 AMD64 amiga AMIGAOS AMIX  
ansi ANSI\_C\_SOURCE apollo ardent ARM32 atarist att386 att3b  
BeOS BIG\_ENDIAN BIT\_MSF bsd BSD bsd43 bsd4\_2 bsd4\_3 BSD4\_3 bsd4\_4  
BSD\_4\_3 BSD\_4\_4 BSD\_NET2 BSD\_TIME BSD\_TYPES BSDCOMPAT bsdi  
bull c cadmus clipper CMU COFF COMPILER\_VERSION  
concurrent convex cpu cray CRAY CRAYMPP ctix CX\_UX  
CYGWIN DGUX DGUX\_SOURCE DJGPP dmert DOLPHIN DPX2 DSO  
Dynix DynixPTX ELF encore EPI EXTENSIONS FAVOR\_BSD  
FILE\_OFFSET\_BITS  
FreeBSD GCC\_NEW\_VARARGS gcos gcx gimpel  
GLIBC GLIBC\_MINOR  
GNU\_SOURCE GNUC GNUC\_MINOR GNU\_LIBRARY GO32 gould GOULD\_PN  
H3050R H3050RX hbullx20 hcx host\_mips  
hp200 hp300 hp700 HP700 hp800 hp9000  
hp9000s200 hp9000s300 hp9000s400 hp9000s500  
hp9000s700 hp9000s800 hp9k8 hp\_osf hppa hpux HPUX\_SOURCE  
i186 i286 i386 i486 i586 i686 i8086 i80960 i860 I960  
IA64 iAPX286 ibm ibm032 ibmesa IBMR2 ibmrt ILP32 ILP64



INLINE\_INTRINSICS INTRINSICS INT64 interdata is68k ksr1  
LANGUAGE\_C LARGE\_FILE\_API LARGEFILE64\_SOURCE  
LARGEFILE\_SOURCE LFS64\_LARGEFILE LFS\_LARGEFILE  
Linux LITTLE\_ENDIAN LONG64 LONG\_DOUBLE LONG\_LONG  
LONGDOUBLE LONGLONG LP64 luna luna88k Lynx  
M68000 m68k m88100 m88k M88KBCS\_TARGET M\_COFF  
M\_I186 M\_I286 M\_I386 M\_I8086 M\_I86 M\_I86SM M\_SYS3  
M\_SYS5 M\_SYSIII M\_SYSV M\_UNIX M\_XENIX MACH machine MachTen  
MATH\_HAS\_NO\_SIDE\_EFFECTS  
mc300 mc500 mc68000 mc68010 mc68020 mc68030 mc68040  
mc68060 mc68k mc68k32 mc700 mc88000 mc88100 merlin  
mert MiNT mips MIPS\_FPSET MIPS\_ISA MIPS\_SIM MIPS\_SZINT  
MIPS\_SZLONG  
MIPS\_SZPTR MIPSEB MIPSEL MODERN\_C motorola  
mpeix MSDOS MTXINU MULTIMAX mvs MVS n16 ncl\_el ncl\_mr  
NetBSD news1500 news1700 news1800 news1900 news3700  
news700 news800 news900 NeXT NLS nonstopux ns16000 ns32000  
ns32016 ns32332 ns32k nsc32000  
OCS88 OEMVS OpenBSD os OS2 OS390 osf OSF1 OSF\_SOURCE  
pa\_risc PA\_RISC1\_1 PA\_RISC2\_0 PARAGON parisc  
pc532 pdp11 PGC PIC plexus PORTAR posix  
POSIX1B\_SOURCE POSIX2\_SOURCE POSIX4\_SOURCE  
POSIX\_C\_SOURCE POSIX\_SOURCE POWER  
PROTOTYPES PWB pyr QNX R3000 REENTRANT RES Rhapsody RISC6000  
riscix riscos RT S390 SA110 scs SCO sequent sgi SGI\_SOURCE SH3 sinix  
SIZE\_INT SIZE\_LONG SIZE\_PTR SOCKET\_SOURCE SOCKETS\_SOURCE  
sony sony\_news sonyrisc sparc sparclite spectrum  
stardent stdc STDC\_EXT stratos sun sun3 sun386  
Sun386i svr3 svr4 SVR4\_2 SVR4\_SOURCE svr5  
SX system SYSTYPE\_BSD SYSTYPE\_BSD43 SYSTYPE\_BSD44  
SYSTYPE\_SVR4 SYSTYPE\_SVR5 SYSTYPE\_SYSV SYSV SYSV3 SYSV4 SYSV5  
sysV68 sysV88 Tek4132 Tek4300 titan  
TM3200 TM5400 TM5600  
tower tower32 tower32\_200 tower32\_600 tower32\_700  
tower32\_800  
tower32\_850 tss  
u370 u3b u3b2 u3b20 u3b200 u3b20d u3b5  
ultrix UMAXV UnicomPBB UnicomPBD UNICOS UNICOSMK  
unix UNIX95 UNIX99 unixpc unos  
USE\_BSD USE\_FILE\_OFFSET64 USE\_GNU USE\_ISOC9X USE\_LARGEFILE USE\_LARGEFILE64  
USE\_MISC USE\_POSIX USE\_POSIX199309 USE\_POSIX199506 USE\_POSIX2  
USE\_REENTRANT USE\_SVID USE\_UNIX98 USE\_XOPEN USE\_XOPEN\_EXTENDED  
USGr4 USGr4\_2  
Utek Utek UTS UWIN uxpm uxps vax venix VMESA vms xenix Xenix286  
XOPEN\_SOURCE XOPEN\_SOURCE\_EXTENDED XPG2 XPG2\_EXTENDED  
XPG3 XPG3\_EXTENDED XPG4 XPG4\_EXTENDED  
z8000  
EOSH

?X: Maybe put other stuff here too.

```
cat <<EOSH >>Cppsym.know
$osname
EOSH
./tr '[a-z]' '[A-Z]' < Cppsym.know > Cppsym.a
./tr '[A-Z]' '[a-z]' < Cppsym.know > Cppsym.b
$cat Cppsym.know > Cppsym.c
$cat Cppsym.a Cppsym.b Cppsym.c | $tr ' ' $trnl | $sort | $uniq > Cppsym.know
$rm -f Cppsym.a Cppsym.b Cppsym.c
cat <<EOSH > Cppsym
$startsh
if $test $# -gt 0; then
    echo \"$* | $tr \" \" \"$trnl\" | ./Cppsym.try > Cppsym.got
    if $test -s Cppsym.got; then
        $rm -f Cppsym.got
        exit 0
    fi
    $rm -f Cppsym.got
    exit 1
else
    $tr \" \" \"$trnl\" | ./Cppsym.try
    exit 0
fi
```

EOSH

```
chmod +x Cppsym
```

```
$eunicefix Cppsym
```

?X: The below awk script will die a horrible death if

?X: some of the tested symbols are not long ints.

?X: Also, we do not make difference between just defined and defined zero.

```
cat <<EOSH > Cppsym.try
```

```
$startsh
```

```
cat <<'EOCP' > try.c
```

```
#include <stdio.h>
```

```
int main() {
```

```
EOCP
```

?X: The length(\$1) command guards against possible empty entries.

?X: The awk snippet is know to give heartburn to UNICOS/mk awk.

```
$awk \\  
EOSH
```

```
cat <<'EOSH' >> Cppsym.try
```

```
'length($1) > 0 {
```

```
    printf "#ifdef %s\n#if %s+0\nprintf(\"%s=%ld\n\", (long)%s);\n#else\nprintf(\"%s\n\");\n#endif\n#endif\n", $1,  
$1, $1, $1, $1  
    printf "#ifdef __%s\n#if __%s+0\nprintf(\"_%s=%ld\n\",  
(long)_%s);\n#else\nprintf(\"_%s\n\");\n#endif\n#endif\n", $1, $1, $1, $1, $1  
    printf "#ifdef __%s\n#if __%s+0\nprintf(\"__%s=%ld\n\",  
(long)__%s);\n#else\nprintf(\"__%s\n\");\n#endif\n#endif\n",
```

```

$1, $1, $1, $1, $1
printf "#ifdef __%s__\n#if __%s__+0\nprintf(\"__%s__=%ld\\n\",
(long) __%s__);n#else\nprintf(\"__%s__\\n\");\n#endif\n#endif\n", $1, $1, $1, $1, $1
}' >> try.c
echo 'return 0;}' >> try.c
EOSH
cat <<EOSH >> Cppsym.try
flags="$ccflags"
case "$osname-$gccversion" in
irix-) flags="\$flags -woff 1178" ;;
os2-*) flags="\$flags -Zlinker /PM:VIO" ;;
esac
$cc -o try $optimize \$flags $ldflags try.c $libs && $run ./try
EOSH
chmod +x Cppsym.try
$eunicefix Cppsym.try
./Cppsym < Cppsym.know > Cppsym.true
: now check the C compiler for additional symbols
?X: suggested by Jarkko Hietaniemi <jhi@snakemail.hut.fi>, thanks!
postprocess_cc_v="
case "$osname" in
aix) postprocess_cc_v="|$tr , ' "' ;;
esac
$cat >ccsym <<EOS
$startsh
$cat >tmp.c <<EOF
extern int foo;
EOF
for i in ` $cc -v -c tmp.c 2>&1 $postprocess_cc_v `
do
case "$i" in
-D*) echo "$i" | $sed 's/^-D//';;
-A*) $test "$gccversion" && echo "$i" | $sed 's/^-A// | $sed 's/(.*)/(.*)\1=2/';;
esac
done
$rm
-f try.c
EOS
postprocess_cc_v="
chmod +x ccsym
$eunicefix ccsym
./ccsym > ccsym1.raw
?X: AIX complains if $uniq is passed an empty file. ($sort apparently
?X: doesn't care.) --AD 14 July 1998
if $test -s ccsym1.raw; then
    $sort ccsym1.raw | $uniq >ccsym.raw
else
    mv ccsym1.raw ccsym.raw

```

fi

?X: canonicalize symbols for easier sort/uniq/comm usage: append =1 if no = sign

?X: the awk script must be on two lines for older awk programs, sigh! -- ADO

```
$awk '/^=/ { print $0; next }
{ print $0="1" }' ccsym.raw >ccsym.list
$awk '/^=/ { print $0; next }
{ print $0="1" }' Cppsym.true >ccsym.true
$comm -13 ccsym.true ccsym.list >ccsym.own
$comm -12 ccsym.true ccsym.list >ccsym.com
$comm -23 ccsym.true ccsym.list >ccsym.cpp
also="
if $test -z ccsym.raw; then
echo "Your C compiler doesn't seem to define any symbols!" >&4
echo " "
echo "However, your C preprocessor defines the following symbols:"
$cat Cppsym.true
  ccsymbols="
  cppsymbols=`$cat Cppsym.true`
  cppsymbols=`echo
$cpsymbols`
  cppcsymbols="$cpsymbols"
else
if $test -s ccsym.com; then
echo "Your C compiler and pre-processor define these symbols:"
$sed -e 's/(.*\)=.*\1/' ccsym.com
also='also '
symbols='ones'
cppcsymbols=`$cat ccsym.com`
cppcsymbols=`echo $cppcsymbols`
$test "$$silent" || sleep 1
fi
if $test -s ccsym.cpp; then
$test "$$also" && echo " "
echo "Your C pre-processor ${also}defines the following symbols:"
$sed -e 's/(.*\)=.*\1/' ccsym.cpp
also='further '
cpsymbols=`$cat ccsym.cpp`
cpsymbols=`echo $cpsymbols`
$test "$$silent" || sleep 1
fi
if $test -s ccsym.own; then
$test "$$also" && echo " "
echo "Your C compiler ${also}defines the following cpp symbols:"
$sed -e 's/(.*\)=1\1/' ccsym.own
$sed -e 's/(.*\)=.*\1/' ccsym.own | $uniq >>Cpsym.true
  ccsymbols=`$cat ccsym.own`
  ccsymbols=`echo $ccsymbols`
```

```
$test "$silent" || sleep 1
fi
fi
$rm -f Cppsym.know Cppsym.true
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Cppsym.U
```

No license file was found, but licenses were detected in source scan.

```
# $Id: errnolist.sh,v 3.0.1.1 1994/01/24 14:00:00 ram Exp ram $
#
# Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
#
# You may redistribute only under the terms of the Artistic Licence,
# as specified in the README file that comes with the distribution.
# You may reuse parts of this distribution only within the terms of
# that same Artistic Licence; a copy of which may be found at the root
# of the source tree for dist 4.0.
#
# Original Author: Harlan Stenn <harlan@mumps.pfcs.com>
#
# $Log: errnolist.sh,v $
# Revision 3.0.1.1 1994/01/24 14:00:00 ram
# patch16: changed top ln-style config.sh lookup into test-style one
#
# Revision 3.0 1993/08/18 12:04:36 ram
# Baseline for dist 3.0 netwide release.
#
```

```
case $CONFIG in
")
if test -f config.sh; then TOP=.;
elif test -f ../config.sh; then TOP=..;
elif test -f ../../config.sh; then TOP=../../.;
elif test -f ../../../config.sh; then TOP=../../../.;
elif
test -f ../../../../config.sh; then TOP=../../../../.;
else
echo "Can't find config.sh."; exit 1
fi
. $TOP/config.sh
;;
esac
case "$0" in
*/*) cd `expr X$0 : 'X\(.*/\)'` ;;
esac
case "$errnoliste" in
```

```

") ;;
*)
echo "Making $errnolistc ..."
awk -f errnolist.a < /usr/include/sys/errno.h > $errnolistc
echo "It would be a good idea to make sure that $errnolistc is correct."
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/lib/errnolist.SH

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpwnam\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getpwnam\_r getpwnam\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_pwd extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getpwnam\_r:

?S: This variable conditionally defines the HAS\_GETPWNAM\_R symbol,

?S: which indicates to the C program that the getpwnam\_r()

?S: routine is available.

?S:.

?S:getpwnam\_r\_proto:

?S: This variable encodes the prototype of getpwnam\_r.

?S: It is zero if d\_getpwnam\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getpwnam\_r

?S: is defined.

?S:.

?C:HAS\_GETPWNAM\_R:

?C: This symbol, if defined, indicates that the getpwnam\_r routine

?C: is available to

getpwnam re-entrantly.

?C:.

?C:GETPWNAM\_R\_PROTO:

?C: This symbol encodes the prototype of getpwnam\_r.

?C: It is zero if d\_getpwnam\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getpwnam\_r

?C: is defined.

?C:.

?H:#d\_getpwnam\_r HAS\_GETPWNAM\_R /\*\*/

?H:#define GETPWNAM\_R\_PROTO \$getpwnam\_r\_proto /\*\*/

?H:.

```

?T:try hdrs d_getpwnam_r_proto
: see if getpwnam_r exists
set getpwnam_r d_getpwnam_r
eval $inlibc
case "$d_getpwnam_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_pwd pwd.h"
case "$d_getpwnam_r_proto:$usethreads" in
":define") d_getpwnam_r_proto=define
set d_getpwnam_r_proto getpwnam_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getpwnam_r_proto" in
define)
case "$getpwnam_r_proto" in
"|0) try='int getpwnam_r(const char*, struct passwd*, char*, size_t, struct passwd**);'
./protochk "$extern_C $try" $hdrs && getpwnam_r_proto=I_CSBWR ;;
esac
case "$getpwnam_r_proto" in
"|0) try='int getpwnam_r(const char*, struct passwd*,
char*, int, struct passwd**);'
./protochk "$extern_C $try" $hdrs && getpwnam_r_proto=I_CSBIR ;;
esac
case "$getpwnam_r_proto" in
"|0) try='struct passwd* getpwnam_r(const char*, struct passwd*, char*, int);'
./protochk "$extern_C $try" $hdrs && getpwnam_r_proto=S_CSBI ;;
esac
case "$getpwnam_r_proto" in
"|0) try='int getpwnam_r(const char*, struct passwd*, char*, int);'
./protochk "$extern_C $try" $hdrs && getpwnam_r_proto=I_CSBI ;;
esac
case "$getpwnam_r_proto" in
"|0) d_getpwnam_r=undef
getpwnam_r_proto=0
echo "Disabling getpwnam_r, cannot determine prototype." >&4 ;;
*) case "$getpwnam_r_proto" in
REENTRANT_PROTO*) ;;
*) getpwnam_r_proto="REENTRANT_PROTO_${getpwnam_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "getpwnam_r has no prototype, not using it." >&4 ;;
esac
d_getpwnam_r=undef
getpwnam_r_proto=0

```

```
;;
esac
;;
*) getpwnam_r_proto=0
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_getpwnam_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

```
?MAKE:ivdformat uvuformat uvofformat uvxformat uvXUformat \
nvEUformat nvFUformat nvGUformat \
nveformat nvffformat nvformat: \
ivsize longsize intsize shortsize \
sPRId64 sPRIu64 sPRIo64 sPRIx64 sPRIXU64 \
uselongdouble d_longdbl usequadmath d_PRIgldbl \
sPRIEUldbl sPRIFUldbl sPRIGUldbl sPRIeldbl sPRIfldbl sPRIgldbl \
test echo
```

?MAKE: -pick add \$@ %<

?S:ivdformat:

?S: This variable contains the format string used for printing

?S: a Perl IV as a signed decimal integer.

?S:.

?S:uvuformat:

?S: This variable contains the format string used for printing

?S: a Perl UV as an unsigned decimal integer.

?S:.

?S:uvoformat:

?S: This variable contains the format string used for printing

?S: a Perl UV as an unsigned  
octal integer.

?S:.

?S:uvxformat:

?S: This variable contains the format string used for printing

?S: a Perl UV as an unsigned hexadecimal integer in lowercase abcdef.

?S:.

?S:uvXUformat:

?S: This variable contains the format string used for printing

?S: a Perl UV as an unsigned hexadecimal integer in uppercase ABCDEF.



?S:.

?S:nveformat:

?S: This variable contains the format string used for printing

?S: a Perl NV using %e-ish floating point format.

?S:.

?S:nvffformat:

?S: This variable contains the format string used for printing

?S: a Perl NV using %f-ish floating point format.

?S:.

?S:nvgformat:

?S: This variable contains the format string used for printing

?S: a Perl NV using %g-ish floating point format.

?S:.

?S:nvEUformat:

?S: This variable contains the format string used for printing

?S: a Perl NV using %E-ish floating point format.

?S:.

?S:nvFUformat:

?S: This variable contains the format string used for printing

?S: a Perl NV using %F-ish floating point format.

?S:.

?S:nvGUformat:

?S: This

variable contains the format string used for printing

?S: a Perl NV using %G-ish floating point format.

?S:.

?C:IVdf:

?C: This symbol defines the format string used for printing a Perl IV

?C: as a signed decimal integer.

?C:.

?C:UVuf:

?C: This symbol defines the format string used for printing a Perl UV

?C: as an unsigned decimal integer.

?C:.

?C:UVof:

?C: This symbol defines the format string used for printing a Perl UV

?C: as an unsigned octal integer.

?C:.

?C:UVxf:

?C: This symbol defines the format string used for printing a Perl UV

?C: as an unsigned hexadecimal integer in lowercase abcdef.

?C:.

?C:UVXf:

?C: This symbol defines the format string used for printing a Perl UV

?C: as an unsigned hexadecimal integer in uppercase ABCDEF.

?C:.

?C:NVef:

?C: This symbol defines the format string used for printing a Perl NV

```

?C: using %e-ish floating point format.
?C:.
?C:NVff:
?C: This symbol defines the format string used for printing a Perl NV
?C: using %f-ish floating point
format.
?C:.
?C:NVgf:
?C: This symbol defines the format string used for printing a Perl NV
?C: using %g-ish floating point format.
?C:.
?C:NVEf:
?C: This symbol defines the format string used for printing a Perl NV
?C: using %E-ish floating point format.
?C:.
?C:NVff:
?C: This symbol defines the format string used for printing a Perl NV
?C: using %F-ish floating point format.
?C:.
?C:NVGf:
?C: This symbol defines the format string used for printing a Perl NV
?C: using %G-ish floating point format.
?C:.
?H:#define IVdf $ivdformat /**/
?H:#define UVuf $uvuformat /**/
?H:#define UVof $uvoformat /**/
?H:#define UVxf $uvxf format /**/
?H:#define UVXf $uvXUformat /**/
?H:#define NVEf $nveformat /**/
?H:#define NVff $nvffformat /**/
?H:#define NVgf $nvgformat /**/
?H:#define NVEf $nvEUformat /**/
?H:#define NVFf $nvFUformat /**/
?H:#define NVGf $nvGUformat /**/
?H:.
: Check format strings for internal types
echo " "
$echo "Checking the format strings to be used for Perl's
internal types..." >&4

if $test X"$ivsize" = X8; then
ivdformat="$sPRId64"
uvuformat="$sPRIu64"
uvoformat="$sPRIo64"
uvxf format="$sPRIx64"
uvXUformat="$sPRIXU64"
else
if $test X"$ivsize" = X"$longsize"; then

```

```

ivdformat="ld"
uvuformat="lu"
uvoformat="lo"
uvxformat="lx"
uvXUformat="IX"
else
if $test X"$ivsize" = X"$intsize"; then
ivdformat="d"
uvuformat="u"
uvoformat="o"
uvxformat="x"
uvXUformat="X"
else
: far out
if $test X"$ivsize" = X"$shortsize"; then
ivdformat="hd"
uvuformat="hu"
uvoformat="ho"
uvxformat="hx"
uvXUformat="hX"
fi
fi
fi
fi

if $test X"$usequadmath" = X"$define"; then
nveformat="Qe"
nvffformat="Qf"
nvgformat="Qg"
nvEUformat="QE"
nvFUformat="QF"
nvGUformat="QG"
else
if $test X"$uselongdouble" = X"$define" -a X"$d_longdbl" = X"$define" -a X"$d_PRIdbl" = X"$define"; then
nveformat="$sPRIldbl"
nvffformat="$sPRIfdbl"
nvgformat="$sPRIdbl"
nvEUformat="$sPRIEUldbl"
nvFUformat="$sPRIFUldbl"
nvGUformat="$sPRIGUldbl"
else
nveformat="e"
nvffformat="f"
nvgformat="g"
nvEUformat="E"
nvFUformat="F"
nvGUformat="G"
fi

```

fi

```
case "$ivdformat" in
) echo "$0: Fatal: failed to find format strings, cannot continue." >&4
  exit 1
  ;;
esac
```

Found in path(s):

```
*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/perlxfv.U
```

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?RCS: of the source tree for dist 4.0.

?RCS:

```
?MAKE:d_setlocale d_setlocale_accepts_any_locale_name d_has_C_UTF8: \
cat Compile run rm_try i_locale i_wctype d_towupper Setvar Myread
```

?MAKE: -pick add \$@ %<

?S:d\_has\_C\_UTF8:

?S: This variable is set to either "true" or "false" depending on

?S: whether the compilation system supports the C.UTF-8 locale.

?S:.

?S:d\_setlocale:

?S: This variable conditionally defines HAS\_SETLOCALE if setlocale() is

?S: available to handle locale-specific ctype implementations.

?S:.

?S:d\_setlocale\_accepts\_any\_locale\_name:

?S: This

variable conditionally defines SETLOCALE\_ACCEPTS\_ANY\_LOCALE\_NAME

?S: if setlocale() accepts any locale name.

?S:.

?C:HAS\_SETLOCALE:

?C: This symbol, if defined, indicates that the setlocale routine is

?C: available to handle locale-specific ctype implementations.

?C:.

?C:SETLOCALE\_ACCEPTS\_ANY\_LOCALE\_NAME:

?C: This symbol, if defined, indicates that the setlocale routine is

?C: available and it accepts any input locale name as valid.

?C:.

?H:#\$d\_setlocale HAS\_SETLOCALE /\*\*/

?H:#\$d\_setlocale\_accepts\_any\_locale\_name SETLOCALE\_ACCEPTS\_ANY\_LOCALE\_NAME /\*\*/

```
?H:
?F:!try
?T:LC_CTYPE c_utf8_locale
: check for setlocale function and behavior
case "$d_setlocale" in
")
$cat >&4 <<EOM
```

Checking to see if you have setlocale() and its behavior

EOM

```
$cat >try.c <<EOCP
#include <stdlib.h>
#include <string.h>
#ifdef I_LOCALE
#include <locale.h>
#endif
#ifdef I_WCTYPE
#include <wctype.h>
#endif

int main() {
    const char * invalid_name
= "\a"; /* This is really invalid! */
    int accepts_any_locale_name = 0;
    int has_C_UTF8 = 0;
    unsigned char bad_setlocale = 255;

    /* If LC_CTYPE isn't defined the compilation will fail, and locales will be
    * disabled. It's hard to imagine an instance where meaningful locale
    * handling could be done without LC_CTYPE */
    const char * name = setlocale(LC_CTYPE, "C");

    if (name == NULL || strcmp(name, "C") != 0) {
        exit(bad_setlocale);
    }

    name = setlocale(LC_CTYPE, invalid_name);
    if (name != NULL) {

        /* Let it pass if it accepts the name but gives back one of the C
        * locales */
        if (strcmp(name, "C") != 0 && strcmp(name, "C.UTF-8") != 0) {
            accepts_any_locale_name = 1;
        }
    }
}
```

```

name = setlocale(LC_CTYPE, "C.UTF-8");
if (name != NULL) {
    unsigned char y_with_diaeresis = ('A' == 193) ? 0xDF : 0xFF;

#ifdef _TOWUPPER HAS_TOWUPPER
#ifdef HAS_TOWUPPER

    /* We assume that if
the machine doesn't have the C99 towupper, it
    * doesn't have C.UTF-8, even if we successfully changed locales to
    * include it. This seems safer even on platforms that didn't accept
    * the really invalid name */

    if (towupper(y_with_diaeresis) == 0x178) {
        has_C_UTF8 = 1;
    }

#endif
#endif

}

#endif

}

#if 0

/* Currently unused code to determine if LC_ALL with disparate values uses
* category = value pairs or positional, and to determine the separator
* between the categories. We could add code so that if the separator were
* > '9', we subtract 10; similarly for 'Z' and 'z', and then just about
* every possible ASCII separator would fit in the 5 bits available in the
* exit code. This would not be true in EBCDIC. And then if LC_ALL is
* positional, we probably would want to know the order of the categories.
* Using a file between the C program and the shell script would really be
* require to do that
*/

#ifdef LC_ALL

unsigned char min_separator = ' ' - 1;
unsigned char separator = min_separator;
int uses_name_value_pair_names = 0;

name = setlocale(LC_ALL, "C");
if (name == NULL || strcmp(name, "C") != 0) {
    exit(bad_setlocale);
}

if (has_C_UTF8) {
    char * pos;

    name = setlocale(LC_CTYPE, "C.UTF-8");

```

```

if (name == NULL) {
    exit(bad_setlocale);
}
name = setlocale(LC_ALL, NULL);
if (name == NULL) {
    exit(bad_setlocale);
}

pos = strstr(name, "LC_CTYPE" "=C.UTF-8");
if (pos != NULL) {
    uses_name_value_pair_names = 1;
    if (pos == name) {
        separator = name[sizeof("LC_CTYPE=C.UTF-8") - 1];
    }
    else {
        separator = *(pos - 1);
    }
}
else {
    pos = strstr(name, "C.UTF-8");
    if (pos == NULL) {
        /* bad */
    }

else if (pos == name) {
    separator = name[sizeof("C.UTF-8") - 1];
}
else {
    separator = *(pos - 1);
}
}
}

#endif
#endif

exit( 0 /* (separator - min_separator) << 3
| uses_name_value_pair_names << 2
*/
| has_C_UTF8 << 1
| accepts_any_locale_name);

}
EOCP
val=
set d_setlocale
eval $setvar
case $d_setlocale in

```

```

$undef) d_setlocale_accepts_any_locale_name="$undef"
    d_has_C_UTF8="false"
    ;;
*) set try
    if eval $compile; then
        echo "Your system has setlocale()..." >&4
        $run ./try
        case $? in
            0) echo "and it seems sane; you don't have a C.UTF-8 locale" >&4
                d_setlocale="$define"
                d_setlocale_accepts_any_locale_name="$undef"
                d_has_C_UTF8="false"
                ;;
            1) echo "and it seems sane, but accepts
any locale name as valid" >&4
                d_setlocale="$define"
                d_setlocale_accepts_any_locale_name="$define"
                d_has_C_UTF8="false"
                ;;
            2) echo "and it seems sane; you have a C.UTF-8 locale" >&4
                d_setlocale="$define"
                d_setlocale_accepts_any_locale_name="$undef"
                d_has_C_UTF8="true"
                ;;
            3) echo "and it seems sane, but accepts any locale name as valid" >&4
                d_setlocale="$define"
                d_setlocale_accepts_any_locale_name="$define"
                d_has_C_UTF8="true"
                ;;
            *) echo "but it doesn't seem to work, so we won't use it." >&4
                d_setlocale="$undef"
                d_setlocale_accepts_any_locale_name="$undef"
                d_has_C_UTF8="false"
                ;;
        esac
    else
        echo "your system does not have setlocale()"
    >&4
        d_setlocale="$undef"
        d_setlocale_accepts_any_locale_name="$undef"
        d_has_C_UTF8="false"
    fi
esac
$rm_try
;;
*) val="$d_setlocale"
    set d_setlocale
    eval $setvar

```



```

case "$d_setlocale" in
    $undef) echo "There may be other ways to set the locale on your system, so we need to ask:" >&4
        ;;
    esac
rp="Does your system have the C.UTF-8 locale?"
dflt=n
./myread
case "$ans" in
    [Yy]*) d_has_C_UTF8="true"
        c_utf8_locale=" or C.UTF-8"
        ;;
    *) d_has_C_UTF8="false"
        c_utf8_locale=""
        ;;
    esac
case "$d_setlocale" in
    $define)
        rp="When you set your locale to something besides C$c_utf8_locale, does it do so, or just pretend to?" >&4
        dflt=n
        ./myread
        case "$ans" in
            true|[Yy]*)
                d_setlocale_accepts_any_locale_name="$undef"
                ;;
            *) d_setlocale_accepts_any_locale_name="$define"
                ;;
            ;;
        esac
        ;;
    *) d_setlocale_accepts_any_locale_name="$undef"
        ;;
    ;;
    esac
esac
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_setlocale.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_shmat.U,v 3.0.1.3 1995/07/25 14:04:23 ram Exp \$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:  
?RCS: \$Log: d\_shmat.U,v \$  
?RCS: Revision 3.0.1.3 1995/07/25 14:04:23 ram  
?RCS: patch56: use findhdr to find <sys/shm.h>, to get the right one (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/05/13 15:18:56 ram  
?RCS: patch27: added new symbol HAS\_SHMAT\_PROTOTYPE (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 14:54:18 ram  
?RCS: patch23: new Shmat\_t symbol to declare return type of shmat()  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:07:18 ram  
?RCS: Baseline for dist 3.0 netwide  
release.  
?RCS:  
?MAKE:d\_shmat shmattype d\_shmatprototype: Inlibc cat +cc +ccflags \  
rm cppstdin cppflags cppminus Findhdr Setvar contains  
?MAKE: -pick add \$@ %<  
?S:d\_shmat:  
?S: This variable conditionally defines the HAS\_SHMAT symbol, which  
?S: indicates to the C program that the shmat() routine is available.  
?S:.  
?S:shmattype:  
?S: This symbol contains the type of pointer returned by shmat().  
?S: It can be 'void \*' or 'char \*'.  
?S:.  
?S:d\_shmatprototype:  
?S: This variable conditionally defines the HAS\_SHMAT\_PROTOTYPE  
?S: symbol, which indicates that sys/shm.h has a prototype for  
?S: shmat.  
?S:.  
?C:HAS\_SHMAT:  
?C: This symbol, if defined, indicates that the shmat() routine is  
?C: available to attach a shared memory segment to the process space.  
?C:.  
?C:Shmat\_t:  
?C: This symbol holds the return type of the shmat() system call.  
?C: Usually set to 'void \*' or 'char \*'.  
?C:.  
?C:HAS\_SHMAT\_PROTOTYPE:  
?C: This symbol, if defined, indicates that the sys/shm.h includes  
?C: a prototype for shmat().  
Otherwise, it is up to the program to  
?C: guess one. Shmat\_t shmat(int, Shmat\_t, int) is a good guess,  
?C: but not always right so it should be emitted by the program only  
?C: when HAS\_SHMAT\_PROTOTYPE is not defined to avoid conflicting defs.  
?C:.  
?H:#\$d\_shmat HAS\_SHMAT /\*\*/

```

?H:#define Shmat_t $shmattype /**/
?H:#$d_shmatprototype HAS_SHMAT_PROTOTYPE /**/
?H:.
?LINT:set d_shmat d_shmatprototype
?T:xxx
: see if shmat exists
set shmat d_shmat
eval $inlibc
: see what shmat returns
case "$d_shmat" in
"$define")
$cat >shmat.c <<'END'
#include <sys/shm.h>
void *shmat();
END
if $cc $ccflags -c shmat.c >/dev/null 2>&1; then
shmattype='void *'
else
shmattype='char *'
fi
echo "and it returns ($shmattype)." >&4
: see if a prototype for shmat is available
xxx=`./findhdr sys/shm.h`
$cpstdin $cppflags $cppminus < $xxx > shmat.c 2>/dev/null
if $contains 'shmat.*(' shmat.c >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
$rm -f shmat.[co]
;;
*)
val="$undef"
;;
esac
set
d_shmatprototype
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_shmat.U

```

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```

?RCS: $Id: d_semop.U 1 2006-08-24 12:32:52Z rmanfredi $

```

```

?RCS:

```

```

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```

```

?RCS:

```

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_semop.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:05 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_semop: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_semop:  
?S: This variable conditionally defines the HAS\_SEMOP symbol, which  
?S: indicates to the C program that the semop() routine is available.  
?S:.  
?C:HAS\_SEMOP:  
?C: This symbol, if defined, indicates that the semop() routine is  
?C: available to execute semaphore operations.  
?C:.  
?H:#\$d\_semop  
HAS\_SEMOP /\*\*/  
?H:.  
?LINT:set d\_semop  
: see if semop exists  
set semop d\_semop  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_semop.U

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?RCS: \$Id: d\_newsadm.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_newsadm.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:36:53 ram  
?RCS: patch61: added Guess dependency  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:14:33 ram

```

?RCS: patch36: call ./eunice explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:42 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_newsadm newsadmin: cat contains Guess Setvar Myread Oldconfig
?MAKE: -pick add $@ %<
?S:d_newsadm:
?S: This variable
    conditionally defines the NEWS_ADMIN symbol, which
?S: indicates to the C program that there is a user who is in charge
?S: of news administration.
?S:.
?S:newsadmin:
?S: This variable holds the login name of the news administrator, if any.
?S:.
?C:NEWS_ADMIN (NEWSADMIN):
?C: This symbol, if defined, contains the login name of the news
?C: administrator.
?C:.
?H:#$d_newsadm NEWS_ADMIN "$newsadmin" /**/
?H:.
?LINT:set d_newsadm
: get news administrator name
case "$newsadmin" in
")
if $contains "^news:" /etc/passwd >/dev/null 2>&1 ; then
    dflt=news
elif $contains "^usenet:" /etc/passwd >/dev/null 2>&1 ; then
    dflt=usenet
elif ./eunice; then
    dflt=system
else
    dflt=root
fi
;;
*)
dflt="$newsadmin"
;;
esac
$cat <<'EOM'

```

Many systems keep their news in a private directory, or have a non-superuser in charge of administering news. (If you don't have such a user, take the default answer.) I need the login name (not directory) which is used for news administration.

EOM

```
rp="News
admin login?"
./myread
newsadmin="$ans"
case "$newsadmin" in
root) val="$undef" ;;
*) val="$define" ;;
esac
set d_newsadm
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_newsadm.U
```

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_ptrdiff\_t: Inlibc Setvar Compile rm\_try cat

?MAKE: -pick add @\$ %<

?S:d\_ptrdiff\_t:

?S: This symbol will be defined if the C compiler supports ptrdiff\_t.

?S:.

?C:HAS\_PTRDIFF\_T:

?C: This symbol will be defined if the C compiler supports ptrdiff\_t.

?C:.

?H:#\$d\_ptrdiff\_t HAS\_PTRDIFF\_T /\*\*/

?H:.

?LINT:set d\_ptrdiff\_t

: check for ptrdiff\_t

echo " "

echo "Checking to see if you have ptrdiff\_t..." >&4

\$cat >try.c <<EOCP

#include <stddef.h>

int main() { ptrdiff\_t x = 7; }

EOCP

set try

if eval \$compile; then

val="\$define"

echo "You have ptrdiff\_t."

else

val="\$undef"

echo "You do not have ptrdiff\_t."

```
fi
$rm_try
set d_ptrdiff_t
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_ptrdiff_t.U
```

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?RCS: \$Id: d\_getprotoent\_r.U,v 0RCS:

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?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getprotoent\_r getprotoent\_r\_proto: Inlibc Protochk Hasproto \  
i\_systypes usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getprotoent\_r:

?S: This variable conditionally defines the HAS\_GETPROTOENT\_R symbol,

?S: which indicates to the C program that the getprotoent\_r()

?S: routine is available.

?S:.

?S:getprotoent\_r\_proto:

?S: This variable encodes the prototype of getprotoent\_r.

?S: It is zero if d\_getprotoent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getprotoent\_r

?S: is defined.

?S:.

?C:HAS\_GETPROTOENT\_R:

?C: This symbol, if defined, indicates that the getprotoent\_r  
routine

?C: is available to getprotoent re-entrantly.

?C:.

?C:GETPROTOENT\_R\_PROTO:

?C: This symbol encodes the prototype of getprotoent\_r.

?C: It is zero if d\_getprotoent\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getprotoent\_r

?C: is defined.

?C:.

?H:#\$d\_getprotoent\_r HAS\_GETPROTOENT\_R /\*\*/

?H:#define GETPROTOENT\_R\_PROTO \$getprotoent\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getprotoent\_r\_proto

: see if getprotoent\_r exists

```

set getprotoent_r d_getprotoent_r
eval $inlibc
case "$d_getprotoent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_getprotoent_r_proto:$usethreads" in
":define") d_getprotoent_r_proto=define
set d_getprotoent_r_proto getprotoent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getprotoent_r_proto" in
define)
case "$getprotoent_r_proto" in
"|0) try='int getprotoent_r(struct protoent*, char*, size_t, struct protoent**);'
./prochck "$extern_C $try" $hdrs && getprotoent_r_proto=I_SBWR
;;
esac
case "$getprotoent_r_proto" in
"|0) try='int getprotoent_r(struct protoent*, char*, int);'
./prochck "$extern_C $try" $hdrs && getprotoent_r_proto=I_SBI ;;
esac
case "$getprotoent_r_proto" in
"|0) try='struct protoent* getprotoent_r(struct protoent*, char*, int);'
./prochck "$extern_C $try" $hdrs && getprotoent_r_proto=S_SBI ;;
esac
case "$getprotoent_r_proto" in
"|0) try='int getprotoent_r(struct protoent*, struct protoent_data*);'
./prochck "$extern_C $try" $hdrs && getprotoent_r_proto=I_SD ;;
esac
case "$getprotoent_r_proto" in
"|0) d_getprotoent_r=undef
getprotoent_r_proto=0
echo "Disabling getprotoent_r, cannot determine prototype." >&4 ;;
*) case "$getprotoent_r_proto" in
REENTRANT_PROTO*) ;;
*) getprotoent_r_proto="REENTRANT_PROTO_$getprotoent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "getprotoent_r has no prototype, not using it." >&4 ;;
esac
d_getprotoent_r=undef
getprotoent_r_proto=0
;;
esac

```



```
;;
*) getprotoent_r_proto=0
;;
esac
```

#### Found

in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_getprotoent_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999, Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:full\_ar: ar

?MAKE: -pick add \$@ %<

?S:full\_ar:

?S: This variable contains the full pathname to 'ar', whether or

?S: not the user has specified 'portability'. This is only used

?S: in the Makefile.SH.

?S:.

: Store the full pathname to the ar program for use in the C program

: Respect a hint or command line value for full\_ar.

case "\$full\_ar" in

") full\_ar=\$ar ;;

esac

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/Loc_ar.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:  
?RCS: \$Log: d\_csh.U,v \$  
?RCS: Revision 3.0.1.1 1997/02/28 15:32:18 ram  
?RCS: patch61: added full\_csh to preserve the full path even when portable  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:53 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_csh full\_csh: csh Setvar  
?MAKE: -pick add \$@ %<  
?S:d\_csh:  
?S: This variable conditionally defines the CSH symbol, which  
?S: indicates to the C program that the C-shell exists.  
?S:.  
?S:full\_csh:  
?S: This variable contains the full pathname to 'csh', whether  
or  
?S: not the user has specified 'portability'. This is only used  
?S: in the compiled C program, and we assume that all systems which  
?S: can share this executable will have the same full pathname to  
?S: 'csh.'  
?S:.  
?X: Yes, I know about the C symbol PORTABLE, but I think csh  
?X: is unlikely to move, and I'm too lazy to add all the  
?X: #ifdef PORTABLE sections to the perl source.  
?X:  
?C:HAS\_CSH:  
?C: This symbol, if defined, indicates that the C-shell exists.  
?C:.  
?C:CSH:  
?C: This symbol, if defined, contains the full pathname of csh.  
?C:.  
?X: Previously, I just did \$d\_csh CSH "\$full\_csh", but that caused  
?X: problems on VMS where the config.sh extraction program changes  
?X: \$undef to a real cpp undef, and they then had #undef CSH ""  
?X: which the compiler didn't like. It's easy to work around this,  
?X: so I did. --AD 3/1998.  
?X: And we don't want to define CSH if !HAS\_CSH, but we don't want  
?X: those lines in config.h if they don't need CSH, so protect with ?CSH  
?X: and not  
?%<. --RAM, 15/02/2004  
?H:?%<:#\$d\_csh HAS\_CSH /\*\*/  
?H:?CSH:#ifdef HAS\_CSH  
?H:?CSH:#define CSH "\$full\_csh" /\*\*/  
?H:?CSH:#endif  
?H:.  
?LINT:set d\_csh  
: get csh whereabouts

```

case "$csh" in
'csh') val="$undef" ;;
*) val="$define" ;;
esac
set d_csh
eval $setvar
: Respect a hint or command line value for full_csh.
case "$full_csh" in
") full_csh=$csh ;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_csh.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_euc2jis.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_euc2jis.U,v $
?RCS: Revision 3.0 1993/08/18 12:05:58 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_euc2jis: Inlibc
?MAKE: -pick add $@ %<
?S:d_euc2jis:
?S: This variable conditionally defines the HAS_EUC2JIS symbol, which
?S: indicates to the C program that the euc2jis() routine is available
?S: to convert EUC to JIS.
?S:.
?C:HAS_EUC2JIS:
?C: This symbol, if defined, indicates that the euc2jis routine is
?C: available to convert
EUC to JIS.
?C:.
?H:#$d_euc2jis HAS_EUC2JIS /**/
?H:.
?LINT:set d_euc2jis
: see if euc2jis exists
set euc2jis d_euc2jis
eval $inlibc

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_euc2jis.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: baserev.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: baserev.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:24 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:baserev: Null

?MAKE: -pick wipe \$@ %<

?S:baserev:

?S: The base revision level of this package, from the .package file.

?S:.

: set the base revision

baserev=<BASEREV>

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/baserev.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setruid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_setruid.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:15 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setruid: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setuid:

?S: This variable conditionally defines the HAS\_SETUID symbol, which

?S: indicates to the C program that the setuid() routine is available

?S: to change the real uid of the current program.

?S:.

?C:HAS\_SETUID (SETUID):

?C: This symbol, if defined, indicates that the setuid routine is available

?C: to change the real uid of the current program.

?C:.

?H:#\$d\_setuid HAS\_SETUID /\*\*/

?H:.

?LINT:set d\_setuid

: see if setuid exists

set setuid d\_setuid

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_setuid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_setitimer: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setitimer:

?S: This variable conditionally defines the HAS\_SETITIMER symbol, which

?S: indicates to the C program that the setitimer() routine is available.

?S:.

?C:HAS\_SETITIMER:

?C: This symbol, if defined, indicates that the setitimer routine is

?C: available to set interval timers.

?C:.

?H:#\$d\_setitimer HAS\_SETITIMER /\*\*/

?H:.

?LINT:set d\_setitimer

: see if setitimer exists

set setitimer d\_setitimer

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_setitimer.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fs\_data\_s: Hasstruct i\_sysparam i\_sysmount i\_systypes Setvar

?MAKE: -pick add \$@ %<

?S:d\_fs\_data\_s:

?S: This variable conditionally defines the HAS\_STRUCT\_FS\_DATA symbol,

?S: which indicates that the struct fs\_data is supported.

?S:.

?C:HAS\_STRUCT\_FS\_DATA:

?C: This symbol, if defined, indicates that the struct fs\_data

?C: to do statfs() is supported.

?C:.

?H:#\$d\_fs\_data\_s HAS\_STRUCT\_FS\_DATA /\*\*/

?H:.

?LINT:set d\_fs\_data\_s

: Check for fs\_data\_s

echo " "

echo "Checking to see if your system supports struct fs\_data..." >&4

set d\_fs\_data\_s fs\_data \$i\_systypes sys/types.h \$i\_sysparam sys/param.h \$i\_sysmount sys/mount.h

eval \$hasstruct

case "\$d\_fs\_data\_s" in

"\$define") echo "Yes, it does." ;;

\*)

echo "No, it doesn't." ;;

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_fs\_data\_s.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_truncate.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_truncate.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:48 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_truncate: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_truncate:  
?S: This variable conditionally defines HAS\_TRUNCATE if truncate() is  
?S: available to truncate files.  
?S:.  
?C:HAS\_TRUNCATE (TRUNCATE):  
?C: This symbol, if defined, indicates that the truncate routine is  
?C: available to truncate files.  
?C:.  
?H:#\$d\_truncate HAS\_TRUNCATE /\*\*/  
?H:.  
?LINT:set  
d\_truncate  
: see if truncate exists  
set truncate d\_truncate  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_truncate.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_memmove.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_memmove.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:35 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_memmove: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_memmove:  
?S: This variable conditionally defines the HAS\_MEMMOVE symbol, which  
?S: indicates to the C program that the memmove() routine is available

?S: to copy potentially overlapping blocks of memory.

?S:.

?C:HAS\_MEMMOVE:

?C: This symbol, if defined, indicates that the memmove routine is available

?C: to copy potentially overlapping blocks of memory. This should be used

?C: only when HAS\_SAFE\_BCOPY is not defined. If neither is there, roll your

?C: own version.

?C:.

?H:#\$d\_memmove HAS\_MEMMOVE /\*\*/

?H:.

?LINT:set d\_memmove

: see if memmove exists

set memmove d\_memmove

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_memmove.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getprotby.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getpbyname d\_getpbynumber: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getpbyname:

?S: This variable conditionally defines the HAS\_GETPROTOBYNAME

?S: symbol, which indicates to the C program that the

?S: getprotobyname() routine is available to look up protocols

?S: by their name.

?S:.

?S:d\_getpbynumber:

?S: This variable conditionally defines the HAS\_GETPROTOBYNUMBER

?S: symbol, which indicates to the C program that the

?S: getprotobynumber() routine is available to look up protocols

?S: by their number.

?S:.

?C:HAS\_GETPROTOBYNAME:

?C: This symbol, if defined, indicates that the getprotobyname()

?C: routine is available to look up protocols by their name.

?C:.

?C:HAS\_GETPROTOBYNUMBER:

?C: This



symbol, if defined, indicates that the getprotobyname()  
?C: routine is available to look up protocols by their number.  
?C:.  
?H:#\$d\_getpbyname HAS\_GETPROTOBYNAME /\*\*/  
?H:#\$d\_getpbynumber HAS\_GETPROTOBYNUMBER /\*\*/  
?H:.  
?LINT:set d\_getpbyname d\_getpbynumber  
: Optional checks for getprotobyname and getprotobynumber

```
@if d_getpbyname || HAS_GETPROTOBYNAME
: see if getprotobyname exists
set getprotobyname d_getpbyname
eval $inlibc
@end
```

```
@if d_getpbynumber || HAS_GETPROTOBYNUMBER
: see if getprotobynumber exists
set getprotobynumber d_getpbynumber
eval $inlibc
@end
```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_getprotoby.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_sanemcmp.U,v 3.0.1.1 1997/02/28 15:41:19 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_sanemcmp.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:41:19 ram
?RCS: patch61: created
?RCS:
?RCS:
?MAKE:d_sanemcmp: Compile cat d_memcmp rm_try run \
i_memory i_stdlib i_string i_unistd Oldconfig Setvar
?MAKE: -pick add $@ %<
?S:d_sanemcmp:
?S: This variable conditionally defines the HAS_SANE_MEMCMP symbol if
?S: the memcpy() routine is available and can be used to compare relative
?S: magnitudes of chars with their high bits set.
```

```

?S:.
?C:HAS_SANE_MEMCMP:
?C: This
symbol, if defined, indicates that the memcmp routine is available
?C: and can be used to compare relative magnitudes of chars with their high
?C: bits set. If it is not defined, roll your own version.
?C:.
?H:#$d_sanemcmp HAS_SANE_MEMCMP /**/
?H:.
?F:!try
?LINT: set d_sanemcmp
: can memcmp be trusted to compare relative magnitude?
?X: assume the worst
val="$undef"
case "$d_memcmp" in
"$define")
echo " "
echo "Checking if your memcmp() can compare relative magnitude..." >&4
$cat >try.c <<EOCP
#$i_memory I_MEMORY
#$i_stdlib I_STDLIB
#$i_string I_STRING
#$i_unistd I_UNISTD
EOCP
$cat >>try.c <<'EOCP'
#include <stdio.h>
#ifdef I_MEMORY
# include <memory.h>
#endif
#ifdef I_STDLIB
# include <stdlib.h>
#endif
#ifdef I_STRING
# include <string.h>
#else
# include <strings.h>
#endif
#ifdef I_UNISTD
# include <unistd.h> /* Needed for NetBSD */
#endif
int main()
{
char a = -1;
char b = 0;
if ((a < b) && memcmp(&a, &b, 1) < 0)
exit(1);
exit(0);
}

```

```

EOCP
set try
if eval
$compile_ok; then
if $run ./try 2>/dev/null; then
echo "Yes, it can."
val="$define"
else
echo "No, it can't (it uses signed chars)."

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_sanemcmp.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_pwd.U,v 3.0.1.2 1995/07/25 14:10:57 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: i_pwd.U,v $
?RCS: Revision 3.0.1.2 1995/07/25 14:10:57 ram
?RCS: patch56: use setvar so hint file values can override our guesses (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 15:03:27 ram
?RCS: patch23: had forgotten cppminus in cppstdin test (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:25 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit checks whether there is a pwd system or not
?X:
?MAKE:i_pwd d_pwquota d_pwage d_pwchange

```

d\_pwclass d\_pwexpire \  
d\_pwgecos d\_pwpasswd d\_pwcomment: \  
contains rm cppstdin cppflags cppminus Inhdr Findhdr Setvar  
?MAKE: -pick add \$@ %<  
?S:i\_pwd:  
?S: This variable conditionally defines I\_PWD, which indicates  
?S: to the C program that it should include <pwd.h>.  
?S:.  
?S:d\_pwquota:  
?S: This variable conditionally defines PWQUOTA, which indicates  
?S: that struct passwd contains pw\_quota.  
?S:.  
?S:d\_pwage:  
?S: This variable conditionally defines PWAGE, which indicates  
?S: that struct passwd contains pw\_age.  
?S:.  
?S:d\_pwchange:  
?S: This variable conditionally defines PWCHANGE, which indicates  
?S: that struct passwd contains pw\_change.  
?S:.  
?S:d\_pwclass:  
?S: This variable conditionally defines PWCLASS, which indicates  
?S: that struct passwd contains pw\_class.  
?S:.  
?S:d\_pwexpire:  
?S: This variable conditionally defines PWEXPIRE, which indicates  
?S: that struct passwd contains pw\_expire.  
?S:.  
?S:d\_pwcomment:  
?S: This variable conditionally defines PWCOMMENT, which indicates  
?S: that  
struct passwd contains pw\_comment.  
?S:.  
?S:d\_pwgecos:  
?S: This variable conditionally defines PWGECOS, which indicates  
?S: that struct passwd contains pw\_gecos.  
?S:.  
?S:d\_pwpasswd:  
?S: This variable conditionally defines PWPASSWD, which indicates  
?S: that struct passwd contains pw\_passwd.  
?S:.  
?C:I\_PWD:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <pwd.h>.  
?C:.  
?C:PWQUOTA:  
?C: This symbol, if defined, indicates to the C program that struct passwd  
?C: contains pw\_quota.

```

?C:.
?C:PWAGE:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_age.
?C:.
?C:PWCHANGE:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_change.
?C:.
?C:PWCLASS:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_class.
?C:.
?C:PWEXPIRE:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_expire.
?C:.
?C:PWCOMMENT:
?C: This
symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_comment.
?C:.
?C:PWGECOS:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_gecos.
?C:.
?C:PWPASSWD:
?C: This symbol, if defined, indicates to the C program that struct passwd
?C: contains pw_passwd.
?C:.
?H:#$i_pwd I_PWD /**/
?H:#$d_pwquota PWQUOTA /**/
?H:#$d_pwage PWAGE /**/
?H:#$d_pwchange PWCHANGE /**/
?H:#$d_pwclass PWCLASS /**/
?H:#$d_pwexpire PWEXPIRE /**/
?H:#$d_pwcomment PWCOMMENT /**/
?H:#$d_pwgecos PWGECOS /**/
?H:#$d_pwpasswd PWPASSWD /**/
?H:.
?LINT: set i_pwd d_pwquota d_pwage d_pwchange d_pwclass d_pwexpire d_pwcomment
?LINT: set d_pwgecos d_pwpasswd
?T:xxx
: see if this is a pwd.h system
set pwd.h i_pwd
eval $inhdr

case "$i_pwd" in

```

```

$define)
xxx=`./findhdr pwd.h`
$cppstdin $cppflags $cppminus < $xxx >$$h

if $contains 'pw_quota' $$h >/dev/null 2>&1; then
  val="$define"
else
  val="$undef"
fi
set d_pwquota
eval $setvar

if $contains 'pw_age'
$$h >/dev/null 2>&1; then
  val="$define"
else
  val="$undef"
fi
set d_pwage
eval $setvar

if $contains 'pw_change' $$h >/dev/null 2>&1; then
  val="$define"
else
  val="$undef"
fi
set d_pwchange
eval $setvar

if $contains 'pw_class' $$h >/dev/null 2>&1; then
  val="$define"
else
  val="$undef"
fi
set d_pwclass
eval $setvar

if $contains 'pw_expire' $$h >/dev/null 2>&1; then
  val="$define"
else
  val="$undef"
fi
set d_pwexpire
eval $setvar

if $contains 'pw_comment' $$h >/dev/null 2>&1; then
  val="$define"
else

```

```

val="$undef"
fi
set d_pwcomment
eval $setvar

if $contains 'pw_gecos' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwgecos
eval $setvar

if $contains 'pw_passwd' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwpasswd
eval $setvar

$rm -f $$h
;;
*)
val="$undef";
set d_pwquota; eval $setvar
set d_pwage; eval $setvar
set d_pwchange; eval $setvar
set d_pwclass; eval $setvar
set
d_pwexpire; eval $setvar
set d_pwcomment; eval $setvar
set d_pwgecos; eval $setvar
set d_pwpasswd; eval $setvar
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/i_pwd.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_sigsetmk.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_sigsetmk.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:23 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_sigsetmk: Csym Setvar

?MAKE: -pick add \$@ %<

?S:d\_sigsetmk:

?S: This variable conditionally defines the HAS\_SIGSETMASK symbol, which

?S: indicates to the C program that the sigsetmask() routine is available

?S: to set current signal mask.

?S:.

?C:HAS\_SIGSETMASK (SIGSETMASK):

?C: This symbol, if defined, indicates that the sigsetmask()  
routine is

?C: available to set current signal mask. Otherwise, you should probably

?C: emulate this by using signal(), but fear race conditions...

?C:.

?H:#\$d\_sigsetmk HAS\_SIGSETMASK /\*\*/

?H:.

?LINT:set d\_sigsetmk

: see if sigsetmask exists

echo " "

if set sigsetmask val -f d\_sigsetmk; eval \$csym; \$val; then

echo 'sigsetmask() found.' >&4

val="\$define"

else

echo "sigsetmask() not found -- We'll use signal()." >&4

val="\$undef"

fi

set d\_sigsetmk

eval \$setvar

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-  
5.38.0/dist/U/d\_sigsetmk.U

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?RCS: \$Id: d\_siglist.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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```

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?RCS:
?RCS: $Log: d_siglist.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:22 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_siglist: Csym Setvar
?MAKE: -pick add $@ %<
?S:d_siglist:
?S: This variable conditionally defines HAS_SYS_SIGLIST if sys_siglist[] is
?S: available to translate signal numbers to strings.
?S:.
?C:HAS_SYS_SIGLIST (SYS_SIGLIST):
?C: This symbol, if defined, indicates that the sys_siglist array is
?C: available to translate signal numbers
to strings.
?C:.
?H:#$d_siglist HAS_SYS_SIGLIST /**/
?H:.
?LINT:set d_siglist
: see if sys_siglist[] exist
echo " "
if set sys_siglist val -a d_siglist; eval $csym; $val; then
echo "You have sys_siglist[] for signal description." >&4
val="$define"
else
echo "You don't have sys_siglist[]." >&4
val="$undef"
fi
set d_siglist
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/d_siglist.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
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?RCS: of the source tree for dist 4.0.
?RCS:

```

?RCS: \$Log: d\_strftime.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:36 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_strftime: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strftime:  
?S: This variable conditionally defines HAS\_STRFTIME if strftime() is  
?S: available to format locale-specific times.  
?S:.  
?C:HAS\_STRFTIME:  
?C: This symbol, if defined, indicates that the strftime routine is  
?C: available to format locale-specific times.  
?C:.  
?H:#\$d\_strftime HAS\_STRFTIME /\*\*/  
?H:.  
?LINT:set d\_strftime  
: see  
if strftime exists  
set strftime d\_strftime  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_strftime.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_nolnbuf.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_nolnbuf.U,v \$  
?RCS: Revision 3.0.1.1 1994/05/06 14:46:07 ram  
?RCS: patch23: avoid looping in the "see that again?" prompt (WED)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:06:43 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_nolnbuf: test +cc cat rm Setvar Myread  
?MAKE: -pick add \$@ %<  
?S:d\_nolnbuf:  
?S: This variable conditionally defines the NOLINEBUF symbol, which

?S: indicates to the C program that stdout is not buffered, so that

?S: the

program can call setbuf() or setlinebuf() for efficiency.

?S:.

?C:NOLINEBUF:

?C: This symbol, if defined, indicates that stdout is not buffered, so that

?C: the program can call setbuf() or setlinebuf() for efficiency.

?C:.

?H:#\$d\_nolnbuf NOLINEBUF /\*\*/

?H:.

?T:xxx

?F:!blurfl

?LINT:set d\_nolnbuf

: check for buffering of stdout

echo " "

case "\$d\_nolnbuf" in

")

\$cat <<'EOT' >blurfl.c

#include <stdio.h>

int main()

{

int i;

for (i = 0; i < 5; i++) {

putchar(i+'a');

sleep(1);

}

putchar('\n');

}

EOT

\$cc -o blurfl blurfl.c >/dev/null 2>&1;

\$rm -f blurfl.c

\$cat >&4 <<'EOM'

Checking for buffering of stdout to terminal.

Observe the following characters as they are printed out, to see whether they print out all at once, or with a 1 second pause between each of them. If they print out one by one, you don't have buffering. If they print together (after about a 5 second pause), you do have buffering.

EOM

dflt='Type return to start printing the test characters'

rp="

.

./myread

xxx=y

while \$test "\$xxx" = 'y'; do

./blurfl 1>&4

```

dflt=n
rp='Would you like to see that again?'
./myread
case "$ans" in
[yY]*) xxx="y";;
*) xxx="n";;
esac
done
dflt=y
rp="Do you have buffering (printed all at once)?"
./myread
case "$ans" in
n*) val="$define";;
*) val="$undef";;
esac
;;
*)
case "$d_nolnbuf" in
"$define") dflt=n;;
*) dflt=y;;
esac
rp="Do you have buffering on stdout to terminals?"
./myread
case "$ans" in
n*) val="$define";;
*) val="$undef";;
esac
;;
esac
set d_nolnbuf
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_nolnbuf.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setreuid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS:

?RCS: \$Log: d\_setreuid.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:13 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setreuid d\_setresuid: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setreuid:

?S: This variable conditionally defines HAS\_SETREUID if setreuid() is

?S: available to change the real and effective uid of the current

?S: process.

?S:.

?S:d\_setresuid:

?S: This variable conditionally defines HAS\_SETREUID if setresuid() is

?S: available to change

the real, effective and saved uid of the current

?S: process.

?S:.

?C:HAS\_SETREUID (SETREUID):

?C: This symbol, if defined, indicates that the setreuid routine is

?C: available to change the real and effective uid of the current

?C: process.

?C:.

?C:HAS\_SETRESUID (SETRESUID):

?C: This symbol, if defined, indicates that the setresuid routine is

?C: available to change the real, effective and saved uid of the current

?C: process.

?C:.

?H:#\$d\_setreuid HAS\_SETREUID /\*\*/

?H:#\$d\_setresuid HAS\_SETRESUID /\*\*/

?H:.

?LINT:set d\_setreuid d\_setresuid

: see if setreuid exists

set setreuid d\_setreuid

eval \$inlibc

set setresuid d\_setresuid

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_setreuid.U

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?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Tye McQueen <tye@metronet.com> added safe setuid script checks.  
?RCS:  
?RCS: \$Log: d\_dosuid.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:33:03 ram  
?RCS: patch61: moved unit to TOP via a ?Y: layout directive  
?RCS: patch61: tell them /dev/fd is not about floppy disks  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:12:08 ram  
?RCS: patch36: added checks for secure setuid scripts (Tye McQueen)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:55 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_dosuid  
d\_suidsaf: cat contains ls rm test Myread Setvar \  
Oldconfig Guess package hint  
?MAKE: -pick add \$@ %<  
?S:d\_suidsaf:  
?S: This variable conditionally defines SETUID\_SCRIPTS\_ARE\_SECURE\_NOW  
?S: if setuid scripts can be secure. This test looks in /dev/fd/.  
?S:.  
?S:d\_dosuid:  
?S: This variable conditionally defines the symbol DOSUID, which  
?S: tells the C program that it should insert setuid emulation code  
?S: on hosts which have setuid #! scripts disabled.  
?S:.  
?C:SETUID\_SCRIPTS\_ARE\_SECURE\_NOW:  
?C: This symbol, if defined, indicates that the bug that prevents  
?C: setuid scripts from being secure is not present in this kernel.  
?C:.  
?C:DOSUID:  
?C: This symbol, if defined, indicates that the C program should  
?C: check the script that it is executing for setuid/setgid bits, and  
?C: attempt to emulate setuid/setgid on systems that have disabled  
?C: setuid #! scripts because the kernel can't do it securely.  
?C: It is up to the package designer to make sure that this emulation  
?C: is done securely.  
Among other things, it should do an fstat on  
?C: the script it just opened to make sure it really is a setuid/setgid  
?C: script, it should make sure the arguments passed correspond exactly  
?C: to the argument on the #! line, and it should not trust any  
?C: subprocesses to which it must pass the filename rather than the  
?C: file descriptor of the script to be executed.  
?C:.  
?H:#\$d\_suidsaf SETUID\_SCRIPTS\_ARE\_SECURE\_NOW /\*\*/

```
?H:#$d_dosuid DOSUID /**/
?H:.
?Y:TOP
?F:!reflect
?LINT: set d_suidsaf
?LINT: set d_dosuid
: see if setuid scripts can be secure
$cat <<EOM
```

Some kernels have a bug that prevents setuid #! scripts from being secure. Some sites have disabled setuid #! scripts because of this.

First let's decide if your kernel supports secure setuid #! scripts. (If setuid #! scripts would be secure but have been disabled anyway, don't say that they are secure if asked.)

EOM

```
val="$undef"
if $test -d /dev/fd; then
echo "#!$ls" >reflect
chmod +x,u+s reflect
./reflect >flect
2>&1
if $contains "/dev/fd" flect >/dev/null; then
echo "Congratulations, your kernel has secure setuid scripts!" >&4
val="$define"
else
$cat <<EOM
```

If you are not sure if they are secure, I can check but I'll need a username and password different from the one you are using right now. If you don't have such a username or don't want me to test, simply enter 'none'.

EOM

```
rp='Other username to test security of setuid scripts with?'
dflt='none'
./myread
case "$ans" in
n|none)
case "$d_suidsaf" in
") echo "I'll assume setuid scripts are *not* secure." >&4
dflt=n;;
"$undef")
echo "Well, the $hint value is *not* secure." >&4
dflt=n;;
*) echo "Well, the $hint value *is* secure." >&4
dflt=y;;
```

```

esac
;;
*)
$rm -f reflect flect
echo "#!$ls" >reflect
chmod +x,u+s reflect
echo >flect
chmod a+w flect
echo "'su' will (probably) prompt you for '$ans's password.'"
su $ans -c './reflect >flect'
if $contains "/dev/fd" flect
>/dev/null; then
    echo "Okay, it looks like setuid scripts are secure." >&4
    dflt=y
else
    echo "I don't think setuid scripts are secure." >&4
    dflt=n
fi
;;
esac
rp='Does your kernel have *secure* setuid scripts?'
. ./myread
case "$ans" in
[yY]*) val="$define";;
*) val="$undef";;
esac
fi
else
echo "I don't think setuid scripts are secure (no /dev/fd directory)." >&4
echo "(That's for file descriptors, not floppy disks.)"
val="$undef"
fi
set d_suidsafes
eval $setvar

$rm -f reflect flect

: now see if they want to do setuid emulation
echo " "
val="$undef"
case "$d_suidsafes" in
"$define")
val="$undef"
echo "No need to emulate SUID scripts since they are secure here." >& 4
;;
*)
$cat <<EOM
Some systems have disabled setuid scripts, especially systems where

```



setuid scripts cannot be secure. On systems where setuid scripts have been disabled, the setuid/setgid bits on scripts are currently useless. It is possible for \$package to detect those bits and emulate setuid/setgid in a secure fashion. This emulation will only work if setuid scripts have been disabled in your kernel.

EOM

```
case "$d_dosuid" in
"$define") dflt=y ;;
*) dflt=n ;;
esac
rp="Do you want to do setuid/setgid emulation?"
. ./myread
case "$ans" in
[yY]*) val="$define";;
*) val="$undef";;
esac
;;
esac
set d_dosuid
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_dosuid.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_msg.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:37 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_msg: test d\_msgctl d\_msgget d\_msgsnd d\_msgrcv Setvar Findhdr osname

?MAKE: -pick add \$@ %<

?S:d\_msg:

?S: This variable conditionally defines the HAS\_MSG symbol, which

?S: indicates that the entire msg\*(2) library is present.

?S:.

?C:HAS\_MSG:

?C: This symbol, if defined, indicates that the entire msg\*(2) library is

?C: supported (IPC mechanism based on message queues).

?C:.

?H:#\$d\_msg

HAS\_MSG /\*\*/

?H:.

?T:h\_msg

?LINT:set d\_msg

: see how much of the 'msg\*(2)' library is present.

h\_msg=true

echo " "

case "\$d\_msgctl\$d\_msgget\$d\_msgsnd\$d\_msgrcv" in

\*"\${undef})\*" h\_msg=false;;

esac

case "\$osname" in

freebsd)

case "`ipcs 2>&1`" in

"SVID messages"\*"not configured"\*)

echo "Your \$osname does not have the msg\*(2) configured." >&4

h\_msg=false

val="\${undef}"

set msgctl d\_msgctl

eval \$setvar

set msgget d\_msgget

eval \$setvar

set msgsnd d\_msgsnd

eval \$setvar

set msgrcv d\_msgrcv

eval \$setvar

::

esac

::

esac

: we could also check for sys/ipc.h ...

if \$h\_msg && \$test `./findhdr sys/msg.h`; then

echo "You have the full msg\*(2) library." >&4

val="\${define}"

else

echo "You don't have the full msg\*(2) library." >&4

val="\${undef}"

fi

set d\_msg

eval \$setvar

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/dist/U/d\_msg.U

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```
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?MAKE:d_accept4: Inlibc
?MAKE: -pick add $@ %<
?S:d_accept4:
?S: This variable conditionally defines HAS_ACCEPT4 if accept4() is
?S: available to accept socket connections.
?S:.
?C:HAS_ACCEPT4:
?C: This symbol, if defined, indicates that the accept4 routine is
?C: available to accept socket connections.
?C:.
?H:#$d_accept4 HAS_ACCEPT4 /**/
?H:.
?LINT:set d_accept4
: see if accept4 exists
set accept4 d_accept4
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_accept4.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_PORTAR.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_PORTAR.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:08:42 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:40 ram
?RCS: Baseline for dist 3.0 netwide release.
```

```

?RCS:
?MAKE:d_PORTAR: cat +cc rm Setvar
?MAKE: -pick add $@ %<
?S:d_PORTAR:
?S: This variable conditionally handles definition of PORTAR,
?S: a creation of greater minds than I can imagine.
?S:.
?C:PORTAR:
?C: This manifest constant must
be defined to 1 for some implementations
?C: of ar.h to get the portable ar most everybody uses.
?C:.
?L:ar_fmag:
?L:ARFMAG:
?L:SARMAG:
?H:#$d_PORTAR PORTAR 1 /**/
?H:.
?F:!portar
?LINT:set d_PORTAR
: see if we need to define PORTAR
echo " "
echo 'Checking to see if we need to define PORTAR for portable archives...' >&4
$cat >portar.c <<'EOCP'
#include <ar.h>
int main() {
char *arfmag = ARFMAG;
int sarmag = SARMAG;
struct ar_hdr arh;

strncpy(arh.ar_fmag, arfmag, 2);

#ifdef PORTAR
printf("D\n");
#else
printf("U\n");
#endif
exit(0);}
EOCP
if $cc -o portar portar.c >/dev/null 2>&1 || \
$cc -DPORTAR=1 -o portar portar.c >/dev/null 2>&1 ; then
case "`./portar`" in
D)
val="$define"
echo "We'll be defining PORTAR for you."
;;
U)
val="$undef"
echo "We don't seem to need PORTAR defined here."

```

```

;;
*)
val="$define"
echo "(My test program gave me an unexpected value!)"
echo "I'll just define PORTAR to be sure."
;;
esac
else
echo "(Strange, I couldn't get my test
program to compile.)"
echo "We'll just define PORTAR in this case."
val="$define"
fi
set d_PORTAR
eval $setvar
$rm -f portar*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/d_PORTAR.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: sitearch.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:21:30 ram

?RCS: patch61: created

?RCS:

?MAKE:sitearch sitearchexp installsitearch: afs cat Getfile \

Oldconfig Prefixit prefix test archname sitelib

?MAKE: -pick add \$@ %<

?Y:TOP

?S:sitearch:

?S: This variable contains the eventual value of the SITEARCH symbol,

?S: which is the name of the private library for this package. It may

?S: have a ~ on the front. It is up to the makefile to eventually create

?S: this

directory while performing installation (with ~ substitution).

?S:.

?S:sitearchexp:

?S: This variable is the ~name expanded version of sitearch, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?S:installsitearch:

?S: This variable is really the same as sitearchexp but may differ on

?S: those systems using AFS. For extra portability, only this variable

?S: should be used in makefiles.

?S:.

?C:SITEARCH:

?C: This symbol contains the name of the private library for this package.

?C: The library is private in the sense that it needn't be in anyone's

?C: execution path, but it should be accessible by the world. The program

?C: should be prepared to do ~ expansion.

?C: The standard distribution will put nothing in this directory.

?C: Individual sites may place their own extensions and modules in

?C: this directory.

?C:.

?C:SITEARCH\_EXP:

?C: This symbol contains the ~name expanded version of SITEARCH, to be used

?C: in programs that are not prepared to deal

with ~ expansion at run-time.

?C:.

?H:#define SITEARCH "\$sitearch" /\*\*/

?H:#define SITEARCH\_EXP "\$sitearchexp" /\*\*/

?H:.

?T:xxx

: determine where site specific architecture-dependent libraries go.

xxx=`echo \$sitelib/\$archname | sed 's!^\$prefix!'"`

: xxx is usually lib/site\_perl/archname.

set sitearch sitearch none

eval \$prefixit

case "\$sitearch" in

\*) dflt="\$sitelib/\$archname" ;;

\*) dflt="\$sitearch" ;;

esac

\$cat <<EOM

The installation process will also create a directory for  
architecture-dependent site-specific extensions and modules.

EOM

fn=nd~+

rp='Pathname for the site-specific architecture-dependent library files?'

./getfile

if \$test "X\$sitearchexp" != "X\$ansexp"; then

installsitearch="

fi

```
sitearch="$ans"
sitearchexp="$ansexp"
if $afs; then
$cat <<EOM
```

Since you are running AFS, I need to distinguish the directory in which private files reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```
EOM
case
"$installsitearch" in
*) dflt=`echo $sitearchexp | sed 's#~/afs/#/afs/.#^';
*) dflt="$installsitearch";;
esac
fn=de~
rp='Where will private files be installed?'
./getfile
installsitearch="$ans"
else
installsitearch="$sitearchexp"
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/sitearch.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_fcntl\_can\_lock.U,v\$

?RCS:

?RCS: Copyright (c) 2000, Andrew Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_fcntl\_can\_lock.U,v \$

?RCS:

?MAKE:d\_fcntl\_can\_lock: d\_fcntl Compile Setvar cat rm\_try run signal\_t i\_stdlib

?MAKE: -pick add \$@ %<

?S:d\_fcntl\_can\_lock:

?S: This variable conditionally defines the FCNTL\_CAN\_LOCK symbol

?S: and indicates whether file locking with fcntl() works.

?S:.

?C:FCNTL\_CAN\_LOCK:

?C: This symbol, if defined, indicates that fcntl() can be used

?C: for file locking. Normally on Unix systems this is defined.

?C: It may be undefined on VMS.

?C:.

```

?H:#$d_fcntl_can_lock FCNTL_CAN_LOCK /**/
?H:.
?F:!try
?LINT: set d_fcntl_can_lock
?X: fcntl may not be fully functional. As of November 2000, on VMS and
?X: DOS/DJGPP, fcntl-based locking doesn't work.
?X: Thanks
to Craig A. Berry <craig.berry@psinetcs.com> for this test.
: See if fcntl-based locking works.
echo " "
$cat >try.c <<EOCP
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <unistd.h>
#include <fcntl.h>
#include <signal.h>
$signal_t blech(int x) { exit(3); }
int main() {
#if defined(F_SETLK) && defined(F_SETLKW)
    struct flock flock;
    int retval, fd;
    fd = open("try.c", O_RDONLY);
    flock.l_type = F_RDLCK;
    flock.l_whence = SEEK_SET;
    flock.l_start = flock.l_len = 0;
    signal(SIGALRM, blech);
    alarm(10);
    retval = fcntl(fd, F_SETLK, &flock);
    close(fd);
    (retval < 0 ? exit(2) : exit(0));
#else
    exit(2);
#endif
}
EOCP
echo "Checking if fcntl-based file locking works... "
case "$d_fcntl" in
"$define")
    set try
    if eval $compile_ok; then
    if $run ./try; then
        echo "Yes, it seems to work."
        val="$define"
    else
        echo "Nope, it didn't work."
        val="$undef"

```



```

    case "$?" in
    3) $cat >&4 <<EOM
***
*** I had to
forcibly timeout from fcntl(..., F_SETLK, ...).
*** This is (almost) impossible.
*** If your NFS lock daemons are not feeling well, something like
*** this may happen, please investigate. Cannot continue, aborting.
***
EOM
    exit 1
    ;;
    esac
    fi
    else
    echo "I'm unable to compile the test program, so I'll assume not."
    val="$undef"
    fi
    ;;
*) val="$undef";
    echo "Nope, since you don't even have fcntl()."
    ;;
    esac
    set d_fcntl_can_lock
    eval $setvar
    $rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_fcntl_can_lock.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: randbits.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:19:29 ram

?RCS: patch61: added <unistd.h> and <stdlib.h> to the C program test

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:38 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit has been somewhat made obsolete with creation of the

?X: randfunc function (which finds out how to generate random

?X: numbers between 0 and 1.

?X:

?MAKE:randbits: cat rm Myread cc i\_unistd i\_stdlib

?MAKE: -pick add \$@ %<

?S:randbits:

?S: This

variable contains the eventual value of the RANDBITS symbol,

?S: which indicates to the C program how many bits of random number

?S: the rand() function produces.

?S:.

?C:RANDBITS:

?C: This symbol contains the number of bits of random number the rand()

?C: function produces. Usual values are 15, 16, and 31.

?C:.

?H:#define RANDBITS \$randbits /\*\*/

?H:.

: check for size of random number generator

```
echo " "
case "$randbits" in
")
echo "Checking to see how many bits your rand function produces..." >&4
$cat >try.c <<EOCP
#i_unistd I_UNISTD
#i_stdlib I_STDLIB
#include <stdio.h>
#ifdef I_UNISTD
# include <unistd.h>
#endif
#ifdef I_STDLIB
# include <stdlib.h>
#endif
EOCP
$cat >>try.c <<'EOCP'
int main()
{
register int i;
register unsigned long tmp;
register unsigned long max = 0L;

for (i = 1000; i; i--) {
tmp = (unsigned long)rand();
if (tmp > max) max = tmp;
}
for (i = 0; max; i++)
```

```

    max /= 2;
    printf("%d\n",i);
}
EOCP
if $cc -o try try.c >/dev/null 2>&1 ; then
    dflt=`try`
else
    dflt='?'
    echo
    "(I can't seem to compile the test program...)"
fi
;;
*)
    dflt="$randbits"
;;
esac
rp='How many bits does your rand() function produce?'
./myread
randbits="$ans"
$rm -f try.c try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/randbits.U
```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_newlocale d\_freelocale d\_uselocale d\_duplocale d\_querylocale \

i\_xlocale xlocale\_needed: Inlibc Inhdr Compile cat rm\_try run \

d\_localeconv\_l

?MAKE: -pick add \$@ %<

?S:d\_newlocale:

?S: This variable conditionally defines the HAS\_NEWLOCALE symbol, which

?S: indicates to the C program that the newlocale() routine is available

?S: to return a new locale object or modify an existing locale object.

?S:.

?S:d\_freelocale:

?S: This variable conditionally defines the HAS\_FREELOCALE symbol, which

?S: indicates to the C program that the freelocale() routine is available

?S: to deallocate the resources associated with a locale object.

?S:.

?S:d\_uselocale:

?S: This variable conditionally defines the HAS\_USELOCALE symbol, which

?S: indicates to the C program that the uselocale()

routine is available

?S: to set the current locale for the calling thread.

?S:.

?S:d\_duplocale:

?S: This variable conditionally defines the HAS\_DUPLOCALE symbol, which

?S: indicates to the C program that the duplocale() routine is available

?S: to duplicate a locale object.

?S:.

?S:d\_querylocale:

?S: This variable conditionally defines the HAS\_QUERYLOCALE symbol, which

?S: indicates to the C program that the querylocale() routine is available

?S: to return the name of the locale for a category mask.

?S:.

?S:i\_xlocale:

?S: This symbol, if defined, indicates to the C program that the

?S: header xlocale.h is available. See also xlocale\_needed.

?S:.

?S:xlocale\_needed:

?S: This symbol, if defined, indicates that the C program should

?S: include <xlocale.h> to get newlocale() and its friends.

?S:.

?C:HAS\_NEWLOCALE:

?C: This symbol, if defined, indicates that the newlocale routine is

?C: available to return a new locale object or modify an existing

?C: locale object.

?C:.

?C:HAS\_FREELOCALE:

?C: This

symbol, if defined, indicates that the freelocale routine is

?C: available to deallocate the resources associated with a locale object.

?C:.

?C:HAS\_USELOCALE:

?C: This symbol, if defined, indicates that the uselocale routine is

?C: available to set the current locale for the calling thread.

?C:.

?C:HAS\_DUPLOCALE:

?C: This symbol, if defined, indicates that the duplocale routine is

?C: available to duplicate a locale object.

?C:.

?C:HAS\_QUERYLOCALE:

?C: This symbol, if defined, indicates that the querylocale routine is

?C: available to return the name of the locale for a category mask.

?C:.

?C:I\_XLOCALE:

?C: This symbol, if defined, indicates to the C program that the

?C: header xlocale.h is available. See also NEED\_XLOCALE\_H

?C:.

?C:NEED\_XLOCALE\_H:

?C: This symbol, if defined, indicates that the C program should

?C: include <xlocale.h> to get newlocale() and its friends.

```
?C:
?H:#$d_newlocale HAS_NEWLOCALE /**/
?H:#$d_freelocale HAS_FREELOCALE /**/
?H:#$d_uselocale HAS_USELOCALE /**/
?H:#$d_duplocale HAS_DUPLOCALE /**/
?H:#$d_querylocale HAS_QUERYLOCALE /**/
?H:#$xlocale_needed NEED_XLOCALE_H /**/
?H:#$i_xlocale I_XLOCALE
    /**/
```

```
?H:.
```

```
?LINT:set i_xlocale
```

```
?LINT:set d_newlocale
```

```
?LINT:set d_freelocale
```

```
?LINT:set d_uselocale
```

```
?LINT:set d_duplocale
```

```
?LINT:set d_querylocale
```

```
?F:!try
```

```
: see if this is an xlocale.h system
```

```
set xlocale.h i_xlocale
```

```
eval $inhdr
```

```
: see if newlocale exists
```

```
set newlocale d_newlocale
```

```
eval $inlibc
```

```
: see if freelocale exists
```

```
set freelocale d_freelocale
```

```
eval $inlibc
```

```
: see if uselocale exists
```

```
set uselocale d_uselocale
```

```
eval $inlibc
```

```
: see if duplocale exists
```

```
set duplocale d_duplocale
```

```
eval $inlibc
```

```
: see if querylocale exists
```

```
set querylocale d_querylocale
```

```
eval $inlibc
```

```
: if we have xlocale.h, check whether it is needed
```

```
case "$i_xlocale$d_newlocale$xlocale_needed" in
"$define$define")
```

```
echo "Checking if xlocale.h is needed..." >&4
```

```
$cat >try.c <<EOF
```

```
#include <locale.h>
```

```
#include <stdio.h>
```

```

#ifdef TRY_XLOCALE
#include <xlocale.h>
#endif
#ifdef HAVE_LOCALECONV_L
HAVE_LOCALECONV_L

#ifdef HAVE_LOCALECONV_L
struct lconv *(*lcptr)(locale_t) = localeconv_l;
#endif

int main(void) {
    locale_t lc = newlocale(LC_ALL_MASK, "C", (locale_t)0);

#ifdef HAVE_LOCALECONV_L
/* FreeBSD hides only localeconv_l() in xlocale.h */
struct lconv *lcbuf = localeconv_l(lc);
printf("decimal: %s\n", lcbuf->decimal_point);
#endif

    freelocale(lc);
    return 0;
}

```

EOF

```

set try
if eval $compile && $run ./try > /dev/null 2>&1 ; then
    echo "xlocale.h isn't needed" >&4
    xlocale_needed=$undef
else
    set try -DTRY_XLOCALE
    if eval $compile && $run ./try > /dev/null 2>&1 ; then
        xlocale_needed=$define
        echo "xlocale.h is needed" >&4
    else
        echo "I can't build my test either way" >&4
        xlocale_needed=$undef
    fi
fi
$rm_try
;;
*) xlocale_needed=$undef ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_newlocale.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysuio.U,v \$

```

?RCS:
?RCS: Copyright (c) 1998 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:i_sysuio: Inhdr
?MAKE: -pick add $@ %<
?S:i_sysuio:
?S: This variable conditionally defines the I_SYSUIO symbol, and indicates
?S: whether a C program should include <sys/uio.h>.
?S:.
?C:I_SYSUIO:
?C: This symbol, if defined, indicates that <sys/uio.h> exists and
?C: should be included.
?C:.
?H:#$i_sysuio I_SYSUIO /**/
?H:.
?LINT:set i_sysuio
: see if this is a sys/uio.h system
set sys/uio.h i_sysuio
eval $inhdr

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/i_sysuio.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Config_h.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Config_h.U,v $
?RCS: Revision 3.0.1.5 1997/02/28 14:57:43 ram
?RCS: patch61: added support for src.U
?RCS:
?RCS: Revision 3.0.1.4 1995/09/25 09:10:49 ram
?RCS: patch59: commented the purpose of the #un-def directive
?RCS:
?RCS: Revision 3.0.1.3 1995/01/30 14:25:39 ram
?RCS: patch49: typo fixes in leading config.h comment (WED)
?RCS:

```

```

?RCS: Revision 3.0.1.2 1993/08/24 12:13:20 ram
?RCS: patch3: added TOP as a local shell temporary variable
?RCS:
?RCS:
Revision 3.0.1.1 1993/08/19 06:42:20 ram
?RCS: patch1: leading config.sh searching was not aborting properly
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:47 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This file ends up producing the config_h.SH script, which is run to produce
?X: the config.h file. The file ./Config_h below contains all the ?H: lines
?X: extracted out of all the units. Metaconfig itself adds the !GROK!THIS!.
?X: Note that this code isn't included into Configure, but must be shipped with.
?X:
?X: For those who wish to know why the file is config_h.SH instead of the more
?X: natural config.h.SH, well... it is to support systems like MS-DOG. Only one
?X: 'dot' is allowed within the file name, as it is part of the "extension" of
?X: the file. MS-DOG will not let you have two 'dots' because that would mean
?X: two "extensions".
?X:
?MAKE:Config_h: Id End Config_sh Obsol_h myuname cf_time cf_by package src
?MAKE: -pick c_h_weed $@ %<
?MAKE: -pick
c_h_weed $@ ./Config_h
?MAKE: -pick c_h_weed $@ ./Obsol_h
?T:PERL_CONFIG_SH TOP
?LINT:unclosed !GROK!THIS!
?LINT:extern CONFIG_H CONFIG_SH
?LINT:change CONFIG_H CONFIG_SH
?X:?LINT:nocomment
: Set up for generating config_h.SH
case "$CONFIG_SH" in
") CONFIG_SH=config.sh;;
esac
case "$CONFIG_H" in
") CONFIG_H=config.h;;
esac
case $PERL_CONFIG_SH in
")
if test -f $CONFIG_SH; then TOP=.;
elif test -f ../$CONFIG_SH; then TOP=../.;
elif test -f ../../$CONFIG_SH; then TOP=../../.;
elif test -f ../../../$CONFIG_SH; then TOP=../../../.;
else
echo "Can't find $CONFIG_SH."; exit 1

```



```

fi
. $TOP/$CONFIG_SH
;;
esac
?X: Make sure we are in the directory where the .SH file is located.
case "$0" in
*/*) cd `expr X$0 : 'X\(.*)/'` ;;
esac
echo "Extracting $CONFIG_H (with variable substitutions)"
?X:
?X: Since we unconditionally translate leading #undef into /*#define, we're
?X: stuck when we really want to have a #undef in $CONFIG_H.
That's why there
?X: is provision here for #un-def, which is translated back into #undef after
?X: all original #undef have been processed.
?X:
?X: Previously, we changed all
?X: #undef FOO /**/
?X: into
?X: /*#define FOO /**/
?X: The xlc compiler (available on IBM's AIX) complains that this is
?X: an illegal attempt to write a nested comment, and warns against it.
?X: There's apparently no way to shut the compiler up, either.
?X: This sed command from Hallvard B Furuseth <h.b.furuseth@usit.uio.no>
?X: changes it to
?X: /*#define FOO / **/
sed <<!GROK!THIS!>$CONFIG_H -e 's!^#undef\(.*)\)!/^*#define\1 \!' -e 's!^#un-def!#undef!' -
e's!define\t!define !'
/* This file was produced by running the config_h.SH script, which
* gets its values from $CONFIG_SH, which is generally produced by
* running Configure.
*
* Feel free to modify any of this as the need arises. Note, however,
* that running config_h.SH again will wipe out any changes you've made.
* For a more permanent change
edit $CONFIG_SH and rerun config_h.SH.
*/

/* Package name : $package
* Source directory : $src
* Configuration time: $cf_time
* Configured by : $cf_by
* Target system : $myuname
*/

#ifndef _config_h_
#define _config_h_

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Config\_h.U

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2018-2018, H.Merijn Brand

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?MAKE:d\_pipe2: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_pipe2:

?S: This variable conditionally defines the HAS\_PIPE2 symbol, which

?S: indicates to the C program that the pipe2() routine is available

?S: to create an inter-process channel.

?S:.

?C:HAS\_PIPE2:

?C: This symbol, if defined, indicates that the pipe2 routine is

?C: available to create an inter-process channel.

?C:.

?H:#\$d\_pipe2 HAS\_PIPE2 /\*\*/

?H:.

?LINT:set d\_pipe2

: see if pipe2 exists

set pipe2 d\_pipe2

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_pipe2.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_neterno.U,v 3.0.1.3 1994/10/29 16:20:29 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

```

?RCS: $Log: i_neterrno.U,v $
?RCS: Revision 3.0.1.3 1994/10/29 16:20:29 ram
?RCS: patch36: forgot to initialize 'val' to an empty value (ADO)
?RCS:
?RCS: Revision 3.0.1.2 1994/08/29 16:22:10 ram
?RCS: patch32: removed spurious echo
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 07:02:05 ram
?RCS: patch30: created by ADO
?RCS:
?MAKE:i_neterrno: Inhdr +cc +ccflags rm_try Setvar
?MAKE: -pick
add $@ %<
?S:i_neterrno:
?S: This variable conditionally defines the I_NET_ERRNO symbol, which
?S: indicates to the C program that <net/errno.h> exists and should
?S: be included.
?S:.
?C:I_NET_ERRNO:
?C: This symbol, if defined, indicates that <net/errno.h> exists and
?C: should be included.
?C:.
?H:#$i_neterrno I_NET_ERRNO /**/
?H:.
?LINT:set i_neterrno
: see if net/errno.h is available
val="
set net/errno.h val
eval $inhdr

: Unfortunately, it causes problems on some systems. Arrgh.
case "$val" in
$define)
cat > try.c <<'EOM'
#include <stdio.h>
#include <errno.h>
#include <net/errno.h>
int func()
{
return ENOTSOCK;
}
EOM
if $cc $ccflags -c try.c >/dev/null 2>&1; then
echo "We'll be including <net/errno.h>." >&4
else
echo "We won't be including <net/errno.h>." >&4
val="$undef"
fi

```

```
$rm_try
;;
esac
set i_netermo
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/i_netermo.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_regcmp.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_regcmp.U,v $
```

```
?RCS: Revision 3.0.1.1 1995/01/30 14:34:45 ram
```

```
?RCS: patch49: now looks for POSIX regcomp() routine
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:06:53 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_regcmp d_re_comp d_regcomp: Csym cat
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_regcomp:
```

```
?S: This variable conditionally defines the HAS_REGCOMP symbol, which
```

```
?S: indicates to the C program that the regcomp() routine is available
```

```
?S: for regular
```

```
pattern matching (usually on POSIX.2 conforming systems).
```

```
?S:.
```

```
?S:d_regcmp:
```

```
?S: This variable conditionally defines the HAS_REGCMP symbol, which
```

```
?S: indicates to the C program that the regcmp() routine is available
```

```
?S: for regular pattern matching (usually on System V).
```

```
?S:.
```

```
?S:d_re_comp:
```

```
?S: This variable conditionally defines the HAS_RECOMP symbol, which
```

```
?S: indicates to the C program that the re_comp() routine is available
```

```
?S: for regular pattern matching (usually on BSD). If so, it is likely that
```

```
?S: re_exec() exists.
```

```
?S:.
```

```
?C:HAS_REGCOMP (REGCOMP):
```

?C: This symbol, if defined, indicates that the regcomp() routine is  
?C: available to do some regular pattern matching (usually on POSIX.2  
?C: conforming systems).

?C:.

?C:HAS\_REGCMP (REGCMP):

?C: This symbol, if defined, indicates that the regcmp() routine is  
?C: available to do some regular pattern matching (usually on System V).

?C:.

?C:HAS\_RECOMP (RECOMP):

?C: This symbol, if defined, indicates that the re\_comp() routine is  
?C: available

to do some regular pattern matching (usually on BSD). If so,

?C: it is likely that re\_exec() be available.

?C:.

?H:#\$d\_regcomp HAS\_REGCOMP /\* POSIX.2 \*/

?H:#\$d\_regcomp HAS\_REGCOMP /\* sysV \*/

?H:#\$d\_re\_comp HAS\_RECOMP /\* BSD \*/

?H:.

?T:val

: see if regcomp, regcmp, or re\_comp exist, for regular pattern matching

echo " "

if set regcomp val -f d\_regcomp; eval \$csym; \$val; then

echo 'regcomp() found.' >&4

d\_regcomp="\$define"

d\_regcmp="\$undef"

d\_re\_comp="\$undef"

elif set regcmp val -f d\_regcmp; eval \$csym; \$val; then

echo 'regcmp() found.' >&4

d\_regcomp="\$define"

d\_regcmp="\$undef"

d\_re\_comp="\$undef"

elif set re\_comp val -f d\_re\_comp; eval \$csym; \$val; then

echo 're\_comp() found, assuming re\_exec() also exists.' >&4

d\_re\_comp="\$define"

d\_regcomp="\$undef"

d\_regcmp="\$undef"

else

\$cat >&4 <<EOM

No regcomp(), regcmp() nor re\_comp() found !! No regular pattern matching.

EOM

d\_regcomp="\$undef"

d\_re\_comp="\$undef"

d\_regcomp="\$undef"

fi

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_regcmp.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_class: Inlibc
?MAKE: -pick add $@ %<
?S:d_class:
?S: This variable conditionally defines the HAS_CLASS symbol, which
?S: indicates to the C program that the class() routine is available.
?S:.
?C:HAS_CLASS:
?C: This symbol, if defined, indicates that the class routine is
?C: available to classify doubles. Available for example in AIX.
?C: The returned values are defined in <float.h> and are:
?C:
?C: FP_PLUS_NORM Positive normalized, nonzero
?C: FP_MINUS_NORM Negative normalized, nonzero
?C: FP_PLUS_DENORM Positive denormalized, nonzero
?C: FP_MINUS_DENORM Negative denormalized, nonzero
?C: FP_PLUS_ZERO +0.0
?C: FP_MINUS_ZERO -0.0
?C: FP_PLUS_INF +INF
?C: FP_MINUS_INF -INF
?C: FP_NANS Signaling
    Not a Number (NaNS)
?C: FP_NANQ Quiet Not a Number (NaNQ)
?C:.
?H:#$d_class HAS_CLASS /**/
?H:.
?LINT:set d_class
: see if class exists
set class d_class
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_class.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: Copyright (c) 2017, Lukas Mai
?RCS:
?RCS: You may distribute this file under the terms of either
?RCS: a) the "Artistic License" which comes with Perl, or
```

?RCS: b) the "Artistic License" which comes with dist, or

?RCS: c) the GNU General Public License as published by the Free

?RCS: Software Foundation; either version 1, or (at your option) any

?RCS: later version (see the file "Copying" that comes with the

?RCS: Perl distribution).

?RCS: Which one to use is your choice.

?RCS: See the U/README file.

?MAKE:d\_builtin\_add\_overflow d\_builtin\_sub\_overflow d\_builtin\_mul\_overflow : Compile Setvar cat run rm\_try

?MAKE:-pick add \$@ %<

?S:d\_builtin\_add\_overflow:

?S: This variable conditionally defines HAS\_BUILTIN\_ADD\_OVERFLOW, which

?S: indicates that the compiler supports \_\_builtin\_add\_overflow(x,y,&z)

?S: for safely adding x and y into z while checking for overflow.

?S:.

?S:d\_builtin\_sub\_overflow:

?S: This

variable conditionally defines HAS\_BUILTIN\_SUB\_OVERFLOW, which

?S: indicates that the compiler supports \_\_builtin\_sub\_overflow(x,y,&z)

?S: for safely subtracting y from x into z while checking for overflow.

?S:.

?S:d\_builtin\_mul\_overflow:

?S: This variable conditionally defines HAS\_BUILTIN\_MUL\_OVERFLOW, which

?S: indicates that the compiler supports \_\_builtin\_mul\_overflow(x,y,&z)

?S: for safely multiplying x and y into z while checking for overflow.

?S:.

?C:HAS\_BUILTIN\_ADD\_OVERFLOW:

?C: This symbol, if defined, indicates that the compiler supports

?C: \_\_builtin\_add\_overflow for adding integers with overflow checks.

?C:.

?C:HAS\_BUILTIN\_SUB\_OVERFLOW:

?C: This symbol, if defined, indicates that the compiler supports

?C: \_\_builtin\_sub\_overflow for subtracting integers with overflow checks.

?C:.

?C:HAS\_BUILTIN\_MUL\_OVERFLOW:

?C: This symbol, if defined, indicates that the compiler supports

?C: \_\_builtin\_mul\_overflow for multiplying integers with overflow checks.

?C:.

?H:#\$d\_builtin\_add\_overflow

HAS\_BUILTIN\_ADD\_OVERFLOW /\*\*/

?H:#\$d\_builtin\_sub\_overflow HAS\_BUILTIN\_SUB\_OVERFLOW /\*\*/

?H:#\$d\_builtin\_mul\_overflow HAS\_BUILTIN\_MUL\_OVERFLOW /\*\*/

?H:.

?F:!try

?LINT:set d\_builtin\_add\_overflow d\_builtin\_sub\_overflow d\_builtin\_mul\_overflow

: Look for GCC-style \_\_builtin\_add\_overflow

case "\$d\_builtin\_add\_overflow" in

)

echo " "

```

    echo "Checking whether your compiler can handle __builtin_add_overflow ..." >&4
    $cat >try.c <<'EOCP'
int main(void) {
    const unsigned int uint_max = ~0u;
    int target_int = 0;
    if (__builtin_add_overflow(1, 2, &target_int) || target_int != 3) {
        return 1;
    }
    if (!__builtin_add_overflow((int)(uint_max >> 1), 1, &target_int)) {
        return 1;
    }
    if (!__builtin_add_overflow(uint_max, -1, &target_int)) {
        return 1;
    }
    return 0;
}
EOCP
set try
if eval $compile && $run ./try; then
    echo "Your C compiler supports __builtin_add_overflow."
    val="$define"
else
    echo
    "Your C compiler doesn't seem to understand __builtin_add_overflow."
    val="$undef"
fi
;;
*) val="$d_builtin_add_overflow" ;;
esac

set d_builtin_add_overflow
eval $setvar
$rm_try

: Look for GCC-style __builtin_sub_overflow
case "$d_builtin_sub_overflow" in
")
    echo " "
    echo "Checking whether your compiler can handle __builtin_sub_overflow ..." >&4
    $cat >try.c <<'EOCP'
int main(void) {
    const unsigned int uint_max = ~0u;
    int target_int = 0;
    if (__builtin_sub_overflow(1, -2, &target_int) || target_int != 3) {
        return 1;
    }
    if (!__builtin_sub_overflow(-(int)(uint_max >> 1), 2, &target_int)) {
        return 1;
    }
}

```



```

}
if (!__builtin_sub_overflow(uint_max, 1, &target_int)) {
    return 1;
}
return 0;
}
EOCP
set try
if eval $compile && $run ./try; then
    echo "Your C compiler supports __builtin_sub_overflow."
    val="$define"
else
    echo "Your C compiler doesn't seem to understand __builtin_sub_overflow."
    val="$undef"
fi
;;
*) val="$d_builtin_sub_overflow" ;;
esac

set d_builtin_sub_overflow
eval $setvar
$rm_try

: Look for GCC-style __builtin_mul_overflow
case "$d_builtin_mul_overflow" in
")
    echo " "
    echo "Checking whether your compiler can handle __builtin_mul_overflow ..." >&4
    $cat >try.c <<'EOCP'
int main(void) {
    const unsigned int uint_max = ~0u;
    int target_int = 0;
    if (__builtin_mul_overflow(2, 3, &target_int) || target_int != 6) {
        return 1;
    }
    if (!__builtin_mul_overflow((int)(uint_max >> 1), 2, &target_int)) {
        return 1;
    }
    if (!__builtin_mul_overflow(uint_max, 1, &target_int)) {
        return 1;
    }
    return 0;
}
EOCP
set try
if eval $compile && $run ./try; then
    echo "Your C compiler supports __builtin_mul_overflow."
    val="$define"

```

```

else
    echo "Your C compiler doesn't seem to understand __builtin_mul_overflow."
    val="$undef"
fi
;;
*) val="$d_builtin_mul_overflow"
;;
esac

```

```

set d_builtin_mul_overflow
eval $setvar
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_builtin_overflow.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_times.U,v 3.0.1.2 1995/07/25 14:07:50 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_times.U,v $
?RCS: Revision 3.0.1.2 1995/07/25 14:07:50 ram
?RCS: patch56: typo fix, sytem -> system
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:14:00 ram
?RCS: patch32: now uses new Typedef unit to compute type information
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:46 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: What is the type returned by times() ?
?X:
?X: Force inclusion of <sys/types.h>
?X:INC: i_systypes
?MAKE:d_times clocktype:
    Csym Myread Typedef i_systimes
?MAKE: -pick add $@ %<
?S:d_times:
?S: This variable conditionally defines the HAS_TIMES symbol, which indicates

```

?S: that the times() routine exists. The times() routine is normally  
?S: provided on UNIX systems. You may have to include <sys/times.h>.

?S:.

?S:clocktype:

?S: This variable holds the type returned by times(). It can be long,

?S: or clock\_t on BSD sites (in which case <sys/types.h> should be

?S: included).

?S:.

?C:HAS\_TIMES (TIMES):

?C: This symbol, if defined, indicates that the times() routine exists.

?C: Note that this became obsolete on some systems (SUNOS), which now

?C: use getrusage(). It may be necessary to include <sys/times.h>.

?C:.

?C:Clock\_t (CLOCKTYPE):

?C: This symbol holds the type returned by times(). It can be long,

?C: or clock\_t on BSD sites (in which case <sys/types.h> should be

?C: included).

?C:.

?H:#\$d\_times HAS\_TIMES /\*\*/

?H:#define Clock\_t \$clocktype /\* Clock time \*/

?H:.

?T:val inc

: see if times exists

echo "

"

if set times val -f d\_times; eval \$csym; \$val; then

echo 'times() found.' >&4

d\_times="\$define"

inc="

case "\$i\_systimes" in

"\$define") inc='sys/times.h';;

esac

rp="What is the type returned by times() on this system?"

set clock\_t clocktype long stdio.h sys/types.h \$inc

eval \$typedef\_ask

else

echo 'times() NOT found, hope that will do.' >&4

d\_times="\$undef"

?X: The following is needed for typedef (won't like an empty variable)

clocktype='int'

fi

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/d\_times.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: contains.U 1 2006-08-24 12:32:52Z rmanfredi \$

```

?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: contains.U,v $
?RCS: Revision 3.0 1993/08/18 12:05:35 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:contains: Nothing
?MAKE: -pick add $@ %<
?S:contains:
?S: This variable holds the command to do a grep with a proper return
?S: status. On most sane systems it is simply "grep". On insane systems
?S: it is a grep followed by a cat followed by a test. This variable
?S: is primarily for the use of other Configure units.
?S:.
: Some
  greps do not return status, grrr.
  echo "grimblepritz" >grimble
  if grep blurfldyick grimble >/dev/null 2>&1 ; then
  contains=contains
  elif grep grimblepritz grimble >/dev/null 2>&1 ; then
  contains=grep
  else
  contains=contains
  fi
  rm -f grimble
: the following should work in any shell
case "$contains" in
contains*)
  echo " "
  echo "AGH! Grep doesn't return a status. Attempting remedial action."
  cat >contains <<'EOSS'
  grep "$1" "$2" >.greptmp && cat .greptmp && test -s .greptmp
EOSS
  chmod +x contains
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/contains.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_termio.U,v \$

?RCS: Revision 3.0.1.4 1994/10/29 16:20:54 ram

?RCS: patch36: call ./usg and ./Cpplib explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0.1.3 1994/08/29 16:26:38 ram

?RCS: patch32: don't include all three I\_\* symbols in config.h

?RCS: patch32: (had forgotten to undo this part last time)

?RCS:

?RCS: Revision 3.0.1.2 1994/05/13 15:25:03 ram

?RCS: patch27: undone ADO's fix in previous patch since it was useless

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 15:05:23  
ram

?RCS: patch23: now include all three defines in config.h (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:44 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_termio i\_sgty i\_termios: test Inlibc Cpplib Guess Setvar Findhdr Warn

?MAKE: -pick add \$@ %<

?S:i\_termio:

?S: This variable conditionally defines the I\_TERMIO symbol, which  
?S: indicates to the C program that it should include <termio.h> rather  
?S: than <sgty.h>.

?S:.

?S:i\_termios:

?S: This variable conditionally defines the I\_TERMIOS symbol, which  
?S: indicates to the C program that the POSIX <termios.h> file is  
?S: to be included.

?S:.

?S:i\_sgty:

?S: This variable conditionally defines the I\_SGTTY symbol, which  
?S: indicates to the C program that it should include <sgty.h> rather  
?S: than <termio.h>.

?S:.

?C:I\_TERMIO:

?C: This symbol, if defined, indicates that the program should include  
?C: <termio.h> rather than <sgty.h>. There are also differences in

?C: the ioctl() calls that depend on the value of this symbol.

?C:.

?C:I\_TERMIO:

?C: This symbol, if defined, indicates that the program should include

?C: the POSIX termios.h rather than sgtty.h or termio.h.

?C: There are also differences in the ioctl() calls that depend on the

?C: value of this symbol.

?C:.

?C:I\_SGTTY:

?C: This symbol, if defined, indicates that the program should include

?C: <sgtty.h> rather than <termio.h>. There are also differences in

?C: the ioctl() calls that depend on the value of this symbol.

?C:.

?H:#\$i\_termio I\_TERMIO /\*\*/

?H:#\$i\_termios I\_TERMIOS /\*\*/

?H:#\$i\_sgtty I\_SGTTY /\*\*/

?H:.

?T:val2 val3

?LINT:set i\_termio i\_sgtty i\_termios

: see if this is a termio system

val="\$undef"

val2="\$undef"

val3="\$undef"

?X: Prefer POSIX-approved termios.h over all else

```

if $test `./findhdr termios.h`; then
  set tcsetattr i_termios
  eval $inlibc
  val3="$i_termios"
fi
echo " "
case "$val3" in
"$define") echo "You have POSIX termios.h... good!" >&4;;
*) if ./Cppsym pyr; then
  case "`/bin/universe`" in
ucb) if $test `./findhdr
sgtty.h`; then
  val2="$define"
  echo "<sgtty.h> found." >&4
  else
  echo "System is pyramid with BSD universe."
  ./warn "<sgtty.h> not found--you could have problems."
  fi;;
*) if $test `./findhdr termio.h`; then
  val="$define"
  echo "<termio.h> found." >&4
  else
  echo "System is pyramid with USG universe."

```

```

./warn "<termio.h> not found--you could have problems."
fi;;
esac
?X: Start with USG to avoid problems if both usg/bsd was guessed
elif ./usg; then
if $test `./findhdr termio.h`; then
echo "<termio.h> found." >&4
val="$define"
elif $test `./findhdr sgtty.h`; then
echo "<sgtty.h> found." >&4
val2="$define"
else
./warn "Neither <termio.h> nor <sgtty.h> found--cross fingers!"
fi
else
if $test `./findhdr sgtty.h`; then
echo "<sgtty.h> found." >&4
val2="$define"
elif $test `./findhdr termio.h`; then
echo "<termio.h> found." >&4
val="$define"
else
./warn "Neither <sgtty.h> nor <termio.h> found--cross
fingers!"
fi
fi;;
esac
set i_termio; eval $setvar
val=$val2; set i_sgtty; eval $setvar
val=$val3; set i_termios; eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/i_termio.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_setgrps.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_setgrps.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:08 ram
```

```

?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_setgrps: Inlibc
?MAKE: -pick add $@ %<
?S:d_setgrps:
?S: This variable conditionally defines the HAS_SETGROUPS symbol, which
?S: indicates to the C program that the setgroups() routine is available
?S: to set the list of process groups.
?S:.
?C:HAS_SETGROUPS:
?C: This symbol, if defined, indicates that the setgroups() routine is
?C: available
to set the list of process groups. If unavailable, multiple
?C: groups are probably not supported.
?C:.
?H:#$d_setgrps HAS_SETGROUPS /**/
?H:.
?LINT:set d_setgrps
: see if setgroups exists
set setgroups d_setgrps
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_setgrps.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_scorfl.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_scorfl.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:01 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_scorfl: cat Myread Oldconfig nametype Setvar
?MAKE: -pick add $@ %<
?S:d_scorfl:
?S: This variable conditionally defines the SCOREFULL symbol, which
?S: indicates to the C program that any scoreboard kept by the program
?S: should be kept on the basis of the user's full name as opposed to
?S: the user's login name.

```



```

?S:.
?C:SCOREFULL:
?C: This
symbol, if defined, indicates that any scoreboard kept by the
?C: program should be kept on the basis of the user's full name as opposed
?C: to the user's login name. If the user can change his full name he
?C: can enter multiple scores if this is defined.
?C:.
?H:#$d_scorfl SCOREFULL /**/
?H:.
?LINT:set d_scorfl
: see how they want the scoreboard kept
case "$d_scorfl" in
"$define") dflt=y ;;
*) dflt=n ;;
esac
case "$nametype" in
other) val="$undef" ;;
*)
$cat <<'EOM'

```

The scoreboard can be kept with one score per login name, or one score per full name. If users can change their full name, or if there is more than one person on your system with the same full name, you should keep the score by login name (the full name is still printed).

```

EOM
rp='Do you want the scoreboard kept by full name?'
./myread
case "$ans" in
y*) val="$define" ;;
*) val="$undef" ;;
esac
;;
esac
set d_scorfl
eval $setvar

```

Found in path(s):  
\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_scorfl.U  
No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,

```

?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?MAKE:d\_drand48proto: Hasproto i\_stdlib i\_unistd  
?MAKE: -pick add \$@ %<  
?S:d\_drand48proto:  
?S: This variable conditionally defines the HAS\_DRAND48\_PROTO symbol,  
?S: which indicates to the C program that the system provides  
?S: a prototype for the drand48() function. Otherwise, it is  
?S: up to the program to supply one.  
?S:.  
?C:HAS\_DRAND48\_PROTO:  
?C: This symbol, if defined, indicates that the system provides  
?C: a prototype for the drand48() function. Otherwise, it is up  
?C: to the program to supply one. A good guess  
is  
?C: extern double drand48(void);  
?C:.  
?H:#\$d\_drand48proto HAS\_DRAND48\_PROTO /\*\*/  
?H:.  
?LINT:set d\_drand48proto  
: see if prototype for drand48 is available  
echo " "  
set d\_drand48proto drand48 \$i\_stdlib stdlib.h \$i\_unistd unistd.h  
eval \$hasproto

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/protos/d\_drand48proto.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Whoa.U,v 3.0.1.2 1997/02/28 15:21:21 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: Whoa.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:21:21 ram  
?RCS: patch61: whoa script now starts with leading "startsh"  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:02:01 ram

```

?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:19 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit produces a bit of shell code that must be dotted in in order
?X: to warn the user in case a change into a variable
is noticed.
?X:
?X: To use this unit, $was must hold the old value that has changed. Upon
?X: exit, the two variables $td and $tu are set to the correct value for
?X: respectively defining or undefining a variable. For instance, if $vas was
?X: $undef, but now $var is $define, after calling . whoa, you should use
?X: eval "$var=\$tu" to finally set $var to the correct value. See unit Inlibc.
?X:
?MAKE:Whoa: Myread startsh hint
?MAKE: -pick add $@ %<
?F:./whoa
?T:var was td tu hintfile
: set up the script used to warn in case of inconsistency
cat <<EOS >whoa
$startsh
EOS
cat <<'EOSC' >>whoa
dflt=y
case "$hint" in
    recommended)
case "$hintfile" in
    *) echo "The $hint value for \$$var on this machine was \"\$was\!" >&4
    ;;
    *) echo "Hmm. Based on the hints in hints/$hintfile.sh, " >&4
    echo "the $hint value for \$$var on this machine was \"\$was\!" >&4
    ;;
esac
;;
*) echo " "
echo "*** WHOA THERE!!! ***" >&4
echo " The $hint value for \$$var on this machine was
\"$was\!" >&4
;;
esac
rp=" Keep the $hint value?"
./myread
case "$ans" in
y) td=$was; tu=$was;;
esac
EOSC

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Whoa.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_values.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_values.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:48:34 ram

?RCS: patch61: created

?RCS:

?MAKE:i\_values: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_values:

?S: This variable conditionally defines the I\_VALUES symbol, and indicates

?S: whether a C program may include <values.h> to get symbols like MAXLONG

?S: and friends.

?S:.

?C:I\_VALUES:

?C: This symbol, if defined, indicates to the C program that it should

?C: include

<values.h> to get definition of symbols like MINFLOAT or

?C: MAXLONG, i.e. machine dependant limitations. Probably, you

?C: should use <limits.h> instead, if it is available.

?C:.

?H:#\$i\_values I\_VALUES /\*\*/

?H:.

?LINT:set i\_values

: see if this is a values.h system

set values.h i\_values

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_values.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: i\_grp.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:20 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:i\_grp: Inhdr  
?MAKE: -pick add \$@ %<  
?S:i\_grp:  
?S: This variable conditionally defines the I\_GRP symbol, and indicates  
?S: whether a C program should include <grp.h>.  
?S:.  
?C:I\_GRP:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <grp.h>.  
?C:.  
?H:#\$i\_grp I\_GRP /\*\*/  
?H:.  
?LINT:set i\_grp  
: see if this is an grp system  
set grp.h i\_grp  
eval \$inhdr

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_grp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: sitescript.U,v \$  
?RCS:  
?RCS: Copyright (c) 1999 Andy Dougherty  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: sitescript.U,v \$  
?RCS:

```

?MAKE:sitescript sitescriptexp installsitescript : Getfile Oldconfig test \
Setprefixvar sitebin siteprefix
?MAKE: -pick add $@ %<
?Y:TOP
?D:sitescript="
?S:sitescript:
?S: This variable holds the name of the directory in which the user wants
?S: to put add-on publicly executable files for the package in question. It
?S: is most often a local directory such as /usr/local/bin. Programs using
?S: this variable must be prepared to deal with ~name substitution.
?S: The standard
distribution will put nothing in this directory.
?S: After perl has been installed, users may install their own local
?S: scripts in this directory with
?S: MakeMaker Makefile.PL
?S: or equivalent. See INSTALL for details.
?S:.
?D:sitescriptexp="
?S:sitescriptexp:
?S: This is the same as the sitescript variable, but is filename expanded at
?S: configuration time, for use in your makefiles.
?S:.
?D:installsitescript="
?S:installsitescript:
?S: This variable is usually the same as sitescriptexp, unless you are on
?S: a system running AFS, in which case they may differ slightly. You
?S: should always use this variable within your makefiles for portability.
?S:.
?LINT:change prefixvar
?LINT:set installsitescript
?LINT:set sitescript
?LINT:set sitescriptexp
: determine where add-on public executable scripts go
case "$sitescript" in
") dflt=$siteprefix/script
$test -d $dflt || dflt=$sitebin ;;
*) dflt="$sitescript" ;;
esac
fn=d~+
rp='Pathname where add-on public executable scripts
should be installed?'
./getfile
prefixvar=sitescript
./setprefixvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/installdirs/sitescript.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1999 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_msgghdr_s: Hasstruct i_systypes d_socket i_sysuio Setvar
?MAKE: -pick add $@ %<
?S:d_msgghdr_s:
?S: This variable conditionally defines the HAS_STRUCT_MSGHDR symbol,
?S: which indicates that the struct msgghdr is supported.
?S:.
?C:HAS_STRUCT_MSGHDR:
?C: This symbol, if defined, indicates that the struct msgghdr
?C: is supported.
?C:.
?H:#$d_msgghdr_s HAS_STRUCT_MSGHDR /**/
?H:.
?LINT:set d_msgghdr_s
: Check for msgghdr support
echo " "
echo "Checking to see if your system supports struct msgghdr..." >&4
set d_msgghdr_s msgghdr $i_systypes sys/types.h $d_socket sys/socket.h $i_sysuio sys/uio.h
eval $hasstruct
case "$d_msgghdr_s" in
"$define") echo "Yes, it does." ;;
*) echo
"No, it doesn't." ;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_msgghdr_s.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_hypot: Inlibc
?MAKE: -pick add $@ %<
?S:d_hypot:
?S: This variable conditionally defines HAS_HYPOT if hypot is available
?S: for numerically stable hypotenuse function.
?S:.
?C:HAS_HYPOT:
```

?C: This symbol, if defined, indicates that the hypot routine is

?C: available to do the hypotenuse function.

?C:.

?H:#\$d\_hypot HAS\_HYPOT /\*\*/

?H:.

?LINT:set d\_hypot

: see if hypot exists

set hypot d\_hypot

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_hypot.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_endpent.U,v 3.0 1993/08/18 12:06:09 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_endpent.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:09 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_endpent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_endpent:

?S: This variable conditionally defines HAS\_ENDPROTOENT if endprotoent() is

?S: available to close whatever was being used for protocol queries.

?S:.

?C:HAS\_ENDPROTOENT:

?C: This symbol, if defined, indicates that the endprotoent() routine is

?C: available to close whatever was being used

for protocol queries.

?C:.

?H:#\$d\_endpent HAS\_ENDPROTOENT /\*\*/

?H:.

?LINT:set d\_endpent

: see if endprotoent exists

set endprotoent d\_endpent

eval \$inlibc

Found in path(s):



\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_endpent.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_truncl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_truncl:

?S: This variable conditionally defines the HAS\_TRUNCL symbol, which

?S: indicates to the C program that the truncl() routine is available

?S: to round long doubles towards zero. If copysignl is also present,

?S: we can emulate modfl.

?S:.

?C:HAS\_TRUNCL :

?C: This symbol, if defined, indicates that the truncl routine is

?C: available. If copysignl is also present we can emulate modfl.

?C:.

?H:#\$d\_truncl HAS\_TRUNCL /\*\*/

?H:.

?LINT:set d\_truncl

: see if truncl exists

set truncl d\_truncl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_truncl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: i\_neterrno.U,v \$

?RCS: Revision 3.0.1.3 1994/10/29 16:20:29 ram

?RCS: patch36: forgot to initialize 'val' to an empty value (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1994/08/29 16:22:10 ram

```

?RCS: patch32: removed spurious echo
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 07:02:05 ram
?RCS: patch30: created by ADO
?RCS:
?MAKE:i_neterrno: Inhdr +cc +ccflags rm_try Setvar
?MAKE: -pick add $@ %<
?S:i_neterrno:
?S: This variable
    conditionally defines the I_NET_ERRNO symbol, which
?S: indicates to the C program that <net/errno.h> exists and should
?S: be included.
?S:.
?C:I_NET_ERRNO:
?C: This symbol, if defined, indicates that <net/errno.h> exists and
?C: should be included.
?C:.
?H:#$i_neterrno I_NET_ERRNO /**/
?H:.
?LINT:set i_neterrno
: see if net/errno.h is available
val="
set net/errno.h val
eval $inhdr

```

: Unfortunately, it causes problems on some systems. Arrgh.

```

case "$val" in
$define)
    cat > try.c <<'EOM'
#include <stdio.h>
#include <errno.h>
#include <net/errno.h>
int func()
{
    return ENOTSOCK;
}
EOM
if $cc $ccflags -c try.c >/dev/null 2>&1; then
    echo "We'll be including <net/errno.h>." >&4
else
    echo "We won't be including <net/errno.h>." >&4
    val="$undef"
fi
$rm_try
;;
esac
set i_neterrno
eval $setvar

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_neterrno.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_netdb.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_netdb: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_netdb:

?S: This variable conditionally defines the I\_NETDB symbol, and indicates

?S: whether a C program should include <netdb.h>.

?S:.

?C:I\_NETDB:

?C: This symbol, if defined, indicates that <netdb.h> exists and

?C: should be included.

?C:.

?H:#\$i\_netdb I\_NETDB /\*\*/

?H:.

?LINT:set i\_netdb

: see if this is a netdb.h system

set netdb.h i\_netdb

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/i\_netdb.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strerror.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_strerror.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:46:36 ram

?RCS: patch61: created  
?RCS:  
?RCS:  
?MAKE:d\_strtod: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strtod:  
?S: This variable conditionally defines the HAS\_STRTOD symbol, which  
?S: indicates to the C program that the strtod() routine is available  
?S: to provide better numeric string conversion than atof().  
?S:.  
?C:HAS\_STRTOD (STRTOD):  
?C: This symbol, if defined,  
indicates that the strtod routine is  
?C: available to provide better numeric string conversion than atof().  
?C:.  
?H:#\$d\_strtod HAS\_STRTOD /\*\*/  
?H:.  
?LINT:set d\_strtod  
: see if strtod exists  
set strtod d\_strtod  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_strtod.U

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2016 Dagfinn Ilmari Mannsker & H.Merijn Brand  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?X:  
?X: This unit produces a variable that is intended to be eval'ed in  
?X: order to define/undefine a symbol. A consistency check is made  
?X: regarding any previous value and a warning is issued if there  
?X: is any discrepancy.  
?X:  
?X: To use it, say:  
?X: set d\_siginfo\_si\_errno siginfo\_t int si\_errno \$d\_sigaction signal.h  
?X: eval \$hasfield\_t;  
?X:  
?MAKE:Hasfield\_t: test Compile rm\_try Setvar  
?MAKE: -pick add \$@ %<  
?LINT:define hasfield\_t  
?S:hasfield\_t:  
?S: Internal macro for Configure  
?S:.

```

?V:hasfield_t:
?T:varname struct type field
: Define hasfield_t macro for Configure internal use
hasfield_t='varname=$1; struct=$2; type=$3; field=$4; shift; shift; shift; shift;
while $test $# -ge 2; do
    case
"$1" in
$define) echo "#include <$2>";;
    esac ;
    shift 2;
done > try.c;
echo "int main () { $struct foo; $type bar = foo.$field; }" >> try.c;
set try;
if eval $compile; then
    val="$define";
else
    val="$undef";
fi;
set $varname;
eval $setvar;
$rm_try'

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/Hasfield_t.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: nlist_pfx.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: nlist_pfx.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:26:18 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:25 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:nlist_pfx nlist_fnd: cat test Myread Oldconfig libnlist \
+cc +ccflags
?MAKE: -pick add $@ %<
?S:nlist_pfx:

```

?S: This variable holds any characters which precede the symbol name

?S: when doing an nlist search.

?S:.

?S:nlist\_fnd:

?S: This variable holds the member of the nlist structure which is

?S: nonzero if an nlist search succeeds. Presently, it is always "n\_value".

?S:.

?C:NLIST\_PREFIX:

?C: This manifest constant holds the string of characters which should

?C: precede the symbol name when doing an nlist search.

?C:.

?C:NLIST\_FOUND:

?C: This manifest constant holds the member of the nlist structure which

?C: is nonzero if an nlist search succeeds.

?C:.

?H:#define NLIST\_PREFIX \$nlist\_pfx /\*\*/

?H:#define NLIST\_FOUND \$nlist\_fnd /\*\*/

?H:.

?F:!nlisttest

?T:nlist\_loc

: Nose around for nlist stuff

echo " "

echo "Checking out nlist stuff..." >&4

\$cat >nlisttest.c <<'EOCP'

#include <stdio.h>

#include <nlist.h>

main(argc, argv)

int argc;

char \*\*argv;

{

int (\*loc)();

extern int hereIam();

static struct nlist nl[] = {

{ "IamNotFound", 0 },

{ "hereIam", 0 },

{ "\_hereIam", 0 },

{ ".hereIam", 0 },

{ "", 0 }

};

loc = hereIam;

if(argc == 1) {

printf("%ld\n", loc);}

else {

int i;

```

int rc;

if(nlist("./nlisttest",
nl) == -1) exit(-1);
i = argv[1][0] - '0';
printf("%d %d %d\n", nl[i].n_name, nl[i].n_type, nl[i].n_value);
}
exit(0);}

int hereIam() {

return;}
EOCP
nlist_fnd=n_value
if $cc $ccflags -o nlisttest nlisttest.c $libnlist >/dev/null 2>&1 ; then
set `./nlisttest`
nlist_loc=$1

set `./nlisttest 0`
if $test "$3" = "0" ; then
echo "$nlist_fnd is 0 if nlist() fails, as I expected."
else
$cat <<EOM
Hello, Jim. We have just discovered that $nlist_fnd was nonzero on an
nlist() lookup failure! Your mission, should you choose to accept it, is to
edit either config.sh (to provide a Good value for nlist_fnd) or The Code
(to find an alternative to NLIST_FOUND), and reporting the full details of
your success to the MetaConfig Police. Of course, should you fail...
EOM
nlist_fnd="/* Blech! */ /*"
fi

set `./nlisttest 1`
if $test "$nlist_loc" = "$3" ; then
echo "Symbols are stored with no initial characters."
nlist_pfx=
else
set `./nlisttest 2`
if
$test "$nlist_loc" = "$3" ; then
echo "Symbols are stored with an initial underscore."
nlist_pfx=_
else
set `./nlisttest 3`
if $test "$nlist_loc" = "$3" ; then
echo "Symbols are stored with an initial dot."
nlist_pfx=.
else

```

\$cat <<EOM

I can't figure out the symbol prefix!

You get to edit config.sh and fix 'nlist\_pfx' (Configure will let you do this at the end of its configuration questions), or config.h and fix the value of the NLIST\_PREFIX symbol.

EOM

```
nlist_pfx="/* Blech! */ /*"
```

```
fi
```

```
fi
```

```
fi
```

```
else
```

```
$cat <<EOM
```

I can't get the nlist test program working!

You get to edit config.sh and fix 'nlist\_pfx' (Configure will let you do this at the end of its configuration questions) and 'nlist\_fnd', or config.h and fix the value of the NLIST\_PREFIX and NLIST\_FOUND symbols.

EOM

```
nlist_pfx="/* Blech! */ /*"
```

```
nlist_fnd="/* Blech! */ /*"
```

```
fi
```

Found in path(s):

```
*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/nlist_pfx.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS: 2023 Tony Cook & H.Merijn Brand

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_syscallproto: Hasproto i\_unistd i\_sysyscall

?MAKE: -pick add \$@ %<

?S:d\_syscallproto:

?S: This variable conditionally defines the HAS\_SYSCALL\_PROTO symbol,

?S: which indicates to the C program that the system provides

?S: a prototype for the syscall() function. Otherwise, it is

?S: up to the program to supply one.

?S:.

?C:HAS\_SYSCALL\_PROTO:

?C: This symbol, if defined, indicates that the system provides

?C: a prototype for the syscall() function. Otherwise, it



```
is up
?C: to the program to supply one. Good guesses are
?C: extern int syscall(int, ...);
?C: extern int syscall(long, ...);
?C:.
?H:#$d_syscallproto HAS_SYSCALL_PROTO /**/
?H:.
?LINT:set d_syscallproto
: see if prototype for syscall is available
echo " "
set d_syscallproto syscall $i_unistd unistd.h $i_syssyscall sys/syscall.h
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_syscallproto.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1998 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_atolf: Inlibc
?MAKE: -pick add $@ %<
?S:d_atolf:
?S: This variable conditionally defines the HAS_ATOLF symbol, which
?S: indicates to the C program that the atolf() routine is available.
?S:.
?C:HAS_ATOLF:
?C: This symbol, if defined, indicates that the atolf routine is
?C: available to convert strings into long doubles.
?C:.
?H:#$d_atolf HAS_ATOLF /**/
?H:.
?LINT:set d_atolf
: see if atolf exists
set atolf d_atolf
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/atolf.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_systimes.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```

?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_systimes.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:39 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_systimes: Inhdr
?MAKE: -pick add $@ %<
?S:i_systimes:
?S: This variable conditionally defines the I_SYS_TIMES symbol, and indicates
?S: whether a C program should include <sys/times.h>.
?S:.
?C:I_SYS_TIMES (I_SYSTIMES):
?C: This symbol, if defined, indicates to the C program that it should
?C: include <sys/times.h>.
?C:.
?H:#$i_systimes I_SYS_TIMES /**/
?H:.
?LINT:set
i_systimes
: see if this is a sys/times.h system
set sys/times.h i_systimes
eval $inhdr

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/i_systimes.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: myhostname.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 16:15:55 ram

```

?RCS: patch61: improved hostname lookup by using ypmatch when NIS is used

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:25:43 ram

?RCS: patch36: call ./xenix explicitly instead of relying on PATH

?RCS: patch36: now uses new Tr unit to convert to/from lowercase

?RCS:

?RCS: Revision 3.0.1.1 1994/06/20 07:06:20 ram

?RCS: patch30: now a little more clever for domain name guessing

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:18 ram

?RCS:

Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:myhostname phostname mydomain: contains sed test Myread Oldconfig \  
 Guess Loc awk echo sort uniq +usrinc rm hostcat Tr osname

?MAKE: -pick add \$@ %<

?S:myhostname (hostname):

?S: This variable contains the eventual value of the MYHOSTNAME symbol,  
 ?S: which is the name of the host the program is going to run on.  
 ?S: The domain is not kept with hostname, but must be gotten from mydomain.  
 ?S: The dot comes with mydomain, and need not be supplied by the program.  
 ?S:.

?S:mydomain:

?S: This variable contains the eventual value of the MYDOMAIN symbol,  
 ?S: which is the domain of the host the program is going to run on.  
 ?S: The domain must be appended to myhostname to form a complete host name.  
 ?S: The dot comes with mydomain, and need not be supplied by the program.  
 ?S:.

?S:phostname:

?S: This variable contains the eventual value of the PHOSTNAME symbol,  
 ?S: which is a command that can be fed to popen() to get the host name.  
 ?S: The program  
 should probably not presume that the domain is or isn't  
 ?S: there already.  
 ?S:.

?C:MYHOSTNAME (HOSTNAME):

?C: This symbol contains name of the host the program is going to run on.  
 ?C: The domain is not kept with hostname, but must be gotten from MYDOMAIN.  
 ?C: The dot comes with MYDOMAIN, and need not be supplied by the program.  
 ?C: If gethostname() or uname() exist, MYHOSTNAME may be ignored. If MYDOMAIN  
 ?C: is not used, MYHOSTNAME will hold the name derived from PHOSTNAME.  
 ?C:.

?C:MYDOMAIN:

?C: This symbol contains the domain of the host the program is going to  
 ?C: run on. The domain must be appended to HOSTNAME to form a complete  
 ?C: host name. The dot comes with MYDOMAIN, and need not be supplied by  
 ?C: the program. If the host name is derived from PHOSTNAME, the domain  
 ?C: may or may not already be there, and the program should check.

```

?C:.
?H:#define MYHOSTNAME "$myhostname" /**/
?H:#define MYDOMAIN "$mydomain" /**/
?H:.
?T:cont i tans tmp_re file
: now get the host name
echo
" "
echo "Figuring out host name..." >&4
case "$myhostname" in
") cont=true
echo 'Maybe "hostname" will work...'
if tans=`sh -c hostname 2>&1` ; then
myhostname=$tans
phostname=hostname
cont=""
fi
;;
*) cont="";;
esac
if $test "$cont"; then
if ./xenix; then
echo 'Oh, dear. Maybe "/etc/systemid" is the key...'
if tans=`cat /etc/systemid 2>&1` ; then
myhostname=$tans
phostname='cat /etc/systemid'
echo "Whadyaknow. Xenix always was a bit strange..."
cont=""
fi
elif $test -r /etc/systemid; then
echo "(What is a non-Xenix system doing with /etc/systemid?)"
fi
fi
if $test "$cont"; then
echo 'No, maybe "uuname -l" will work...'
if tans=`sh -c 'uuname -l' 2>&1` ; then
myhostname=$tans
phostname='uuname -l'
else
echo 'Strange. Maybe "uname -n" will work...'
if tans=`sh -c 'uname -n' 2>&1` ; then
myhostname=$tans
phostname='uname -n'
else
echo 'Oh well, maybe I can mine it out of whoami.h...'
if tans=`sh -c $contains' sysname $usrinc/whoami.h'
2>&1` ; then
myhostname=`echo "$tans" | $sed 's/^\.*(.)"/^1/'

```

```

phostname="sed -n -e ""/sysname/s/^.*\\(.*)\\1/{"" -e p -e q -e '}' <$/usrinc/whoami.h"
else
case "$myhostname" in
") echo "Does this machine have an identity crisis or something?"
phostname="";
*)
echo "Well, you said $myhostname before..."
phostname='echo $myhostname';;
esac
fi
fi
fi
fi
case "$myhostname" in
") myhostname=noname ;;
esac
: you do not want to know about this
set $myhostname
myhostname=$1

: verify guess
if $test "$myhostname" ; then
dflt=y
rp='Your host name appears to be "$myhostname"." Right?'
./myread
case "$ans" in
y*) ;;
*) myhostname="";;
esac
fi

: bad guess or no guess
while $test "X$myhostname" = X ; do
dflt=""
rp="Please type the (one word) name of your host:"
./myread
myhostname="$ans"
done

: translate upper to lower if necessary
case "$myhostname" in
*[A-Z]*)
echo "(Normalizing case in your host name)"
myhostname=`echo
$myhostname | ./tr '[A-Z]' '[a-z]'`
;;
esac

```

?X: Do not ask for domain name if this is not used later on. In that

?X: case, the hostname may keep its domain name, but it doesn't matter.

```
@if MYDOMAIN || mydomain
```

```
case "$myhostname" in
```

```
 *.* )
```

```
  dflt=`expr "X$myhostname" : "X[^.]*\(\..*\)`
```

```
  myhostname=`expr "X$myhostname" : "X\([^.*]\).`
```

```
  echo "(Trimming domain name from host name--host name is now $myhostname)"
```

```
  ;;
```

```
*) case "$mydomain" in
```

```
  ")
```

?X:

?X: There is currently no way to say we do not want hostcat if mydomain is not

?X: used. One way to achieve that would be to put that code in a mydomain.U

?X: unit. However, we want to stick the sanity checks right after the domain

?X: name computation, or if none is done, right after the hostname computation.

?X:

```
{
```

?X: If we use NIS, try ypmatch.

```
  test "X$hostcat" = "Xypcat hosts" &&
```

```
  ypmatch "$myhostname" hosts 2>/dev/null \
```

```
  $sed -e 's/[ ]*#.*//; s/$/ /' > hosts && \
```

```
  $stest -s hosts
```

```
  } || {
```

?X: Extract only

the relevant hosts, reducing file size,

?X: remove comments, insert trailing space for later use.

```
  $hostcat | $sed -n -e "s/[ ]*#.*//; s^\$/ /
```

```
  /[ ]$myhostname[ ]/p" > hosts
```

```
  }
```

```
  tmp_re="[ ]"
```

```
  $stest x`$awk "/[0-9].*[ ]$myhostname$tmp_re/ { sum++ }
```

```
  END { print sum }" hosts` = x1 || tmp_re="[ ]"
```

```
  dflt=`$awk \
```

```
  "/[0-9].*[ ]$myhostname$tmp_re/ {for(i=2; i<=NF;i++) print \\$i}" \
```

```
  hosts | $sort | $uniq | \
```

```
  $sed -n -e "s/$myhostname\.\([^-a-zA-Z0-9_]\)\1/p"
```

```
  case ` $echo X$dflt` in
```

```
  X*\ *) echo "(Several hosts in /etc/hosts matched hostname)"
```

```
  dflt=.
```

```
  ;;
```

?X: There is no /etc/hosts on os390

```
  X.)
```

```
  if $test -f /etc/hosts; then
```

```
    echo "(You do not have fully-qualified names in /etc/hosts)"
```

```
  else
```

```
    echo "(I cannot locate a hosts database anywhere)"
```

```
  fi
```

```

;;
esac
case "$dflt" in
.)
tans=`./loc resolv.conf X /etc /usr/etc`
if $test -f "$tans"; then
echo "(Attempting domain name extraction from $tans)"
?X: Look for either a search
or a domain directive.
dflt=`$sed -n -e 's// /g' \
-e 's/^search *([ ]*).*/\1/p' $tans \
| ./tr '[A-Z]' '[a-z]' 2>/dev/null`
case "$dflt" in
.) dflt=`$sed -n -e 's// /g' \
-e 's/^domain *([ ]*).*/\1/p' $tans \
| ./tr '[A-Z]' '[a-z]' 2>/dev/null`
;;
esac
fi
;;
esac
case "$dflt" in
.) echo "(No help from resolv.conf either -- attempting clever guess)"
dflt=`sh -c domainname 2>/dev/null`
case "$dflt" in
") dflt='.';
.nis.*|.yp.*|.main.*) dflt=`echo $dflt | $sed -e 's/^\.[^.]*/'`;
esac
;;
esac
case "$dflt${osname}" in
.os390)
file="//SYS1.TCPPARMS(TCPDATA)"
echo "(Attempting domain name extraction from $file)"
dflt=`awk '/^DOMAINORIGIN/ {print $2}' "$file" 2>/dev/null`
;;
esac
case "$dflt" in
.) echo "(Lost all hope -- silly guess then)"
dflt='.nonet'
;;
esac
$rm -f hosts
;;
*) dflt="$mydomain";
esac;;
esac
echo " "

```

```
rp="What is your domain name?"
```

```
.  
./myread  
tans="$ans"  
case "$ans" in  
") ;;  
.*) ;;  
) tans=".${ans}";;  
esac  
mydomain="$tans"
```

```
: translate upper to lower if necessary  
case "$mydomain" in  
*[A-Z]*)  
echo "(Normalizing case in your domain name)"  
mydomain=`echo $mydomain | ./tr '[A-Z]' '[a-z]`  
;;  
esac
```

```
@end
```

```
: a little sanity check here
```

```
case "$phostname" in  
") ;;  
*)  
case ` $phostname | ./tr '[A-Z]' '[a-z]^` in  
$myhostname$mydomain|$myhostname) ;;  
*)  
case "$phostname" in  
sed*)  
echo "(That doesn't agree with your whoami.h file, by the way.)"  
;;  
*)  
echo "(That doesn't agree with your $phostname command, by the way.)"  
;;  
esac  
;;  
esac  
;;  
esac  
;;  
esac
```

```
Found in path(s):
```

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/myhostname.U
```

```
No license file was found, but licenses were detected in source scan.
```

```
?RCS: $Id: d_sethostent_r.U,v 0RCS:
```

```
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
```

```
?RCS:
```



?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
?RCS:  
?MAKE:d\_sethostent\_r sethostent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_netdb extern\_C  
?MAKE: -pick add \$@ %<  
?S:d\_sethostent\_r:  
?S: This variable conditionally defines the HAS\_SETHOSTENT\_R symbol,  
?S: which indicates to the C program that the sethostent\_r()  
?S: routine is available.  
?S:.  
?S:sethostent\_r\_proto:  
?S: This variable encodes the prototype of sethostent\_r.  
?S: It is zero if d\_sethostent\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_sethostent\_r  
?S: is defined.  
?S:.  
?C:HAS\_SETHOSTENT\_R:  
?C: This symbol, if defined, indicates that the sethostent\_r routine  
?C: is  
available to sethostent re-entrantly.  
?C:.  
?C:SETHOSTENT\_R\_PROTO:  
?C: This symbol encodes the prototype of sethostent\_r.  
?C: It is zero if d\_sethostent\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_sethostent\_r  
?C: is defined.  
?C:.  
?H:#\$d\_sethostent\_r HAS\_SETHOSTENT\_R /\*\*/  
?H:#define SETHOSTENT\_R\_PROTO \$sethostent\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_sethostent\_r\_proto  
: see if sethostent\_r exists  
set sethostent\_r d\_sethostent\_r  
eval \$inlibc  
case "\$d\_sethostent\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"  
case "\$d\_sethostent\_r\_proto:\$usethreads" in  
":define") d\_sethostent\_r\_proto=define  
set d\_sethostent\_r\_proto sethostent\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_sethostent\_r\_proto" in  
define)

```

case "$sethostent_r_proto" in
"|0) try='int sethostent_r(int, struct hostent_data*);'
./protochk "$extern_C $try" $hdrs && sethostent_r_proto=I_ID ;;
esac
case "$sethostent_r_proto" in
"|0) try='void
sethostent_r(int, struct hostent_data*);'
./protochk "$extern_C $try" $hdrs && sethostent_r_proto=V_ID ;;
esac
case "$sethostent_r_proto" in
"|0) d_sethostent_r=undef
sethostent_r_proto=0
echo "Disabling sethostent_r, cannot determine prototype." >&4 ;;
*) case "$sethostent_r_proto" in
REENTRANT_PROTO*) ;;
*) sethostent_r_proto="REENTRANT_PROTO_$sethostent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "sethostent_r has no prototype, not using it." >&4 ;;
esac
d_sethostent_r=undef
sethostent_r_proto=0
;;
esac
;;
*) sethostent_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_sethostent_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_dbl\_dig.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

```

?RCS:
?RCS: $Log: d_dbl_dig.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:07:28 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_dbl_dig: Myread contains cat rm Setvar i_limits i_float \
  cppstdin cppflags cppminus
?MAKE: -pick add $@ %<
?S:d_dbl_dig:
?S: This variable conditionally defines d_dbl_dig if this system's
?S: header files provide DBL_DIG, which is the number of significant
?S: digits
  in a double precision number.
?S:.
?C:HAS_DBL_DIG:
?C: This symbol, if defined, indicates that this system's <float.h>
?C: or <limits.h> defines the symbol DBL_DIG, which is the number
?C: of significant digits in a double precision number. If this
?C: symbol is not defined, a guess of 15 is usually pretty good.
?C:.
?H:#$d_dbl_dig HAS_DBL_DIG /**/
?H:.
?F:!dbl_dig.c
?LINT:set d_dbl_dig
: See if number of significant digits in a double precision number is known
echo " "
$cat >dbl_dig.c <<EOM
#$i_limits I_LIMITS
#$i_float I_FLOAT
#ifdef I_LIMITS
#include <limits.h>
#endif
#ifdef I_FLOAT
#include <float.h>
#endif
#ifdef DBL_DIG
printf("Contains DBL_DIG");
#endif
EOM
$cppstdin $cppflags $cppminus < dbl_dig.c >dbl_dig.E 2>/dev/null
if $contains 'DBL_DIG' dbl_dig.E >/dev/null 2>&1; then
  echo "DBL_DIG found." >&4
  val="$define"
else
  echo "DBL_DIG NOT found." >&4
  val="$undef"
fi
$rm -f dbl_dig.?

```

```
set d_dbl_dig
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_dbl_dig.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: sysman.U,v $
```

```
?RCS: Revision 3.0.1.2 1994/06/20 07:08:43 ram
```

```
?RCS: patch30: now explicitly states that /usr/man/man1 is the default
```

```
?RCS: patch30: added /usr/local/man/man1 to the search list
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1993/09/13 16:13:50 ram
```

```
?RCS: patch10: added support for /local/man/man1 (WAD)
```

```
?RCS: patch10: added temporary syspath variable to cut down on line length
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:09:55 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:sysman: test
```

```
Loc Oldconfig
```

```
?MAKE: -pick add $@ %<
```

```
?S:sysman:
```

```
?S: This variable holds the place where the manual is located on this
```

```
?S: system. It is not the place where the user wants to put his manual
```

```
?S: pages. Rather it is the place where Configure may look to find manual
```

```
?S: for unix commands (section 1 of the manual usually). See mansrc.
```

```
?S:.
```

```
?T:syspath
```

```
: determine where manual pages are on this system
```

```
echo " "
```

```
case "$sysman" in
```

```
")
```

```
syspath="/usr/share/man/man1 /usr/man/man1"
```

```
syspath="$syspath /usr/man/mann /usr/man/man1 /usr/man/local/man1"
```

```
syspath="$syspath /usr/man/u_man/man1 /usr/share/man/man1"
```

```
syspath="$syspath /usr/catman/u_man/man1 /usr/man/l_man/man1"
```

```
syspath="$syspath /usr/local/man/u_man/man1 /usr/local/man/l_man/man1"
syspath="$syspath /usr/man/man.L /local/man/man1 /usr/local/man/man1"
sysman=`./loc . /usr/man/man1 $syspath`
;;
esac
if $test -d "$sysman"; then
  echo "System manual is in $sysman." >&4
else
  echo "Could not find manual pages in source form." >&4
fi
```

#### Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/sysman.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_bfd.U,v \$

?RCS:

?RCS: Copyright (c) 2014 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_bfd: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_bfd:

?S: This variable conditionally defines the I\_BFD symbol, and

?S: indicates whether a C program can include <bfd.h>.

?S:.

?C:I\_BFD:

?C: This symbol, if defined, indicates that <bfd.h> exists and

?C: can be included.

?C:.

?H:#\$i\_bfd I\_BFD /\*\*/

?H:.

?LINT:set i\_bfd

: see if this is a bfd.h system

set bfd.h i\_bfd

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_bfd.U

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?RCS: License or the Artistic License, as specified in the README file.

```

?RCS:
?MAKE:d_exp2: Inlibc
?MAKE: -pick add $@ %<
?S:d_exp2:
?S: This variable conditionally defines the HAS_EXP2 symbol, which
?S: indicates to the C program that the exp2() routine is available.
?S:.
?C:HAS_EXP2:
?C: This symbol, if defined, indicates that the exp2 routine is
?C: available to do the 2**x function.
?C:.
?H:#$d_exp2 HAS_EXP2 /**/
?H:.
?LINT:set d_exp2
: see if exp2 exists
set exp2 d_exp2
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_exp2.U

```

No license file was found, but licenses were detected in source scan.

```

case $CONFIG in
")
if test -f config.sh; then TOP=.;
elif test -f ../config.sh; then TOP=..;
elif test -f ../../config.sh; then TOP=../../;
elif test -f ../../../config.sh; then TOP=../../../;
elif test -f ../../../../config.sh; then TOP=../../../../../;
else
echo "Can't find config.sh."; exit 1
fi
. $TOP/config.sh
;;
esac
case "$0" in
*/*) cd `expr X$0 : 'X\(.*/\)` ;;
esac
echo "Extracting makedir (with variable substitutions)"
$spitshell >makedir <<!GROK!THIS!
$startsh
# $Id: makedir.sh,v 3.0.1.1 1994/01/24 14:00:08 ram Exp ram $
#
# Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
#
# You may redistribute only under the terms of the Artistic Licence,
# as specified in the README file that comes with the distribution.

```

```

# You may reuse parts of this distribution only within the terms of
# that same Artistic Licence; a copy of which may be found at the root
# of the source tree for dist 4.0.
#
# Original
Author: Larry Wall <lwall@netlabs.com>
#
# $Log: mkdir.sh,v $
# Revision 3.0.1.1 1994/01/24 14:00:08 ram
# patch16: changed top ln-style config.sh lookup into test-style one
#
# Revision 3.0 1993/08/18 12:04:38 ram
# Baseline for dist 3.0 netwide release.
#

export PATH || (echo "OOPS, this isn't sh. Desperation time. I will feed myself to sh."; sh $0; kill $$)

case $# in
0)
    $echo "mkdir pathname filenameflag"
    exit 1
    ;;
esac

: guarantee one slash before 1st component
case $1 in
/*) ;;
*) set ./$1 $2 ;;
esac

: strip last component if it is to be a filename
case X$2 in
X1) set ` $echo $1 | $sed 's:(.*)/[^]*\$:1:\` ;;
*) set $1 ;;
esac

: return reasonable status if nothing to be created
if $test -d "$1" ; then
    exit 0
fi

list=""
while true ; do
    case $1 in
    /*)
        list="$1 $list"
        set `echo $1 | $sed 's:(.*)/:1:\`
    ;;

```

```

*)
break
;;
esac
done

set \list

for dir do
  $mkdir \${dir} >/dev/null 2>&1
done
!GROK!THIS!
$unicefix
mkdir
chmod +x mkdir

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/lib/mkdir.SH

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_fcntl.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_fcntl.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:18 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_fcntl: h_fcntl h_sysfile +i_sysfile Inhdr Setvar
?MAKE: -pick add $@ %<
?S:i_fcntl:
?S: This variable controls the value of I_FCNTL (which tells
?S: the C program to include <fcntl.h>).
?S:
?C:I_FCNTL (HDR_O_STUFF FCNTL):
?C: This manifest constant tells the C program to include <fcntl.h>.
?C:
?H:#$i_fcntl I_FCNTL /**/
?H:
?T:val
?X:

```



```

Make line lists +i_sysfile to ensure tests for <sys/file.h> will be
?X: conducted prior tests for <fcntl.h>, hence making sure the h_sysfile
?X: variable is correctly set when we reach that unit.
?LINT:set i_fcntl
?LINT:use i_sysfile
?LINT:change h_fcntl
: see if fcntl.h is there
val=""
set fcntl.h val
eval $inhdr

: see if we can include fcntl.h
case "$val" in
"$define")
echo " "
if $h_fcntl; then
val="$define"
echo "We'll be including <fcntl.h>." >&4
else
val="$undef"
if $h_sysfile; then
echo "We don't need to include <fcntl.h> if we include <sys/file.h>." >&4
else
echo "We won't be including <fcntl.h>." >&4
fi
fi
;;
*)
h_fcntl=false
val="$undef"
;;
esac
set i_fcntl
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_fcntl.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Oldconfig.U,v \$  
?RCS: Revision 3.0.1.10 1997/02/28 15:06:39 ram  
?RCS: patch61: added support for src.U  
?RCS: patch61: new OSNAME define  
?RCS: patch61: can now sense new OSes  
?RCS:  
?RCS: Revision 3.0.1.9 1995/07/25 13:40:51 ram  
?RCS: patch56: now knows about OS/2 platforms  
?RCS:  
?RCS: Revision 3.0.1.8 1995/05/12 12:04:18 ram  
?RCS: patch54: config.sh reload logic now knows about new -K switch  
?RCS: patch54: cleaned up and extended osvers for DEC OSF/1 (ADO)  
?RCS: patch54: added MachTen detection  
(ADO)  
?RCS:  
?RCS: Revision 3.0.1.7 1995/02/15 14:13:41 ram  
?RCS: patch51: adapted osvers computation for AIX (ADO)  
?RCS:  
?RCS: Revision 3.0.1.6 1995/01/30 14:27:15 ram  
?RCS: patch49: unit Options.U now exports file optdef.sh, not a variable  
?RCS: patch49: update code for myuname changed (WED)  
?RCS:  
?RCS: Revision 3.0.1.5 1995/01/11 15:15:36 ram  
?RCS: patch45: added quotes around the INITPROG variable (ADO)  
?RCS: patch45: allows variable overriding after config file loading  
?RCS:  
?RCS: Revision 3.0.1.4 1994/10/29 15:57:05 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS: patch36: merged with the version used for perl5's Configure (ADO)  
?RCS:  
?RCS: Revision 3.0.1.3 1994/05/06 14:24:17 ram  
?RCS: patch23: added support for osf1 hints  
?RCS: patch23: new support for solaris and i386 systems (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/01/24 14:05:02 ram  
?RCS: patch16: added post-processing on myuname for Xenix targets  
?RCS: patch16: message proposing config.sh  
defaults made consistent  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 15:56:32 ram  
?RCS: patch10: force use of config.sh when -d option is used (WAD)  
?RCS: patch10: complain about non-existent hint files (WAD)  
?RCS: patch10: added Options dependency for fastread variable  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:12 ram  
?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit tries to remember what we did last time we ran Configure, mostly  
 ?X: for the sake of setting defaults.

?X:

?MAKE:Oldconfig hint myuname osname osvers: Instruct Myread Checkcc \  
 Mksymlinks Loc Options Tr src trnl ln uname sh awk sed test cat grep \  
 rm lns tr n c contains targetarch

?MAKE: -pick wipe \$@ %<

?S:myuname:

?S: The output of 'uname -a' if available, otherwise the hostname. On Xenix,  
 ?S: pseudo variables assignments in the output are stripped, thank you. The  
 ?S: whole thing is then lower-cased.

?S:.

?S:hint:

?S: Gives the type of hints used for previous answers. May be one of  
 ?S: "default",  
 "recommended" or "previous".

?S:.

?S:osname:

?S: This variable contains the operating system name (e.g. sunos,  
 ?S: solaris, hpux, etc.). It can be useful later on for setting  
 ?S: defaults. Any spaces are replaced with underscores. It is set  
 ?S: to a null string if we can't figure it out.

?S:.

?S:osvers:

?S: This variable contains the operating system version (e.g.  
 ?S: 4.1.3, 5.2, etc.). It is primarily used for helping select  
 ?S: an appropriate hints file, but might be useful elsewhere for  
 ?S: setting defaults. It is set to " if we can't figure it out.  
 ?S: We try to be flexible about how much of the version number  
 ?S: to keep, e.g. if 4.1.1, 4.1.2, and 4.1.3 are essentially the  
 ?S: same for this package, hints files might just be os\_4.0 or  
 ?S: os\_4.1, etc., not keeping separate files for each little release.

?S:.

?C:OSNAME:

?C: This symbol contains the name of the operating system, as determined  
 ?C: by Configure. You shouldn't rely on it too much; the specific  
 ?C: feature  
 tests from Configure are generally more reliable.

?C:.

?C:OSVERS:

?C: This symbol contains the version of the operating system, as determined  
 ?C: by Configure. You shouldn't rely on it too much; the specific  
 ?C: feature tests from Configure are generally more reliable.

?C:.

?H:#define OSNAME "\$osname" /\*\*/  
 ?H:#define OSVERS "\$osvers" /\*\*/

```

?H:
?F:!config.sh
?T:tmp tmp_n tmp_c tmp_sh file
?T:xxxxfile xxxfile xxfile xfile hintfile newmyuname
?T:tans _ isesix INITPROG DJGPP has_uname
?D:osname=""
?LINT:change n c sh
?LINT:extern hostarch
?LINT:change hostarch
: Determine the name of the machine
myuname=`$uname -a 2>/dev/null`
$test -z "$myuname" && myuname=`hostname 2>/dev/null`
?X: Special mention for Xenix, whose 'uname -a' gives us output like this:
?X: sysname=XENIX
?X: nodename=whatever
?X: release=2.3.2 .. etc...
?X: Therefore, we strip all this variable assignment junk and remove all the
?X: new lines to keep the myuname variable sane... --RAM
myuname=`echo $myuname | $sed -e
's/^[^=]*=/' -e 's/\\//g' | \
./tr '[A-Z]' '[a-z]' | $tr $trnl ' '`
?X: Save the value we just computed to reset myuname after we get done here.
newmyuname="$myuname"
$test -f "$uname$_exe" && has_uname=y

: Guessing of the OS name -- half the following guesses are probably wrong...
: If you have better tests or hints, please send them to the metaconfig
: authors and to <MAINTLOC>
$test -f /irix && osname=irix
$test -f /xenix && osname=sco_xenix
$test -f /dynix && osname=dynix
$test -f /dnix && osname=dnix
$test -f /lynx.os && osname=lynxos
$test -f /unicos && osname=unicos && osvers=`$uname -r`
$test -f /unicosmk && osname=unicosmk && osvers=`$uname -r`
$test -f /unicosmk.ar && osname=unicosmk && osvers=`$uname -r`
$test -f /bin/mips && /bin/mips && osname=mips
$test -d /NextApps && set X `hostinfo | $grep 'NeXT Mach.*:' | \
$sed -e 's:/://' -e 's/\\/_/'` && osname=next && osvers=$4
$test -d /usr/apollo/bin && osname=apollo
$test -f /etc/saf/_sactab && osname=svr4
$test -d /usr/include/minix
&& osname=minix
$test -f /system/gnu_library/bin/ar.pm && osname=vos
if $test -d /MachTen -o -d /MachTen_Folder; then
?X: MachTen uname -a output looks like
?X: xxx 4 0.0 Macintosh
?X: MachTen /sbin/version output looks like

```

?X: MachTen 4.0 Mon Aug 28 10:18:00 1995

?X: MachTen 3.x had the 'version' command in /usr/etc/version.

```
osname=machten
if $test -x /sbin/version; then
  osvers=`/sbin/version | $awk '{print $2}' |
  $sed -e 's/[A-Za-z]$//'^
elif $test -x /usr/etc/version; then
  osvers=`/usr/etc/version | $awk '{print $2}' |
  $sed -e 's/[A-Za-z]$//'^
else
  osvers="$2.$3"
fi
fi
```

```
$test -f /sys/posix.dll &&
$test -f /usr/bin/what &&
set X `usr/bin/what /sys/posix.dll` &&
$test "$3" = UWIN &&
osname=uwin &&
osvers="$5"
```

?X: If we have uname, we already computed a suitable uname -a output, correctly

?X: formatted for Xenix, and it lies in \$myuname.

```
if $test "X$has_uname" != X; then
```

```
set X $myuname
shift
case "$5" in
  fps*) osname=fps ;;
  mips*)
    case "$4"
    in
      umips) osname=umips ;;
      *) osname=mips ;;
    esac;;
  [23]100) osname=mips ;;
  next*) osname=next ;;
```

?X: Interactive Unix.

```
i386*)
  tmp=`/bin/uname -X 2>/dev/null|awk '/3\,2v[45]/{ print $(NF) }'^
  if $test "$tmp" != "" -a "$3" = "3.2" -a -f /etc/systemid; then
    osname='sco'
    osvers=$tmp
  elif $test -f /etc/kconfig; then
    osname=isc
    if $test "$lns" = "$ln -s"; then
      osvers=4
    elif $contains _SYSV3 /usr/include/stdio.h > /dev/null 2>&1 ; then
      osvers=3
    elif $contains _POSIX_SOURCE /usr/include/stdio.h > /dev/null 2>&1 ; then
      osvers=2
```

```

fi
fi
tmp="
;;
?X: MS-DOS djgpp uname -a output looks like:
?X: ms-dos xxx 6 22 pc
?X: $1 is the "dos flavor" (need not be "ms-dos").
?X: $2 is the node name
?X: $3 and $4 are version/subversion
?X: $5 is always "pc", but that might not be unique to DJGPP.
?X: (e.g. Solaris_x86 has $5 = i86pc, which doesn't actually conflict,
?X: but it's close enough that I can easily imagine other vendors also
?X: using variants
?X: of pc* in $5.)
?X: The "DJGPP" environment variable is always set when djgpp is active.
pc*)
if $test -n "$DJGPP"; then
    osname=dos
    osvers=djgpp
fi
;;
esac
case "$1" in
aix) osname=aix
?X: aix 4.1 uname -a output looks like
?X: AIX foo 1 4 000123456789
?X: where $4 is the major release number and $3 is the (minor) version.
?X: More detail on the version is available with the oslevel command.
?X: in 3.2.x, it output a string (see case statements below). In 4.1,
?X: it puts out something like 4.1.1.0
tmp=`( oslevel) 2>/dev/null || echo "not found") 2>&1`
case "$tmp" in
'not found') osvers="$4"."$3" ;;
'<3240'|<>3240') osvers=3.2.0 ;;
'<3240'|>3240'|<3250'|<>3250') osvers=3.2.4 ;;
'<3250'|>3250') osvers=3.2.5 ;;
*) osvers=$tmp;;
esac
;;
bsd386) osname=bsd386
osvers=`$uname -r`
;;
cygwin*) osname=cygwin
osvers="$3"
;;
*dc.osx) osname=dcosx
osvers="$3"
;;

```

```

dnix) osname=dnix
osvers="$3"
;;
domainos) osname=apollo
osvers="$3"
;;
dgux)
osname=dgux
osvers="$3"
;;
?X: uname -a returns
?X: DYNIX/ptx xxx 4.0 V4.1.2 i386
dynixptx*) osname=dynixptx
osvers=`echo "$4"|sed 's/^v//'^
;;
freebsd) osname=freebsd
osvers="$3" ;;
genix) osname=genix ;;
?X: HP-UX uname -a gives something like
?X: HP-UX foobar B.10.20 A 9000/735 2016483812 two-user license
?X: Preserve the full 10.20 string instead of the previous plain '10'.
?X: Thanks to Graham Barr. --AD 6/30/1998
hp*) osname=hpux
osvers=`echo "$3" | $sed 's,.*\.[0-9]*\.[0-9]*),\1,^
;;
irix*) osname=irix
case "$3" in
4*) osvers=4 ;;
5*) osvers=5 ;;
*) osvers="$3" ;;
esac
;;
linux) osname=linux
case "$3" in
*) osvers="$3" ;;
esac
;;
MiNT) osname=mint
;;
netbsd*) osname=netbsd
osvers="$3"
;;
news-os) osvers="$3"
case "$3" in
4*) osname=newsos4 ;;
*) osname=newsos ;;
esac
;;

```

```

next*) osname=next ;;
nonstop-ux) osname=nonstopux ;;
openbsd) osname=openbsd
    osvers="$3"
    ;;
POSIX-BC | posix-bc
) osname=posix-bc
    osvers="$3"
    ;;
powerux | power_ux | powermax_os | powermaxos | \
powerunix | power_unix) osname=powerux
    osvers="$3"
    ;;
qnx) osname=qnx
    osvers="$4"
    ;;
solaris) osname=solaris
    case "$3" in
    5*) osvers=`echo $3 | $sed 's/^5/2/g'` ;;
    *) osvers="$3" ;;
    esac
    ;;
sunos) osname=sunos
    case "$3" in
    5*) osname=solaris
        osvers=`echo $3 | $sed 's/^5/2/g'` ;;
    *) osvers="$3" ;;
    esac
    ;;
titanos) osname=titanos
    case "$3" in
    1*) osvers=1 ;;
    2*) osvers=2 ;;
    3*) osvers=3 ;;
    4*) osvers=4 ;;
    *) osvers="$3" ;;
    esac
    ;;
ultrix) osname=ultrix
    osvers="$3"
    ;;
osf1|mfs+) case "$5" in
    alpha)
?X: DEC OSF/1 myuname -a output looks like: osf1 xxxx t3.2 123.4 alpha
?X: where the version number can be something like [xvt]n.n
        osname=dec_osf
?X: sizer knows the minor minor version: the letter
        osvers=`sizer -v | awk '{print $3}' | \

```



```

./tr '[A-Z]' '[a-z]' | sed 's/^[xvt]//'^
case "$osvers" in
[1-9].[0-9]*) ;;
*) osvers=`echo
"$3" | sed 's/^[xvt]//'^ ;;
esac
;;
hp*) osname=hp_osf1 ;;
mips) osname=mips_osf1 ;;
?X: hp and mips were unsupported Technology Releases -- ADO, 24/10/94
esac
;;
unixware) osname=svr5
osvers="$4"
;;
uts) osname=uts
osvers="$3"
;;
vos) osvers="$3"
;;
$2) case "$osname" in
*isc*) ;;
*freebsd*) ;;
svr*)
: svr4.x or possibly later
case "svr$3" in
${osname}*)
osname=svr$3
osvers=$4
;;
esac
case "$osname" in
svr4.0)
: Check for ESIX
if $test -f /stand/boot ; then
eval `grep '^INITPROG=[a-z/0-9]*$' /stand/boot`
if $test -n "$INITPROG" -a -f "$INITPROG"; then
isesix=`strings -a $INITPROG | \
$grep 'ESIX SYSTEM V/386 Release 4.0`
if $test -n "$isesix"; then
osname=esix4
fi
fi
fi
;;
esac
;;
*) if $test -f /etc/systemid; then

```

```

osname=sco
set `echo $3 | $sed 's/\./ /g` $4
if $test -f $src/hints/sco_$1_$2_$3.sh; then
  osvers=$1.$2.$3
elif $test
-f $src/hints/sco_$1_$2.sh; then
  osvers=$1.$2
elif $test -f $src/hints/sco_$1.sh; then
  osvers=$1
fi
else
case "$osname" in
") : Still unknown. Probably a generic Sys V.
  osname="sysv"
  osvers="$3"
  ;;
esac
fi
;;
esac
;;
*) case "$osname" in
") : Still unknown. Probably a generic BSD.
  osname="$1"
  osvers="$3"
  ;;
esac
;;
esac
else
?X: Try to identify sony's NEWS-OS (BSD unix)
if $test -f /vmunix -a -f $src/hints/news_os.sh; then
(what /vmunix | UU/tr '[A-Z]' '[a-z]' > UU/kernel.what 2>&1
if $contains news-os UU/kernel.what >/dev/null 2>&1; then
  osname=news_os
fi
$rm -f UU/kernel.what
?X: Maybe it's OS/2 or DOS or something similar
elif $test -d c:/.; then
set X $myuname
osname=os2
osvers="$5"
fi
fi

: Try to determine whether config.sh was made on this system
case "$config_sh" in
")

```

?X: indentation wrong on purpose--RAM

```
dflt=n
case "$knowitall" in
")
if test -f ../config.sh; then
  if $contains
myuname= ../config.sh >/dev/null 2>&1; then
  eval "`$grep myuname= ../config.sh`"
  fi
if test "X$myuname" = "X$newmyuname"; then
  dflt=y
  fi
fi
;;
*) dflt=y;;
esac
```

: Get old answers from config file if it was generated on the same system

```
hint=default
if $test -f ../config.sh; then
echo " "
rp="I see a config.sh file. Shall I use it to set the defaults?"
. ./myread
case "$ans" in
n*|N*) echo "OK, I'll ignore it."
mv ../config.sh ../config.sh.old
myuname="$newmyuname"
;;
*) echo "Fetching default answers from your old config.sh file..." >&4
tmp_n="$n"
tmp_c="$c"
tmp_sh="$sh"
../config.sh
cp ../config.sh .
n="$tmp_n"
c="$tmp_c"
hint=previous
;;
esac
fi
```

?X: remember, case indentation is wrong--RAM

```
;;
*)
echo " "
echo "Fetching default answers from $config_sh..." >&4
tmp_n="$n"
tmp_c="$c"
tmp_sh="$sh"
```

```

cd ..
?X: preserve symbolic links, if any
cp $config_sh config.sh 2>/dev/null
chmod +w config.sh
. ./config.sh
cd UU
cp ../config.sh
.
n="$tmp_n"
c="$tmp_c"
hint=previous
;;
esac
?X: Older versions did not always set $sh.
case "$sh" in
") sh="$tmp_sh" ;;
esac
$test "$soverride" && . ./optdef.sh

: Restore computed paths
for file in $loclist $strylist; do
eval $file="\$_$file"
done

. ./checkcc
?X: Cross-compiling support
case "$targetarch" in
") ;;
*) hostarch=$osname
osname=`echo $targetarch|sed 's,^[^-]*-,`
osvers="
;;
esac

@if { test -d ../hints }
: Offer them some hints based on their OS
cd ..
?X: Since we are now at the root of the source tree, we must use $src
?X: to access the sources and not $rsrc. See src.U for details...
if $test ! -f config.sh; then
$cat <<EOM

First time through, eh? I have some defaults handy for some systems
that need some extra help getting the Configure answers right:

EOM
(cd $src/hints; ls -C *.sh) | $sed 's/\./sh/ /g' >&4
dflt="

```

```

: Now look for a hint file osname_osvers, unless one has been
: specified already.
case "$hintfile" in
"|' ')
file=`echo "${osname}_${osvers}"
| $sed -e 's%\.\%_ \%g' -e 's%_ \%%'`
: Also try without trailing minor version numbers.
xfile=`echo $file | $sed -e 's%[_\ ]*$%%'`
xxfile=`echo $xfile | $sed -e 's%[_\ ]*$%%'`
xxxfile=`echo $xxfile | $sed -e 's%[_\ ]*$%%'`
xxxxfile=`echo $xxxfile | $sed -e 's%[_\ ]*$%%'`
case "$file" in
") dflt=none ;;
*) case "$osvers" in
") dflt=$file
;;
*) if $test -f $src/hints/$file.sh ; then
dflt=$file
elif $test -f $src/hints/$xfile.sh ; then
dflt=$xfile
elif $test -f $src/hints/$xxfile.sh ; then
dflt=$xxfile
elif $test -f $src/hints/$xxxfile.sh ; then
dflt=$xxxfile
elif $test -f $src/hints/$xxxxfile.sh ; then
dflt=$xxxxfile
elif $test -f "$src/hints/${osname}.sh" ; then
dflt="${osname}"
else
dflt=none
fi
;;
esac
;;
esac
if $test -f Policy.sh ; then
case "$dflt" in
*Policy*) ;;
none) dflt="Policy" ;;
*) dflt="Policy $dflt" ;;
esac
fi
;;
*)
dflt=`echo
$hintfile | $sed 's/\.sh$/`
;;

```

```
esac
```

```
if $test -f Policy.sh ; then  
$cat <<EOM
```

There's also a Policy hint file available, which should make the site-specific (policy) questions easier to answer.

```
EOM
```

```
fi
```

```
$cat <<EOM
```

You may give one or more space-separated answers, or "none" if appropriate. A well-behaved OS will have no hints, so answering "none" or just "Policy" is a good thing. DO NOT give a wrong version or a wrong OS.

```
EOM
```

```
rp="Which of these apply, if any?"  
. UU/myread  
tans=$ans  
for file in $tans; do  
if $test X$file = XPolicy -a -f Policy.sh; then  
. Policy.sh  
$cat Policy.sh >> UU/config.sh  
elif $test -f $src/hints/$file.sh; then  
. $src/hints/$file.sh  
$cat $src/hints/$file.sh >> UU/config.sh  
elif $test X"$tans" = X -o X"$tans" = Xnone ; then  
: nothing  
else  
: Give one chance to correct a possible typo.  
echo "$file.sh does not exist"  
dflt=$file  
rp="hint to use instead?"  
. UU/myread  
for file in $ans; do  
if $test -f "$src/hints/$file.sh";  
then  
. $src/hints/$file.sh  
$cat $src/hints/$file.sh >> UU/config.sh  
elif $test X$ans = X -o X$ans = Xnone ; then  
: nothing  
else  
echo "$file.sh does not exist -- ignored."  
fi  
done
```

```
fi
done
```

```
hint=recommended
```

```
: Remember our hint file for later.
```

```
if $test -f "$src/hints/$file.sh" ; then
```

```
    hintfile="$file"
```

```
else
```

```
    hintfile=""
```

```
fi
```

```
fi
```

```
cd UU
```

```
?X: From here on, we must use $rsrc instead of $src
```

```
@end
```

```
: Process their -A options
```

```
./posthint.sh
```

```
@if osname || osvers
```

```
: Ask them to confirm the OS name
```

```
cat << EOM
```

Configure uses the operating system name and version to set some defaults.

The default value is probably right if the name rings a bell. Otherwise, since spelling matters for me, either accept the default or answer "none" to leave it blank.

```
EOM
```

```
@end
```

```
@if osname
```

```
case "$osname" in
```

```
"| ")
```

```
    case "$hintfile" in
```

```
        "| |none) dflt=none ;;
```

```
        *) dflt=`echo $hintfile | $sed -e 's/\.sh$//' -e 's/_.*$//'^` ;;
```

```
    esac
```

```
;;
```

```
*) dflt="$osname" ;;
```

```
esac
```

```
rp="Operating
```

```
system name?"
```

```
./myread
```

```
case "$ans" in
```

```
none) osname="" ;;
```

```
*) osname=`echo "$ans" | $sed -e 's/[ ][ ]*/_/g' | ./tr '[A-Z]' '[a-z]'^` ;;
```

```
esac
```

```
@end
```

```
@if osvers
```

```

@if osname
echo " "
@end
case "$osvers" in
'| ')
case "$hintfile" in
'| |none) dflt=none ;;
*) dflt=`echo $hintfile | $sed -e 's/\.sh$//' -e 's/^[^_]*//'^
dflt=`echo $dflt | $sed -e 's/^_/' -e 's/_/./g'^
case "$dflt" in
'| ') dflt=none ;;
esac
;;
esac
;;
*) dflt="$osvers" ;;
esac
rp="Operating system version?"
./myread
case "$ans" in
none) osvers=" " ;;
*) osvers="$ans" ;;
esac

@end

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Oldconfig.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: rootid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: rootid.U,v \$

?RCS: Revision 3.0.1.1 1995/01/30 14:45:36 ram

?RCS: patch49: now only prints a single empty line when outputting something

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:42 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:



```
?MAKE:rootid: sed
?MAKE: -pick add $@ %<
?S:rootid:
?S: This variable contains the eventual value of the ROOTID symbol,
?S: which is the uid of root.
?S:.
?C:ROOTID:
?C: This symbol contains the uid of root, normally
0.
?C:.
?H:#define ROOTID $rootid /**/
?H:.
: determine root id
rootid=`$sed -e "/^root:/{s/^[^:]*:[^:]*:\([^\:]*\).*$""\1/" -e "q" -e "}" -e "d" </etc/passwd`
case "$rootid" in
") rootid=0 ;;
*) echo " "; echo "Root uid = $rootid" >&4 ;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/rootid.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_getgrent.U,v $
?RCS:
?RCS: Copyright (c) 1998 Andy Dougherty
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: d_getgrent.U,v $
?RCS:
?MAKE:d_getgrent: Inlibc
?MAKE: -pick add $@ %<
?S:d_getgrent:
?S: This variable conditionally defines the HAS_GETGRENT symbol, which
?S: indicates to the C program that the getgrent() routine is available
?S: for sequential access of the group database.
?S:.
?C:HAS_GETGRENT:
?C: This symbol, if defined, indicates that the getgrent routine is
?C: available for sequential access of the group database.
?C:.
?H:#$d_getgrent HAS_GETGRENT /**/
?H:.
?LINT:set d_getgrent
: see if getgrent exists
```

```
set tcgetpgrp d_tcgetpgrp
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_tcgetpgrp.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_tcgetpgrp.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_tcgetpgrp.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:12:08 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_tcgetpgrp: Inlibc
?MAKE: -pick add $@ %<
?S:d_tcgetpgrp:
?S: This variable conditionally defines the HAS_TCGETPGRP symbol, which
?S: indicates to the C program that the tcgetpgrp() routine is available.
?S: to get foreground process group ID.
?S:
?C:HAS_TCGETPGRP
:
?C: This symbol, if defined, indicates that the tcgetpgrp routine is
?C: available to get foreground process group ID.
?C:
?H:#$d_tcgetpgrp HAS_TCGETPGRP /**/
?H:
?LINT:set d_tcgetpgrp
: see if tcgetpgrp exists
set tcgetpgrp d_tcgetpgrp
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_tcgetpgrp.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: instubperl.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1999, Jarkko Hietaniemi

?RCS:

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?RCS:

?MAKE:installusrbinperl: installbin cat bin Myread Setvar test Devel

?MAKE: -pick add \$@ %<

?LINT:set installusrbinperl

?Y:TOP

?S:installusrbinperl:

?S: This variable tells whether Perl should be installed also as

?S: /usr/bin/perl in addition to

?S: \$installbin/perl

?S:.

?C:INSTALL\_USR\_BIN\_PERL:

?C: This symbol, if defined, indicates that Perl is to be installed

?C: also as /usr/bin/perl.

?C:.

?H:#\$installusrbinperl INSTALL\_USR\_BIN\_PERL /\*\*/

?H:.

: determine

whether to install perl also as /usr/bin/perl

echo " "

if \$test -d /usr/bin -a "X\$installbin" != X/usr/bin; then

\$cat <<EOM

Many scripts expect perl to be installed as /usr/bin/perl.

If you want to, I can install the perl you are about to compile

as /usr/bin/perl (in addition to \$bin/perl).

EOM

if test -f /usr/bin/perl; then

\$cat <<EOM

However, please note that because you already have a /usr/bin/perl,

overwriting that with a new Perl would very probably cause problems.

Therefore I'm assuming you don't want to do that (unless you insist).

EOM

case "\$installusrbinperl" in

"\$define"|[yY]\*) dflt='y';;

\*) dflt='n';;

esac

```
else
  $cat <<EOM
```

Since you don't have a /usr/bin/perl I'm assuming creating one is okay.

EOM

```
  case "$installusrbinperl" in
    "$undef"|[nN]*) dflt='n';;
    *) dflt='y';;
  esac
fi
rp="Do you want to install perl as /usr/bin/perl?"
. ./myread
case "$ans" in
[yY]*) val="$define";;
*) val="$undef" ;;
esac
else
  val="$undef"
fi
set
installusrbinperl
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/instubperl.U
```

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```
?RCS: $Id: d_setvbuf.U,v 3.0.1.1 1994/08/29 16:11:57 ram Exp $
?RCS:
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?RCS:
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?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_setvbuf.U,v $
?RCS:
?MAKE:d_setvbuf: Inlibc
?MAKE: -pick add $@ %<
?S:d_setvbuf:
?S: This variable conditionally defines the HAS_SETVBUF symbol, which
?S: indicates to the C program that the setvbuf() routine is available
?S: to change buffering on an open stdio stream.
?S:.
?C:HAS_SETVBUF :
```

?C: This symbol, if defined, indicates that the setvbuf routine is

?C: available to change buffering on an open stdio stream.

?C: to a line-buffered mode.

?C:.

?H:#\$d\_setvbuf HAS\_SETVBUF /\*\*/

?H:.

?LINT:set d\_setvbuf

: see if setvbuf exists

set setvbuf d\_setvbuf

eval \$inlibc

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_setvbuf.U

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?RCS:

?RCS: \$Log: i\_varhdr.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:54:42 ram

?RCS: patch61: varargs script now starts with leading "startsh"

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:21:02 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0.1.1 1994/05/13 15:26:05 ram

?RCS: patch27: this unit now supersedes old i\_stdarg.U and i\_varargs.U

?RCS: patch27: modified to avoid spurious Whoa warnings (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:49 ram

?RCS: Baseline for

dist 3.0 netwide release.

?RCS:

?MAKE:i\_stdarg i\_varargs i\_varhdr: cat +cc +ccflags rm test Setvar \

Findhdr Warn startsh \_o

?MAKE: -pick add \$@ %<

?S:i\_stdarg:

?S: This variable conditionally defines the I\_STDARG symbol, which

?S: indicates to the C program that <stdarg.h> exists and should

?S: be included.

?S:.

?S:i\_varargs:

?S: This variable conditionally defines I\_VARARGS, which indicates

?S: to the C program that it should include <varargs.h>.

?S:.

?S:i\_varhdr:

?S: Contains the name of the header to be included to get va\_dcl definition.

?S: Typically one of varargs.h or stdarg.h.

?S:.

?C:I\_STDARG:

?C: This symbol, if defined, indicates that <stdarg.h> exists and should

?C: be included.

?C:.

?C:I\_VARARGS:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <varargs.h>.

?C:.

?H:#\$i\_stdarg I\_STDARG /\*\*/

?H:#\$i\_varargs I\_VARARGS /\*\*/

?H:.

?W:%<:va\_dcl

?F:!varargs

?T:valstd

?LINT:set i\_stdarg i\_varargs

?X:

?X: Don't use setvar because the varargs test

below might override these.

?X: Actually, the messages here are just informative. We don't wish to set

?X: i\_varargs or i\_stdarg to their final value before knowing which of the

?X: two we'll include.

?X:

```
: see if stdarg is available
echo " "
if $test `./findhdr stdarg.h`; then
echo "<stdarg.h> found." >&4
valstd="$define"
else
echo "<stdarg.h> NOT found." >&4
valstd="$undef"
fi

: see if varargs is available
echo " "
if $test `./findhdr varargs.h`; then
echo "<varargs.h> found." >&4
else
echo "<varargs.h> NOT found, but that's ok (I hope)." >&4
```

fi

?X:

?X: if you have stdarg.h, you need to support prototypes to actually use it;

?X: but if stdarg.h exists and the compiler doesn't support prototypes (for some

?X: bizarre reason), we'll fall back to varargs.h anyway so it's not so bad.

?X:

: set up the varargs testing programs

```
$cat > varargs.c <<EOP
```

```
#ifdef I_STDARG
```

```
#include <stdarg.h>
```

```
#endif
```

```
#ifdef I_VARARGS
```

```
#include <varargs.h>
```

```
#endif
```

```
#ifdef I_STDARG
```

```
int f(char *p, ...)
```

```
#else
```

```
int
```

```
  f(va_alist)
```

```
  va_dcl
```

```
#endif
```

```
{
```

```
  va_list ap;
```

```
#ifndef I_STDARG
```

```
  char *p;
```

```
#endif
```

```
#ifdef I_STDARG
```

```
  va_start(ap,p);
```

```
#else
```

```
  va_start(ap);
```

```
  p = va_arg(ap, char *);
```

```
#endif
```

```
  va_end(ap);
```

```
}
```

```
EOP
```

```
$cat > varargs <<EOP
```

```
$startsh
```

```
if $cc -c $ccflags -D\${1} varargs.c >/dev/null 2>&1; then
```

```
  echo "true"
```

```
else
```

```
  echo "false"
```

```
fi
```

```
$rm -f varargs$_o
```

```
EOP
```

```
chmod +x varargs
```

```

: now check which varargs header should be included
echo " "
i_varhdr="
case "$valstd" in
"$define")
if `./varargs I_STDARG`; then
val='stdarg.h'
elif `./varargs I_VARARGS`; then
val='varargs.h'
fi
;;
*)
if `./varargs I_VARARGS`; then
val='varargs.h'
fi
;;
esac
case "$val" in
")
./warn "I could not find the definition for va_dcl... You have problems..."
val="$undef"; set i_stdarg; eval $setvar
val="$undef"; set i_varargs; eval $setvar
;;
*)
set i_varhdr
eval $setvar
case "$i_varhdr" in
stdarg.h)
val="$define"; set i_stdarg; eval $setvar
val="$undef"; set i_varargs; eval $setvar
;;
varargs.h)
val="$undef"; set i_stdarg;
eval $setvar
val="$define"; set i_varargs; eval $setvar
;;
esac
echo "We'll include <$i_varhdr> to get va_dcl definition." >&4;;
esac
$rm -f varargs*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_varhdr.U

```

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?RCS:



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?RCS:

?MAKE:d\_socklen\_t: Inhdr cat rm\_try Setvar Compile d\_socket sizetype

?MAKE: -pick add \$@ %<

?S:d\_socklen\_t:

?S: This symbol will be defined if the C compiler supports socklen\_t.

?S:.

?C:HAS\_SOCKET:

?C: This symbol will defined if the C compiler supports socklen\_t.

?C: Usually the <sys/socket.h> needs to be included.

?C:.

?H:#\$d\_socklen\_t HAS\_SOCKET /\*\*/

?H:.

?LINT:set d\_socklen\_t

: check for socklen\_t

echo " "

echo "Checking to see if you have socklen\_t..." >&4

\$cat >try.c <<EOCP

#include <sys/types.h>

#\$d\_socket

HAS\_SOCKET

#ifdef HAS\_SOCKET

#include <sys/socket.h>

#endif

int main() { socklen\_t x = 16; }

EOCP

set try

if eval \$compile; then

val="\$define"

echo "You have socklen\_t."

else

val="\$undef"

echo "You do not have socklen\_t."

case "\$sizetype" in

size\_t) echo "(You do have size\_t, that might work. Some people are happy with just an int.)" ;;

esac

fi

\$rm\_try

set d\_socklen\_t

eval \$setvar

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_socklen_t.U
```

No license file was found, but licenses were detected in source scan.

```
/*
```

```
* $Id: rename.C,v 3.0.1.1 1994/01/24 13:58:42 ram Exp ram $
```

```
*
```

```
* Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
*
```

```
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```

```
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```

```
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```

```
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```

```
* of the source tree for dist 4.0.
```

```
*
```

```
* $Log: rename.C,v $
```

```
* Revision 3.0.1.1 1994/01/24 13:58:42 ram
```

```
* patch16: created
```

```
*
```

```
*/
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/lib/C/fake/rename.C
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:d_isnan: Inlibc cat Compile rm_try Setvar
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_isnan:
```

```
?S: This variable conditionally defines the HAS_ISNAN symbol, which
```

```
?S: indicates to the C program that the isnan() routine is available.
```

```
?S:.
```

```
?C:HAS_ISNAN:
```

```
?C: This symbol, if defined, indicates that the isnan routine is
```

```
?C: available to check whether a double is a NaN.
```

```
?C:.
```

```
?H:#$d_isnan HAS_ISNAN /**/
```

```
?H:.
```

```
?LINT:set d_isnan
```

```
: check for isnan
```

```
echo "Checking to see if you have isnan..." >&4
```

```
$cat >try.c <<EOCP
#include <math.h>
int main() { return isnan(0.0); }
EOCP
set try
if eval $compile; then
  val="$define"
  echo "You have isnan."
else
  val="$undef"
  echo "You do not have isnan."
fi
$rm_try
set d_isnan
eval $setvar
```

Found

in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_isnan.U
```

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?RCS:

?MAKE:d\_snprintf\_l d\_vsnprintf\_l : Inlibc d\_snprintf d\_vsnprintf

?MAKE: -pick add \$@ %<

?S:d\_snprintf\_l:

?S: This variable conditionally defines the HAS\_SNPRINTF\_L symbol, which

?S: indicates to the C program that the snprintf\_l () library function

?S: is available.

?S:.

?S:d\_vsnprintf\_l:

?S: This variable conditionally defines the HAS\_VSNPRINTF\_L symbol, which

?S: indicates to the C program that the vsnprintf\_l () library function

?S: is available.

?S:.

?C:HAS\_SNPRINTF\_L:

?C: This symbol, if defined, indicates that the snprintf\_l () library

?C: function

is available for use.

?C:.

?C:HAS\_VSNPRINTF\_L:

?C: This symbol, if defined, indicates that the vsnprintf\_l () library

?C: function is available for use.

?C:.

?H:#\$d\_snprintf\_l HAS\_SNPRINTF\_L /\*\*/

?H:#\$d\_vsnprintf\_l HAS\_VSNPRINTF\_L /\*\*/

?H:.

: see if snprintf\_l exists

set snprintf\_l d\_snprintf\_l

eval \$inlibc

: see if vsnprintf\_l exists

set vsnprintf\_l d\_vsnprintf\_l

eval \$inlibc

case "\$d\_snprintf-\$d\_vsnprintf-\$d\_snprintf\_l-\$d\_vsnprintf\_l" in

"\$define-\$define-\$define-\$define")

;;

\*) echo "(These require the basic snprintf and vsnprintf to also be available, which they aren't"

d\_snprintf\_l="\$undef"

d\_vsnprintf\_l="\$undef"

;;

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_snprintf\_l.U

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?RCS:

?MAKE:d\_towlower: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_towlower:

?S: This variable conditionally defines the HAS\_TOWLOWER symbol, which

?S: indicates to the C program that the towlower() routine is available.

?S:.

?C:HAS\_TOWLOWER:

?C: This symbol, if defined, indicates that the towlower () routine is

?C: available to do case conversion.

?C:.

?H:#\$d\_towlower HAS\_TOWLOWER /\*\*/

?H:.

?LINT:set d\_towlower

```
: see if towlower exists
set towlower d_towlower
eval $inlibc
```

Found in path(s):

```
*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_towlower.U
```

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?RCS:

?RCS: Copyright (c) 2000, Jarkko Hietaniemi

?RCS:

?X:

?X: This unit produces a bit of shell code that must be dotted in order

?X: to make quick check on whether the current C compiler is working.

?X:

?MAKE:Checkcc ccname ccversion: Myread Warn startsh cat contains test

?MAKE: -pick add \$@ %<

?S:ccname:

?S: This can set either by hints files or by Configure. If using

?S: gcc, this is gcc, and if not, usually equal to cc, unimpressive, no?

?S: Some platforms, however, make good use of this by storing the

?S: flavor

of the C compiler being used here. For example if using

?S: the Sun WorkShop suite, ccname will be 'workshop'.

?S:.

?S:ccversion:

?S: This can set either by hints files or by Configure. If using

?S: a (non-gcc) vendor cc, this variable may contain a version for

?S: the compiler.

?S:.

?F:./checkcc ./trygcc !checktmp

?V:despair

?T:trygcc

?LINT:extern cc rm ccflags ldflags

?LINT:change cc ccflags

?LINT:usefile checktmp

?INIT:ccname=""

?INIT:ccversion=""

```

: generate the trygcc script for later perusal
cat <<EOS >trygcc
$startsh
EOS
cat <<'EOSC' >>trygcc
case "$cc" in
") ;;
*) $rm -f try try.*
   $cat >try.c <<EOM
int main(int argc, char *argv[]) {
(void) argc;
(void) argv;
return 0;
}
EOM
if $cc -o try $ccflags $ldflags try.c; then
:
else
echo "Uh-oh, the C compiler '$cc' doesn't seem to be working." >&4
despair=yes
trygcc=yes
case "$cc" in
*gcc*) trygcc=no ;;
esac
case "`$cc -v -c try.c 2>&1`" in

*gcc*) trygcc=no ;;
esac
if $test X"$trygcc" = Xyes; then
if gcc -o try -c try.c; then
echo " "
echo "You seem to have a working gcc, though." >&4
rp="Would you like to use it?"
dflt=y
if $test -f myread; then
./myread
else
if $test -f UU/myread; then
./UU/myread
else
echo "Cannot find myread, sorry. Aborting." >&2
exit 1
fi
fi
case "$ans" in
[yY]*) cc=gcc; ccname=gcc; ccflags=""; despair=no;
?X: Look whether we have 'call-back units' generated by hints that would
?X: seemingly affect the compiling environment.

```

```
$cat *.cbu >checktmp 2>/dev/null
if $contains ccflags checktmp >/dev/null; then
```

```
./warn <<EOM
```

Any previous setting of the C compiler flags has been lost.  
It may be necessary to pass -Dcc=gcc to Configure right away.

```
EOM
```

```
        fi;;
    esac
fi
fi
fi
$rm -f try try.*
;;
esac
EOESC
```

: generate the checkcc script for later perusal

```
cat <<EOS >checkcc
```

```
$startsh
```

```
EOS
```

```
cat <<'EOESC' >>checkcc
```

```
case "$cc" in
```

```
");;
```

```
*) $rm -f try try.*
```

```
    $cat >try.c <<EOM
```

```
int main(int argc, char *argv[]) {
```

```
(void) argc;
```

```
(void) argv;
```

```
return 0;
```

```
}
```

```
EOM
```

```
if $cc -o try $ccflags $ldflags try.c; then
```

```
:
```

```
else
```

```
    if $test X"$despair" = Xyes; then
```

```
        echo "Uh-oh, the C compiler '$cc' doesn't seem to be working." >&4
```

```
    fi
```

```
    $cat >&4 <<EOM
```

You need to find a working C compiler.

Either (purchase and) install the C compiler supplied by your OS vendor,  
or for a free C compiler try <http://gcc.gnu.org/>

I cannot continue any further, aborting.

```
EOM
```

```
    exit 1
```

```
fi
```

```
$rm -f try try.*
;;
esac
EOSC
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Checkcc.U
```

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```
?RCS: $Id: d_getpgrp2.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_getpgrp2.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:15 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_getpgrp2: Inlibc
?MAKE: -pick add $@ %<
?S:d_getpgrp2:
?S: This variable conditionally defines the HAS_GETPGRP2 symbol, which
?S: indicates to the C program that the getpgrp2() (as in DG/UX) routine
?S: is available to get the current process group.
?S:.
?C:HAS_GETPGRP2 (GETPGRP2):
?C: This symbol, if defined, indicates that the
?C: getpgrp2() (as in DG/UX)
?C: routine is available to get the current process group.
?C:.
?H:#$d_getpgrp2 HAS_GETPGRP2 /**/
?H:.
?LINT:set d_getpgrp2
: see if getpgrp2 exists
set getpgrp2 d_getpgrp2
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_getpgrp2.U
```

No license file was found, but licenses were detected in source scan.



```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_closedir.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 15:31:26 ram
?RCS: patch61: added ?F: metalint hint
?RCS:
?RCS: Revision 3.0.1.2 1994/10/29 16:11:18 ram
?RCS: patch36: added 'ldflags' to the test compile line (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:07:21 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_closedir d_void_closedir: Inlibc i_dirent i_sysdir i_sysndir \
cc ccflags ldflags libs Setvar rm
?MAKE: -pick
add $@ %<
?S:d_closedir:
?S: This variable conditionally defines HAS_CLOSEDIR if closedir() is
?S: available.
?S:.
?C:HAS_CLOSEDIR:
?C: This symbol, if defined, indicates that the closedir() routine is
?C: available.
?C:.
?H:#$d_closedir HAS_CLOSEDIR /**/
?H:.
?S:d_void_closedir:
?S: This variable conditionally defines VOID_CLOSEDIR if closedir()
?S: does not return a value.
?S:.
?C:VOID_CLOSEDIR:
?C: This symbol, if defined, indicates that the closedir() routine
?C: does not return a value.
?C:.
?H:#$d_void_closedir VOID_CLOSEDIR /**/
?H:.
?F:!closedir
?LINT:set d_closedir d_void_closedir

```

```
: see if closedir exists
set closedir d_closedir
eval $inlibc
```

```
@if VOID_CLOSEDIR || d_void_closedir
```

```
?X: The following contortions are designed so we can call closedir()
?X: and check whether it returns a value. The contortions are designed
?X: to portably pick up the correct directory header, for those
?X: systems that support various mutually incompatible directory functions.
?X: This
```

```
is from perl5's perl.h
case "$d_closedir" in
"$define")
echo " "
echo "Checking whether closedir() returns a status..." >&4
cat > closedir.c <<EOM
#$i_dirent I_DIRENT /**/
#$i_sysdir I_SYS_DIR /**/
#$i_sysndir I_SYS_NDIR /**/
```

```
#if defined(I_DIRENT)
#include <dirent.h>
#if defined(NeXT) && defined(I_SYS_DIR) /* NeXT needs dirent + sys/dir.h */
#include <sys/dir.h>
#endif
#else
#ifdef I_SYS_NDIR
#include <sys/ndir.h>
#else
#ifdef I_SYS_DIR
#ifdef hp9000s500
#include <ndir.h> /* may be wrong in the future */
#else
#include <sys/dir.h>
#endif
#endif
#endif
#endif
int main() { return closedir(opendir(".")); }
EOM
```

```
if $cc $cflags $ldflags -o closedir closedir.c $libs > /dev/null 2>&1; then
if ./closedir > /dev/null 2>&1 ; then
echo "Yes, it does."
val="$undef"
else
echo "No, it doesn't."
val="$define"
fi
```

```

else
  echo "(I can't seem to compile the test program--assuming it doesn't)"
  val="$define"
fi
;;
*)
val="$undef";
;;
esac
set d_void_closedir
eval $setvar
$rm
-f closedir*
@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_closedir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_finitel: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_finitel:

?S: This variable conditionally defines the HAS\_FINITEL symbol, which

?S: indicates to the C program that the finitel() routine is available.

?S:.

?C:HAS\_FINITEL:

?C: This symbol, if defined, indicates that the finitel routine is

?C: available to check whether a long double is finite

?C: (non-infinity non-NaN).

?C:.

?H:#\$d\_finitel HAS\_FINITEL /\*\*/

?H:.

?LINT:set d\_finitel

: see if finitel exists

set finitel d\_finitel

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_finitel.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:use64bitint use64bitall archname64: Myread Oldconfig Setvar test \  
usemorebits longsize ccflags d\_quad uquadtype Compile rm\_try run

?MAKE: -pick add \$@ %<

?Y:TOP

?S:use64bitint:

?S: This variable conditionally defines the USE\_64\_BIT\_INT symbol,

?S: and indicates that 64-bit integer types should be used

?S: when available. The minimal possible 64-bitness

?S: is employed, just enough to get 64-bit integers into Perl.

?S: This may mean using for example "long longs", while your memory

?S: may still be limited to 2 gigabytes.

?S:.

?S:use64bitall:

?S: This variable conditionally defines the USE\_64\_BIT\_ALL symbol,

?S: and indicates that 64-bit integer types should be used

?S: when available. The maximal

possible

?S: 64-bitness is employed: LP64 or ILP64, meaning that you will

?S: be able to use more than 2 gigabytes of memory. This mode is

?S: even more binary incompatible than USE\_64\_BIT\_INT. You may not

?S: be able to run the resulting executable in a 32-bit CPU at all or

?S: you may need at least to reboot your OS to 64-bit mode.

?S:.

?S:archname64:

?S: This variable is used for the 64-bitness part of \$archname.

?S:.

?C:USE\_64\_BIT\_INT:

?C: This symbol, if defined, indicates that 64-bit integers should

?C: be used when available. If not defined, the native integers

?C: will be employed (be they 32 or 64 bits). The minimal possible

?C: 64-bitness is used, just enough to get 64-bit integers into Perl.

?C: This may mean using for example "long longs", while your memory

?C: may still be limited to 2 gigabytes.

?C:.

?C:USE\_64\_BIT\_ALL:

?C: This symbol, if defined, indicates that 64-bit integers should

?C: be used when available. If not defined, the native integers

?C: will be used (be

```

they 32 or 64 bits). The maximal possible
?C: 64-bitness is employed: LP64 or ILP64, meaning that you will
?C: be able to use more than 2 gigabytes of memory. This mode is
?C: even more binary incompatible than USE_64_BIT_INT. You may not
?C: be able to run the resulting executable in a 32-bit CPU at all or
?C: you may need at least to reboot your OS to 64-bit mode.
?C:.
?H:%<:#ifndef USE_64_BIT_INT
?H:%<:#$use64bitint USE_64_BIT_INT /**/
?H:%<:#endif
?H:%<:#ifndef USE_64_BIT_ALL
?H:%<:#$use64bitall USE_64_BIT_ALL /**/
?H:%<:#endif
?H:.
?INIT:archname64="
?LINT:extern cflags
?LINT:use usemorebits
?LINT:extern use64bits
?LINT:extern uselonglong
?LINT:extern uselonglongs
?LINT:extern use64bitints
?LINT:extern use64bitsint
?LINT:extern use64bitsall
?T:libcquad
?F:!try
?F:!use64bitint.cbu
?F:!use64bitall.cbu
: Do we want 64bit support
case "$uselonglong" in
"$define"|true|[yY]*)
cat <<EOM >&4

```

\*\*\* Configure -Duselonglong is deprecated, using -Duse64bitint instead.

```

EOM
use64bitint="$define"
;;
esac
case
"$use64bits" in
"$define"|true|[yY]*)
cat <<EOM >&4

```

\*\*\* Configure -Duse64bits is deprecated, using -Duse64bitint instead.

```

EOM
use64bitint="$define"
;;
esac
case "$use64bitints" in

```

```
"$define"|true|[yY]*)  
cat <<EOM >&4
```

\*\*\* There is no Configure -Duse64bitints, using -Duse64bitint instead.

```
EOM  
use64bitint="$define"  
;;  
esac  
case "$use64bitsint" in  
"$define"|true|[yY]*)  
cat <<EOM >&4
```

\*\*\* There is no Configure -Duse64bitsint, using -Duse64bitint instead.

```
EOM  
use64bitint="$define"  
;;  
esac  
case "$uselonglongs" in  
"$define"|true|[yY]*)  
cat <<EOM >&4
```

\*\*\* There is no Configure -Duselonglongs, using -Duse64bitint instead.

```
EOM  
use64bitint="$define"  
;;  
esac  
case "$use64bitsall" in  
"$define"|true|[yY]*)  
cat <<EOM >&4
```

\*\*\* There is no Configure -Duse64bitsall, using -Duse64bitall instead.

```
EOM  
use64bitall="$define"  
;;  
esac
```

```
case "$ccflags" in  
*-DUSE_LONG_LONG*|*-DUSE_64_BIT_INT*|*-DUSE_64_BIT_ALL*) use64bitint="$define";;  
esac  
case "$use64bitall" in  
"$define"|true|[yY]*)  
use64bitint="$define" ;;  
esac
```

```
case "$longsize" in  
8) cat <<EOM
```

You have natively 64-bit long integers.

```

EOM
val="$define"
;;
*) case "$use64bitint" in
"$define"|true|[yY]*) dflt='y';;
*) dflt='n';;
esac
case "$d_quad" in
"$define") ;;
*) dflt='n' ;;
esac
cat <<EOM

```

Perl can be built to take advantage of 64-bit integer types on some systems. To do so, Configure can be run with `-Duse64bitint`. Choosing this option will most probably introduce binary incompatibilities.

If this doesn't make any sense to you, just accept the default '\$dflt'. (The default has been chosen based on your configuration.)

```

EOM
rp="Try to use 64-bit integers, if available?"
./myread
case "$ans" in
[yY]*) val="$define" ;;
*) val="$undef" ;;
esac
;;
esac
set use64bitint
eval $setvar

case "$use64bitall" in
"$define"|true|[yY]*) dflt='y' ;;
*) case "$longsize" in
8) dflt='y' ;;
*) dflt='n' ;;
esac
;;
esac
cat <<EOM

```

You may also choose to try maximal 64-bitness. It means using as much 64-bitness as possible on the platform. This in turn means even more binary incompatibilities. On the other hand, your platform may not have any more 64-bitness available than what you already have chosen.

If this doesn't make any sense to you, just accept the default '\$dflt'.

(The default has been chosen based on your configuration.)

EOM

```
rp="Try to use maximal 64-bit support, if available?"
. ./myread
case "$ans" in
[yY]*) val="$define" ;;
*) val="$undef" ;;
esac
set use64bitall
eval $setvar
case "$use64bitall" in
"$define")
case "$use64bitint" in
"$undef")
cat <<EOM
```

Since you have chosen a maximally 64-bit build, I'm also turning on the use of 64-bit integers.

EOM

```
use64bitint="$define" ;;
esac
;;
esac
```

```
: Look for a hint-file generated 'call-back-unit'. If the
: user has specified that a 64-bit perl is to be built,
: we may need to set or change some other defaults.
if $test -f use64bitint.cbu; then
echo "Your
platform has some specific hints regarding 64-bit integers, using them..."
. ./use64bitint.cbu
fi
case "$use64bitint" in
"$define"|true|[yY]*)
: This test was common to all the OpenBSD forks, and seems harmless for
: other platforms:
echo " "
echo "Checking if your C library has broken 64-bit functions..." >&4
cat >try.c <<EOCP
#include <stdio.h>
typedef $uquadtype myULL;
int main (void)
{
struct {
double d;
myULL u;
} *p, test[] = {
{4294967303.15, 4294967303ULL},
```



```

{4294967294.2, 4294967294ULL},
{4294967295.7, 4294967295ULL},
{0.0, 0ULL}
};
for (p = test; p->u; p++) {
myULL x = (myULL)p->d;
if (x != p->u) {
    printf("buggy\n");
    return 0;
}
}
printf("ok\n");
return 0;
}
EOCP
set try
if eval $compile_ok; then
    libcquad=`$run ./try`
    echo "Your C library's 64-bit functions are $libcquad."
else
    echo "(I can't seem to compile the test program.)"
    echo "Assuming that your C library's 64-bit functions are ok."
    libcquad="ok"
fi
$rm_try

case
"$libcquad" in
    buggy*)
        cat >&4 <<EOM

*** You have a C library with broken 64-bit functions.
*** 64-bit support does not work reliably in this configuration.
*** Please rerun Configure without -Duse64bitint and/or -Dusemorebits.
*** Cannot continue, aborting.

EOM
    exit 1
    ;;
esac
case "$longsize" in
4) case "$sarchname64" in
    ") archname64=64int ;;
    esac
    ;;
esac
;;
esac

```

```

: Look for a hint-file generated 'call-back-unit'. If the
: user has specified that a maximally 64-bit perl is to be built,
: we may need to set or change some other defaults.
if $test -f use64bitall.cbu; then
    echo "Your platform has some specific hints regarding 64-bit builds, using them..."
    . /use64bitall.cbu
fi
case "$use64bitall" in
"$define"|true|[yY]*)
    case "$longsize" in
4) case "$archname64" in
    "|64int) archname64=64all ;;
    esac
    ;;
    esac
    ;;
esac

```

```

case "$d_quad:$use64bitint" in
$undef:$define)
    cat >&4 <<EOF

```

```

*** You have chosen to use 64-bit
integers,
*** but none can be found.
*** Please rerun Configure without -Duse64bitint and/or -Dusemorebits.
*** Cannot continue, aborting.

```

```

EOF
exit 1
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/use64bits.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: yacc.U,v 3.0.1.1 1994/05/13 15:28:48 ram Exp $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

```

```

?RCS:

```

```

?RCS: You may redistribute only under the terms of the Artistic License,

```

```

?RCS: as specified in the README file that comes with the distribution.

```

```

?RCS: You may reuse parts of this distribution only within the terms of

```

```

?RCS: that same Artistic License; a copy of which may be found at the root

```

```

?RCS: of the source tree for dist 3.0.

```

```

?RCS:
?RCS: $Log: yacc.U,v $
?RCS: Revision 3.0.1.1 1994/05/13 15:28:48 ram
?RCS: patch27: added byacc as another alternative (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:10:03 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:yacc yaccflags: Guess Myread Oldconfig byacc bison cat test _exe
?MAKE: -pick add $@ %<
?S:yacc:
?S: This variable holds the name of the compiler compiler we
?S: want to use in the Makefile. It can be yacc, byacc, or bison -y.
?S:.
?S:yaccflags:
?S: This
variable contains any additional yacc flags desired by the
?S: user. It is up to the Makefile to use this.
?S:.
?T:comp
: determine compiler compiler
case "$yacc" in
")
dflt=yacc;;
*)
dflt="$yacc";;
esac
echo " "
comp='yacc'
if $test -f "$byacc$_exe"; then
dflt="$byacc"
comp="byacc or $comp"
fi
if $test -f "$bison$_exe"; then
comp="$comp or bison -y"
fi
rp="Which compiler compiler ($comp) shall I use?"
../myread
yacc="$ans"
case "$yacc" in
*bis*)
case "$yacc" in
*-y*) ;;
*)
yacc="$yacc -y"
echo "(Adding -y option to bison to get yacc-compatible behavior.)"
;;
esac

```

```

;;
esac

@if yaccflags
: see if we need extra yacc flags
dflt="$yaccflags"
case "$dflt" in
") dflt=none;;
esac
$cat <<EOH

```

Your yacc program may need extra flags to normally process the parser sources. Do NOT specify any -d or -v flags here, since those are explicitly known by the various Makefiles. However, if your machine has strange/undocumented options (like -Sr# on SCO to specify the maximum number of grammar rules), then please add them here. To use no flags, specify the word "none".

```

EOH
rp="Any additional yacc flags?"
./myread
case "$ans" in
none) yaccflags="";;
*) yaccflags="$ans";;
esac

```

@end

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/yacc.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Myread.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Myread.U,v $
?RCS: Revision 3.0.1.6 1997/02/28 15:05:39 ram
?RCS: patch61: myread script now starts with a "startsh"
?RCS: patch61: miscellaneous fixes
?RCS:

```

?RCS: Revision 3.0.1.5 1995/01/11 15:14:22 ram

?RCS: patch45: added & escape allowing user to turn on -d from the prompt

?RCS:

?RCS: Revision 3.0.1.4 1994/10/31 09:48:04 ram

?RCS: patch44: added Options to the MAKE line since it's no longer in Init.U

?RCS:

?RCS: Revision 3.0.1.3 1994/10/29  
15:56:20 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0.1.2 1993/08/30 08:57:59 ram

?RCS: patch8: added new visible 'nostick' symbol, mainly for Finish.U

?RCS:

?RCS: Revision 3.0.1.1 1993/08/27 14:39:20 ram

?RCS: patch7: now sticks to the question when no default and empty answer

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:08 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a bit of shell code that must be dotted in in order  
?X: to do a read. It allows for shell escapes, default assignment and  
?X: parameter evaluation.

?X:

?X: To use this unit, \$rp and \$dflt must hold the question and the  
?X: default answer. The question will be printed by the script itself.

?X: Neither \$rp nor \$dflt is altered by the script.

?X:

?X: The myread script will stick to the question if no default is proposed  
?X: and the user answer is empty, which prevents mistakes. However, at the  
?X: end of Configure, there is an exception  
to this rule (Finish.U) where we  
?X: set nostick to a non-empty value to allow the Return key to play its role!

?X:

?MAKE:Myread: Options startsh n c trnl

?MAKE: -pick add \$@ %<

?V:ans:dflt rp nostick

?F:./myread

?T:COLUMNS xxxm rp dflt answ aok myecho

?LINT:change fastread

?X: Some shells (Ultrix) do not understand \${COLUMNS:-80}, sigh!  
: compute the number of columns on the terminal for proper question formatting  
case "\$COLUMNS" in  
") COLUMNS='80';;  
esac

: set up the echo used in my read

?X:

?X: This variable is intended to be eval'ed. It will echo the two  
 ?X: variables \$rp and \$dflt (provided this latter has a non null value).  
 ?X: It is mainly used by the myread script to echo the questions.  
 ?X:  
 ?X: The \$n and \$c below are substituted before Loc does its silly echo check  
 ?X: so don't put a \$ on the echo below so we get builtin, even if \$echo is  
 ?X: pointing to /bin/echo.

```
?X:
myecho="case \"\$xxm\" in
") echo $n \"\$rp $c\" >&4;;
*) case \"\$rp\" in
") echo $n \"[\$xxm] $c\";;
*)
if
test `echo \"\$rp [\$xxm] \" | wc -c` -ge $COLUMNS; then
  echo \"\$rp\" >&4
  echo $n \"[\$xxm] $c\" >&4
else
  echo $n \"\$rp [\$xxm] $c\" >&4
fi
;;
esac;;
esac"
```

: now set up to do reads with possible shell escape and default assignment  
 cat <<EOESC >myread

\$startsh

?X:  
 ?X: Save value of default -- do not alter original in case of eval  
 ?X:

```
xxm=\$dflt
$myecho
```

?X:  
 ?X: If there is no default, then stop, regardless of the value in fastread.  
 ?X: In silent mode, no new-line is to be echoed if the question is empty,  
 ?X: since this is used to wait for the "return" key.

```
?X:
ans='!
case \"\$fastread\" in
yes) case \"\$dflt\" in
") ;;
*) ans=";
case \"\$silent-\$rp\" in
true-) ;;
*) echo " " >&4;;
esac;;
esac;;
*) case \"\$silent\" in
```

```

true) case "\$rp" in
  ") ans=";;
  esac;;
esac;;
esac
while expr "X\$ans" : "X!" >/dev/null; do
  read answ
?X:
?X: Run 'eval' on the answer, in order to do variable substitution, in case
?X: the user types $HOME or $WHATEVER.
  Variables must be evaluated now.
?X: Typing '$HOME' won't currently prevent from substitution -- use '$HOME'
?X: The $1 .. $9 and $*, as well as $@, are available to refer to the
?X: default value.
?X:
  set x \$xxm
  shift
  aok="; eval "ans=\\\"$answ\\\" && aok=y
  case "\$answ" in
?X:
?X: Use "!" and not a plain ! because of a bug in BSD 4.4 shell
?X: (reported by Wayne Davison)
?X: We must handle the shell escapes before dealing with possible variable
?X: substitution, since the shell we're launching in that case will be able
?X: to do it as well as we can -- RAM, 15/03/96
?X
"!")
  sh 1>&4
  echo " "
  $myecho
  ;;
!*)
  set x `expr "X\$ans" : "X!(.*)\$" `
  shift
  sh 1>&4 -c "\$*"
  echo " "
  $myecho
  ;;
"\$ans")
  case "\$ans" in
?X:
?X: Answers starting with & are hooks allowing to dynamically turn on/off
?X: some Configure options. That's for the future. -- RAM, 09/01/95
?X: Today, we only recognize '& -d' to mean 'go on as if Configure -d, which
?X: is a hardwired
  behaviour compatible with our general scheme.
?X:
  \\&*)

```

```

set x `expr "X\$ans" : "X&\.*)\$"`
shift
case "\$1" in
-d)
fastread=yes
echo "(OK, I'll run with -d after this question.)" >&4
;;
-*)
echo "*** Sorry, \$1 not supported yet." >&4
;;
esac
$myecho
ans=!
;;
esac;;
*)
case "\$aok" in
y)
echo "*** Substitution done -- please confirm."
xxxm="\$ans"
ans=`echo $n "\$ans$c" | tr ' $trnl' ' `
xxxm="\$ans"
ans=!
;;
*)
echo "*** Error -- try again."
ans=!
;;
esac
$myecho
;;
esac
?X: Stick in myread if no default answer and nothing was answered
case "\$ans\$xxxm\$nostick" in
")
ans=!
$myecho
;;
esac
done
case "\$ans" in
") ans="\$xxxm";;
esac
EOSC

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Myread.U

```



No license file was found, but licenses were detected in source scan.

## Perl5 Metaconfig Units

Copyright (c) 1996-1998, Andy Dougherty

Copyright (c) 1999-2011, H.Merijn Brand

All rights reserved.

These units are the ones I used to build Configure and config\_h.SH in the Perl5 distribution.

The Configure script and config\_h.SH file in the Perl distribution are generated by a program called metaconfig. To run metaconfig, you will need the full dist 3.0 distribution, maintained by Raphael Manfredi.

As of this writing, the current version is dist3.0, patchlevel 70.

Dist version dist-3.0@70.tar.gz is available on CPAN (the Comprehensive Perl Archive Network) as

<<http://www.perl.com/perl/CPAN/authors/id/RAM/dist-3.0@70.tar.gz>>.

### Instructions:

1. Unpack the full perl5 sources. Execute the following command

```
chmod +w Configure config_h.SH Porting/Glossary Porting/config*
```

2. Unpack the archive containing this file in the perl5 source directory. This will create a directory 'U' under the perl5 sources. That directory will contain the metaconfig units for perl5. This will also create two files in the perl5 source tree: MANIFEST.new and .package.
3. Apply any patches to perl in the perl\_patches/ directory. (This may well be empty.)
4. Obtain and install dist-3.0p170.
4. Apply any patches to dist under the dist\_patches subdirectory.
5. From your main perl5 source directory, run packinit to regenerate the .package file. **IMPORTANT:** Change the name and address of the maintainer to your own name and address. I don't want bug reports intended for you coming to me.
6. From your main perl5 source directory, run  
  
metalint (or mlint)

and repair every failure it reports.

7. From your main perl5 source directory, run

metaconfig -m (or mconfig -m)

8. Edit U/mkglossary and/or U/mkgloss.pl to point to your dist-3.0pl70 location. (See comments at the top.)

9. Run the Porting/mksample script to update the contents of the Porting/ subdirectory, or run all parts by hand. (see README)

NB: this script used to be U/mksample replaced by Porting/mksample; see Porting/pumpkin.pod instead for current documentation on its use.

10. Let me know about any changes, corrections, or enhancements.

Things to watch out for:

1. Future support of better random number generators should probably start with the randfunc.U unit included here. It's currently broken, but well commented and probably a good place to start.

Descriptions:

The units and other related files have been broken up into the following directories:

acl/

This is an old patch to begin to detect and use ACL (access control list) file protection schemes.

compline/

These are similar to the standard units, but I have modified them to have a more uniform compile command line, usually using the new Compile.U unit. I have submitted these for inclusion into the regular dist distribution. (The ccflags.U unit is actually perl-specific since it mentions -DDEBUGGING and -DPOSIX\_SOURCE, but that's the only place it is perl-specific.)

dist\_patches/

These are patches to dist that must be applied before it is built and installed. I have submitted these for inclusion in the regular dist distribution.

modified/

These are modified versions of the standard units. Also included in this directory are new units that are clearly derived from existing units. I have submitted these for inclusion in the regular dist distribution.

perl/

These are specific to perl. Some are heavily derived from original dist units, and are marked as such. Others are original.

perl\_patches/

These are patches to the perl source. This directory should ordinarily be empty, but there may have been drift between the standard version of perl and the one associated with these units.

protos/

These are units modified to use the new Hasproto.U or Protochk.U units to check for prototypes. I have submitted these for inclusion into the regular dist distribution.

target/

This is the very, very beginning of cross-compiler support. It doesn't work yet, and many standard units will need modification.

typedefs/

These are standard units modified to use the modified Typedef.U unit to check for typedefs. (The modified Typedef.U includes a function to avoid unnecessary prompts if the typedef being searched for exists.) I have submitted these for inclusion into the regular dist distribution.

threads/

These are specific to threading perl.

Copyright Information:

Unless otherwise indicated, the files contained in this distribution are:

Copyright (c) 1996-1998, Andy Dougherty

The following licensing terms apply to all files contained in this distribution:

You may distribute the files contained in this distribution under the terms of either

a) the "Artistic License" which comes with Perl,  
or

b) the "Artistic License" which comes with dist, or

c) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version (see the file "Copying" that comes with the Perl distribution).

Which one to use is your choice.

The units in the "modified" directory have been derived from units associated with the metaconfig program of Raphael Manfredi's "dist" distribution. These units list Raphael Manfredi as the Copyright holder. dist is distributed under a modified version of the Perl Artistic License. Clause 7 of this modified license as contained in dist-3.0-pl60 provides:

7. You may reuse parts of this Package in your own programs, provided that you explicitly state where you got them from, in the source code (and, left to your courtesy, in the documentation), duplicating all the associated copyright notices and disclaimers. Besides your changes, if any, must be clearly marked as such. Parts reused that way will no longer fall under this license if, and only if, the name of your program(s) have no immediate connection with the name of the Package itself or its associated programs. You may then apply whatever restrictions you wish on the reused parts or choose to place them in the Public Domain--this will apply only within the context of your package.

In accordance with this clause, the versions of these units contained here are made available under the same terms as the rest of the units.

If you have any questions about the use of these units or about the differences between these units and the standard versions, please feel free to ask.

Andy Dougherty [doughera@lafayette.edu](mailto:doughera@lafayette.edu)  
Dept. of Physics  
Lafayette College  
Easton, PA 18042-1782

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/README.dist

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_erfc: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_erfc:

?S: This variable conditionally defines the HAS\_ERFC symbol, which

?S: indicates to the C program that the erfc() routine is available.

?S:.

?C:HAS\_ERFC:

?C: This symbol, if defined, indicates that the erfc routine is

?C: available to do the complementary error function.

?C:.

?H:#\$d\_erfc HAS\_ERFC /\*\*/

?H:.

?LINT:set d\_erfc

: see if erfc exists

set erfc d\_erfc

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_erfc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: abortsig.U,v 3.0.1.1 1994/10/29 16:02:19 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: abortsig.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:02:19 ram

?RCS: patch36: call ./usg explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:20 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:abortsig: Myread Oldconfig Guess cat Compile rm

?MAKE: -pick add \$@ %<

?S:abortsig:

?S: This variable holds the name of the signal used by the abort() call.

?S:.

?C:ABORTSIG:

?C: This symbol holds the signal number (symbol)  
used by the abort() call. To

?C: actually define the signal symbol, <signal.h> should be included.

?C:.

?H:#define ABORTSIG \$abortsig /\*\*/

?H:.

?T:signal

: which signal is sent by abort ?

echo " "

case "\$abortsig" in

")

echo "Checking to see which signal is sent to the process by abort()..." >&4

echo "abort" > abort.sh

chmod +x abort.sh

?X: SIGABRT should replace SIGIOT on USG machines in a near future (1991).

for signal in SIGIOT SIGILL SIGABRT; do

case "\$abortsig" in

") \$cat >abort.c <<EOP

#include <signal.h>

caught() { exit(0); }

int main()

{

#ifdef \$signal

signal(\$signal, caught);

#endif

if (-1 == abort())

exit(1);

exit(1);

}

EOP

?X: We have to use the abort.sh script otherwise sh behaves strangely on AIX.

set abort

if eval \$compile; then

(./abort.sh) >/dev/null 2>&1

case \$? in

0) abortsig="\$signal";;

esac

fi

::

esac

done

::

esac

case "\$abortsig" in

") echo "(I wasn't able to compute the signal name--guessing)"

if ./usg; then

```

dflt="SIGIOT"
else
dflt="SIGILL"
fi;;
*)
dflt="$abortsig"
;;
esac
rp="Which signal does abort() send to the process (signal name)?"
./myread
abortsig="$ans"
$rm -f core abort.sh abort abort.c

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/abortsig.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_setlocale.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_setlocale.U,v $
?RCS: Revision 3.0.1.1 1994/06/20 06:57:51 ram
?RCS: patch30: created
?RCS:
?MAKE:d_setlocale: Inlibc
?MAKE: -pick add $@ %<
?S:d_setlocale:
?S: This variable conditionally defines HAS_SETLOCALE if setlocale() is
?S: available to handle locale-specific ctype implementations.
?S:.
?C:HAS_SETLOCALE:
?C: This symbol, if defined, indicates that the setlocale
?C: routine is
?C: available to handle locale-specific ctype implementations.
?C:.
?H:#$d_setlocale HAS_SETLOCALE /**/
?H:.
?LINT:set d_setlocale

```

```
: see if setlocale exists
set setlocale d_setlocale
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_setlocale.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: vaprotol.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>
```

```
?RCS:
```

```
?RCS: $Log: vaprotol.U,v $
```

```
?RCS: Revision 3.0.1.1 1994/01/24 14:17:16 ram
```

```
?RCS: patch16: definition of _V now appears only when needed
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:09:59 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:vaprotol: prototype i_stdarg Setvar
```

```
?MAKE: -pick add $@ %<
```

```
?S:vaprotol:
```

```
?S: This variable conditionally defines CAN_VAPROTO on systems supporting
```

```
?S: prototype
```

```
declaration of functions with a variable number of
```

```
?S: arguments. See also prototype.
```

```
?S:.
```

```
?C:CAN_VAPROTO ~ %<:
```

```
?C: This variable is defined on systems supporting prototype declaration
```

```
?C: of functions with a variable number of arguments.
```

```
?C:.
```

```
?C:_V:
```

```
?C: This macro is used to declare function parameters in prototypes for
```

```
?C: functions with a variable number of parameters. Use double parentheses.
```

```
?C: For example:
```

```
?C:
```

```
?C: int printf _V((char *fmt, ...));
```

```
?C:
```

```
?C: Remember to use the plain simple _() macro when declaring a function
```



?C: with no variable number of arguments, since it might be possible to

?C: have a non-effect \_V() macro and still get prototypes via \_().

?C:.

```
?H:?%<:#$vaprot CAN_VAPROTO /**/
```

```
?H:?_V:#ifdef CAN_VAPROTO
```

```
?H:?_V:#define _V(args) args
```

```
?H:?_V:#else
```

```
?H:?_V:#define _V(args) ()
```

```
?H:?_V:#endif
```

?H:.

```
?LINT:set vaprot
```

: see if prototypes support variable argument declarations

```
echo " "
```

```
case "$prototype$i_stdarg" in
```

```
$define$define)
```

```
echo "It appears we'll be able
```

```
to prototype varargs functions." >&4
```

```
val="$define"
```

```
;;
```

```
*)
```

```
echo "Too bad... We won't be using prototyped varargs functions..." >&4
```

```
val="$undef"
```

```
;;
```

```
esac
```

```
set vaprot
```

```
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/vaprot.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_niin.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: i_niin.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:24 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?X:
```

```
?X: This unit looks wether <netinet/in.h> is available or not
```

?X:

?MAKE:i\_niin i\_sysin: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_niin:

?S: This variable conditionally defines I\_NETINET\_IN, which indicates

?S: to the C program that it should include <netinet/in.h>. Otherwise,

?S: you may try <sys/in.h>.

?S:.

?S:i\_sysin:

?S: This variable conditionally

defines I\_SYS\_IN, which indicates

?S: to the C program that it should include <sys/in.h> instead of

?S: <netinet/in.h>.

?S:.

?C:I\_NETINET\_IN:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <netinet/in.h>. Otherwise, you may try <sys/in.h>.

?C:.

?C:I\_SYS\_IN (I\_SYSIN):

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/in.h> instead of <netinet/in.h>.

?C:.

?H:#\$i\_niin I\_NETINET\_IN /\*\*/

?H:#\$i\_sysin I\_SYS\_IN /\*\*/

?H:.

?LINT:set i\_niin i\_sysin

: see if this is a netinet/in.h or sys/in.h system

set netinet/in.h i\_niin sys/in.h i\_sysin

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_niin.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_isnormal: cat Compile Setvar rm\_try

?MAKE: -pick add \$@ %<

?S:d\_isnormal:

?S: This variable conditionally defines the HAS\_ISNORMAL symbol, which

?S: indicates to the C program that the isnormal() routine is available.

?S:.

?C:HAS\_ISNORMAL:

?C: This symbol, if defined, indicates that the isnormal routine is

?C: available to check whether a double is normal (non-zero normalized).

?C:.

```

?H:#$d_isnormal HAS_ISNORMAL /**/
?H:.
?LINT:set d_isnormal
: check for isnormal
echo "Checking to see if you have isnormal..." >&4
$cat >try.c <<EOCP
#include <math.h>
int main() { return isnormal(0.0); }
EOCP
set try
if eval $compile; then
  val="$define"
  echo "You have isnormal."
else
  val="$undef"
  echo "You do not have isnormal."
fi
$rm_try
set d_isnormal
eval $setvar

Found
in path(s):
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/perl/d_isnormal.U
No license file was found, but licenses were detected in source scan.

?RCS: $Id: d_vprintf.U,v 3.0 1993/08/18 12:07:59 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_vprintf.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:59 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_vprintf d_charvspr: Compile Guess cat Csym Setvar run rm_try \
i_stdlib i_unistd i_stdarg i_varargs
?MAKE: -pick add $@ %<
?S:d_vprintf:
?S: This variable conditionally defines the HAS_VPRINTF symbol, which
?S: indicates to the C program that the vprintf() routine is available
?S: to printf with a pointer to an argument list.

```

?S:.

?S:d\_charvspr:

?S: This  
variable conditionally defines CHARVSPRINTF if this system

?S: has vsprintf returning type (char\*). The trend seems to be to

?S: declare it as "int vsprintf()".

?S:.

?C:HAS\_VPRINTF (VPRINTF):

?C: This symbol, if defined, indicates that the vprintf routine is available

?C: to printf with a pointer to an argument list. If unavailable, you

?C: may need to write your own, probably in terms of \_doprnt().

?C:.

?C:USE\_CHAR\_VSPRINTF (CHARVSPRINTF):

?C: This symbol is defined if this system has vsprintf() returning type

?C: (char\*). The trend seems to be to declare it as "int vsprintf()". It

?C: is up to the package author to declare vsprintf correctly based on the

?C: symbol.

?C:.

?H:#\$d\_vprintf HAS\_VPRINTF /\*\*/

?H:#\$d\_charvspr USE\_CHAR\_VSPRINTF /\*\*/

?H:.

?T:val2

?F:!try

?LINT:set d\_vprintf d\_charvspr

: see if vprintf exists

echo " "

if set vprintf val -f d\_vprintf; eval \$csym; \$val; then

echo 'vprintf() found.'>&4

val="\$define"

\$cat >try.c <<EOF

#\$i\_stdarg I\_STDARG /\*

Only one of these can be defined by i\_varhrd \*/

#\$i\_varargs I\_VARARGS

#\$i\_stdlib I\_STDLIB

#\$i\_unistd I\_UNISTD

ifndef I\_STDARG

# include <stdarg.h>

else /\* I\_VARARGS \*/

# include <varargs.h>

endif

ifndef I\_UNISTD

# include <unistd.h>

endif

ifndef I\_STDLIB

```

# include <stdlib.h>
#endif

#include <stdio.h> /* vsprintf prototype */

#ifdef I_STDARG
void xxx(int n, ...)
{
    va_list args;
    char buf[10];
    va_start(args, n);
    exit(((unsigned long)vsprintf(buf,"%s",args) > 10L);
}
int main() { xxx(1, "foo"); }

#else /* I_VARARGS */

xxx(va_alist)
va_dcl
{
    va_list args;
    char buf[10];
    va_start(args);
    exit(((unsigned long)vsprintf(buf,"%s",args) > 10L);
}
int main() { xxx("foo"); }

#endif

EOF
set try
if eval $compile_ok; then
if $run ./try; then
    echo "Your vsprintf() returns (int)." >&4
    val2="$undef"
else
    echo "Your vsprintf() returns (char*)." >&4
    val2="$define"
fi
else
echo 'I am unable to compile the vsprintf() test program.' >&4
#
We shouldn't get here. If we do, assume the standard signature,
# not the old BSD one.
echo 'Guessing that vsprintf() returns (int).' >&4
val2="$undef"
fi
else

```

```
echo 'vprintf() NOT found.' >&4
val="$undef"
val2="$undef"
fi
$rm_try
set d_vprintf
eval $setvar
val=$val2
set d_charvspr
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_vprintf.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_sendmsg: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_sendmsg:

?S: This variable conditionally defines the HAS\_SENDMSG symbol, which

?S: indicates to the C program that the sendmsg() routine is available.

?S:.

?C:HAS\_SENDMSG:

?C: This symbol, if defined, indicates that the sendmsg routine is

?C: available to send structured socket messages.

?C:.

?H:#\$d\_sendmsg HAS\_SENDMSG /\*\*/

?H:.

?LINT:set d\_sendmsg

: see if sendmsg exists

set sendmsg d\_sendmsg

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_sendmsg.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2014 Jarkko Hietaniemi & H.Merijn Brand

?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_copysign: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_copysign:  
?S: This variable conditionally defines the HAS\_COPYSIGN symbol, which  
?S: indicates to the C program that the copysign() routine is available.  
?S:.  
?C:HAS\_COPYSIGN:  
?C: This symbol, if defined, indicates that the copysign routine is  
?C: available to do the copysign function.  
?C:.  
?H:#\$d\_copysign HAS\_COPYSIGN /\*\*/  
?H:.  
?LINT:set d\_copysign  
: see if copysign exists  
set copysign d\_copysign  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_copysign.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_mblen.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_mblen.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:09:40 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_mblen: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_mblen:  
?S: This variable conditionally defines the HAS\_MBLLEN symbol, which  
?S: indicates to the C program that the mblen() routine is available  
?S: to find the number of bytes in a multibyte character.

?S:  
?C:HAS\_MBLEN:  
?C: This  
symbol, if defined, indicates that the mblen routine is available  
?C: to find the number of bytes in a multibyte character.

?C:.  
?H:#\$d\_mblen HAS\_MBLEN /\*\*/

?H:.  
?LINT:set d\_mblen  
: see if mblen exists  
set mblen d\_mblen  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_mblen.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:longdblifbytes longdblmanbytes doubleifbytes doublenanbytes: Inlibc \  
cat Compile run rm\_try Setvar echo d\_longdbl \  
doublekind doublesize longdblkind longdblsize

?MAKE: -pick add \$@ %<

?S:longdblifbytes:

?S: This variable contains comma-separated list of hexadecimal bytes

?S: for the long double precision infinity.

?S:.

?S:longdblmanbytes:

?S: This variable contains comma-separated list of hexadecimal bytes

?S: for the long double precision not-a-number.

?S:.

?S:doubleifbytes:

?S: This variable contains comma-separated list of hexadecimal bytes

?S: for the double precision infinity.

?S:.

?S:doublenanbytes:

?S: This variable contains comma-separated list of hexadecimal bytes

?S: for

the double precision not-a-number.

?S:.

?C:DOUBLEINFBYTES:

?C: This symbol, if defined, is a comma-separated list of



```

?C: hexadecimal bytes for the double precision infinity.
?C:.
?C:DOUBLENANBYTES:
?C: This symbol, if defined, is a comma-separated list of
?C: hexadecimal bytes (0xHH) for the double precision not-a-number.
?C:.
?C:LONGDBLINFBYTES:
?C: This symbol, if defined, is a comma-separated list of
?C: hexadecimal bytes for the long double precision infinity.
?C:.
?C:LONGDBLNANBYTES:
?C: This symbol, if defined, is a comma-separated list of
?C: hexadecimal bytes (0xHH) for the long double precision not-a-number.
?C:.
?H:#define DOUBLEINFBYTES $doubleinfbytes /**/
?H:#define DOUBLENANBYTES $doublenanbytes /**/
?H:#define LONGDBLINFBYTES $longdblinfbytes /**/
?H:#define LONGDBLNANBYTES $longdbl nanbytes /**/
?H:.
?F:!try
: Check what kind of inf/nan your system has
$echo "Checking the kind of infinities and nans you have..." >&4
$echo "(The following tests may crash. That's
okay.)" >&4
$cat >try.c <<EOP
#define DOUBLESIZE $doublesize
#$d_longdbl HAS_LONG_DOUBLE
#ifdef HAS_LONG_DOUBLE
#define LONG_DOUBLESIZE $longdblsize
#define LONG_DOUBLEKIND $longdblkind
#endif
#include <math.h>
#include <string.h>
#include <stdio.h>
/* Note that whether the sign bit is on or off
* for NaN depends on the CPU/FPU, and possibly
* can be affected by the build toolchain.
*
* For example for older MIPS and HP-PA 2.0 the quiet NaN is:
* 0x7f, 0xf7, 0xff, 0xff, 0xff, 0xff, 0xff, 0xff
* 0x7f, 0xf4, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
* (respectively) as opposed to the more usual
* 0x7f, 0xf8, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00
*
* Pre-IEEE-754 floating point format do not even have inf/nan support
* at all. They might have a "max" value (DBL_MAX), which may be deadly
* to even mention, causing immediate SIGFPE or equivalent: this is
* the case with VAX floating point, for example.

```

```

*/
static void bytes(void *v, unsigned int n) {
    unsigned char *p = (unsigned
    char *)v;
    int i;
    for (i = 0; i < n; i++) {
        printf("0x%02x%s", p[i], i < n - 1 ? " " : "\n");
    }
}

int main(int argc, char *argv[]) {
    /* We cannot use 1.0/0.0 and 0.0/0.0 (with L suffixes for long double)
    * because some compilers are 'smart' and not only warn but refuse to
    * compile such 'illegal' values. */
    double dinf = exp(1e9);
    double dnan = sqrt(-1.0);
#ifdef HAS_LONG_DOUBLE
    long double ldinf = (long double)exp(1e9);
    long double ldnan = (long double)sqrt(-1.0);
    # if LONG_DOUBLEKIND == 3 || LONG_DOUBLEKIND == 4
    /* the 80-bit long doubles might have garbage in their excess bytes */
    memset((char *)&ldinf + 10, '\0', LONG_DOUBLESIZE - 10);
    memset((char *)&ldnan + 10, '\0', LONG_DOUBLESIZE - 10);
    # endif
#endif
    if (argc == 2) {
        switch (argv[1][0]) {
            case '1': bytes(&dinf, sizeof(dinf)); break;
            case '2': bytes(&dnan, sizeof(dnan)); break;
#ifdef HAS_LONG_DOUBLE
            case '3': bytes(&ldinf, sizeof(ldinf)); break;
            case '4': bytes(&ldnan,
                sizeof(ldnan)); break;
#endif
        }
    }
    return 0;
}

EOP
set try
if eval $compile; then
    doubleinfbytes=`$run ./try 1`
    doubledenabytes=`$run ./try 2`
    case "$d_longdbl" in
    $define)
        longdblinfoytes=`$run ./try 3`
        longdblnanbytes=`$run ./try 4`
        ;;
    esac

```

```

else
# Defaults in case the above test program failed.
case "$doublekind" in
1) # IEEE 754 32-bit LE
doubleinbytes='0x00, 0x00, 0xf0, 0x7f'
doublenanbytes='0x00, 0x00, 0xf8, 0x7f'
;;
2) # IEEE 754 32-bit BE
doubleinbytes='0x7f, 0xf0, 0x00, 0x00'
doublenanbytes='0x7f, 0xf8, 0x00, 0x00'
;;
3) # IEEE 754 64-bit LE
doubleinbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf0, 0x7f'
doublenanbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf8, 0x7f'
;;
4) # IEEE 754 64-bit BE
doubleinbytes='0x7f, 0xf0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00'
doublenanbytes='0x7f, 0xf8, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00'
;;
5) # IEEE 754 128-bit LE
doubleinbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf0,
0x7f'
doublenanbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf8,
0x7f'
;;
6) # IEEE 754 128-bit BE
doubleinbytes='0x7f, 0xf0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
doublenanbytes='0x7f, 0xf8, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
;;
7) # IEEE 754 64-bit mixed: 32-bit LEs in BE
doubleinbytes='0x00, 0x00, 0xf0, 0x7f, 0x00, 0x00, 0x00, 0x00'
doublenanbytes='0x00, 0x00, 0xf8, 0x7f, 0x00, 0x00, 0x00, 0x00'
;;
8) # IEEE 754 64-bit mixed: 32-bit BEs in LE
doubleinbytes='0x00, 0x00, 0x00, 0x00, 0x7f, 0xf0, 0x00, 0x00'
doublenanbytes='0x00, 0x00, 0x00, 0x00, 0x7f, 0xf8, 0x00, 0x00'
;;
9|10|11|12|13|14) # VAX/Cray/IBM floating
point formats, no inf/nan.
doubleinbytes=$undef
doublenanbytes=$undef
;;
*) # No idea.
doubleinbytes=$undef
doublenanbytes=$undef

```

```

;;
esac
case "$longdblkind" in
1) # IEEE 754 128-bit LE
    longdblfnbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xff,
0x7f'
    longdblfnbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x80, 0xff,
0x7f'
    ;;
2) # IEEE 754 128-bit BE
    longdblfnbytes='0x7f, 0xff, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    longdblfnbytes='0x7f, 0xff, 0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    ;;
3) # IEEE 754 80-bit LE, 12 or 16 bytes (x86)
    case "$longdblsize" in
12) # x86 32-bit (96 bits, or 4 x 32, or 12 x 8)
        longdblfnbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x80, 0xff, 0x7f,
0x00, 0x00'
        longdblfnbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xc0, 0xff, 0x7f, 0x00, 0x00'
        ;;
16) # x86_64
        longdblfnbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x80, 0xff, 0x7f, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
        longdblfnbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xc0, 0xff, 0x7f, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
        ;;
*) # No idea.
        longdblfnbytes=$undef
        longdblfnbytes=$undef
        ;;
esac
;;
4) # IEEE 754 80-bit BE, 12 or 16 bytes
    case "$longdblsize" in
12) # 32-bit system
        longdblfnbytes='0x7f, 0xff, 0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00'
        longdblfnbytes='0x7f, 0xff, 0xc0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00'
        ;;
16) # 64-bit system
        longdblfnbytes='0x7f, 0xff, 0x80, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
        longdblfnbytes='0x7f, 0xff, 0xc0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
        ;;
*) # No idea.
        longdblfnbytes=$undef

```

```

        longdblmanbytes=$undef
    ;;
    esac
    ;;
5) # 128-bit LE-LE "double double"
    longdblmanbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf0,
0x7f'
    longdblmanbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf8,
0x7f'
    ;;
6) # 128-bit BE-BE "double double"
    longdblmanbytes='0x7f, 0xf0, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    longdblmanbytes='0x7f, 0xf8, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    ;;
7) # 128-bit LE-BE "double double"
    longdblmanbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf0, 0x7f, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'

    longdblmanbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0xf8, 0x7f, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    ;;
8) # 128-bit BE-LE "double double"
    longdblmanbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x7f, 0xf0, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    longdblmanbytes='0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x00, 0x7f, 0xf8, 0x00, 0x00, 0x00, 0x00, 0x00,
0x00'
    ;;
9|10|11|12|13|14) # VAX/Cray/IBM floating point formats, no inf/nan.
    longdblmanbytes=$undef
    longdblmanbytes=$undef
    ;;
*) # No idea.
    longdblmanbytes=$undef
    longdblmanbytes=$undef
    ;;
esac
fi
# In case the program crashed the values are empty, turn them undef.
case "$doublemanbytes" in
") doublemanbytes=$undef ;;
esac
case "$doublemanbytes" in
") doublemanbytes=$undef ;;
esac
case "$longdblmanbytes" in
") longdblmanbytes=$undef ;;

```

```
esac
case "$longdblmanbytes" in
") longdblmanbytes=$undef ;;
esac
$rm_try
```

Found in path(s):

\*

/opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/infman.U

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```
?RCS: $Id: d_strerror.U,v 3.0.1.3 1994/05/13 15:20:27 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_strerror.U,v $
?RCS: Revision 3.0.1.3 1994/05/13 15:20:27 ram
?RCS: patch27: now uses new macro support for cleaner Strerror def
?RCS:
?RCS: Revision 3.0.1.2 1994/05/06 14:58:26 ram
?RCS: patch23: renamed strerror into Strerror to protect name space (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/01/24 14:08:56 ram
?RCS: patch16: protected code looking for sys_errnolist[] with @if
?RCS: patch16: added default value for d_syserrlst
?RCS:
?RCS: Revision
3.0 1993/08/18 12:07:35 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_syserrlst d_syserrlst: Csym Findhdr
?MAKE: -pick add $@ %<
?S:d_syserrlst:
?S: This variable conditionally defines HAS_SYS_ERRLIST if sys_errlist[] is
?S: available to translate error numbers to strings.
?S:.
?S:d_syserrlst:
?S: This variable conditionally defines HAS_SYS_ERRNOLIST if sys_errnolist[]
?S: is available to translate error numbers to the symbolic name.
?S:.
?C:HAS_SYS_ERRLIST (SYSERRLIST):
```

```

?C: This symbol, if defined, indicates that the sys_errlist array is
?C: available to translate error numbers to strings. The extern int
?C: sys_nerr gives the size of that table.
?C:.
?C:HAS_SYS_ERRNOLIST (SYSERRNOLIST):
?C: This symbol, if defined, indicates that the sys_errnolist array is
?C: available to translate an errno code into its symbolic name (e.g.
?C: ENOENT). The extern int sys_nerrno gives the size of that table.
?C:.
?H:#$d_syserrlst HAS_SYS_ERRLIST /**/
?H:#$d_sysernlst HAS_SYS_ERRNOLIST /**/
?H:.
?D:d_sysernlst="
?T:val
:
see if sys_errlist[] exists
echo " "
if test "X$d_syserrlst" = X; then
if set sys_errlist val -a d_syserrlst; eval $csym; $val; then
echo "You have sys_errlist[], so we could roll our own strerror."
d_syserrlst="$define"
else
echo "You don't have sys_errlist[], so strerror() is welcome."
d_syserrlst="$undef"
fi
fi
@if d_sysernlst || HAS_SYS_ERRNOLIST
if set sys_errnolist val -a d_sysernlst; eval $csym; $val; then
echo "(Symbolic error codes can be fetched via the sys_errnolist[] array.)"
d_sysernlst="$define"
else
echo "(However, I can't extract the symbolic error code out of errno.)"
d_sysernlst="$undef"
fi
@end

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/modified/d_strerror.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_rdchk.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of

```

?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_rdchk.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:51 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_rdchk: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_rdchk:  
?S: This variable conditionally defines the HAS\_RDCHK symbol, which  
?S: indicates to the C program that the rdchk() routine is available  
?S: to find out if there is input pending on an IO channel.  
?S:.  
?C:HAS\_RDCHK (RDCHK):  
?C: This symbol, if defined, indicates that the rdchk routine  
is available  
?C: to find out if there is input pending on an IO channel. Generally  
?C: the routine is used only if FIONREAD and O\_NDELAY aren't available.  
?C:.  
?H:#\$d\_rdchk HAS\_RDCHK /\*\*/  
?H:.  
?LINT:set d\_rdchk  
: see if rdchk exists  
set rdchk d\_rdchk  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_rdchk.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_statblks.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:29 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_statblks: contains Setvar Findhdr  
?MAKE: -pick add \$@ %<



```

?S:d_statblks:
?S: This variable conditionally defines USE_STAT_BLOCKS if this system
?S: has a stat structure declaring st_blksize and st_blocks.
?S:.
?C:USE_STAT_BLOCKS (STATBLOCKS):
?C: This symbol is defined if this system has a stat structure declaring
?C: st_blksize and st_blocks.
?C:.
?H:#$d_statblks USE_STAT_BLOCKS
/**/
?H:.
?T:xxx
?LINT:set d_statblks
: see if stat knows about block sizes
echo " "
xxx=`./findhdr sys/stat.h`
if $contains 'st_blocks;' "$xxx" >/dev/null 2>&1 ; then
if $contains 'st_blksize;' "$xxx" >/dev/null 2>&1 ; then
echo "Your stat() knows about block sizes." >&4
val="$define"
else
echo "Your stat() doesn't know about block sizes." >&4
val="$undef"
fi
else
echo "Your stat() doesn't know about block sizes." >&4
val="$undef"
fi
set d_statblks
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_statblks.U

```

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```

?RCS: $Id: usenm.U,v 3.0.1.1 1997/02/28 16:26:40 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: usenm.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 16:26:40 ram

```

```

?RCS: patch61: don't use nm with the GNU C library
?RCS: patch61: added support for Linux shared libs
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:57 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:usenm runnm nm_opt nm_so_opt: cat test Myread Oldconfig myuname grep \
nm d_gnulibc osname egrep rsrc
?MAKE: -pick add $@ %<
?S:usenm:
?S: This variable contains 'true' or 'false' depending
whether the
?S: nm extraction is wanted or not.
?S:.
?S:runnm:
?S: This variable contains 'true' or 'false' depending whether the
?S: nm extraction should be performed or not, according to the value
?S: of usenm and the flags on the Configure command line.
?S:.
?S:nm_opt:
?S: This variable holds the options that may be necessary for nm.
?S:.
?S:nm_so_opt:
?S: This variable holds the options that may be necessary for nm
?S: to work on a shared library but that can not be used on an
?S: archive library. Currently, this is only used by Linux, where
?S: nm --dynamic is *required* to get symbols from an ELF library which
?S: has been stripped, but nm --dynamic is *fatal* on an archive library.
?S: Maybe Linux should just always set usenm=false.
?S:.
: see if nm is to be used to determine whether a symbol is defined or not
?X: If there is enough inquiries, it might be worth to wait for the nm
?X: extraction. Otherwise, the C compilations might be a better deal.
?X:
?X: Don't bother if we're
using GNU libc -- skimo
?LINT:extern PASE
case "$usenm" in
")
dflt="
case "$d_gnulibc" in
"$define")
echo " "
echo "nm probably won't work on the GNU C Library." >&4
dflt=n
;;
esac
case "$dflt" in

```

```

")
if $test "$osname" = aix -a "X$PASE" != "Xdefine" -a ! -f /lib/syscalls.exp; then
  echo " "
  echo "Whoops! This is an AIX system without /lib/syscalls.exp!" >&4
  echo "'nm' won't be sufficient on this system." >&4
  dflt=n
fi
;;
esac
case "$dflt" in
") dflt=`$egrep 'inlibc|csym' $rsrc/Configure | wc -l 2>/dev/null`
if $test $dflt -gt 20; then
  dflt=y
else
  dflt=n
fi
;;
esac
*)
case "$usenm" in
true|$define) dflt=y;;
*) dflt=n;;
esac
;;
esac
$cat <<EOM

```

I can use \$nm to extract the symbols from your C libraries. This is a time consuming task which may generate huge output on the disk (up to 3 megabytes) but that should make the symbols extraction faster. The alternative is to skip the 'nm' extraction part and to compile a small test program instead to determine whether each symbol is present. If you have a fast C compiler and/or if your 'nm' output cannot be parsed, this may be the best solution.

You probably shouldn't let me use 'nm' if you are using the GNU C Library.

EOM

```

rp="Shall I use $nm to extract C symbols from the libraries?"
./myread
case "$ans" in
[Nn]*) usenm=false;;
*) usenm=true;;
esac

```

?X: Name extraction is to be run if 'nm' usage is wanted and if no -r flag

```
?X: was provided to configure (in which case we simply re-use the previous
?X: values).
runnm=$usenm
case "$reuseval" in
true) runnm=false;;
esac
```

```
: nm options which may be necessary
case "$nm_opt" in
") if $test -f /mach_boot; then
  nm_opt="# Mach
elif $test -d /usr/ccs/lib; then
  nm_opt='-p' # Solaris (and SunOS?)
elif $test -f /dgux; then
  nm_opt='-p' # DG-UX
elif $test -f /lib64/rld; then
  nm_opt='-p' # 64-bit Irix
else
  nm_opt=""
fi;;
esac
```

```
: nm options which may be necessary for shared libraries but illegal
: for archive
libraries. Thank you, Linux.
case "$nm_so_opt" in
") case "$myuname" in
*linux*|gnu*)
  if $nm --help | $grep 'dynamic' > /dev/null 2>&1; then
    nm_so_opt='--dynamic'
  fi
  ;;
esac
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/modified/usenm.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysstatvfs.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1999 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

?MAKE:i\_sysstatvfs: Inhdr Hasfield  
?MAKE: -pick add \$@ %<  
?S:i\_sysstatvfs:  
?S: This variable conditionally defines the I\_SYSSTATVFS symbol,  
?S: and indicates whether a C program should include <sys/statvfs.h>.  
?S:.  
?C:I\_SYS\_STATVFS:  
?C: This symbol, if defined, indicates that <sys/statvfs.h> exists and  
?C: should be included.  
?C:.  
?H:#\$i\_sysstatvfs I\_SYS\_STATVFS /\*\*/  
?H:.  
?LINT:set i\_sysstatvfs  
: see if this is a sys/statvfs.h system  
set sys/statvfs.h i\_sysstatvfs  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_sysstatvfs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: so.U,v \$  
?RCS: Revision 3.0.1.2 1994/10/29 16:30:04 ram  
?RCS: patch36: now tells user how he can suppress shared lib lookup (ADO)  
?RCS: patch36: removed echo at the top, since it's now in the here-doc (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/06/20 07:07:02 ram  
?RCS: patch30: created  
?RCS:  
?X:  
?X: This unit computes the shared-object / shared-lib extension  
?X:  
?MAKE:so: test libpth Loc Myread Oldconfig cat  
?MAKE: -pick add \$@ %<  
?S:so:  
?S: This variable holds the extension used to identify

```

shared libraries
?S: (also known as shared objects) on the system. Usually set to 'so'.
?S:.
?T: xxx
: compute shared library extension
case "$so" in
")
if xxx=`./loc libc.sl X $libpth`; $test -f "$xxx"; then
    dflt='sl'
else
    dflt='so'
fi
;;
*) dflt="$so";;
esac
$cat <<EOM

```

On some systems, shared libraries may be available. Answer 'none' if you want to suppress searching of shared libraries for the remainder of this configuration.

```

EOM
rp='What is the file extension used for shared libraries?'
./myread
so="$ans"

```

```

Found in path(s):
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/so.U
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```

```

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?RCS:
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?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_nl_langinfo: Inlibc i_langinfo
?MAKE: -pick add $@ %<
?S:d_nl_langinfo:
?S: This variable conditionally defines the HAS_NL_LANGINFO symbol, which
?S: indicates to the C program that the nl_langinfo() routine is available.
?S:.
?C:HAS_NL_LANGINFO:
?C: This symbol, if defined, indicates that the nl_langinfo routine is
?C: available to return local data. You will also need <langinfo.h>
?C: and therefore I_LANGINFO.

```

```
?C:
?H:#$d_nl_langinfo HAS_NL_LANGINFO /**/
?H:
?LINT:set d_nl_langinfo
?LINT:use i_langinfo
: see if nl_langinfo exists
set nl_langinfo d_nl_langinfo
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_nl_langinfo.U
```

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```
?RCS: $Id: i_dirent.U,v 3.0.1.4 1994/10/29 16:20:01 ram Exp $
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: i_dirent.U,v $
?RCS: Revision 3.0.1.4 1994/10/29 16:20:01 ram
?RCS: patch36: failed scanning for 'd_namlen' with missing <dirent.h> (ADO)
?RCS:
?RCS: Revision 3.0.1.3 1994/06/20 07:01:25 ram
?RCS: patch30: added direntrytype for hints, merely for NeXT (ADO)
?RCS: patch30: now checks for both struct dirent and direct (ADO)
?RCS:
?RCS: Revision 3.0.1.2 1994/05/13 15:22:37 ram
?RCS: patch27: new variable direntrytype for proper type setting (ADO)
?RCS:
?RCS:
Revision 3.0.1.1 1994/01/24 14:11:15 ram
?RCS: patch16: added new Direntry_t pseudo-type for directory entries
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:17 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit looks whether there is a dirent system or not
?X:
?MAKE:i_dirent d_dirnamlen direntrytype: test contains Setvar \
Myread Findhdr cppstdin cppflags cppminus rm_try
?MAKE: -pick add $@ %<
```

?S:i\_dirent:  
 ?S: This variable conditionally defines I\_DIRENT, which indicates  
 ?S: to the C program that it should include <dirent.h>.  
 ?S:.

?S:d\_dirnamlen:  
 ?S: This variable conditionally defines DIRNAMLEN, which indicates  
 ?S: to the C program that the length of directory entry names is  
 ?S: provided by a d\_namelen field.  
 ?S:.

?S:direntrytype:  
 ?S: This symbol is set to 'struct direct' or 'struct dirent' depending on  
 ?S: whether dirent is available or not. You should use this pseudo type to  
 ?S: portably declare your directory entries.  
 ?S:.

?C:I\_DIRENT:  
 ?C: This symbol,  
 if defined, indicates to the C program that it should  
 ?C: include <dirent.h>. Using this symbol also triggers the definition  
 ?C: of the Direntry\_t define which ends up being 'struct dirent' or  
 ?C: 'struct direct' depending on the availability of <dirent.h>.  
 ?C:.

?C:DIRNAMLEN:  
 ?C: This symbol, if defined, indicates to the C program that the length  
 ?C: of directory entry names is provided by a d\_namlen field. Otherwise  
 ?C: you need to do strlen() on the d\_name field.  
 ?C:.

?C:Direntry\_t:  
 ?C: This symbol is set to 'struct direct' or 'struct dirent' depending on  
 ?C: whether dirent is available or not. You should use this pseudo type to  
 ?C: portably declare your directory entries.  
 ?C:.

?H:#\$i\_dirent I\_DIRENT /\*\*/  
 ?H:#\$d\_dirnamlen DIRNAMLEN /\*\*/  
 ?H:%<:@if I\_DIRENT && Direntry\_t  
 ?H:%<:#define Direntry\_t \$direntrytype  
 ?H:%<:@end  
 ?H:.

?T:xinc guess1 guess2  
 ?LINT:set i\_dirent d\_dirnamlen  
 : see if this is a dirent system  
 echo " "  
 if xinc=`./findhdr dirent.h`; \$test "\$xinc"; then  
 val="\$define"  
 echo  
 "<dirent.h> found." >&4  
 else  
 val="\$undef"  
 if xinc=`./findhdr sys/dir.h`; \$test "\$xinc"; then



```

echo "<sys/dir.h> found." >&4
echo " "
else
  xinc=`./findhdr sys/ndir.h`
fi
echo "<dirent.h> NOT found." >&4
fi
set i_dirent
eval $setvar

```

?X: Use struct dirent or struct direct? If we're using dirent.h,

?X: it's probably struct dirent, but apparently not always.

?X: Assume \$xinc still contains the name of the header file we're using.

```
@if direntrytype || Direntry_t
```

```
: Look for type of directory structure.
```

```
echo " "
```

```
$cppstdin $cppflags $cppminus < "$xinc" > try.c
```

```
case "$direntrytype" in
```

```
"| ")
```

```
case "$i_dirent" in
```

```
$define) guess1='struct dirent' ;;
```

```
*) guess1='struct direct' ;;
```

```
esac
```

```
::
```

```
*) guess1="$direntrytype"
```

```
::
```

```
esac
```

```
case "$guess1" in
```

```
'struct dirent') guess2='struct direct' ;;
```

```
*) guess2='struct dirent' ;;
```

```
esac
```

```
if $contains "$guess1" try.c >/dev/null 2>&1; then
```

```
direntrytype="$guess1"
```

```
echo "Your directory entries are $direntrytype." >&4
```

```
elif $contains "$guess2"
```

```
try.c >/dev/null 2>&1; then
```

```
direntrytype="$guess2"
```

```
echo "Your directory entries seem to be $direntrytype." >&4
```

```
else
```

```
echo "I don't recognize your system's directory entries." >&4
```

```
rp="What type is used for directory entries on this system?"
```

```
dflt="$guess1"
```

```
. ./myread
```

```
direntrytype="$ans"
```

```
fi
```

```

$rm_try

@end
@if d_dirnamlen || DIRNAMLEN
: see if the directory entry stores field length
echo " "
$cppstdin $cppflags $cppminus < "$xinc" > try.c
if $contains 'd_namlen' try.c >/dev/null 2>&1; then
echo "Good, your directory entry keeps length information in d_namlen." >&4
val="$define"
else
echo "Your directory entry does not know about the d_namlen field." >&4
val="$undef"
fi
set d_dirnamlen
eval $setvar
$rm_try

```

@end

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/i_dirent.U
```

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?RCS: of the source tree for dist 4.0.

?RCS:

?MAKE:d\_dup3: Inlibc

?MAKE:-pick add \$@ %<

?S:d\_dup3:

?S: This variable conditionally defines HAS\_DUP3 if dup3() is

?S: available to duplicate file descriptors.

?S:.

?C:HAS\_DUP3:

?C: This symbol, if defined, indicates that the dup3 routine is

?C: available to duplicate file descriptors.

?C:.

?H:#\$d\_dup3 HAS\_DUP3 /\*\*/

?H:.

?LINT:set d\_dup3

: see if dup3 exists

set dup3 d\_dup3

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_dup3.U

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_open3.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:37:12 ram

?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.1 1995/07/25 13:58:26 ram

?RCS: patch56: added knowledge of the O\_NONBLOCK symbol

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:44 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_open3: test +cc cat +cppflags h\_fcntl h\_sysfile rm Setvar Findhdr Warn

?MAKE: -pick add \$@ %<

?X: It would be easy to separate the h\_O\_stuff from this.

?X: Is there a reason

to do so? -- HMS

?S:d\_open3:

?S: This variable conditionally defines the HAS\_OPEN3 manifest constant,

?S: which indicates to the C program that the 3 argument version of

?S: the open(2) function is available.

?S:.

?C:HAS\_OPEN3 (OPEN3):

?C: This manifest constant lets the C program know that the three

?C: argument form of open(2) is available.

?C:.

?H:#\$d\_open3 HAS\_OPEN3 /\*\*/

?H:.

?W:%<:O\_RDONLY O\_WRONLY O\_RDWR O\_NDELAY O\_APPEND O\_SYNC O\_CREAT O\_TRUNC

?W:%<:O\_EXCL O\_NONBLOCK

?F:!open3

?LINT:set d\_open3

?LINT:change h\_fcntl h\_sysfile

```

: Locate the flags for 'open()'
echo " "
$cat >open3.c <<'EOCP'
#include <sys/types.h>
#ifdef I_FCNTL
#include <fcntl.h>
#endif
#ifdef I_SYS_FILE
#include <sys/file.h>
#endif
int main() {
    if(O_RDONLY);
#ifdef O_TRUNC
    exit(0);
#else
    exit(1);
#endif
}
EOCP
: check sys/file.h first to get FREAD on Sun
if $test `./findhdr sys/file.h` && \
    $cc $cppflags "-DI_SYS_FILE" -o open3 open3.c >/dev/null 2>&1 ; then
    h_sysfile=true;
    echo "<sys/file.h> defines the
O_* constants..." >&4
    if ./open3; then
        echo "and you have the 3 argument form of open()." >&4
        val="$define"
    else
        echo "but not the 3 argument form of open(). Oh, well." >&4
        val="$undef"
    fi
elif $test `./findhdr fcntl.h` && \
    $cc "-DI_FCNTL" -o open3 open3.c >/dev/null 2>&1 ; then
    h_fcntl=true;
    echo "<fcntl.h> defines the O_* constants..." >&4
    if ./open3; then
        echo "and you have the 3 argument form of open()." >&4
        val="$define"
    else
        echo "but not the 3 argument form of open(). Oh, well." >&4
        val="$undef"
    fi
else
    val="$undef"
    ./warn "I can't find the O_* constant definitions! You got problems."
fi
set d_open3

```

```
eval $setvar
$rm -f open3*
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_open3.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: prefix.U,v 3.1 1999/07/08 18:27:51 doughera Exp doughera $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
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```

```
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```

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```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
```

```
?RCS:
```

```
?RCS: $Log: prefix.U,v $
```

```
?RCS: Revision 3.1 1999/07/08 18:27:51 doughera
```

```
?RCS: 5.005_5x version -- Andy Dougherty
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1995/01/30 14:44:05 ram
```

```
?RCS: patch49: new prefixexp variable holding a fully expanded prefix
```

```
?RCS: patch49: save off previous prefix value in oldprefix if changed (WED)
```

```
?RCS: patch49: added the INSTALLPREFIX define for C programs to use (WED)
```

```
?RCS:
```

```
?RCS:
```

```
Revision 3.0.1.1 1994/08/29 16:31:34 ram
```

```
?RCS: patch32: created by ADO
```

```
?RCS:
```

```
?MAKE:prefix prefixexp +oldprefix: Getfile Loc Oldconfig cat package
```

```
?MAKE: -pick add $@ %<
```

```
?S:prefix:
```

```
?S: This variable holds the name of the directory below which the
```

```
?S: user will install the package. Usually, this is /usr/local, and
```

```
?S: executables go in /usr/local/bin, library stuff in /usr/local/lib,
```

```
?S: man pages in /usr/local/man, etc. It is only used to set defaults
```

```
?S: for things in bin.U, mansrc.U, privlib.U, or scriptdir.U.
```

```
?S:.
```

```
?S:prefixexp:
```

```
?S: This variable holds the full absolute path of the directory below
```

```
?S: which the user will install the package. Derived from prefix.
```

```
?S:.
```

```
?S:oldprefix:
```

```
?S: This variable is set non-null if the prefix was previously defined
```

?S: and gets set to a new value. Used internally by Configure only.

?S:.

?C:INSTALLPREFIX:

?C: This symbol contains the name of the install prefix for this package.

?C:.

```
?H:#define INSTALLPREFIX "$prefix" /**/
```

?H:.

:

determine root of directory hierarchy where package will be installed.

```
case "$prefix" in
```

```
) dflt=`./loc . /usr/local /usr/local /local /opt /usr`
```

```
;;
```

```
*) dflt="$prefix"
```

```
;;
```

```
esac
```

```
$cat <<EOM
```

By default, \$package will be installed in \$dflt/bin, manual pages under \$dflt/man, etc..., i.e. with \$dflt as prefix for all installation directories. Typically this is something like /usr/local. If you wish to have binaries under /usr/bin but other parts of the installation under /usr/local, that's ok: you will be prompted separately for each of the installation directories, the prefix being only used to set the defaults.

EOM

```
fn=d~
```

```
rp='Installation prefix to use?'
```

```
./getfile
```

```
oldprefix=""
```

```
case "$prefix" in
```

```
) ;;
```

```
*) case "$ans" in
```

```
"$prefix") ;;
```

```
*) oldprefix="$prefix";;
```

```
esac
```

```
;;
```

```
esac
```

```
case "$ans" in
```

```
*?) prefix=`echo "$ans" | sed 's/.$//`
```

```
;;
```

```
*) prefix="$ans"
```

```
esac
```

```
case "$ansexp" in
```

```
*?) prefixexp=`echo "$ansexp" | sed 's/.$//`
```

```
;;
```

```
*) prefixexp="$sansexp"
```

```
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/prefix.U
```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_llroundl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_llroundl:

?S: This variable conditionally defines the HAS\_LLROUNDL symbol, which

?S: indicates to the C program that the llroundl() routine is available

?S: to return the long long value nearest to x away from zero.

?S:.

?C:HAS\_LLROUNDL:

?C: This symbol, if defined, indicates that the llroundl routine is

?C: available to return the nearest long long value away from zero of

?C: the long double argument value.

?C:.

?H:#\$d\_llroundl HAS\_LLROUNDL /\*\*/

?H:.

?LINT:set d\_llroundl

: see if llroundl exists

set llroundl d\_llroundl

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_llroundl.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Warn.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Extract.U,v \$

?X:

?X: This unit produces a shell script which can be run in order to emit

?X: an important warning to the user, which will be remembered and shown

?X: at the end of the Configure run as well.

?X:

?X: A typical use would be:

?X:

?X: ./warn <<EOM

?X: Problem with your C compiler: can't turn debugging on.

?X: EOM

?X:

?X: or:

?X:

?X: ./warn "Problem with your C compiler: can't turn debugging on."

?X:

?X: Which will both display to the user:

?X:

?X: \*\*\*

WARNING:

?X: \*\*\* Problem with your C compiler: can't turn debugging on.

?X: \*\*\*

?X:

?MAKE:Warn: startsh eunicefix

?MAKE: -pick add \$@ %<

?F:./warn

: script used to emit important warnings

cat >warn <<EOS

\$startsh

?X: Read the whole warning message from stdin into a temporary file

?X: when no argument was supplied.

if test \$# -gt 0; then

echo "\$@" >msg

else

cat >msg

fi

?X: Emit the warning, prefixing all lines with '\*\*\* '

echo "\*\*\* WARNING:" >&4

sed -e 's/^\\*\*\* //' <msg >&4

echo "\*\*\* " >&4

?X: Save the warning in the logs, which will be shown again at the end

cat msg >>config.msg

echo " " >>config.msg

rm -f msg

EOS

chmod +x warn

\$eunicefix warn

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Warn.U



No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: package.U,v $
?RCS: Revision 3.0.1.3 1994/10/29 16:27:21 ram
?RCS: patch36: beware of non-ascii character sets when translating case
?RCS:
?RCS: Revision 3.0.1.2 1993/11/10 17:37:02 ram
?RCS: patch14: skip definition of spackage if not otherwise used
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:11:10 ram
?RCS: patch10: added spackage, suitable for starting sentences
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:28 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:package spackage:
Nothing
?MAKE: -pick wipe $@ %<
?S:package:
?S: This variable contains the name of the package being constructed.
?S: It is primarily intended for the use of later Configure units.
?S:.
?S:spackage:
?S: This variable contains the name of the package being constructed,
?S: with the first letter uppercased, i.e. suitable for starting
?S: sentences.
?S:.
?C:PACKAGE:
?C: This variable contains the name of the package being built.
?C:.
?H:#define PACKAGE "$package"
?H:.
?T:first last
: set package name
package='<PACKAGENAME>'
@if spackage
first=`echo $package | sed -e 's/^(.).*\1/'`
last=`echo $package | sed -e 's/^(.*)\1/'`
```

?X:

?X: So early in the Configure script, we don't have ./tr set up and can't  
?X: include Tr in our dependency or that would create a cycle. Therefore,  
?X: we have to somehow duplicate the work done in Tr. That's life.

?X:

```
case " `echo AbyZ | tr '[:lower:]' '[:upper:]' 2>/dev/null" in
ABYZ) spackage=`echo $first | tr '[:lower:]' '[:upper:]'`$last;;
*) spackage=`echo
$first | tr '[a-z]' '[A-Z]'`$last;;
esac
@end
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/package.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2003, Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_pthread\_attr\_setscope: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_pthread\_attr\_setscope:

?S: This variable conditionally defines HAS\_PTHREAD\_ATTR\_SETSCOPE if

?S: pthread\_attr\_setscope() is available to set the contention scope

?S: attribute of a thread attribute object.

?S:.

?C:HAS\_PTHREAD\_ATTR\_SETSCOPE:

?C: This symbol, if defined, indicates that the pthread\_attr\_setscope

?C: system call is available to set the contention scope attribute of

?C: a thread attribute object.

?C:.

?H:#\$d\_pthread\_attr\_setscope HAS\_PTHREAD\_ATTR\_SETSCOPE /\*\*/

?H:.

?LINT:set

d\_pthread\_attr\_setscope

: see if pthread\_attr\_setscope exists

set pthread\_attr\_setscope d\_pthread\_attr\_setscope

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_pthread\_attr\_ss.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setnent.U,v 3.0 1993/08/18 12:06:09 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_setnent.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:09 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setnent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setnent:

?S: This variable conditionally defines HAS\_SETNETENT if setnent() is

?S: available.

?S:.

?C:HAS\_SETNETENT:

?C: This symbol, if defined, indicates that the setnent() routine is

?C: available.

?C:.

?H:#\$d\_setnent HAS\_SETNETENT /\*\*/

?H:.

?LINT:set d\_setnent

: see if setnent exists

set

setnent d\_setnent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_setnent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_safemcpy.U,v 3.0.1.5 1997/02/28 15:41:12 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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```

?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_safemcpy.U,v $
?RCS: Revision 3.0.1.5 1997/02/28 15:41:12 ram
?RCS: patch61: improved overlapping copy check
?RCS: patch61: comfort them if they have memmove
?RCS: patch61: added ?F: metalint hint
?RCS:
?RCS: Revision 3.0.1.4 1995/07/25 13:58:46 ram
?RCS: patch56: re-arranged compile line to include ldflags before objects
?RCS:
?RCS: Revision 3.0.1.3 1995/03/21 08:47:26 ram
?RCS: patch52: swapped two first arguments of memcpy() calls
?RCS:
?RCS:
Revision 3.0.1.2 1994/10/29 16:15:10 ram
?RCS: patch36: added 'ldflags' to the test compile line (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 14:53:12 ram
?RCS: patch23: ensure string is not optimized in read-only memory (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:58 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_safemcpy: Compile cat d_memcpy rm_try run \
d_memmove i_memory i_stdlib i_string i_unistd Oldconfig Setvar
?MAKE: -pick add $@ %<
?S:d_safemcpy:
?S: This variable conditionally defines the HAS_SAFE_MEMCPY symbol if
?S: the memcpy() routine can do overlapping copies.
?S: For overlapping copies, memmove() should be used, if available.
?S:.
?C:HAS_SAFE_MEMCPY (SAFE_MEMCPY):
?C: This symbol, if defined, indicates that the memcpy routine is available
?C: to copy potentially overlapping memory blocks. If you need to
?C: copy overlapping memory blocks, you should check HAS_MEMMOVE and
?C: use memmove() instead, if available.
?C:.
?H:#$d_safemcpy HAS_SAFE_MEMCPY /**/
?H:.
?F:!try
?LINT:
set d_safemcpy
: can memcpy handle overlapping blocks?
echo " "
?X: assume the worst
val="$undef"

```

```

case "$d_memmove" in
"$define") echo "I'll use memmove() instead of memcpy() for overlapping copies." ;;
*) case "$d_memcpy" in
"$define")
echo "Checking to see if memcpy() can do overlapping copies..." >&4
$cat >try.c <<EOCP
#$i_memory I_MEMORY
#$i_stdlib I_STDLIB
#$i_string I_STRING
#$i_unistd I_UNISTD
EOCP
$cat >>try.c <<'EOCP'
#include <stdio.h>
#ifdef I_MEMORY
# include <memory.h>
#endif
#ifdef I_STDLIB
# include <stdlib.h>
#endif
#ifdef I_STRING
# include <string.h>
#else
# include <strings.h>
#endif
#ifdef I_UNISTD
# include <unistd.h> /* Needed for NetBSD */
#endif
int main()
{
char buf[128], abc[128];
char *b;
int len;
int off;
int align;

/* Copy "abcde..." string to char abc[] so that gcc doesn't
try to store the string in read-only memory. */
memcpy(abc, "abcdefghijklmnopqrstuvwxy0123456789", 36);

for (align = 7; align >=
0; align--) {
for (len = 36; len; len--) {
b = buf+align;
memcpy(b, abc, len);
for (off = 1; off <= len; off++) {
memcpy(b+off, b, len);
memcpy(b, b+off, len);
if (memcmp(b, abc, len))

```

```

    exit(1);
}
}
}
exit(0);
}
EOCP
set try
if eval $compile_ok; then
if $run ./try 2>/dev/null; then
    echo "Yes, it can."
    val="$define"
else
    echo "It can't, sorry."
fi
else
    echo "(I can't compile the test program, so we'll assume not...)"
fi
;;
esac
$rm_try
;;
esac
set d_safemcpy
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_safemcpy.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getnbyad.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getnbyname: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getnbyname:

?S: This variable conditionally defines the HAS\_GETNETBYNAME symbol, which

?S: indicates to the C program that the getnetbyname() routine is available

?S: to look up networks by their names.

?S:.

?C:HAS\_GETNETBYNAME:

?C: This symbol, if defined, indicates that the getnetbyname() routine is

?C: available to look up networks by their names.

```
?C:
?H:#$d_getbyname HAS_GETNETBYNAME /**/
?H:
?LINT:set d_getbyname
: see if getnetbyname exists
set getnetbyname d_getbyname
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_getbynm.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_ctime_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_ctime_r ctime_r_proto: Inlibc Protochk Hasproto i_systypes \
  usethreads i_time i_systime extern_C
?MAKE: -pick add $@ %<
?S:d_ctime_r:
?S: This variable conditionally defines the HAS_CTIME_R symbol,
?S: which indicates to the C program that the ctime_r()
?S: routine is available.
?S:
?S:ctime_r_proto:
?S: This variable encodes the prototype of ctime_r.
?S: It is zero if d_ctime_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_ctime_r
?S: is defined.
?S:
?C:HAS_CTIME_R:
?C: This symbol, if defined, indicates that the ctime_r routine
?C: is available to ctime re-entrantly.
?C:
?C:CTIME_R_PROTO:
?C: This
  symbol encodes the prototype of ctime_r.
?C: It is zero if d_ctime_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_ctime_r
?C: is defined.
?C:
?H:#$d_ctime_r HAS_CTIME_R /**/
?H:#define CTIME_R_PROTO $ctime_r_proto /**/
```

```

?H:
?T:try hdrs d_ctime_r_proto
: see if ctime_r exists
set ctime_r d_ctime_r
eval $inlibc
case "$d_ctime_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_time time.h $i_systime sys/time.h"
case "$d_ctime_r_proto:$usethreads" in
":define") d_ctime_r_proto=define
set d_ctime_r_proto ctime_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_ctime_r_proto" in
define)
case "$ctime_r_proto" in
"|0) try='char* ctime_r(const time_t*, char*);'
./protochk "$extern_C $try" $hdrs && ctime_r_proto=B_SB ;;
esac
case "$ctime_r_proto" in
"|0) try='char* ctime_r(const time_t*, char*, int);'
./protochk "$extern_C $try" $hdrs && ctime_r_proto=B_SBI ;;
esac
case "$ctime_r_proto" in
"|0) try='int ctime_r(const
time_t*, char*);'
./protochk "$extern_C $try" $hdrs && ctime_r_proto=L_SB ;;
esac
case "$ctime_r_proto" in
"|0) try='int ctime_r(const time_t*, char*, int);'
./protochk "$extern_C $try" $hdrs && ctime_r_proto=L_SBI ;;
esac
case "$ctime_r_proto" in
"|0) d_ctime_r=undef
ctime_r_proto=0
echo "Disabling ctime_r, cannot determine prototype." >&4 ;;
*) case "$ctime_r_proto" in
REENTRANT_PROTO*) ;;
*) ctime_r_proto="REENTRANT_PROTO_${ctime_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "ctime_r has no prototype, not using it." >&4 ;;
esac
d_ctime_r=undef

```



```
ctime_r_proto=0
;;
esac
;;
*) ctime_r_proto=0
;;
esac
```

Found in path(s):

```
*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_ctime_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:siteman3dir siteman3direxp installsiteman3dir: Getfile \

Setprefixvar prefix siteprefix man3dir sed

?MAKE: -pick add \$@ %<

?Y:TOP

?D:siteman3dir="

?S:siteman3dir:

?S: This variable contains the name of the directory in which site-specific

?S: library man source pages are to be put. It is the responsibility of the

?S: Makefile.SH to get the value of this into the proper command.

?S: You must be prepared to do the ~name expansion yourself.

?S: The standard distribution will put nothing in this directory.

?S: After

perl has been installed, users may install their own local

?S: man3 pages in this directory with

?S: MakeMaker Makefile.PL

?S: or equivalent. See INSTALL for details.

?S:.

?D:siteman3direxp="

?S:siteman3direxp:

?S: This variable is the same as the siteman3dir variable, but is filename

?S: expanded at configuration time, for convenient use in makefiles.

?S:.

?D:installsiteman3dir="

?S:installsiteman3dir:

?S: This variable is really the same as siteman3direxp, unless you are using

```

?S: AFS in which case it points to the read/write location whereas
?S: man3direxp only points to the read-only access location. For extra
?S: portability, you should only use this variable within your makefiles.
?S:.
?LINT:change prefixvar
?LINT:set installsiteman3dir
?LINT:set siteman3dir
?LINT:set siteman3direxp
: determine where add-on library man pages go
case "$siteman3dir" in
") dflt=`echo $man3dir | $sed "s#^$prefix#$siteprefix#" ` ;;
*) dflt=$siteman3dir ;;
esac
case "$dflt" in
"|' ') dflt=none ;;
esac
fn=dn+~
rp='Pathname
where the site-specific library manual pages should be installed?'
./getfile
prefixvar=siteman3dir
./setprefixvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/siteman3dir.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: usedtrace.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 2008 H.Merijn Brand
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?RCS: $Log: usedtrace.U,v $
```

```
?RCS:
```

```
?MAKE:usedtrace dtrace: Myread Oldconfig Setvar Getfile test
```

```
?MAKE: -pick add $@ %<
```

```
?Y:TOP
```

```
?S:usedtrace:
```

```
?S: This variable indicates whether we are compiling with dtrace
```

```
?S: support. See also dtrace.
```

```
?S:.
```

```
?S:dtrace:
```

```
?S: This variable holds the location of the dtrace executable.
```

```
?S:.
```

```
?C:USE_DTRACE:
```

?C: This symbol, if defined, indicates that Perl should

?C: be built with support for DTrace.

?C:.

?H:#\$usedtrace USE\_DTRACE /\*\*/

?H:.

?T:dflt\_dtrace

?LINT:set usedtrace

?LINT:set dtrace

: DTrace support

dflt\_dtrace='/usr/sbin/dtrace'

\$test -x /usr/bin/dtrace && dflt\_dtrace='/usr/bin/dtrace'

cat <<EOM

Perl can be built to support DTrace on platforms that support it.

DTrace is a diagnosis and performance analysis tool from Sun.

If this doesn't make any sense to you, just accept the default.

EOM

```
while $test 1 ; do
```

```
case "$usedtrace" in
```

```
$define|true|[yY]*)
```

```
  dflt='y'
```

```
  ;;
```

```
$undef|false|[nN]*)
```

```
  dflt='n'
```

```
  dflt_dtrace=""
```

```
  ;;
```

```
?)
```

```
  dflt='y'
```

```
  dflt_dtrace=$usedtrace
```

```
  ;;
```

```
*)
```

```
  dflt='n'
```

```
  ;;
```

```
esac
```

```
rp='Support DTrace if available?'
```

```
./myread
```

```
case "$ans" in
```

```
y|Y) val="$define" ;;
```

```
*)   val="$undef" ;;
```

```
esac
```

```
set usedtrace
```

```
eval $setvar
```

```

test "X$usedtrace" != "X$define" && break

echo " "
rp='Where is the dtrace executable?'
dflt=$dflt_dtrace
./getfile
val="$ans"
set dtrace
eval $setvar

if $test -f $dtrace
then
if $dtrace -h -s ../perldtrace.d \
-o perldtrace.tmp >/dev/null 2>&1 \
&& rm -f perldtrace.tmp
then
echo " "
echo "Good: your $dtrace knows about the -h flag."
else
cat >&2 <<EOM

*** $me: Fatal Error: $dtrace doesn't support -h flag
***
*** Your installed dtrace doesn't support the -h switch to
compile a D
*** program into a C header. Can't continue.

EOM
exit 1
fi
break;
fi

case "$fastread" in
yes)
cat >&2 <<EOM

*** $me: Fatal Error: $dtrace not found.
*** Can't continue.

EOM
exit 1
;;
*)
echo "*** $dtrace was not found."
echo " "
;;
esac

```

done

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/usedtrace.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_llrint: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_llrint:

?S: This variable conditionally defines the HAS\_LLRLINT symbol, which

?S: indicates to the C program that the llrint() routine is available

?S: to return the long long value closest to a double (according

?S: to the current rounding mode).

?S:.

?C:HAS\_LLRLINT:

?C: This symbol, if defined, indicates that the llrint routine is

?C: available to return the long long value closest to a double

?C: (according to the current rounding mode).

?C:.

?H:#\$d\_llrint HAS\_LLRLINT /\*\*/

?H:.

?LINT:set d\_llrint

: see if llrint exists

set llrint d\_llrint

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_llrint.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_msgctl.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_msgctl.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:38 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:  
?MAKE:d\_msgctl: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_msgctl:  
?S: This variable conditionally defines the HAS\_MSGCTL symbol, which  
?S: indicates to the C program that the msgctl() routine is available.  
?S:.  
?C:HAS\_MSGCTL:  
?C: This symbol, if defined, indicates that the msgctl() routine is  
?C: available to perform message control operations.  
?C:.  
?H:#\$d\_msgctl  
HAS\_MSGCTL /\*\*/  
?H:.  
?LINT:set d\_msgctl  
: see if msgctl exists  
set msgctl d\_msgctl  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_msgctl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_pipe.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_pipe.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:11:44 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_pipe: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_pipe:  
?S: This variable conditionally defines the HAS\_PIPE symbol, which  
?S: indicates to the C program that the pipe() routine is available  
?S: to create an inter-process channel.  
?S:.  
?C:HAS\_PIPE :

?C: This symbol, if defined, indicates  
that the pipe routine is  
?C: available to create an inter-process channel.  
?C:.  
?H:#\$d\_pipe HAS\_PIPE /\*\*/  
?H:.  
?LINT:set d\_pipe  
: see if pipe exists  
set pipe d\_pipe  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_pipe.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Tye McQueen <tye@metronet.com>  
?RCS:  
?RCS: \$Log: d\_stdstdio.U,v \$  
?RCS: Revision 3.0.1.3 1997/02/28 15:46:32 ram  
?RCS: patch61: merged with perl5's unit  
?RCS:  
?RCS: Revision 3.0.1.2 1995/07/25 14:06:54 ram  
?RCS: patch56: typo fix on ?C: line for FILE\_bufsiz  
?RCS: patch56: fixed unbalanced parenthesis (ADO)  
?RCS: patch56: check whether FILE\_cnt and FILE\_ptr can be assigned to (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1995/05/12 12:12:11 ram  
?RCS: patch54: complete rewrite by Tye McQueen  
to fit modern systems  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:07:31 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_stdstdio d\_stdiobase stdio\_ptr stdio\_cnt stdio\_base \  
stdio\_bufsiz d\_stdio\_cnt\_lval d\_stdio\_ptr\_lval stdio\_filbuf: cat \  
+cc +ccflags contains +ldflags +libs rm\_try \  
Setvar Findhdr Oldconfig

?MAKE: -pick add \$@ %<  
?S:d\_stdstdio:  
?S: This variable conditionally defines USE\_STDIO\_PTR if this system  
?S: has a FILE structure declaring usable \_ptr and \_cnt fields (or  
?S: equivalent) in stdio.h.  
?S:.  
?S:stdio\_ptr:  
?S: This variable defines how, given a FILE pointer, fp, to access the  
?S: \_ptr field (or equivalent) of stdio.h's FILE structure. This will  
?S: be used to define the macro FILE\_ptr(fp).  
?S:.  
?S:d\_stdio\_ptr\_lval:  
?S: This variable conditionally defines STDIO\_PTR\_LVALUE if the  
?S: FILE\_ptr macro can be used as an lvalue.  
?S:.  
?S:stdio\_cnt:  
?S: This variable defines how, given a FILE pointer, fp, to access the  
?S: \_cnt field (or equivalent) of  
?S: stdio.h's FILE structure. This will  
?S: be used to define the macro FILE\_cnt(fp).  
?S:.  
?S:d\_stdio\_cnt\_lval:  
?S: This variable conditionally defines STDIO\_CNT\_LVALUE if the  
?S: FILE\_cnt macro can be used as an lvalue.  
?S:.  
?S:stdio\_filbuf:  
?S: This variable defines how, given a FILE pointer, fp, to tell  
?S: stdio to refill it's internal buffers (?). This will  
?S: be used to define the macro FILE\_filbuf(fp).  
?S:.  
?S:d\_stdibase:  
?S: This variable conditionally defines USE\_STDIO\_BASE if this system  
?S: has a FILE structure declaring a usable \_base field (or equivalent)  
?S: in stdio.h.  
?S:.  
?S:stdio\_base:  
?S: This variable defines how, given a FILE pointer, fp, to access the  
?S: \_base field (or equivalent) of stdio.h's FILE structure. This will  
?S: be used to define the macro FILE\_base(fp).  
?S:.  
?S:stdio\_bufsiz:  
?S: This variable defines how, given a FILE pointer, fp, to determine  
?S: the number of bytes store in the I/O buffer pointer to by the  
?S: \_base field (or equivalent) of stdio.h's  
?S: FILE structure. This will  
?S: be used to define the macro FILE\_bufsiz(fp).  
?S:.  
?C:USE\_STDIO\_PTR ~ d\_stdstdio (USE\_STD\_STDIO STDSTDIO):



?C: This symbol is defined if the `_ptr` and `_cnt` fields (or similar) of the `stdio FILE` structure can be used to access the `stdio` buffer for a file handle. If this is defined, then the `FILE_ptr(fp)` and `FILE_cnt(fp)` macros will also be defined and should be used to access these fields.

?C:.

?C: `FILE_ptr`:

?C: This macro is used to access the `_ptr` field (or equivalent) of the `FILE` structure pointed to by its argument. This macro will always be defined if `USE_STDIO_PTR` is defined.

?C:.

?C: `STDIO_PTR_LVALUE`:

?C: This symbol is defined if the `FILE_ptr` macro can be used as an lvalue.

?C:.

?C: `FILE_cnt`:

?C: This macro is used to access the `_cnt` field (or equivalent) of the `FILE` structure pointed to by its argument. This macro will always be defined if `USE_STDIO_PTR` is defined.

?C:.

?C: `STDIO_CNT_LVALUE`:

?C: This symbol is defined if the `FILE_cnt` macro can be used as an lvalue.

?C:.

?C: `FILE_filbuf`:

?C: This macro is used to access the internal `stdio _filbuf` function (or equivalent), if `STDIO_CNT_LVALUE` and `STDIO_PTR_LVALUE` are defined. It is typically either `_filbuf` or `__filbuf`. This macro will only be defined if both `STDIO_CNT_LVALUE` and `STDIO_PTR_LVALUE` are defined.

?C:.

```
?H:?d_stdstdio:#$d_stdstdio USE_STDIO_PTR /**/
?H:?d_stdstdio:#ifdef USE_STDIO_PTR
?H:#define FILE_ptr(fp) $stdio_ptr
?H:#$d_stdstdio_ptr_lval STDIO_PTR_LVALUE /**/
?H:#define FILE_cnt(fp) $stdio_cnt
?H:#$d_stdstdio_cnt_lval STDIO_CNT_LVALUE /**/
?H:?d_stdstdio:#if defined(STDIO_PTR_LVALUE) && defined(STDIO_CNT_LVALUE)
?H:#define FILE_filbuf(fp) $stdio_filbuf /**/
?H:?d_stdstdio:#endif
?H:?d_stdstdio:#endif
?H:.
```

?W:d\_stdstdio:FILE\_ptr FILE\_cnt FILE\_filbuf

?C: `USE_STDIO_BASE ~ d_stdiobase`:

?C: This symbol is defined if the `_base` field (or similar) of the `stdio FILE` structure can be used to access the `stdio` buffer

```

for
?C: a file handle. If this is defined, then the FILE_base(fp) macro
?C: will also be defined and should be used to access this field.
?C: Also, the FILE_bufsiz(fp) macro will be defined and should be used
?C: to determine the number of bytes in the buffer. USE_STDIO_BASE
?C: will never be defined unless USE_STDIO_PTR is.
?C:.
?C:FILE_base:
?C: This macro is used to access the _base field (or equivalent) of the
?C: FILE structure pointed to by its argument. This macro will always be
?C: defined if USE_STDIO_BASE is defined.
?C:.
?C:FILE_bufsiz:
?C: This macro is used to determine the number of bytes in the I/O
?C: buffer pointed to by _base field (or equivalent) of the FILE
?C: structure pointed to its argument. This macro will always be defined
?C: if USE_STDIO_BASE is defined.
?C:.
?H:?d_stdibase:#$d_stdibase USE_STDIO_BASE /**/
?H:?d_stdibase:#ifdef USE_STDIO_BASE
?H:#define FILE_base(fp) $stdio_base
?H:#define FILE_bufsiz(fp) $stdio_bufsiz
?H:?d_stdibase:#endif
?H:.
?W:d_stdibase:FILE_base
FILE_bufsiz
?LINT:set d_stdstdio d_stdibase
?T:ptr_lval cnt_lval filbuf xxx
?F:!try
: see if _ptr and _cnt from stdio act std
echo " "
if $contains '_IO_fpos_t' `./findhdr stdio.h` >/dev/null 2>&1 ; then
echo "(Looks like you have stdio.h from Linux.)"
case "$stdio_ptr" in
") stdio_ptr='((fp)->_IO_read_ptr)'
ptr_lval=$define
;;
*) ptr_lval=$d_stdio_ptr_lval;;
esac
case "$stdio_cnt" in
") stdio_cnt='((fp)->_IO_read_end - (fp)->_IO_read_ptr)'
cnt_lval=$undef
;;
*) cnt_lval=$d_stdio_cnt_lval;;
esac
case "$stdio_base" in
") stdio_base='((fp)->_IO_read_base)';;
esac

```

```

case "$stdio_bufsiz" in
") stdio_bufsiz=$((fp->_IO_read_end - (fp->_IO_read_base));;
esac
else
case "$stdio_ptr" in
") stdio_ptr='((fp->_ptr)'
ptr_lval=$define
;;
*) ptr_lval=$d_stdio_ptr_lval;;
esac
case "$stdio_cnt" in
") stdio_cnt='((fp->_cnt)'
cnt_lval=$define
;;
*) cnt_lval=$d_stdio_cnt_lval;;
esac
case "$stdio_base" in
") stdio_base='((fp->_base));;
esac
case
"$stdio_bufsiz" in
") stdio_bufsiz=$((fp->_cnt + (fp->_ptr - (fp->_base));;
esac
fi
: test whether _ptr and _cnt really work
echo "Checking how std your stdio is..." >&4
$cat >try.c <<EOP
#include <stdio.h>
#define FILE_ptr(fp) $stdio_ptr
#define FILE_cnt(fp) $stdio_cnt
int main() {
FILE *fp = fopen("try.c", "r");
char c = getc(fp);
if (
18 <= FILE_cnt(fp) &&
strcmp(FILE_ptr(fp), "include <stdio.h>\n", 18) == 0
)
exit(0);
exit(1);
}
EOP
val="$undef"
if $cc $ccflags $ldflags -o try try.c $libs >/dev/null 2>&1; then
if ./try; then
echo "Your stdio acts pretty std."
val="$define"
else
echo "Your stdio isn't very std."

```

```

fi
else
    echo "Your stdio doesn't appear very std."
fi
$rm_try
set d_stdstdio
eval $setvar

@if STDIO_PTR_LVALUE || d_stdio_ptr_lval
: Can _ptr be used as an lvalue?
?X: Only makes sense if we have a known stdio implementation.
case "$d_stdstdio$ptr_lval" in
$define$define) val=$define ;;
*) val=$undef ;;
esac
set d_stdio_ptr_lval
eval
$setvar

@end

@if STDIO_CNT_LVALUE || d_stdio_cnt_lval
: Can _cnt be used as an lvalue?
?X: Only makes sense if we have a known stdio implementation.
case "$d_stdstdio$cnt_lval" in
$define$define) val=$define ;;
*) val=$undef ;;
esac
set d_stdio_cnt_lval
eval $setvar

@end

@if FILE_filbuf
: How to access the stdio _filbuf or __filbuf function.
: If this fails, check how the getc macro in stdio.h works.
case "${d_stdio_ptr_lval}${d_stdio_cnt_lval}" in
${define}${define})
: Try hint value, if any, then _filbuf, __filbuf, _fill, then punt.
: _fill is for OS/2.
xxx='notok'
for filbuf in $stdio_filbuf '_filbuf(fp)' '__filbuf(fp)' '_fill(fp)'; do
$cat >try.c <<EOP
#include <stdio.h>
#define FILE_ptr(fp) $stdio_ptr
#define FILE_cnt(fp) $stdio_cnt
#define FILE_filbuf(fp) $filbuf
int main() {
FILE *fp = fopen("try.c", "r");
int c;

```

```

c = getc(fp);
c = FILE_filbuf(fp); /* Just looking for linker errors.*/
exit(0);
}
EOP
if $cc $ccflags $ldflags -o try try.c $libs >/dev/null 2>&1 &&
./try; then
echo "Your stdio appears to use $filbuf"
stdio_filbuf="$filbuf"
xxx='ok'
break
else
echo "Hmm. $filbuf doesn't seem to work."
fi
$rm_try
done
case "$xxx" in
notok) echo "I can't figure out how to access _filbuf"
echo "I'll just have to work around it."
d_stdio_ptr_lval="$undef"
d_stdio_cnt_lval="$undef"
;;
esac
;;
esac
@end
@if d_stdibase || USE_STDIO_BASE || FILE_base || FILE_bufsiz
: see if _base is also standard
val="$undef"
case "$d_stdstdio" in
$define)
$cat >try.c <<EOP
#include <stdio.h>
#define FILE_base(fp) $stdio_base
#define FILE_bufsiz(fp) $stdio_bufsiz
int main() {
FILE *fp = fopen("try.c", "r");
char c = getc(fp);
if (
19 <= FILE_bufsiz(fp) &&
strncmp(FILE_base(fp), "#include <stdio.h>\n", 19) == 0
)
exit(0);
exit(1);
}
EOP
if $cc $ccflags $ldflags -o try try.c $libs > /dev/null 2>&1; then
if ./try; then

```

```

echo "And its _base field acts std."
val="$define"
else
echo "But its _base field isn't std."
fi
else
echo
"However, it seems to be lacking the _base field."
fi
$rm_try
;;
esac
set d_stdibase
eval $setvar

@end

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_stdstdio.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_syslog.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_syslog.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:46:56 ram
?RCS: patch61: replaced .o with $_o all over the place
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:43 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_syslog: test Csym Setvar Findhdr
?MAKE: -pick add $@ %<
?S:d_syslog:
?S: This variable conditionally defines the HAS_SYSLOG symbol, which
?S: indicates to the C program that syslog() exists on this system.
?S:.
?C:HAS_SYSLOG
(LIBSYSLOG):
?C: This symbol, if defined, indicates that the program can rely on the

```

?C: system providing syslog(). Otherwise, the syslog code provided by

?C: the package should be used.

?C:.

?H:#\$d\_syslog HAS\_SYSLOG /\*\*/

?H:.

?LINT:set d\_syslog

: see if syslog is available

echo " "

if \$test `./findhdr syslog.h` && \

(set syslog val -f d\_syslog; eval \$csym; \$val); then

echo "syslog() found." >&4

val="\$define"

else

echo "syslog() not found in your C library." >&4

val="\$undef"

fi

set d\_syslog

eval \$setvar

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_syslog.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2008 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_timegm: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_timegm:

?S: This variable conditionally defines the HAS\_TIMEGM symbol, which

?S: indicates to the C program that the timegm () routine is available.

?S:.

?C:HAS\_TIMEGM:

?C: This symbol, if defined, indicates that the timegm routine is

?C: available to do the opposite of gmtime ()

?C:.

?H:#\$d\_timegm HAS\_TIMEGM /\*\*/

?H:.

?LINT:set d\_timegm

: see if timegm exists

set timegm d\_timegm

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_timegm.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_sigsetjmp.U,v 3.0.1.1 1997/02/28 15:44:33 ram Exp \$

?RCS:

?RCS: Copyright (c) 1996,1998 Andy Dougherty

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 3.0.

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?RCS:

?RCS: \$Log: d\_sigsetjmp.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:44:33 ram

?RCS: patch61: created

?RCS:

?MAKE:d\_sigsetjmp: Compile Setvar cat rm\_try run i\_stdlib

?MAKE: -pick add \$@ %<

?S:d\_sigsetjmp:

?S: This variable conditionally defines the HAS\_SIGSETJMP symbol,

?S: which

indicates that the sigsetjmp() routine is available to

?S: call setjmp() and optionally save the process's signal mask.

?S:.

?C:HAS\_SIGSETJMP:

?C: This variable indicates to the C program that the sigsetjmp()

?C: routine is available to save the calling process's registers

?C: and stack environment for later use by siglongjmp(), and

?C: to optionally save the process's signal mask. See

?C: Sigjmp\_buf, Sigsetjmp, and Siglongjmp.

?C:.

?C:Sigjmp\_buf:

?C: This is the buffer type to be used with Sigsetjmp and Siglongjmp.

?C:.

?C:Sigsetjmp:

?C: This macro is used in the same way as sigsetjmp(), but will invoke

?C: traditional setjmp() if sigsetjmp isn't available.

?C: See HAS\_SIGSETJMP.

?C:.

?C:Siglongjmp:

?C: This macro is used in the same way as siglongjmp(), but will invoke



```

?C: traditional longjmp() if siglongjmp isn't available.
?C: See HAS_SIGSETJMP.
?C:.
?H:?%<:#$d_sigsetjmp HAS_SIGSETJMP /**/
?H:?%<:#ifdef HAS_SIGSETJMP
?H:?%<:#define Sigjmp_buf sigjmp_buf
?H:?%<:#define Sigsetjmp(buf,save_mask)
sigsetjmp((buf),(save_mask))
?H:?%<:#define Siglongjmp(buf,retval) siglongjmp((buf),(retval))
?H:?%<:#else
?H:?%<:#define Sigjmp_buf jmp_buf
?H:?%<:#define Sigsetjmp(buf,save_mask) setjmp((buf))
?H:?%<:#define Siglongjmp(buf,retval) longjmp((buf),(retval))
?H:?%<:#endif
?H:.
?W:%<:Sigjmp_buf Sigsetjmp Siglongjmp
?F:!try
?LINT:set d_sigsetjmp
: see if sigsetjmp exists
?X: We can't check for these symbols with Inlibc because sigsetjmp
?X: is (sometimes? always?) a macro under GCC
echo " "
case "$d_sigsetjmp" in
")
$cat >try.c <<EOP
#include <setjmp.h>
#$i_stdlib L_STDLIB
#ifdef L_STDLIB
#include <stdlib.h>
#endif
sigjmp_buf env;
int set = 1;
int main()
{
if (sigsetjmp(env,1))
exit(set);
set = 0;
siglongjmp(env, 1);
exit(1);
}
EOP
set try
if eval $compile; then
if $run ./try >/dev/null 2>&1; then
echo "POSIX sigsetjmp found." >&4
val="$define"
else
$cat >&4 <<EOM

```

Uh-Oh! You have POSIX sigsetjmp and siglongjmp, but they do not work properly!!

I'll

ignore them.

EOM

```
    val="$undef"
fi
else
    echo "sigsetjmp not found." >&4
    val="$undef"
fi
;;
*) val="$d_sigsetjmp"
case "$d_sigsetjmp" in
    $define) echo "POSIX sigsetjmp found." >&4;;
    $undef) echo "sigsetjmp not found." >&4;;
esac
;;
esac
set d_sigsetjmp
eval $setvar
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_sigsetjmp.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getspnam\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getspnam\_r getsppnam\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_shadow extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getspnam\_r:

?S: This variable conditionally defines the HAS\_GETSPNAM\_R symbol,

?S: which indicates to the C program that the getsppnam\_r()

?S: routine is available.

?S:.

?S:getsppnam\_r\_proto:

?S: This variable encodes the prototype of getsppnam\_r.

?S: It is zero if d\_getspnam\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getspnam\_r

?S: is defined.

```

?S:.
?C:HAS_GETSPNAM_R:
?C: This symbol, if defined, indicates that the getsnam_r routine
?C: is available
to getsnam re-entrantly.
?C:.
?C:GETSPNAM_R_PROTO:
?C: This symbol encodes the prototype of getsnam_r.
?C: It is zero if d_getspnam_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getspnam_r
?C: is defined.
?C:.
?H:#$d_getspnam_r HAS_GETSPNAM_R /**/
?H:#define GETSPNAM_R_PROTO $getsnam_r_proto /**/
?H:.
?T:try hdrs d_getspnam_r_proto
: see if getsnam_r exists
set getsnam_r d_getspnam_r
eval $inlibc
case "$d_getspnam_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_shadow shadow.h"
case "$d_getspnam_r_proto:$usetthreads" in
":define") d_getspnam_r_proto=define
set d_getspnam_r_proto getsnam_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getspnam_r_proto" in
define)
case "$getsnam_r_proto" in
"|0) try='int getsnam_r(const char*, struct spwd*, char*, size_t, struct spwd**);'
./protochk "$extern_C $try" $hdrs && getsnam_r_proto=I_CSBWR ;;
esac
case "$getsnam_r_proto" in
"|0) try='struct spwd* getsnam_r(const char*, struct
spwd*, char*, int);'
./protochk "$extern_C $try" $hdrs && getsnam_r_proto=S_CSBI ;;
esac
case "$getsnam_r_proto" in
"|0) d_getspnam_r=undef
getsnam_r_proto=0
echo "Disabling getsnam_r, cannot determine prototype." >&4 ;;
* ) case "$getsnam_r_proto" in
REENTRANT_PROTO*) ;;
*) getsnam_r_proto="REENTRANT_PROTO_$getsnam_r_proto" ;;
esac
echo "Prototype: $try" ;;

```

```

esac
;;
*) case "$usethreads" in
define) echo "getspnam_r has no prototype, not using it." >&4 ;;
esac
d_getspnam_r=undef
getspnam_r_proto=0
;;
esac
;;
*) getspnam_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_getspnam_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Obsol_sh.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: Obsol_sh.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:05:11 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?X:
```

```
?X: This file is prepended to .MT/Obsol_sh if that file is not empty. That file
```

```
?X: contains the necessary mappings of new symbols to obsolete ones.
```

```
?X:
```

```
?MAKE:Obsol_sh:
```

```
?MAKE: -pick prepend $@ ./Obsol_sh
```

```
?LINT:nocomment
```

```
#
```

```
# The following symbols are obsolete. They are mapped to the new
```

```
# symbols only to ease the transition process. The
```

```
sources should be
```

```
# updated so as to use the new symbols only, since supporting of those
```

```
# obsolete symbols may end without notice.
```

```
#
```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/ObsoL\_sh.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: nis.U,v 3.0.1.3 1997/02/28 16:17:38 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: nis.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 16:17:38 ram

?RCS: patch61: ensure suitable defaults for hostcat and friends

?RCS:

?RCS: Revision 3.0.1.2 1995/03/21 08:48:34 ram

?RCS: patch52: continued fix for NeXT NIS/NetInfo handling

?RCS:

?RCS: Revision 3.0.1.1 1995/02/15 14:16:23 ram

?RCS: patch51: now correctly handles NeXT using NIS rather than NetInfo

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:24 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:passcat

groupcat hostcat: Myread Oldconfig test contains

?MAKE: -pick add \$@ %<

?S:passcat:

?S: This variable contains a command that produces the text of the

?S: /etc/passwd file. This is normally "cat /etc/passwd", but can be

?S: "ypcat passwd" when NIS is used.

?S: On some systems, such as os390, there may be no equivalent

?S: command, in which case this variable is unset.

?S:.

?S:groupcat:

?S: This variable contains a command that produces the text of the

?S: /etc/group file. This is normally "cat /etc/group", but can be

?S: "ypcat group" when NIS is used.

?S: On some systems, such as os390, there may be no equivalent

?S: command, in which case this variable is unset.

?S:.

?S:hostcat:

?S: This variable contains a command that produces the text of the

?S: /etc/hosts file. This is normally "cat /etc/hosts", but can be

?S: "ypcat hosts" when NIS is used.

?S: On some systems, such as os390, there may be no equivalent

?S: command, in which case this variable is unset.

?S:.

:

see if we have to deal with yellow pages, now NIS.

?X: NeXT gives us some fun here, as always, by having both NIS (former YP)

?X: and NetInfo. But since it has both, it's ok to put the test inside the if.

?X: Contributed by Thomas Neumann <tom@smart.bo.open.de>.

```

if $test -d /usr/etc/yp || $test -d /etc/yp || $test -d /usr/lib/yp; then
@if passcat || groupcat
case "$passcat" in
nidump*) ;;
*)
case "$passcat" in
*ypcat*) dflt=y;;
") if $contains '\+' /etc/passwd >/dev/null 2>&1; then
dflt=y
else
dflt=n
fi;;
*) dflt=n;;
esac
echo " "
rp='Are you getting the passwd file via yellow pages?'
./myread
case "$ans" in
y*) passcat='ypcat passwd'
@if groupcat
echo "(Assuming /etc/group is also distributed.)"
groupcat='ypcat group'
@end
;;
*) passcat='cat /etc/passwd'
@if groupcat
echo "(Assuming /etc/group is also local.)"
groupcat='cat /etc/group'
@end
;;
esac
;;
esac
@end
@if hostcat
case "$hostcat" in
nidump*) ;;
*)
case

```

```

"$hostcat" in
*) dflt=y;;
") if $contains '\+' /etc/passwd >/dev/null 2>&1; then
    dflt=y
else
    dflt=n
fi;;
*) dflt=n;;
esac
echo " "
rp='Are you getting the hosts file via yellow pages?'
./myread
case "$ans" in
y*) hostcat='ypcat hosts';;
*) hostcat='cat /etc/hosts';;
esac
;;
esac
@end
fi
?X: Ensure suitable default -- Manoj Srivastava
case "$hostcat" in
") test -f /etc/hosts && hostcat='cat /etc/hosts';;
esac
case "$groupcat" in
") test -f /etc/group && groupcat='cat /etc/group';;
esac
case "$passcat" in
") test -f /etc/passwd && passcat='cat /etc/passwd';;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/nis.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_strxfrm_1.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:

```

?RCS: \$Log: d\_strxfrm\_1.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:12:04 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_strxfrm\_1: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strxfrm\_1:  
?S: This variable conditionally defines HAS\_STRXFRM\_L if strxfrm\_1() is  
?S: available to transform strings.  
?S:.  
?C:HAS\_STRXFRM\_L:  
?C: This symbol, if defined, indicates that the strxfrm\_1() routine is  
?C: available  
to transform strings.  
?C:.  
?H:#\$d\_strxfrm\_1 HAS\_STRXFRM\_L /\*\*/  
?H:.  
?LINT:set d\_strxfrm\_1  
: see if strxfrm\_1 exists  
set strxfrm\_1 d\_strxfrm\_1  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_strxfrm\_1.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: cf\_who.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:28:50 ram  
?RCS: patch61: new computation method avoiding use of temporary file  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 14:42:34 ram  
?RCS: patch23: login name now computed the hard way  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:32 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:



?X: Oldconfig dependency is there to ensure computation occurs after old values  
?X: from config.sh have been loaded, so that we can supersede them.  
?X:  
?MAKE:cf\_time  
cf\_by: date Oldconfig  
?MAKE: -pick add \$@ %<  
?S:cf\_time:  
?S: Holds the output of the "date" command when the configuration file was  
?S: produced. This is used to tag both config.sh and config\_h.SH.  
?S:.  
?S:cf\_by:  
?S: Login name of the person who ran the Configure script and answered the  
?S: questions. This is used to tag both config.sh and config\_h.SH.  
?S:.  
?LINT:change LC\_ALL LANGUAGE  
: who configured the system  
?X: Ensure English date -- Jarkko Hietaniemi  
cf\_time=`LC\_ALL=C; LANGUAGE=C; export LC\_ALL; export LANGUAGE; \$date 2>&1`  
?X:  
?X: Leave a white space between first two '(' for ksh. The sub-shell is needed  
?X: on some machines to avoid the error message when logname is not found; e.g.  
?X: on SUN-OS 3.2, (logname || whoami) would not execute whoami if logname was  
?X: not found. Sigh!  
?X:  
?X: Convex had a broken logname executable which returned a non-zero status,  
?X: and that broke the previous:  
?X: cf\_by=`(logname) 2>/dev/null || whoami) 2>&1`  
?X: Switch to emergency  
mode... -- RAM, 19/04/94  
?X:  
?X: Parentheses needed to avoid error message if the program does not exist.  
?X: Uses case instead of \$test so it can be put before \$test is defined.  
?X: Don't redirect to a file because on Ultrix (under script?) logname  
?X: outputs a blank line first. This method will apparently work.  
case "\$cf\_by" in  
"")  
cf\_by=`(logname) 2>/dev/null`  
case "\$cf\_by" in  
"")  
cf\_by=`(whoami) 2>/dev/null`  
case "\$cf\_by" in  
"") cf\_by=unknown ;;  
esac ;;  
esac ;;  
esac

Found in path(s):  
\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/dist/U/cf\_who.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_nice.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_nice.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:09:48 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_nice: Inlibc
?MAKE: -pick add $@ %<
?S:d_nice:
?S: This variable conditionally defines the HAS_NICE symbol, which
?S: indicates to the C program that the nice() routine is available.
?S:.
?C:HAS_NICE :
?C: This symbol, if defined, indicates that the nice routine is
?C: available.
?C:.
?H:#$d_nice
HAS_NICE /**/
?H:.
?LINT:set d_nice
: see if nice exists
set nice d_nice
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_nice.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Extras.U,v$
?RCS:
?RCS: Copyright (c) 2001, Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
?MAKE:extras: Myread Oldconfig Setvar rm
?MAKE: -pick add $@ %<
?Y:TOP
?S:extras:
?S: This variable holds a list of extra modules to install.
?S:.
: See if we want extra modules installed
echo " "
case "$extras" in
") dflt='n';;
*) dflt='y';;
esac
cat <<EOM
Perl can be built with extra modules or bundles of modules which
will be fetched from the CPAN and installed alongside Perl.
```

Notice that you will need access to the CPAN; either via the Internet, or a local copy, for example a CD-ROM or a local CPAN mirror. (You will be asked later to configure the CPAN.pm module which will in turn do the installation of the rest of the extra modules or bundles.)

Notice also that if the modules require any external software such as libraries and headers (the libz library and the zlib.h header for the Compress::Zlib module, for example) you MUST have any such software already installed, this configuration process will NOT install such things for you.

If this doesn't make any sense to you, just accept the default '\$dflt'.

```
EOM
rp='Install any extra modules (y or n)?'
. ./myread
case "$ans" in
y|Y)
cat <<EOM
```

Please list any extra modules or bundles to be installed from CPAN, with spaces between the names. The names can be in any format the 'install' command of CPAN.pm will understand. (Answer 'none', without the quotes, to install no extra modules or bundles.)

```
EOM
rp='Extras?'
dflt="$extras"
. ./myread
extras="$ans"
esac
case "$extras" in
```

```

'|none')
val="
$rm -f ../extras.lst
;;
*) echo "(Saving the list of extras for later...)"
echo "$extras" > ../extras.lst
val="$extras"
;;
esac
set extras
eval $setvar
echo " "

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/Extras.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: Original author Jarkko Hietaniemi <jhi@iki.fi>

?RCS: Merged into dist by Andy Dougherty July 13, 1998

?RCS:

?MAKE:ebcdic: Compile Setvar cat rm\_try run

?MAKE: -pick add \$@ %<

?S:ebcdic:

?S: This variable conditionally defines EBCDIC if this

?S: system uses EBCDIC encoding. Among other things, this

?S: means that the character ranges are not contiguous.

?S: See trnl.U

?S:.

?C:EBCDIC:

?C: This symbol, if defined, indicates that this system uses

?C: EBCDIC

encoding.

?C:.

?H:#\$ebcdic EBCDIC /\*\*/

?H:.

```

?F:!try
?LINT:set ebcdic
: look whether system uses EBCDIC
echo " "
echo "Determining whether or not we are on an EBCDIC system..." >&4
$cat >try.c <<'EOM'
int main()
{
if ('M'==0xd4) return 0;
return 1;
}
EOM
val=$undef
set try
if eval $compile_ok; then
if $run ./try; then
echo "You seem to speak EBCDIC." >&4
val="$define"
else
echo "Nope, no EBCDIC, probably ASCII or some ISO Latin. Or UTF-8." >&4
fi
else
echo "I'm unable to compile the test program." >&4
echo "I'll assume ASCII or some ISO Latin. Or UTF8." >&4
fi
$rm_try
set ebcdic
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/ebcdic.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Warn_v7ND.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Warn_v7ND.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:01:46 ram
?RCS: patch36: call ./v7 explicitly instead of relying on PATH
?RCS:

```

```
?RCS: Revision 3.0 1993/08/18 12:05:18 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit warns V7 sites that they may not have a non-blocking read.
?X: This unit needs to be mentioned in End.U to get included.
?X:
?MAKE:Warn_v7ND: package Guess
?MAKE: -pick add $@ %<
: Warnings
if ./v7; then
cat
<<EOM
```

NOTE: many V7 systems do not have a way to do a non-blocking read. If you don't have any of FIONREAD, O\_NDELAY, or rdchk(), the \$package package may not work as well as it might. It might not work at all.

```
EOM
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Warn_v7ND.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysstat.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_sysstat.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:48:30 ram
?RCS: patch61: created
?RCS:
?MAKE:i_sysstat: Inhdr
?MAKE: -pick add $@ %<
?S:i_sysstat:
?S: This variable conditionally defines the I_SYS_STAT symbol,
?S: and indicates whether a C program should include <sys/stat.h>.
?S:.
?C:I_SYS_STAT (I_SYSSTAT):
?C: This symbol, if defined, indicates to the C program that it should
```

```
?C: include <sys/stat.h>.
?C:.
?H:#$i_sysstat I_SYS_STAT /**/
?H:.
?LINT:set
i_sysstat
: see if sys/stat.h is available
set sys/stat.h i_sysstat
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_sysstat.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: package.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: package.U,v $
?RCS: Revision 3.0.1.3 1994/10/29 16:27:21 ram
?RCS: patch36: beware of non-ascii character sets when translating case
?RCS:
?RCS: Revision 3.0.1.2 1993/11/10 17:37:02 ram
?RCS: patch14: skip definition of spackage if not otherwise used
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:11:10 ram
?RCS: patch10: added package, suitable for starting sentences
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:28 ram
?RCS: Baseline for dist 3.0
?RCS: worldwide release.
?RCS:
?MAKE:package spackage: Nothing
?MAKE: -pick wipe $@ %<
?S:package:
?S: This variable contains the name of the package being constructed.
?S: It is primarily intended for the use of later Configure units.
?S:.
?S:spackage:
?S: This variable contains the name of the package being constructed,
?S: with the first letter uppercased, i.e. suitable for starting
```

?S: sentences.

?S:.

?X: dist-4 has defined PACKAGE: here, which clashes with perl.y.h

?X: as package is a reserved keyword in perl

?T: first last

: set package name

```
package='<PACKAGENAME>'
```

@if spackage

```
first=`echo $package | sed -e 's/^(.).*\1/'`
```

```
last=`echo $package | sed -e 's/^(.*)\1/'`
```

?X:

?X: So early in the Configure script, we don't have ./tr set up and can't

?X: include Tr in our dependency or that would create a cycle. Therefore,

?X: we have to somehow duplicate the work done in Tr. That's life.

?X:

```
case "`echo AbyZ | tr '[:lower:]' '[:upper:]' 2>/dev/null`" - "`echo AbyZ | tr '[:upper:]' '[:lower:]'
2>/dev/null`" in
```

```
ABYZ-abyz) spackage=`echo $first | tr '[:lower:]' '[:upper:]'`$last;;
```

```
*) spackage=`echo $first | tr '[a-z]' '[A-Z]'`$last;;
```

esac

@end

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/package.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Oldconfig.U,v 3.0.1.10 1997/02/28 15:06:39 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: Oldconfig.U,v \$

?RCS: Revision 3.0.1.10 1997/02/28 15:06:39 ram

?RCS: patch61: added support for src.U

?RCS: patch61: new OSNAME define

?RCS: patch61: can now sense new OSes

?RCS:

?RCS: Revision 3.0.1.9 1995/07/25 13:40:51 ram

?RCS: patch56: now knows about OS/2 platforms

?RCS:

?RCS: Revision 3.0.1.8 1995/05/12 12:04:18 ram

?RCS: patch54: config.sh reload logic now knows about new -K switch



?RCS: patch54: cleaned up and extended osvers for DEC  
OSF/1 (ADO)  
?RCS: patch54: added MachTen detection (ADO)  
?RCS:  
?RCS: Revision 3.0.1.7 1995/02/15 14:13:41 ram  
?RCS: patch51: adapted osvers computation for AIX (ADO)  
?RCS:  
?RCS: Revision 3.0.1.6 1995/01/30 14:27:15 ram  
?RCS: patch49: unit Options.U now exports file optdef.sh, not a variable  
?RCS: patch49: update code for myuname changed (WED)  
?RCS:  
?RCS: Revision 3.0.1.5 1995/01/11 15:15:36 ram  
?RCS: patch45: added quotes around the INITPROG variable (ADO)  
?RCS: patch45: allows variable overriding after config file loading  
?RCS:  
?RCS: Revision 3.0.1.4 1994/10/29 15:57:05 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS: patch36: merged with the version used for perl5's Configure (ADO)  
?RCS:  
?RCS: Revision 3.0.1.3 1994/05/06 14:24:17 ram  
?RCS: patch23: added support for osf1 hints  
?RCS: patch23: new support for solaris and i386 systems (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/01/24 14:05:02 ram  
?RCS: patch16: added post-processing on myuname for Xenix targets  
?RCS:  
patch16: message proposing config.sh defaults made consistent  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 15:56:32 ram  
?RCS: patch10: force use of config.sh when -d option is used (WAD)  
?RCS: patch10: complain about non-existent hint files (WAD)  
?RCS: patch10: added Options dependency for fastread variable  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:12 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit tries to remember what we did last time we ran Configure, mostly  
?X: for the sake of setting defaults.  
?X:  
?MAKE:Oldconfig hint myuname osname osvers: Instruct Myread uname \  
Checkcc Mksymlinks run \  
sh awk sed test cat rm lns tr n c contains Loc Options Tr src trnl ln  
?MAKE: -pick wipe \$@ %<  
?S:myuname:  
?S: The output of 'uname -a' if available, otherwise the hostname.  
?S: The whole thing is then lower-cased and slashes and single quotes are  
?S: removed.

?S:.

?S:hint:

?S: Gives the type of hints used for previous answers. May be one of

?S: "default",  
 "recommended" or "previous".

?S:.

?S:osname:

?S: This variable contains the operating system name (e.g. sunos,  
 ?S: solaris, hpux, etc.). It can be useful later on for setting  
 ?S: defaults. Any spaces are replaced with underscores. It is set  
 ?S: to a null string if we can't figure it out.

?S:.

?S:osvers:

?S: This variable contains the operating system version (e.g.  
 ?S: 4.1.3, 5.2, etc.). It is primarily used for helping select  
 ?S: an appropriate hints file, but might be useful elsewhere for  
 ?S: setting defaults. It is set to " if we can't figure it out.  
 ?S: We try to be flexible about how much of the version number  
 ?S: to keep, e.g. if 4.1.1, 4.1.2, and 4.1.3 are essentially the  
 ?S: same for this package, hints files might just be os\_4.0 or  
 ?S: os\_4.1, etc., not keeping separate files for each little release.

?S:.

?C:OSNAME:

?C: This symbol contains the name of the operating system, as determined  
 ?C: by Configure. You shouldn't rely on it too much; the specific  
 ?C: feature tests  
 from Configure are generally more reliable.

?C:.

?C:OSVERS:

?C: This symbol contains the version of the operating system, as determined  
 ?C: by Configure. You shouldn't rely on it too much; the specific  
 ?C: feature tests from Configure are generally more reliable.

?C:.

?H:#define OSNAME "\$osname" /\*\*/  
 ?H:#define OSVERS "\$osvers" /\*\*/  
 ?H:.

?F:!config.sh

?T:tmp tmp\_n tmp\_c tmp\_sh file

?T:xxxxfile xxxfile xxfile xfile hintfile newmyuname

?T:tans \_ isesix INITPROG DJGPP

?D:osname="

?LINT:change n c sh

?LINT:extern targetarch

?LINT:extern hostarch

?LINT:change hostarch

?LINT:extern is\_os2

: Try to determine whether config.sh was made on this system  
 case "\$config\_sh" in

```

")
?X: indentation wrong on purpose--RAM
?X: Leave a white space between first two '(' for ksh. The sub-shell is needed
?X: on some machines to avoid the error message when uname is not found; e.g.
?X: old SUN-OS 3.2 would not execute hostname in (uname -a || hostname). Sigh!
?X: Now not using a subshell but instead $test.
myuname=`$uname
-a 2>/dev/null`
$test -z "$myuname" && myuname=`hostname 2>/dev/null`
# Downcase everything to avoid ambiguity.
# Remove slashes and single quotes so we can use parts of this in
# directory and file names.
# Remove newlines so myuname is sane to use elsewhere.
# tr '[A-Z]' '[a-z]' would not work in EBCDIC
# because the A-Z/a-z are not consecutive.
myuname=`echo $myuname | $sed -e "s,[/],g" | \
./tr '[A-Z]' '[a-z]' | $tr $trnl ' `
?X: Save the value we just computed to reset myuname after we get done here.
newmyuname="$myuname"
dflt=n
case "$knowitall" in
")
if test -f ../config.sh; then
if $contains myuname= ../config.sh >/dev/null 2>&1; then
eval "`grep myuname= ../config.sh`"
fi
if test "X$myuname" = "X$newmyuname"; then
dflt=y
fi
fi
;;
*) dflt=y;;
esac

@if {test -d ../hints}
: Get old answers from old config file if Configure was run on the
: same system, otherwise use the hints.
hint=default
cd ..
?X: Since we are now at the root of the source
tree, we must use $src
?X: to access the sources and not $rsrc. See src.U for details...
if test -f config.sh; then
echo " "
rp="I see a config.sh file. Shall I use it to set the defaults?"
. UU/myread
case "$ans" in
n*|N*) echo "OK, I'll ignore it."

```

```

mv config.sh config.sh.old
myuname="$newmyuname"
;;
*) echo "Fetching default answers from your old config.sh file..." >&4
tmp_n="$n"
tmp_c="$c"
tmp_sh="$sh"
./config.sh
cp config.sh UU
n="$tmp_n"
c="$tmp_c"
: Older versions did not always set $sh. Catch re-use of such
: an old config.sh.
case "$sh" in
") sh="$tmp_sh" ;;
esac
hint=previous
;;
esac
fi
./UU/checkcc
if test ! -f config.sh; then
$cat <<EOM

```

First time through, eh? I have some defaults handy for some systems that need some extra help getting the Configure answers right:

EOM

```

(cd $src/hints; ls -C *.sh) | $sed 's/\,sh/ /g' >&4
dflt="
: Half the following guesses are probably wrong... If you have better
: tests or hints,
please send them to <MAINTLOC>
: The metaconfig authors would also appreciate a copy...
$test -f /irix && osname=irix
$test -f /xenix && osname=sco_xenix
$test -f /dynix && osname=dynix
$test -f /dnix && osname=dnix
$test -f /lynx.os && osname=lynxos
$test -f /unicos && osname=unicos && osvers=`$uname -r`
$test -f /unicosmk && osname=unicosmk && osvers=`$uname -r`
$test -f /unicosmk.ar && osname=unicosmk && osvers=`$uname -r`
$test -f /bin/mips && /bin/mips && osname=mips
$test -d /usr/apollo/bin && osname=apollo
$test -f /etc/saf/_sactab && osname=svr4
$test -d /usr/include/minix && osname=minix && osvers=`$uname -r`
$test -f /system/gnu_library/bin/ar.pm && osname=vos
$test -f /sys/utilities/MultiView && osname=amigaos

```

```

if $test -d /MachTen -o -d /MachTen_Folder; then
?X: MachTen uname -a output looks like
?X: xxx 4 0.0 Macintosh
?X: MachTen /sbin/version output looks like
?X: MachTen 4.0 Mon Aug 28 10:18:00 1995
?X: MachTen 3.x had the 'version' command in /usr/etc/version.
  osname=machten
  if
$test -x /sbin/version; then
  osvers=`/sbin/version | $awk '{print $2}' |
  $sed -e 's/[A-Za-z]$//`
elif $test -x /usr/etc/version; then
  osvers=`/usr/etc/version | $awk '{print $2}' |
  $sed -e 's/[A-Za-z]$//`
else
  osvers="$2.$3"
fi
fi

$test -f /sys/posix.dll &&
$test -f /usr/bin/what &&
set X `/usr/bin/what /sys/posix.dll` &&
$test "$3" = UWIN &&
osname=uwin &&
osvers="$5"

?X: If we have uname, we already computed a suitable uname -a output,
?X: and it lies in $myuname.
if $test -f $uname; then
set X $myuname
shift

case "$5" in
fps*) osname=fps ;;
mips*)
case "$4" in
umips) osname=umips ;;
*) osname=mips ;;
esac;;
[23]100) osname=mips ;;
?X: Interactive Unix.
i386*)
tmp=`/bin/uname -X 2>/dev/null|awk '/3\.2v[45]/{ print $(NF) }`
if $test "$tmp" != "" -a "$3" = "3.2" -a -f /etc/systemid; then
  osname='sco'
  osvers=$tmp
elif $test -f /etc/kconfig; then
  osname=isc

```

```

if
test "$lns" = "$ln -s"; then
    osvers=4
elif $contains _SYSV3 /usr/include/stdio.h > /dev/null 2>&1 ; then
    osvers=3
elif $contains _POSIX_SOURCE /usr/include/stdio.h > /dev/null 2>&1 ; then
    osvers=2
fi
fi
tmp=""
;;

```

?X: MS-DOS djgpp uname -a output looks like:

?X: ms-dos xxx 6 22 pc

?X: \$1 is the "dos flavor" (need not be "ms-dos").

?X: \$2 is the node name

?X: \$3 and \$4 are version/subversion

?X: \$5 is always "pc", but that might not be unique to DJGPP.

?X: (e.g. Solaris\_x86 has \$5 = i86pc, which doesn't actually conflict,

?X: but it's close enough that I can easily imagine other vendors also

?X: using variants of pc\* in \$5.)

?X: The "DJGPP" environment variable is always set when djgpp is active.

pc\*)

```
if test -n "$DJGPP"; then
```

```
    osname=dos
```

```
    osvers=djgpp
```

```
fi
```

```
;;
```

```
esac
```

```
case "$1" in
```

```
    aix) osname=aix
```

?X: aix 4.1 uname -a output looks like

?X: AIX foo 1 4 000123456789

?X: where \$4 is the major release number and \$3 is the (minor) version.

?X: More detail on the version is available with the oslevel command.

?X: in 3.2.x, it output a string (see case statements below). In 4.1,

?X: it puts out something like 4.1.1.0

```
tmp=`( oslevel) 2>/dev/null || echo "not found") 2>&1`
```

```
case "$tmp" in
```

```
# oslevel can fail with:
```

```
# oslevel: Unable to acquire lock.
```

```
*not\ found) osvers="$4"."$3" ;;
```

```
'<3240'|<>3240) osvers=3.2.0 ;;
```

```
'=3240'|>3240'|<3250'|<>3250) osvers=3.2.4 ;;
```

```
'=3250'|>3250) osvers=3.2.5 ;;
```

```
*) osvers=$tmp;;
```

```
esac
```

```

;;
bitrig) osname=bitrig
osvers="$3"
;;
bsd386) osname=bsd386
osvers=`$uname -r`
;;
cygwin*) osname=cygwin
osvers="$3"
;;
*dc.osx) osname=dcosx
osvers="$3"
;;
dnix) osname=dnix
osvers="$3"
;;
domainos) osname=apollo
osvers="$3"
;;
dgux) osname=dgux
osvers="$3"
;;
dragonfly) osname=dragonfly
case "$3" in
  [0-9]*) osvers="$3" ;;
  *) osvers="$2" ;;
esac
;;
?X: uname -a returns
?X: DYNIX/ptx xxx
4.0 V4.1.2 i386
dynixptx*) osname=dynixptx
osvers=`echo "$4"|sed 's/^v//`
;;
freebsd) osname=freebsd
osvers="$3" ;;
genix) osname=genix ;;
?X: GNU/Hurd uname -a gives something like:
?X: GNU foo 0.3 GNU-Mach 1.4/Hurd-0.3 i386-AT386 GNU
?X: GNU gnu 0.3 GNUmach-1.2/Hurd-0.3 i386-AT386 GNU
?X: Note the hostname on the second one, which will fool Configure
?X: into using the SysV case!
gnu) osname=gnu
osvers="$3" ;;
?X: HP-UX uname -a gives something like
?X: HP-UX foobar B.10.20 A 9000/735 2016483812 two-user license
?X: Preserve the full 10.20 string instead of the previous plain '10'.
?X: Thanks to Graham Barr. --AD 6/30/1998

```

```

hp*) osname=hpx
osvers=`echo "$3" | $sed 's,.*\.[0-9]*\.[0-9]*\,1,'`
;;
irix*) osname=irix
case "$3" in
4*) osvers=4 ;;
5*) osvers=5 ;;
*) osvers="$3" ;;
esac
;;
linux) osname=linux
case "$3" in
*) osvers="$3" ;;
esac
$test -f /system/lib/libandroid.so && osname=linux-android
;;
MiNT) osname=mint
;;
minix) osname=minix
osvers=`$uname
-r`
;;
netbsd*) osname=netbsd
osvers="$3"
;;
news-os) osvers="$3"
case "$3" in
4*) osname=newsos4 ;;
*) osname=newsos ;;
esac
;;
nonstop-ux) osname=nonstopux ;;
openbsd) osname=openbsd
osvers="$3"
;;
os2) osname=os2
osvers="$4"
;;
POSIX-BC | posix-bc ) osname=posix-bc
osvers="$3"
;;
powerux | power_ux | powermax_os | powermaxos | \
powerunix | power_unix) osname=powerux
osvers="$3"
;;
qnx) osname=qnx
osvers="$4"
;;

```



```

solaris) osname=solaris
case "$3" in
5*) osvers=`echo $3 | $sed 's/^5/2/g` ;;
*) osvers="$3" ;;
esac
;;
sunos) osname=sunos
case "$3" in
5*) osname=solaris
osvers=`echo $3 | $sed 's/^5/2/g` ;;
*) osvers="$3" ;;
esac
;;
titanos) osname=titanos
case "$3" in
1*) osvers=1 ;;
2*) osvers=2 ;;
3*) osvers=3 ;;
4*) osvers=4 ;;
*) osvers="$3" ;;
esac
;;
ultrix) osname=ultrix
osvers="$3"
;;
osf1|m1s+) case
"$5" in
alpha)
?X: DEC OSF/1 myuname -a output looks like: osf1 xxxx t3.2 123.4 alpha
?X: where the version number can be something like [xvt]n.n
osname=dec_osf
?X: sizer knows the minor minor version: the letter
osvers=`sizer -v | awk -FUNIX '{print $2}' | awk '{print $1}' | tr '[A-Z]' '[a-z]' | sed 's/^[xvt]//'^
case "$osvers" in
[1-9].[0-9]*) ;;
*) osvers=`echo "$3" | sed 's/^[xvt]//'^ ;;
esac
;;
hp*) osname=hp_osf1 ;;
mips) osname=mips_osf1 ;;
?X: hp and mips were unsupported Technology Releases -- ADO, 24/10/94
esac
;;
# UnixWare 7.1.2 is known as Open UNIX 8
openunix|unixware) osname=svr5
osvers="$4"
;;
uts) osname=uts

```

```

osvers="$3"
;;
vos) osvers="$3"
;;
$2) case "$osname" in
*isc*) ;;
*freebsd*) ;;
svr*)
: svr4.x or possibly later
case "svr$3" in
${osname}*)
osname=svr$3
osvers=$4
;;
esac
case "$osname" in
svr4.0)
: Check for ESIX
if
test -f /stand/boot ; then
eval `grep '^INITPROG=[a-z/0-9]*$' /stand/boot`
if test -n "$INITPROG" -a -f "$INITPROG"; then
isesix=`strings -a $INITPROG|grep 'ESIX SYSTEM V/386 Release 4.0`
if test -n "$isesix"; then
osname=esix4
fi
fi
fi
;;
esac
;;
*) if test -f /etc/systemid; then
osname=sco
set `echo $3 | $sed 's/\./ /g` $4
if $test -f $src/hints/sco_$1_$2_$3.sh; then
osvers=$1.$2.$3
elif $test -f $src/hints/sco_$1_$2.sh; then
osvers=$1.$2
elif $test -f $src/hints/sco_$1.sh; then
osvers=$1
fi
else
case "$osname" in
") : Still unknown. Probably a generic Sys V.
osname="sysv"
osvers="$3"
;;
esac

```

```

fi
;;
esac
;;
*) case "$osname" in
") : Still unknown. Probably a generic BSD.
osname="$1"
osvers="$3"
;;
esac
;;
esac
else
?X: Try to identify sony's NEWS-OS (BSD unix)
if test -f /vmunix -a
-f $src/hints/news_os.sh; then
(what /vmunix | UU/tr '[A-Z]' '[a-z]') > UU/kernel.what 2>&1
if $contains news-os UU/kernel.what >/dev/null 2>&1; then
osname=news_os
fi
$rm -f UU/kernel.what
?X: Maybe it's OS/2 or DOS or something similar
elif test -d c:/ -o -n "$is_os2" ; then
set X $myuname
osname=os2
osvers="$5"
fi
fi

case "$targetarch" in
") ;;
*) hostarch=$osname
case "$targetarch" in
nto*|*-nto-*)
# Will load qnx.sh, which should change osname to nto
osname=qnx
osvers="
;;
*linux-android*)
# Catch arm-linux-androideabi, mipsel-linux-android,
# and i686-linux-android
osname=linux-android
osvers="
;;
*linux*)
# Something like arm-linux-gnueabi is really just
# plain linux.
osname=linux

```

```

osvers="
;;
*solaris*|*sunos*)
osname=solaris
# XXX perhaps we should just assume
# osvers to be 2, or maybe take the value
# from targetarch.
Using $run before the
# hints are run is somewhat icky.
set X ` $run $uname -a 2>/dev/null `
shift
case "$3" in
5*) osvers=`echo $3 | $sed 's/^5/2/g` ;;
*) osvers="$3" ;;
esac
;;
*)
osname=`echo $targetarch|sed 's,^[^-]*-,`
osvers="
;;
esac
;;
esac

```

: Now look for a hint file osname\_osvers, unless one has been  
: specified already.

```

case "$hintfile" in
"|' )
file=`echo "${osname}_${osvers}" | $sed -e 's%\.\%_g' -e 's%_$$%'`
: Also try without trailing minor version numbers.
xfile=`echo $file | $sed -e 's%_[^_]*$%'`
xxfile=`echo $xfile | $sed -e 's%_[^_]*$%'`
xxxfile=`echo $xxfile | $sed -e 's%_[^_]*$%'`
xxxxfile=`echo $xxxfile | $sed -e 's%_[^_]*$%'`
case "$file" in
") dflt=none ;;
*) case "$osvers" in
") dflt=$file
;;
*) if $test -f $src/hints/$file.sh ; then
dflt=$file
elif $test -f $src/hints/$xfile.sh ; then
dflt=$xfile
elif $test -f $src/hints/$xxfile.sh
; then
dflt=$xxfile
elif $test -f $src/hints/$xxxfile.sh ; then
dflt=$xxxfile

```

```

elif $test -f $src/hints/$xxxxfile.sh ; then
    dflt=$xxxxfile
elif $test -f "$src/hints/${osname}.sh" ; then
    dflt="${osname}"
else
    dflt=none
fi
;;
esac
;;
esac
if $test -f Policy.sh ; then
    case "$dflt" in
        *Policy*) ;;
        none) dflt="Policy" ;;
        *) dflt="Policy $dflt" ;;
    esac
fi
;;
*)
dflt=`echo $hintfile | $sed 's/\.sh$/^'`
;;
esac

```

```

if $test -f Policy.sh ; then
    $cat <<EOM

```

There's also a Policy hint file available, which should make the site-specific (policy) questions easier to answer.

EOM

```

fi

```

```

$cat <<EOM

```

You may give one or more space-separated answers, or "none" if appropriate.

If you have a handcrafted Policy.sh file or a Policy.sh file generated by a previous run of Configure, you may specify it as well as or instead of OS-specific hints. If hints are provided for your OS, you should use them: although Perl can probably

be built without hints on many platforms, using hints often improve performance and may enable features that Configure can't set up on its own. If there are no hints that match your OS, specify "none"; DO NOT give a wrong version or a wrong OS.

EOM

```

rp="Which of these apply, if any?"

```

```

. UU/myread
tans=$ans
for file in $tans; do
if $test X$file = XPolicy -a -f Policy.sh; then
. Policy.sh
$cat Policy.sh >> UU/config.sh
elif $test -f $src/hints/$file.sh; then
. $src/hints/$file.sh
$cat $src/hints/$file.sh >> UU/config.sh
elif $test X"$tans" = X -o X"$tans" = Xnone ; then
: nothing
else
: Give one chance to correct a possible typo.
echo "$file.sh does not exist"
dflt=$file
rp="hint to use instead?"
. UU/myread
for file in $ans; do
if $test -f "$src/hints/$file.sh"; then
. $src/hints/$file.sh
$cat $src/hints/$file.sh >> UU/config.sh
elif $test X$ans = X -o X$ans = Xnone ; then
: nothing
else
echo "$file.sh
does not exist -- ignored."
fi
done
fi
done

hint=recommended
: Remember our hint file for later.
if $test -f "$src/hints/$file.sh" ; then
hintfile="$file"
else
hintfile=""
fi
fi
cd UU
?X: From here on, we must use $src instead of $src
@else
: Get old answers, if there is a config file out there
hint=default
hintfile=""
if test -f ../config.sh; then
echo " "
rp="I see a config.sh file. Shall I use it to set the defaults?"

```

```

./myread
case "$ans" in
n*|N*) echo "OK, I'll ignore it.";;
*) echo "Fetching default answers from your old config.sh file..." >&4
tmp_n="$n"
tmp_c="$c"
../config.sh
cp ../config.sh .
n="$tmp_n"
c="$tmp_c"
hint=previous
;;
esac
fi
@end
?X: remember, indentation is wrong--RAM
;;
*)
echo " "
echo "Fetching default answers from $config_sh..." >&4
tmp_n="$n"
tmp_c="$c"
cd ..
?X: preserve symbolic links, if any
cp $config_sh config.sh 2>/dev/null
chmod +w config.sh
./config.sh
cd UU
cp ../config.sh .
n="$tmp_n"
c="$tmp_c"
hint=previous
;;
esac
.
./optdef.sh

: Restore computed paths
for file in $loclist $strylist; do
eval $file="\$_$file"
done

@if osname || osvers
cat << EOM

```

Configure uses the operating system name and version to set some defaults.

The default value is probably right if the name rings a bell. Otherwise, since spelling matters for me, either accept the default or answer "none"

to leave it blank.

```
EOM
@end
@if osname
case "$osname" in
'|' ')
    case "$hintfile" in
        '|' |none) dflt=none ;;
        *) dflt=`echo $hintfile | $sed -e 's/\.sh$//' -e 's/_.*/_/'` ;;
    esac
    ;;
    *) dflt="$osname" ;;
esac
rp="Operating system name?"
./myread
case "$ans" in
none) osname="" ;;
*) osname=`echo "$ans" | $sed -e 's/[ ]*/_/' | ./tr '[A-Z]' '[a-z]'` ;;
esac
@end
@if osvers
@if osname
echo " "
@end
case "$osvers" in
'|' ')
    case "$hintfile" in
        '|' |none) dflt=none ;;
        *) dflt=`echo $hintfile | $sed -e 's/\.sh$//' -e 's/^[^_]*//`
            dflt=`echo $dflt | $sed -e 's/^[^_]*//`
            case
"$dflt" in
'|' ') dflt=none ;;
esac
        ;;
esac
        ;;
        *) dflt="$osvers" ;;
esac
rp="Operating system version?"
./myread
case "$ans" in
none) osvers="" ;;
*) osvers="$ans" ;;
esac

@end
```



./posthint.sh

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Oldconfig.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_tzmin.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_tzmin.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:16:58 ram

?RCS: patch36: call ./bsd explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:49 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_tzmin: contains cppstdin cppminus timeincl rm Setvar Guess

?MAKE: -pick add \$@ %<

?S:d\_tzmin:

?S: This symbol conditionally defines TZ\_MINUTESWEST if the system uses

?S: tz\_minuteswest in time header instead of timezone.

?S:.

?C:TZ\_MINUTESWEST:

?C: This

symbol is defined if this system uses tz\_minuteswest

?C: in time header instead of timezone.

?C: If not defined, you may have to use struct timeb and ftime() rather

?C: than the new gettimeofday() system call.

?C:.

?H:#\$d\_tzmin TZ\_MINUTESWEST /\*\*/

?H:.

?LINT:set d\_tzmin

: see if tz\_minuteswest is defined in time header

echo " "

val="\$undef"

\$cppstdin \$cppminus < \$timeincl > try 2>&1

if \$contains 'tz\_minuteswest' try >/dev/null 2>&1; then

echo "You have tz\_minuteswest defined in \$timeincl rather than timezone." >&4

val="\$define"

```

elif $contains 'timezone' try >/dev/null 2>&1; then
echo "You have timezone defined in $timeincl rather than tz_minuteswest." >&4
else
echo "Your $timeincl file looks strange." >&4
fi
if ./bsd; then
case "$d_tzmin" in
"$undef") echo "(Maybe your system is an USG one after all?)";;
esac
fi
set d_tzmin
eval $setvar
$rm -f try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_tzmin.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: pager.U,v \$

?RCS: Revision 3.0.1.2 1995/01/30 14:41:26 ram

?RCS: patch49: ensure dflt gets initialized in case no pagers are found (WED)

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:27:45 ram

?RCS: patch36: replaced Myread by Getfile in the dependency line

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:30 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:pager: pg more less Getfile Oldconfig

?MAKE: -pick add \$@ %<

?S:pager:

?S: This variable contains the name of the preferred pager  
on the system.

?S: Usual values are (the full pathnames of) more, less, pg, or cat.

?S:.

: locate the preferred pager for this system

fn=f/

```

case "$pager" in
")
dflt="
case "$pg" in
/*) dflt=$pg;;
[a-zA-Z]:/*) dflt=$pg;;
esac
case "$more" in
/*) dflt=$more;;
[a-zA-Z]:/*) dflt=$more;;
esac
case "$less" in
/*) dflt=$less;;
[a-zA-Z]:/*) dflt=$less;;
esac
case "$dflt" in
") dflt=/usr/ucb/more;;
esac
;;
*) dflt="$pager"
;;
esac
?X: Instruct ./getfile to trust the default pager value,
?X: even if it does not begin with a slash. For example, on os2,
?X: pager might be cmd /c more. Also, it might include some options,
?X: such as '/usr/bin/less -R'. ./getfile would report that
?X: "/usr/bin/less -R" doesn't exist.
?X: See comments in Getfile.U.
fn="f/($dflt)"
echo " "
rp='What pager is used on your system?'
./getfile
pager="$ans"

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/pager.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: sitelib.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:21:35 ram

?RCS: patch61: created

?RCS:

?MAKE:sitelib sitelibexp installsitelib: afs cat Getfile \  
 Oldconfig Prefixit test privlib package sed

?MAKE: -pick add \$@ %<

?Y:TOP

?S:sitelib:

?S: This variable contains the eventual value of the SITELIB symbol,  
 ?S: which is the name of the private library for this package. It may  
 ?S: have a ~ on the front. It is up to the makefile to eventually create  
 ?S: this  
 directory while performing installation (with ~ substitution).

?S:.

?S:sitelibexp:

?S: This variable is the ~name expanded version of sitelib, so that you  
 ?S: may use it directly in Makefiles or shell scripts.

?S:.

?S:installsitelib:

?S: This variable is really the same as sitelibexp but may differ on  
 ?S: those systems using AFS. For extra portability, only this variable  
 ?S: should be used in makefiles.

?S:.

?C:SITELIB:

?C: This symbol contains the name of the private library for this package.  
 ?C: The library is private in the sense that it needn't be in anyone's  
 ?C: execution path, but it should be accessible by the world. The program  
 ?C: should be prepared to do ~ expansion.  
 ?C: The standard distribution will put nothing in this directory.  
 ?C: Individual sites may place their own extensions and modules in  
 ?C: this directory.

?C:.

?C:SITELIB\_EXP:

?C: This symbol contains the ~name expanded version of SITELIB, to be used  
 ?C: in programs that are not prepared to deal with ~ expansion  
 at run-time.

?C:.

?H:#define SITELIB "\$sitelib" /\*\*/  
 ?H:#define SITELIB\_EXP "\$sitelibexp" /\*\*/  
 ?H:.

?T:prog  
 : determine where site specific libraries go.  
 set sitelib sitelib  
 eval \$prefixit  
 case "\$sitelib" in

```
)
?X: remove any trailing -3.0 or other version identification
prog=`echo $package | $sed 's/-*[0-9.]*$//`
dflt="$privlib/site_ $prog" ;;
*) dflt="$sitelib" ;;
esac
$cat <<EOM
```

The installation process will also create a directory for site-specific extensions and modules. Some users find it convenient to place all local files in this directory rather than in the main distribution directory.

```
EOM
fn=d~+
rp='Pathname for the site-specific library files?'
./getfile
if $test "X$sitelibexp" != "X$sansexp"; then
  installsitelib="
fi
sitelib="$ans"
sitelibexp="$sansexp"
if $afs; then
  $cat <<EOM
```

Since you are running AFS, I need to distinguish the directory in which private files reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```
EOM
case "$installsitelib" in
  *) dflt=`echo $sitelibexp | sed 's#^/afs/#/afs/.#` ;;
  *) dflt="$installsitelib" ;;
esac
fn=de~
rp='Where will private files be installed?'
./getfile
installsitelib="$ans"
else
  installsitelib="$sitelibexp"
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/sitelib.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_sanemcmp.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:41:19 ram
?RCS: patch61: created
?RCS:
?RCS:
?MAKE:d_sanemcmp: cat d_memcmp +cc +optimize +ccflags +libs +ldflags rm \
i_memory i_stdlib i_string i_unistd Oldconfig Setvar
?MAKE: -pick add $@ %<
?S:d_sanemcmp:
?S: This variable conditionally defines the HAS_SANE_MEMCMP symbol if
?S: the memcpy() routine is available and can be used to compare relative
?S: magnitudes of chars with their high bits set.
?S:.
?C:HAS_SANE_MEMCMP:
?C: This symbol,
if defined, indicates that the memcmp routine is available
?C: and can be used to compare relative magnitudes of chars with their high
?C: bits set. If it is not defined, roll your own version.
?C:.
?H:#$d_sanemcmp HAS_SANE_MEMCMP /**/
?H:.
?F:!sanemcmp
?LINT: set d_sanemcmp
: can memcmp be trusted to compare relative magnitude?
?X: assume the worst
val="$undef"
case "$d_memcmp" in
"$define")
echo " "
echo \
    "Checking to see if your memcmp() can compare relative magnitude..." >&4
$cat >foo.c <<EOCP
#i_memory I_MEMORY
#i_stdlib I_STDLIB
#i_string I_STRING
#i_unistd I_UNISTD
EOCP
$cat >>foo.c <<'EOCP'

```

```

#include <stdio.h>
#ifdef I_MEMORY
# include <memory.h>
#endif
#ifdef I_STDLIB
# include <stdlib.h>
#endif
#ifdef I_STRING
# include <string.h>
#else
# include <strings.h>
#endif
#ifdef I_UNISTD
# include <unistd.h> /* Needed for NetBSD */
#endif
int main()
{
char a = -1;
char b = 0;
if ((a < b) && memcmp(&a, &b, 1) < 0)
exit(1);
exit(0);
}
EOCP
if $cc $optimize $cflags
$ldflags \
    -o sanemcmp foo.c $libs >/dev/null 2>&1; then
if ./sanemcmp 2>/dev/null; then
echo "Yes, it can."
val="$define"
else
echo "No, it can't (it uses signed chars)."

```

```

?RCS:
?RCS: Copyright (c) 1999 Andy Dougherty
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: installprefix.U,v $
?RCS: Revision 1.1 1999/07/08 18:32:57 doughera
?RCS: Initial revision
?RCS:
?RCS:
?MAKE:installprefix installprefixexp: Getfile Loc \
Oldconfig afs cat package prefix
?MAKE: -pick add $@ %<
?S:installprefix:
?S: This variable holds the name of the directory below which
?S: "make install" will install the package. For most users, this
?S: is the same
as prefix. However, it is useful for
?S: installing the software into a different (usually temporary)
?S: location after which it can be bundled up and moved somehow
?S: to the final location specified by prefix.
?S:.
?S:installprefixexp:
?S: This variable holds the full absolute path of installprefix
?S: with all ~-expansion done.
?S:.
: determine installation prefix for where package is to be installed.
if $afs; then
$cat <<EOM

```

Since you are running AFS, I need to distinguish the directory in which files will reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```

EOM
case "$installprefix" in
*) dflt=`echo $prefix | sed 's#^/afs/#/afs/.#`;;
*) dflt="$installprefix";;
esac
else
$cat <<EOM

```



In some special cases, particularly when building \$package for distribution, it is convenient to distinguish the directory in which files should be installed from the directory (\$prefix) in which they will eventually reside. For most users, these two directories are the same.

EOM

```
case "$installprefix" in
  *) dflt=$prefix ;;
  *) dflt=$installprefix;;
esac
fi
fn=d~
rp='What installation prefix should I use for installing files?'
./getfile
installprefix="$ans"
installprefixexp="$ansexp"
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/installprefix.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_NeWS.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_NeWS.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:39 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_news d\_news0 d\_newshome d\_textcan: test rm Myread Getfile

?MAKE: -pick add \$@ %<

?S:d\_news:

?S: Set if running NeWS 1.1

?S:.

?S:d\_news0:

?S: Set if running NeWS 1.0

?S:.

?S:d\_newshome:

?S: Path to the top directory of the NeWS structure.

?S:.

```

?S:d_textcan:
?S: Path to where the textcan.ps stuff is...
?S:.
?C:HAS_NEWS1_1 (NEWS1_1):
?C: This
symbol defined if running NeWS 1.1.
?C:.
?C:HAS_NEWS1_0 (NEWS1_0):
?C: This symbol defined if running NeWS 1.0.
?C:.
?C:TEXTCAN:
?C: Tells path to where the textcan.ps stuff is...
?C:.
?H:#$d_news HAS_NEWS1_1  /**/
?H:#$d_news0 HAS_NEWS1_0  /**/
?H:#define TEXTCAN $d_textcan /**/
?H:.
?INIT:: default path for NeWS
?INIT:d_newshome="/usr/NeWS"
?INIT:
: Check to see what version of NeWS is being run?
cd ..
echo " "
echo "Now for the interesting stuff... Lets see what kind of NeWS"
echo "they grow round here...."
echo " "
dflt='y'
if $test -d $d_newshome; then
d_newshome=`(cd $d_newshome ; /bin/pwd)`
echo "Ah...found myself a NeWS in $d_newshome..."
dflt='y'
rp="Is this the NeWS you want your children to grow up with?"
. UU/myread
fi
while $test $ans = "n"; do
dflt=$d_newshome
fn=d
rp="Path to NeWS you want:"
. UU/getfile
d_newshome=$ans

echo " "
if $test ! -d $d_newshome/lib; then
echo "ARG! No lib directory in $d_newshome!!!"
: heavy medicine. I wonder what the disease
is...
$rm -f kit*isdone
$rm -rf UU

```

```

: bye bye
set -t; echo "Sorry... no NeWS is bad news..."
fi

if $test -r $d_newshome/lib/NeWS/colors.ps ; then
echo 'Ahh... your running NeWS 1.1! Boy... that makes stuff easy....'
echo " "
d_news="$define"
d_news0="$undef"
if $test -r $d_newshome/lib/NeWS/textcan.ps; then
d_textcan=$d_newshome/lib/NeWS
echo "The textcan.ps stuff seems to be in : $d_textcan"
else
d_textcan=$d_newshome/clientsrc/client/nterm
if $test ! -r $d_textcan/textcan.ps; then
d_news="$undef"
d_news0="$define"
echo 'Hmm... must have been fooled... gotta be NeWS 1.1 beta!'
else
echo "The textcan.ps stuff seems to be in : $d_textcan"
fi
fi
else
echo 'snif... sniff... I smell the dilapidated smell of NeWS 1.0..'
echo 'Some things will not work under NeWS 1.0...!'
d_news="$undef"
d_news0="$define"
fi
cd UU

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_NeWS.U
```

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?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_dbmunitproto: Hasproto i\_dbm

?MAKE: -pick add \$@ %<

?S:d\_dbmunitproto:

?S: This variable conditionally defines the HAS\_DBMINIT\_PROTO symbol,  
?S: which indicates to the C program that the system provides  
?S: a prototype for the dbm\_init() function. Otherwise, it is  
?S: up to the program to supply one.

?S:.

?C:HAS\_DBMINIT\_PROTO:

?C: This symbol, if defined, indicates that the system provides

?C: a prototype for the dbm\_init() function. Otherwise, it is up

?C: to the program to supply one. A good guess is

?C: extern

```
int dbm_init(char *);
```

?C:.

?H:#\$d\_dbm\_initproto HAS\_DBMINIT\_PROTO /\*\*/

?H:.

?LINT:set d\_dbm\_initproto

: see if prototype for dbm\_init is available

```
echo " "
```

```
set d_dbm_initproto dbm_init $i_dbm dbm.h
```

```
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_dbm_initproto.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: End.U,v 3.0 1993/08/18 12:04:51 ram Exp \$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: End.U,v \$

?RCS: Revision 3.0 1993/08/18 12:04:51 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit serves as the goal which forces make to choose all the units that

?X: ask questions. The \$W on the ?MAKE: line is the list of all symbols wanted.

?X: To force any unit to be included, copy this unit to your private U directory

?X: and add the name of the unit desired to the ?MAKE: dependency line.

?X:

```
?MAKE:End perllibs: $W cppstdin gzip zip
```

```
libs usedl osname osvers
```

```
?MAKE: -pick add $@ %<
```

```

?S:perllibs:
?S: The list of libraries needed by Perl only (any libraries needed
?S: by extensions only will be dropped, if using dynamic loading).
?S:.
?INIT:perllibs="
?LINT:use $W
?LINT:use gzip zip
?LINT:change cppstd in
: Remove libraries needed only for extensions
: The appropriate ext/Foo/Makefile.PL will add them back in, if necessary.
: The exception is SunOS 4.x, which needs them.
case "${osname}X${osvers}" in
sunos*X4*)
    perllibs="$libs"
    ;;
*) case "$usedl" in
    $define[true|[yY]*)
        set X `echo " $libs " | sed -e 's@ -lndbm @ @' -e 's@ -lgdbm @ @' -e 's@ -lgdbm_compat @ @' -e 's@ -ldb @ @' -e 's@ -ldb @ @'`
        shift
        perllibs="$*"
        ;;
    *) perllibs="$libs"
        ;;
    esac
    ;;
esac

```

```

?X: If the user has the cppstd in wrapper, perl.c will try to call
?X: CPPSTDIN, but that will point to a location in the build
?X: directory, not the installed version!. Here, we'll just strip the
?X: name down to 'cppstd in',
and rely on the fact that perl.c will
?X: then call SCRIPTDIR/cppstd in, but local things like 'make depend'
?X: will continue to work.

```

```

: Remove build directory name from cppstd in so it can be used from
: either the present location or the final installed location.

```

```
echo " "
```

```
: Get out of the UU directory to get correct path name.
```

```
cd ..
```

```
case "$cppstd in" in
```

```
`pwd`/cppstd in)
```

```
echo "Stripping down cppstd in path name"
```

```
cppstd in=cppstd in
```

```
::
```

```
esac
```

```
cd UU
```

```
: end of configuration questions
echo " "
echo "End of configuration questions."
echo " "
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/End.U
```

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS:

?X:

?X: This unit is just a quick shorthand for the compile command

?X: to be used in all the other metaconfig units.

?X:

?MAKE:Compile: +cc +optimize +ccflags +ldflags +libs

?MAKE: -pick add \$@ %<

?LINT:define compile compile\_ok

?V:compile compile\_ok mc\_file

?S:compile:

?S: This shell variable is used internally

by Configure to provide

?S: a convenient shorthand for the typical compile command, namely

?S: \$cc \$optimize \$ccflags \$ldflags -o \$1 \$1.c \$libs > /dev/null 2>&1

?S: Note that the output filename does not include the \_exe

?S: extension. Instead we assume that the linker will be

?S: "helpful" and automatically appending the correct suffix.

?S: OS/2 users will apparently need to supply the -Zexe flag to

?S: get this behavior.

?S:

?S: To use this variable, say something like:

?S: echo 'int main() { exit(0); }' > try.c

?S: set try

```

?S: if eval $compile; then
?S: echo "success" # and do whatever . . .
?S: else
?S: echo "failure" # and do whatever . . .
?S: fi
?S: To add extra flags cc flags (e.g. -DWHATEVER) just put them
?S: in $*, e.g.
?S: set try -DTRY_THIS_FLAG
?S:.
?S:compile_ok:
?S: This shell variable is used internally by Configure to provide
?S: a convenient shorthand for the typical compile command that you
?S: expect to work ok. It is the same as $compile,
except we
?S: deliberately let the user see any error messages.
?S:.
: define a shorthand compile call
compile='
mc_file=$1;
shift;
$cc -o ${mc_file} $optimize $ccflags $ldflags $* ${mc_file}.c $libs > /dev/null 2>&1;'
: define a shorthand compile call for compilations that should be ok.
compile_ok='
mc_file=$1;
shift;
$cc -o ${mc_file} $optimize $ccflags $ldflags $* ${mc_file}.c $libs;'

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Compile.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_getprior.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_getprior.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:16 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_getprior: Inlibc
?MAKE: -pick add $@ %<

```

?S:d\_getprior:  
?S: This variable conditionally defines HAS\_GETPRIORITY if getpriority()  
?S: is available to get a process's priority.  
?S:.  
?C:HAS\_GETPRIORITY (GETPRIORITY):  
?C: This symbol, if defined, indicates that the getpriority routine is  
?C: available to get a process's priority.  
?C:.  
?H:#\$d\_getprior  
HAS\_GETPRIORITY /\*\*/  
?H:.  
: see if getpriority exists  
?LINT:set d\_getprior  
set getpriority d\_getprior  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_getprior.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Getfile.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Getfile.U,v \$  
?RCS: Revision 3.0.1.7 1997/02/28 15:01:06 ram  
?RCS: patch61: getfile script now begins with "startsh"  
?RCS:  
?RCS: Revision 3.0.1.6 1995/02/15 14:11:00 ram  
?RCS: patch51: was not working if ~'s allowed with d\_portable on (WED)  
?RCS:  
?RCS: Revision 3.0.1.5 1995/01/11 15:11:25 ram  
?RCS: patch45: added support for escaping answers to skip various checks  
?RCS: patch45: modified message issued after file expansion  
?RCS:  
?RCS: Revision  
3.0.1.4 1994/10/29 15:53:19 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS:  
?RCS: Revision 3.0.1.3 1994/05/06 14:23:36 ram  
?RCS: patch23: getfile could be confused by file name in "locate" requests



?RCS: patch23: new 'p' directive to assume file is in people's path (WED)

?RCS:

?RCS: Revision 3.0.1.2 1994/01/24 14:01:31 ram

?RCS: patch16: added metalint hint on changed 'ans' variable

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 15:46:27 ram

?RCS: patch10: minor format problems and misspellings fixed

?RCS: patch10: now performs from package dir and not from UU subdir

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:56 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a bit of shell code that must be dotted in in order

?X: to get a file name and make some sanity checks. Optionally, a ~name

?X: expansion is performed.

?X:

?X: To use this unit, \$rp and \$dflt must hold the question and the

?X: default answer, which will be passed as-is

to the myread script.

?X: The \$fn variable must hold the file type (f or d, for file/directory).

?X: If \$gfpth is set to a list of space-separated list of directories,

?X: those are prefixes for the filename. Unless \$gfpthkeep is set to 'y',

?X: gfpth is cleared on return from Getfile.

?X:

?X: If it is followed by a ~, then ~name substitution will occur. Upon return,

?X: \$ans is set with the filename value. If a / is specified, then only a full

?X: path name is accepted (but ~ substitution occurs before, if needed). The

?X: expanded path name is returned in that case.

?X:

?X: If a + is specified, the existence checks are skipped. This usually means

?X: the file/directory is under the full control of the program.

?X:

?X: If the 'n' (none) type is used, then the user may answer none.

?X: The 'e' (expand) switch may be used to bypass d\_portable, expanding ~name.

?X:

?X: If the 'l' (locate) type is used, then it must end with a ':' and then a

?X: file name. If the answer is a directory,

the file name will be appended

?X: before testing for file existence. This is useful in locate-style

?X: questions like "where is the active file?". In that case, one should

?X: use:

?X:

?X: dflt='~news/lib'

?X: fn='l~:active'

?X: rp='Where is the active file?'

?X: ../getfile

?X: active="\$ans"

?X:

?X: If the 'p' (path) letter is specified along with 'l', then an answer

?X: without a leading / will be expected to be found in everyone's path.

?X:

?X: It is also possible to include a comma-separated list of items within

?X: parentheses to specify which items should be accepted as-is with no

?X: further checks. This is useful when for instance a full path is expected

?X: but the user may escape out via "magical" answers.

?X:

?X: If the answer to the question is 'none', then the existence checks are

?X: skipped and the empty string is returned.

?X:

?MAKE:Getfile: d\_portable contains startsh Myread Filexp tr trnl

?MAKE: -pick add \$@ %<

?V:anexp:fn gfpth gfpthkeep

?F:./getfile

?T:tilde

type what orig\_rp orig\_dflt fullpath already redo skip none\_ok \

value exp\_file nopath\_ok loc\_file fp pf dir direxp

?LINT:change ans

?LINT:change gfpth

: now set up to get a file name

cat <<EOS >getfile

\$startsh

EOS

cat <<'EOSC' >>getfile

tilde="

fullpath="

already="

skip="

none\_ok="

exp\_file="

nopath\_ok="

orig\_rp="\$rp"

orig\_dflt="\$dflt"

case "\$gfpth" in

") gfpth='.' ;;

esac

?X: Begin by stripping out any (...) grouping.

case "\$fn" in

\*\(\*

: getfile will accept an answer from the comma-separated list

: enclosed in parentheses even if it does not meet other criteria.

expr "\$fn" : '.\*(\(.\*\)).\*' | \$tr ' ' \$trnl >getfile.ok

fn=`echo \$fn | sed 's/(.\*)/'`

;;

esac

?X: Catch up 'locate' requests early, so that we may strip the file name  
?X: before looking at the one-letter commands, in case the file name contains  
?X: one of them. Reported by Wayne Davison <davison@borland.com>.

```
case "$fn" in
*~*)
loc_file=`expr $fn : '.*:\(.*\)^`
fn=`expr $fn : '\(.*\):.*`
;;
esac
```

```
case
"$fn" in
*~*) tilde=true;;
esac
```

```
case "$fn" in
*/*) fullpath=true;;
esac
```

```
case "$fn" in
*+*) skip=true;;
esac
```

```
case "$fn" in
*n*) none_ok=true;;
esac
```

```
case "$fn" in
*e*) exp_file=true;;
esac
```

```
case "$fn" in
*p*) nopath_ok=true;;
esac
```

```
case "$fn" in
*f*) type='File';;
*d*) type='Directory';;
*l*) type='Locate';;
esac
```

```
what="$type"
case "$what" in
Locate) what='File';;
esac
```

```
case "$exp_file" in
")
case "$d_portable" in
"$define") ;;
*) exp_file=true;;
esac
```

```

;;
esac

cd ..
while test "$type"; do
redo="
rp="$orig_rp"
dflt="$orig_dflt"
case "$tilde" in
true) rp="$rp (~name ok)";;
esac
. UU/myread
?X: check for allowed escape sequence which may be accepted verbatim.
if test -f UU/getfile.ok && \
$contains "^$ans\$" UU/getfile.ok >/dev/null 2>&1
then
value="$ans"
ansexp="$ans"
break
fi
case "$ans" in
none)
value="
ansexp="
case "$none_ok" in
true) type="";;
esac
;;
*)
case "$tilde" in
") value="$ans"
ansexp="$ans";;
*)
value=`UU/filexp $ans`
case
$? in
0)
if test "$ans" != "$value"; then
echo "(That expands to $value on this system.)"
fi
;;
*) value="$ans";;
esac
ansexp="$value"
case "$exp_file" in
") value="$ans";;
esac
;;

```

```

esac
case "$fullpath" in
true)
?X: Perform all the checks on ansexp and not value since when d_portable
?X: is defined, the original un-expanded answer which is stored in value
?X: would lead to "non-existent" error messages whilst ansexp has been
?X: properly expanded. -- Fixed by Jan.Djarv@sa.erisoft.se (Jan Djarv)
?X: Always expand ~user if '/' was requested
    case "$ansexp" in
/*) value="$ansexp" ;;
?X: Allow for c:/some/path
[a-zA-Z]:/*) value="$ansexp" ;;
*)
redo=true
case "$already" in
true)
echo "I shall only accept a full path name, as in /bin/lis." >&4
echo "Use a ! shell escape if you wish to check pathnames." >&4
;;
*)
echo "Please give a full path name, starting with slash." >&4
case "$stilde"
in
true)
echo "Note that using ~name is ok provided it expands well." >&4
already=true
;;
esac
esac
;;
esac
;;
esac
case "$redo" in
")
case "$stilde" in
File)
for fp in $gfpth; do
if test "X$fp" = X.; then
pf="$ansexp"
else
pf="$fp/$ansexp"
fi
if test -f "$pf"; then
type="
elif test -r "$pf" || (test -h "$pf") >/dev/null 2>&1
then
echo "($value is not a plain file, but that's ok.)"

```

```

    type="
fi
if test X"$type" = X; then
    value="$pf"
    break
fi
done
;;
Directory)
for fp in $gpth; do
if test "X$fp" = X.; then
    dir="$ans"
    direxp="$ansexp"
else
    dir="$fp/$ansexp"
    direxp="$fp/$ansexp"
fi
if test -d "$direxp"; then
    type="
    value="$dir"
    break
fi
done
;;
Locate)
if test -d "$ansexp"; then
    echo "(Looking for $loc_file in directory
$value.)"
    value="$value/$loc_file"
    ansexp="$ansexp/$loc_file"
fi
if test -f "$ansexp"; then
    type="
fi
case "$nopath_ok" in
true) case "$value" in
*/*) ;;
*) echo "Assuming $value will be in people's path."
    type="
    ;;
esac
;;
esac
;;
esac
;;
esac

case "$skip" in
true) type=";

```

```

esac

case "$type" in
") ;;
*)
if test "$fastread" = yes; then
dflt=y
else
dflt=n
fi
rp="$what $value doesn't exist. Use that name anyway?"
. UU/myread
dflt="
case "$ans" in
y*) type="";;
*) echo " ";;
esac
;;
esac
;;
esac
;;
esac
done
cd UU
ans="$value"
rp="$orig_rp"
dflt="$orig_dflt"
rm -f getfile.ok
test "X$gfpthkeep" != Xy && gfpth=""
EOSC

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Getfile.U

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_gai\_strerror: Compile cat rm\_try run Oldconfig Setvar

?MAKE:-pick add \$@ %<

?S:d\_gai\_strerror:

?S: This variable conditionally defines the HAS\_GAI\_STRERROR symbol

?S: if the gai\_strerror() routine is available and can be used to

?S: translate error codes returned by getaddrinfo() into human

?S: readable strings.

?S:.

?C:HAS\_GAI\_STRERROR:

?C: This symbol, if defined, indicates that the gai\_strerror routine

?C: is available to translate error codes returned by getaddrinfo()

?C: into human readable strings.

?C:.

?H:#\$d\_gai\_strerror

HAS\_GAI\_STRERROR /\*\*/

?H:.

?F:!try

?LINT: set d\_gai\_strerror

: look for gai\_strerror

echo " "

\$cat >try.c <<'EOCP'

#include <sys/types.h>

#include <sys/socket.h>

#include <netdb.h>

int main ()

{

return (gai\_strerror (0) ? 0 : 1);

}

EOCP

set try

?X: if \$cc \$cflags \$ldflags -o try try.c \$libs >/dev/null 2>&1 ; then

val="\$undef"

if eval \$compile; then

`\$run ./try`

case "\$?" in

0) echo "A working gai\_strerror() found." >&4

val="\$define" ;;

\*) echo "gai\_strerror() found, but it doesn't work" >&4

;;

esac

else

echo "gai\_strerror() NOT found." >&4

fi

set d\_gai\_strerror

eval \$setvar

\$rm\_try

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_gai\_strerror.U



No license file was found, but licenses were detected in source scan.

?RCS: \$Id: spitshell.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: spitshell.U,v \$  
?RCS: Revision 3.0.1.4 1997/02/28 16:22:12 ram  
?RCS: patch61: removed useless chatter as this is now done very early  
?RCS:  
?RCS: Revision 3.0.1.3 1995/01/11 15:37:01 ram  
?RCS: patch45: use 'test -f' instead of 'test -r' for exec-only cat progs (WED)  
?RCS: patch45: protected "sh -c" within backquotes for Linux and SGI  
?RCS:  
?RCS: Revision 3.0.1.2 1994/08/29 16:33:00 ram  
?RCS: patch32: don't create spitshell under the UU directory  
?RCS:  
patch32: allow for cat in /bin or /usr/bin  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 16:12:58 ram  
?RCS: patch10: made #-failure message more friendly (WAD)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:49 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:spitshell shsharp sharpbang: eunicefix sh Head  
?MAKE: -pick add \$@ %<  
?S:spitshell:  
?S: This variable contains the command necessary to spit out a runnable  
?S: shell on this system. It is either cat or a grep -v for # comments.  
?S:.  
?S:shsharp:  
?S: This variable tells further Configure units whether your sh can  
?S: handle # comments.  
?S:.  
?S:sharpbang:  
?S: This variable contains the string #! if this system supports that  
?S: construct.  
?S:.  
?F:!sharp  
?T:xcat p  
?X: "paths" comes from Head

```

?LINT:extern paths _exe
: see if sh knows # comments
?X: This is loaded up early, so avoid being chatty.
?X: echo " "
?X: echo "Checking your $sh to see if it knows about # comments..." >&2
if `sh -c '#>/dev/null 2>&1`; then
?X: echo
"Your $sh handles # comments correctly."
shsharp=true
spitshell=cat
?X: echo " "
?X: echo "Okay, let's see if #! works on this system..."
xcat=/bin/cat
test -f $xcat$_exe || xcat=/usr/bin/cat
if test ! -f $xcat$_exe; then
for p in `echo $PATH | sed -e "s/$p_/ /g"` $paths; do
if test -f $p/cat$_exe; then
xcat=$p/cat
break
fi
done
if test ! -f $xcat$_exe; then
echo "Can't find cat anywhere!"
exit 1
fi
fi
echo "#!$xcat" >sharp
$unicefix sharp
chmod +x sharp
./sharp > today 2>/dev/null
if test -s today; then
?X: echo "It does."
sharpbang='#!'
else
echo "#! $xcat" > sharp
$unicefix sharp
chmod +x sharp
./sharp > today 2>/dev/null
if test -s today; then
?X: echo "It does."
sharpbang='#! '
else
?X: echo "Okay, let's see if #! works on this system..."
?X: echo "It's just a comment."
sharpbang=': use '
fi
fi
else

```

```

echo " "
echo "Your $sh doesn't grok # comments--I will strip them later on."
shsharp=false
?X: The
spitshell script will be perused, so leave it out the UU directory
cd ..
echo "exec grep -v '^[ ]*#" >spitshell
chmod +x spitshell
$eunicefix spitshell
spitshell=`pwd`/spitshell
cd UU
echo "I presume that if # doesn't work, #! won't work either!"
sharpbang=: use '
fi
rm -f sharp today

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/spitshell.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_fchown.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_fchown.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:01 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_fchown: Inlibc
?MAKE: -pick add $@ %<
?S:d_fchown:
?S: This variable conditionally defines the HAS_FCHOWN symbol, which
?S: indicates to the C program that the fchown() routine is available
?S: to change ownership of opened files.
?S:.
?C:HAS_FCHOWN (FCHOWN):
?C: This symbol, if defined, indicates that the fchown routine is available
?C: to
?C: change ownership of opened files. If unavailable, use chown().
?C:.
?H:#$d_fchown HAS_FCHOWN /**/

```

```
?H:
?LINT:set d_fchown
: see if fchown exists
set fchown d_fchown
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_fchown.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: nis.U,v $
```

```
?RCS: Revision 3.0.1.3 1997/02/28 16:17:38 ram
```

```
?RCS: patch61: ensure suitable defaults for hostcat and friends
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1995/03/21 08:48:34 ram
```

```
?RCS: patch52: continued fix for NeXT NIS/NetInfo handling
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1995/02/15 14:16:23 ram
```

```
?RCS: patch51: now correctly handles NeXT using NIS rather than NetInfo
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:09:24 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:passcat groupcat hostcat:
```

```
Myread Oldconfig test contains
```

```
?MAKE: -pick add $@ %<
```

```
?S:passcat:
```

```
?S: This variable contains a command that produces the text of the
```

```
?S: /etc/passwd file. This is normally "cat /etc/passwd", but can be
```

```
?S: "ypcat passwd" when NIS is used.
```

```
?S:.
```

```
?S:groupcat:
```

```
?S: This variable contains a command that produces the text of the
```

```
?S: /etc/group file. This is normally "cat /etc/group", but can be
```

```
?S: "ypcat group" when NIS is used.
```

```
?S:.
```

```
?S:hostcat:
```

?S: This variable contains a command that produces the text of the

?S: /etc/hosts file. This is normally "cat /etc/hosts", but can be

?S: "ypcat hosts" when NIS is used.

?S:.

: see if we have to deal with yellow pages, now NIS.

?X: NeXT gives us some fun here, as always, by having both NIS (former YP)

?X: and NetInfo. But since it has both, it's ok to put the test inside the if.

?X: Contributed by Thomas Neumann <tom@smart.bo.open.de>.

```
if $test -d /usr/etc/yp || $test -d /etc/yp || $test -d /usr/lib/yp; then
```

```
if $test -f /usr/etc/nibindd; then
```

```
    echo
```

```
    " "
```

```
    echo "I'm fairly confident you're on a NeXT."
```

```
@if passcat || groupcat
```

```
    echo " "
```

```
    rp='Do you get the passwd file via NetInfo?'
```

```
    dflt=y
```

```
    case "$passcat" in
```

```
        nidump*) ;;
```

```
    *) ;;
```

```
    *) dflt=n;;
```

```
    esac
```

```
    ./myread
```

```
    case "$ans" in
```

```
        y*) passcat='nidump passwd .'
```

```
@if groupcat
```

```
    echo "(Assuming /etc/group is also distributed.)"
```

```
    groupcat='nidump group .'
```

```
@end
```

```
;;
```

```
*) echo "You told me, so don't blame me."
```

```
case "$passcat" in
```

```
    nidump*) passcat="
```

```
@if groupcat
```

```
    groupcat="";;
```

```
@end
```

```
esac
```

```
@if groupcat
```

```
    echo "(Assuming /etc/group is handled the same way.)"
```

```
@end
```

```
;;
```

```
esac
```

```
@end
```

```
@if hostcat
```

```
    echo " "
```

```
    rp='Do you get the hosts file via NetInfo?'
```

```
    dflt=y
```

```
    case "$hostcat" in
```

```

nidump*) ;;
") ;;
*) dflt=n;;
esac
./myread
case "$ans" in
y*) hostcat='nidump hosts .';;
*) case "$hostcat" in
nidump*) hostcat="";;
esac
;;
esac
@end
fi
@if passcat || groupcat
case "$passcat" in
nidump*) ;;
*)
case "$passcat" in
*y*cat*) dflt=y;;
")
if $contains '^+' /etc/passwd >/dev/null 2>&1; then
dflt=y
else
dflt=n
fi;;
*) dflt=n;;
esac
echo " "
rp='Are you getting the passwd file via yellow pages?'
./myread
case "$ans" in
y*) passcat='ypcat passwd'
@if groupcat
echo "(Assuming /etc/group is also distributed.)"
groupcat='ypcat group'
@end
;;
*) passcat='cat /etc/passwd'
@if groupcat
echo "(Assuming /etc/group is also local.)"
groupcat='cat /etc/group'
@end
;;
esac
;;
esac
@end

```

```

@if hostcat
case "$hostcat" in
nidump*) ;;
*)
case "$hostcat" in
*yocat*) dflt=y;;
") if $contains '\+' /etc/passwd >/dev/null 2>&1; then
dflt=y
else
dflt=n
fi;;
*) dflt=n;;
esac
echo " "
rp='Are you getting the hosts file via yellow pages?'
./myread
case "$ans" in
y*) hostcat='yocat hosts';;
*) hostcat='cat /etc/hosts';;
esac
;;
esac
@end
fi
?X: Ensure suitable default -- Manoj Srivastava
case "$hostcat" in
") hostcat=':
$test -f /etc/hosts && hostcat='cat
/etc/hosts';;
esac
case "$groupcat" in
") groupcat=':
$test -f /etc/group && groupcat='cat /etc/group';;
esac
case "$passcat" in
") passcat=':
$test -f /etc/passwd && passcat='cat /etc/passwd';;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/nis.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: installstyle.U,v 1.2 1999/07/13 14:56:06 doughera Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1999 Andy Dougherty
```

```
?RCS:
```

?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: installstyle.U,v \$  
?RCS: Revision 1.2 1999/07/13 14:56:06 doughera  
?RCS: Fix dependencies. Add more comments.  
?RCS:  
?RCS: Revision 1.1 1999/07/12 17:30:41 doughera  
?RCS: Initial revision  
?RCS:  
?RCS:  
?MAKE:installstyle: prefix Myread  
?MAKE: -pick add \$@ %<  
?X: Myread dependence is for dflt.  
?S:installstyle:  
?S: This variable describes the "style" of the perl installation.  
?S: This is intended to be useful for tools that need to  
?S: manipulate entire perl  
distributions. Perl itself doesn't use  
?S: this to find its libraries -- the library directories are  
?S: stored directly in Config.pm. Currently, there are only two  
?S: styles: "lib" and "lib/perl5". The default library locations  
?S: (e.g. privlib, sitelib) are either \$prefix/lib or  
?S: \$prefix/lib/perl5. The former is useful if \$prefix is a  
?S: directory dedicated to perl (e.g. /opt/perl), while the latter  
?S: is useful if \$prefix is shared by many packages, e.g. if  
?S: \$prefix=/usr/local.  
?S:  
?S: Unfortunately, while this "style" variable is used to set  
?S: defaults for all three directory hierarchies (core, vendor, and  
?S: site), there is no guarantee that the same style is actually  
?S: appropriate for all those directories. For example, \$prefix  
?S: might be /opt/perl, but \$siteprefix might be /usr/local.  
?S: (Perhaps, in retrospect, the "lib" style should never have been  
?S: supported, but it did seem like a nice idea at the time.)  
?S:  
?S: The situation is even less clear for  
tools such as MakeMaker  
?S: that can be used to install additional modules into  
?S: non-standard places. For example, if a user intends to install  
?S: a module into a private directory (perhaps by setting PREFIX on  
?S: the Makefile.PL command line), then there is no reason to  
?S: assume that the Configure-time \$installstyle setting will be  
?S: relevant for that PREFIX.  
?S:



?S: This may later be extended to include other information, so

?S: be careful with pattern-matching on the results.

?S:

?S: For compatibility with perl5.005 and earlier, the default

?S: setting is based on whether or not \$prefix contains the string

?S: "perl".

?S:.

: determine installation style

: For now, try to deduce it from prefix unless it is already set.

: Reproduce behavior of 5.005 and earlier, maybe drop that in 5.7.

case "\$installstyle" in

) case "\$prefix" in

\*perl\*) dflt='lib';;

\*) dflt='lib/perl5' ;;

esac

;;

\*) dflt="\$installstyle" ;;

esac

: Probably not worth prompting for this since we prompt

for all

: the directories individually, and the prompt would be too long and

: confusing anyway.

installstyle=\$dflt

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/installstyle.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2009 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getnameinfo: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getnameinfo:

?S: This variable conditionally defines the HAS\_GETNAMEINFO symbol,

?S: which indicates to the C program that the getnameinfo() function

?S: is available.

?S:.

?C:HAS\_GETNAMEINFO:

?C: This symbol, if defined, indicates that the getnameinfo() function

?C: is available for use.

?C:.

?H:#\$d\_getnameinfo HAS\_GETNAMEINFO /\*\*/

?H:  
?LINT:set d\_getnameinfo  
: see if getnameinfo exists  
set getnameinfo d\_getnameinfo  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_getnameinfo.U

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2022 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_setenv: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setenv:

?S: This variable conditionally defines the HAS\_SETENV symbol, which

?S: indicates to the C program that the setenv() routine is available.

?S:.

?C:HAS\_SETENV:

?C: This symbol, if defined, indicates that the setenv() routine is

?C: available to change or add an environment variable.

?C:.

?H:#\$d\_setenv HAS\_SETENV /\*\*/

?H:.

?LINT:set d\_setenv

: see if setenv exists

set setenv d\_setenv

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_setenv.U.x

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999, Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

```

?MAKE:d_mmap mmaptype: Inlibc i_sysmman cat cc cflags
?MAKE: -pick add $@ %<
?S:d_mmap:
?S: This variable conditionally defines HAS_MMAP if mmap() is
?S: available to map a file into memory.
?S:.
?S:mmaptype:
?S: This symbol contains the type of pointer returned by mmap()
?S: (and simultaneously the type of the first argument).
?S: It can be 'void *' or 'caddr_t'.
?S:.
?C:HAS_MMAP:
?C: This symbol, if defined, indicates that the mmap system call is
?C: available to map a file into memory.
?C:.
?C:Mmap_t:
?C: This symbol
holds the return type of the mmap() system call
?C: (and simultaneously the type of the first argument).
?C: Usually set to 'void *' or 'caddr_t'.
?C:.
?H:#$d_mmap HAS_MMAP /**/
?H:#define Mmap_t $mmaptype /**/
?H:.
?LINT:set d_mmap
: see if mmap exists
set mmap d_mmap
eval $inlibc
: see what shmat returns
: default to something harmless
mmaptype='void *'
case "$i_sysmman$d_mmap" in
"$define$define")
$cat >mmap.c <<'END'
#include <sys/mman.h>
void *mmap();
END
if $cc $cflags -c mmap.c >/dev/null 2>&1; then
mmaptype='void *'
else
mmaptype='caddr_t'
fi
echo "and it returns ($mmaptype)." >&4
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/U/modified/d\_mmap.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_csh.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:32:18 ram

?RCS: patch61: added full\_csh to preserve the full path even when portable

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:53 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_csh full\_csh: csh Setvar

?MAKE: -pick add \$@ %<

?S:d\_csh:

?S: This variable conditionally defines the CSH symbol, which

?S: indicates to the C program that the C-shell exists.

?S:.

?S:full\_csh:

?S: This variable contains the full pathname to 'csh', whether

or

?S: not the user has specified 'portability'. This is only used

?S: in the compiled C program, and we assume that all systems which

?S: can share this executable will have the same full pathname to

?S: 'csh.'

?S:.

?C:HAS\_CSH:

?C: This symbol, if defined, indicates that the C-shell exists.

?C:.

?C:CSH:

?C: This symbol, if defined, contains the full pathname of csh.

?C:.

?X: Previously, I just did \$d\_csh CSH "\$full\_csh", but that caused

?X: problems on VMS where the config.sh extraction program changes

?X: \$undef to a real cpp undef, and they then had #undef CSH ""

?X: which the compiler didn't like. It's easy to work around this,

?X: so I did. --AD 3/1998.

?X: And we don't want to define CSH if !HAS\_CSH, but we don't want

?X: those lines in config.h if they don't need CSH, so protect with ?CSH

?X: and not ?%<. --RAM, 15/02/2004

```

?H:%<:#$d_csh HAS_CSH /**/
?H:?CSH:#ifdef HAS_CSH
?H:?CSH:#define CSH "$full_csh" /**/
?H:?CSH:#endif
?H:.
?LINT:set d_csh
: get csh whereabouts
case
"$csh" in
'csh') val="$undef" ;;
*) val="$define" ;;
esac
set d_csh
eval $setvar
: Respect a hint or command line value for full_csh.
case "$full_csh" in
") full_csh=$csh ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_csh.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_sysconf.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_sysconf.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:15:57 ram
?RCS: patch36: created by ADO
?RCS:
?MAKE:d_sysconf: Inlibc
?MAKE: -pick add $@ %<
?S:d_sysconf:
?S: This variable conditionally defines the HAS_SYSCONF symbol, which
?S: indicates to the C program that the sysconf() routine is available
?S: to determine system related limits and options.
?S:.
?C:HAS_SYSCONF:

```

?C: This  
symbol, if defined, indicates that sysconf() is available  
?C: to determine system related limits and options.

?C:.

?H:#\$d\_sysconf HAS\_SYSCONF /\*\*/

?H:.

?LINT:set d\_sysconf

: see if sysconf exists

set sysconf d\_sysconf

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_sysconf.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: alignbytes.U,v \$

?RCS: Revision 3.0.1.2 1994/10/29 16:02:28 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 14:25:20 ram

?RCS: patch23: avoid ALIGNBYTES, since it conflicts on NetBSD

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:23 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:alignbytes: Assert Myread Trylink cat i\_inttypes i\_limits i\_math

?MAKE: -pick add \$@ %<

?S:alignbytes:

?S: This variable holds the number of bytes required

to align an

?S: arbitrary standard type. Usual values are 2, 4 and 8.

?S:.

?X: This used to be called ALIGNBYTES, but that conflicts with

?X: <machines/param.h> in NetBSD.

?C:MEM\_ALIGNBYTES (ALIGNBYTES):

?C: This symbol contains the number of bytes required to align a

?C: double. Usual values are 2, 4 and 8.

```

?C:.
?H:#define MEM_ALIGNBYTES $alignbytes /**/
?H:.
?T:alignment result
: check for alignment requirements
echo " "
case "$alignbytes" in
")
echo "Checking alignment constraints..." >&4

for alignment in 8 4 2 1 16 32 error
do
$cat >try.c <<EOCP
#i_inttypes I_INTTYPES
#ifdef I_INTTYPES
#include <inttypes.h>
#endif
#i_limits I_LIMITS
#ifdef I_LIMITS
#include <limits.h>
#endif
#i_math I_MATH
#ifdef I_MATH
#include <math.h>
#endif

union u {
void *void_ptr;
void (*func_ptr)(void);
char c;
short s;
int i;
long l;
float f;
double d;
#ifdef LLONG_MAX
long long ll;
#else
#warning "LLONG_MAX undefined"
#endif
#ifdef HUGE_VALL
long double ld;
#else
#warning
"HUGE_VALL undefined"
#endif
#ifdef UINT32_MAX
uint32_t u32;

```

```

#else
#warning "UINT32_MAX undefined"
#endif
#ifdef UINT16_MAX
uint16_t u16;
#else
#warning "UINT32_MAX undefined"
#endif
#ifdef UINT64_MAX
uint64_t u64;
#else
#warning "UINT64_MAX undefined"
#endif
#ifdef UINTMAX_MAX
uintmax_t m;
#else
#warning "UINTMAX_MAX undefined"
#endif
#ifdef UINTPTR_MAX
uintptr_t up;
#else
#warning "UINTPTR_MAX undefined"
#endif
};

struct s {
char a;
union u b;
};

#include "static_assert.h"

int
main(void)
{
STATIC_ASSERT($alignment == ((sizeof (struct s) - (sizeof (union u)))));
return 0;
}
EOCP

result="
set result
eval $trylink
case "$result" in
"$define") break;;
esac
done

```



```

case "$alignment" in
error) dflt='8'
echo "(I can't seem to compile the test program...)" >&4
;;
*) dflt=$alignment
;;
esac
;;
*) dflt="$alignbytes"
;;
esac
rp="What is the maximum alignment in bytes required for a standard type?"
./myread
alignbytes="$ans"

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/alignbytes.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Head.U,v \$

?RCS: Revision 3.0.1.9 1997/02/28 15:02:09 ram

?RCS: patch61: make sure we unset CDPATH for shells that support this

?RCS: patch61: improved Korn shell detection and handling

?RCS:

?RCS: Revision 3.0.1.8 1995/07/25 13:40:02 ram

?RCS: patch56: added SVR4-ish /opt directories to path list (ADO)

?RCS: patch56: OS/2 platforms are using another path separator

?RCS:

?RCS: Revision 3.0.1.7 1995/03/21 08:46:15 ram

?RCS: patch52: definition of paths wrongly added spurious ':' chars

?RCS:

?RCS:

Revision 3.0.1.6 1994/10/29 15:54:19 ram

?RCS: patch36: make sure ENV is unset before calling /bin/ksh

?RCS:

?RCS: Revision 3.0.1.5 1994/08/29 16:03:44 ram

?RCS: patch32: now sets PATH only using existing directories

```

?RCS:
?RCS: Revision 3.0.1.4 1994/06/20 06:54:28 ram
?RCS: patch30: now computes its invocation name into 'me'
?RCS: patch30: symbol me is made visible to all units read-only
?RCS:
?RCS: Revision 3.0.1.3 1993/12/15 08:15:07 ram
?RCS: patch15: added /sbin:/usr/sbin:/usr/libexec in PATH for BSD/386
?RCS:
?RCS: Revision 3.0.1.2 1993/11/10 17:32:35 ram
?RCS: patch14: ensure PATH is reset to '.' before testing for alias
?RCS:
?RCS: Revision 3.0.1.1 1993/08/27 14:38:07 ram
?RCS: patch7: not all 'test' programs support the -x option
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:58 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This is the very first unit in the Configure script. It is mostly just
?X: things to keep people from getting
?X: into a tizzy right off the bat.
?X:
?MAKE:Head:
?MAKE: -pick wipe $@ %<
?V:PATH p_ _exe me newsh
?T:argv Id p paths OS2_SHELL DJGPP
?T:inksh needksh avoidksh newsh changesh reason
?F:!*
?LINT:extern ENV CDPATH SHELL MACHTYPE
?LINT:change ENV CDPATH
?LINT:nocomment
#!/bin/sh
#
# If these # comments don't work, trim them. Don't worry about any other
# shell scripts, Configure will trim # comments from them for you.
#
# (If you are trying to port this package to a machine without sh,
# I would suggest you have a look at the prototypical config_h.SH file
# and edit it to reflect your system. Some packages may include samples
# of config.h for certain machines, so you might look for one of those.)
#
?X:
?X: NOTE THAT A CONFIGURE SCRIPT IS IN THE PUBLIC DOMAIN (whether or not
?X: the software which uses it is in the public domain).
?X:
# Yes, you may rip this off to use in other distribution packages. This
# script belongs to the public domain and cannot be copyrighted.
#

```

```

?X:
?X: WE ASK YOU
NOT TO REMOVE OR ALTER THE FOLLOWING PARAGRAPH, PLEASE:
?X:
# Note: this Configure script was generated automatically. Rather than
# working with this copy of Configure, you may wish to get metaconfig.
# The dist package (which contains metaconfig) is available via SVN:
#   svn co https://svn.code.sf.net/p/dist/code/trunk/dist
?X:
?X: NOTA BENE:
?X: If you develop you own version of metaconfig based on this work,
?X: you have to add some comments telling that the script was generated
?X: by your version, not mine: It credits your work.
?X:

# $Id: Head.U 6 2006-08-25 22:21:46Z rmanfredi $
#
# Generated on <DATE> [metaconfig <VERSION> PL<PATCHLEVEL>]

cat >c1$$ <<EOF
ARGGGHHHH!!!!

SCO csh still thinks true is false. Write to SCO today and tell them that next
year Configure ought to "rm /bin/csh" unless they fix their blasted shell. :-)

(Actually, Configure ought to just patch csh in place. Hmm. Hmmmmm. All
we'd have to do is go in and swap the && and || tokens, wherever they are.)

[End
of diatribe. We now return you to your regularly scheduled programming...]
EOF
cat >c2$$ <<EOF

OOPS! You naughty creature! You didn't run Configure with sh!
I will attempt to remedy the situation by running sh for you...
EOF

true || cat c1$$ c2$$
true || exec sh $0 $argv:q

(exit $?0) || cat c2$$
(exit $?0) || exec sh $0 $argv:q
rm -f c1$$ c2$$

: compute my invocation name
me=$0
case "$0" in
*/*)

```

```
me=`echo $0 | sed -e 's!.*\/(.*)!\1!' 2>/dev/null`
test "$me" || me=$0
;;
esac
```

?X:

?X: To be able to run under OS/2, we must detect that early enough to use

?X: the proper path separator, stored in \$p\_. It is : on UNIX and ; on

?X: DOSish systems such as OS/2.

?X:

: Proper separator for the PATH environment variable

p\_=:

: On OS/2 this directory should exist if this is not floppy only system ":-]"

if test -d c:/ ; then

if test -n "\$OS2\_SHELL"; then

p\_=\;

PATH=`cmd /c "echo %PATH%" | tr "\\\\" /`

?X: That's a bug in ksh5.22

OS2\_SHELL=`cmd /c "echo %OS2\_SHELL%" | tr

"/ | tr '[A-Z]' [a-z]"`

elif test -n "\$DJGPP"; then

case "X\${MACHTYPE:-noneschmach}" in

\*cygwin) ;;

\*) p\_=\; ;;

esac

fi

fi

?X:

?X: There are two schools of thoughts here. Some people correctly argue that

?X: the user has a better chance than we do of setting a reasonable PATH and

?X: others argue that Configure is the best place there is to set up a suitable

?X: PATH. Well, here we try to compromise by keeping the user's PATH and

?X: appending some directories which are known to work on some machine or the

?X: other. The rationale behind this being that a novice user might not have a

?X: proper environment variable set, and some directories like /etc (where

?X: chown is located on some BSD systems) may be missing--RAM.

?X:

?X: SVR4 adds an /opt directory for optional packages. Some sites use

?X: various permutations on /opt as opposed to /usr or /usr/local.-- ADO

?X:

?X: We only add directories that are not already in the PATH of the

?X: user and the directories must

exist also.

?X:

: Proper PATH setting

paths="/bin /usr/bin /usr/local/bin /usr/ucb /usr/local /usr/lbin"

paths="\$paths /opt/bin /opt/local/bin /opt/local /opt/lbin"

```

paths="$paths /usr/5bin /etc /usr/gnu/bin /usr/new /usr/new/bin /usr/nbin"
paths="$paths /opt/gnu/bin /opt/new /opt/new/bin /opt/nbin"
paths="$paths /sys5.3/bin /sys5.3/usr/bin /bsd4.3/bin /bsd4.3/usr/ucb"
paths="$paths /bsd4.3/usr/bin /usr/bsd /bsd43/bin /usr/ccs/bin"
paths="$paths /etc /usr/lib /usr/ucblib /lib /usr/ccs/lib"
paths="$paths /sbin /usr/sbin /usr/libexec"
paths="$paths /system/gnu_library/bin"

```

```

for p in $paths
do
case "$p_${PATH}$p_" in
*$p_-$p_*) ;;
*) test -d $p && PATH=${PATH}$p_-$p ;;
esac
done

```

```

PATH=.$p_${PATH}
export PATH

```

: shall we be using ksh?

```
inksh=""
```

```
needksh=""
```

```
avoidksh=""
```

```
newsh=/bin/ksh
```

```
changesh=""
```

?X: Use (alias -x) and not (alias) since zsh and bash recognize the alias

?X: builtin but not the -x option which is typically ksh...

?X: We need to set up PATH before calling the "alias" built-in since some

?X: systems like HP-UX have a binary called /bin/alias.

```
if (PATH=.; alias -x) >/dev/null 2>&1; then
```

```
inksh=true
```

```
fi
```

?X: On HP-UX, large Configure scripts may exercise a bug in /bin/sh, use ksh

```
if test -f /hp-ux -a -f /bin/ksh; then
```

```
needksh='to avoid sh bug in "here document" expansion'
```

```
fi
```

?X: On AIX4, /bin/sh is really ksh and it causes problems, use sh

```
if test -d /usr/lpp -a -f /usr/bin/bsh -a -f /usr/bin/uname; then
```

```
if test X`/usr/bin/uname -v` = X4; then
```

```
avoidksh="to avoid AIX 4's /bin/sh"
```

```
newsh=/usr/bin/bsh
```

```
fi
```

```
fi
```

?X: On Digital UNIX, /bin/sh may start up buggy /bin/ksh, use sh

```
if test -f /osf_boot -a -f /usr/sbin/setld; then
```

```
if test X`/usr/bin/uname -s` = XOSF1; then
```

```
avoidksh="to avoid Digital UNIX' ksh"
```

```

newsh=/bin/sh
?X: if BIN_SH is set to 'xpg4', sh will start up ksh
unset BIN_SH
fi
fi
?X: If we are not in ksh and need it, then feed us back to it
case "$inksh/$needksh" in
/[a-z]*)
?X: Clear ENV to avoid any ~/.kshrc that could alias cd or whatever...
?X: Don't
use "unset ENV", that is not portable enough
ENV=""
changesh=true
reason="$needksh"
;;
esac
?X: If we are in ksh and must avoid it, then feed us back to a new shell
case "$inksh/$avoidksh" in
true/[a-z]*)
changesh=true
reason="$avoidksh"
;;
esac
?X: Warn them if they use ksh on other systems, which are those where
?X: we don't need ksh nor want to avoid it explicitly, yet are using it.
case "$inksh/$needksh-$avoidksh-" in
true/--)
cat <<EOM
(I see you are using the Korn shell. Some ksh's blow up on $me,
mainly on older exotic systems. If yours does, try the Bourne shell instead.)
EOM
;;
esac
case "$changesh" in
true)
export newsh
echo "(Feeding myself to $newsh $reason.)"
?X: Make sure they didn't say sh <Configure by checking whether $0 ends
?X: with Configure or not. If they did say sh <././Configure, then too
?X: bad for them anyway, since we lost that path indication...
?X: Otherwise, execing $0 ensures we keep the full remote source dir
?X: indication for src.U.
case
"$0" in
Configure|*/Configure) exec $newsh $0 "$@";;
*) exec $newsh Configure "$@";;
esac
;;

```

esac

?X: Unset CDPATH to avoid surprises when using cd under some shells

?X: Can't unset it because that's not portable to very old shells.

?X: Can't set it to " because then bash 2.02 won't do "cd UU" --AD 6/98.

?X: Don't want to set it to '.' because then ksh prints out the

?X: name of the directory every time you cd to it. --AD 6/98

?X: In order to inflict the least harm, change it only if it's set.

: if needed, set CDPATH to a harmless value that is not chatty

case "\$CDPATH" in

) ;;

\*) case "\$SHELL" in

\*bash\*) CDPATH='.' ;;

\*) CDPATH="" ;;

esac

;;

esac

: Configure runs within the UU subdirectory

test -d UU || mkdir UU

?X: Use ./\* to avoid any confirmation prompts from enhanced shells -- WED

cd UU && rm -f ./\*

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Head.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: archlib.U,v 3.1 1999/07/08 18:32:29 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: This file is included with or a derivative work of a file included

?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.

?RCS: In accordance with clause 7 of dist's modified Artistic License:

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: archlib.U,v \$

?RCS: Revision 3.1 1999/07/08 18:32:29 doughera

?RCS: Updated for perl5.005\_5x

?RCS:

?RCS:

?RCS: Revision 3.0.1.4 1995/09/25 09:15:18 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:  
?RCS: Revision 3.0.1.3 1995/02/15 14:14:14 ram  
?RCS: patch51: architecture name is now  
computed by a separate unit  
?RCS:  
?RCS: Revision 3.0.1.2 1995/01/30 14:32:22 ram  
?RCS: patch49: archname is now systematically recomputed  
?RCS: patch49: can now handle installation prefix changes (from WED)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:02:36 ram  
?RCS: patch36: created by ADO  
?RCS:  
?MAKE:d\_archlib archlib archlibexp installarchlib: \  
cat Getfile Setprefixvar Loc Oldconfig archname spackage \  
privlib sed test Prefixit Prefixup binexp  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?S:d\_archlib:  
?S: This variable conditionally defines ARCHLIB to hold the pathname  
?S: of architecture-dependent library files for \$package. If  
?S: \$archlib is the same as \$privlib, then this is set to undef.  
?S:.  
?D:archlib="  
?S:archlib:  
?S: This variable holds the name of the directory in which the user wants  
?S: to put architecture-dependent public library files for \$package.  
?S: It is most often a local directory such as /usr/local/lib.  
?S: Programs using this variable must be prepared to deal  
?S: with  
filename expansion.  
?S:.  
?D:archlibexp="  
?S:archlibexp:  
?S: This variable is the same as the archlib variable, but is  
?S: filename expanded at configuration time, for convenient use.  
?S:.  
?D:installarchlib="  
?S:installarchlib:  
?S: This variable is really the same as archlibexp but may differ on  
?S: those systems using AFS. For extra portability, only this variable  
?S: should be used in makefiles.  
?S:.  
?C:ARCHLIB:  
?C: This variable, if defined, holds the name of the directory in  
?C: which the user wants to put architecture-dependent public  
?C: library files for \$package. It is most often a local directory  
?C: such as /usr/local/lib. Programs using this variable must be  
?C: prepared to deal with filename expansion. If ARCHLIB is the



```

?C: same as PRIVLIB, it is not defined, since presumably the
?C: program already searches PRIVLIB.
?C:.
?C:ARCHLIB_EXP:
?C: This symbol contains the ~name expanded version of ARCHLIB, to be used
?C: in programs that are not prepared to deal with ~ expansion
    at run-time.
?C:.
?H:#$d_archlib ARCHLIB "$sarchlib" /**/
?H:#$d_archlib ARCHLIB_EXP "$sarchlibexp" /**/
?H:.
?T: tdfmt
?LINT:change prefixvar
?LINT:set archlib
?LINT:set archlibexp
?LINT:set installarchlib
: determine where public architecture dependent libraries go
set archlib archlib
eval $prefixit
: privlib default is /usr/local/lib/$package/$version
: archlib default is /usr/local/lib/$package/$version/$sarchname
: privlib may have an optional trailing /share.
tdfmt=`echo $privlib | $sed 's,/share$,,'`
tdfmt=$tdfmt/$sarchname
case "$sarchlib" in
") dfmt=$tdfmt
;;
*) dfmt="$sarchlib"
;;
esac
$cat <<EOM

```

\$package contains architecture-dependent library files. If you are sharing libraries in a heterogeneous environment, you might store these files in a separate location. Otherwise, you can just include them with the rest of the public library files.

```

EOM
?X: Force dependency on bin.U
fn=$binexp
fn=d+~
rp="Where do you want to put the public architecture-dependent libraries?"
.
./getfile
prefixvar=archlib
./setprefixvar
if $test X"$sarchlib" = X"$privlib"; then
    d_archlib="$undef"

```

```
else
d_archlib="$define"
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/archlib.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Init.U,v 3.0.1.1 1994/10/31 09:45:59 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: Init.U,v $
```

```
?RCS: Revision 3.0.1.1 1994/10/31 09:45:59 ram
```

```
?RCS: patch44: removed Options from MAKE to prevent Init overrides
```

```
?RCS: patch44: option processing now done after Myinit thanks to new Begin.U
```

```
?RCS: patch44: moved "Beginning of configuration questions" to Begin.U
```

```
?RCS: patch44: moved signal trapping instruction to Begin.U as well
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:05:02 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?X:
```

```
?X: This file
```

```
initializes certain default variables used by Configure. They
```

```
?X: may be overridden or added to by definitions in Myinit.U.
```

```
?X:
```

```
?MAKE:Init eunicefix: Null
```

```
?MAKE: -pick add $@ %<
```

```
?MAKE: -pick weed $@ ./Init
```

```
?S:eunicefix:
```

```
?S: When running under Eunice this variable contains a command which will
```

```
?S: convert a shell script to the proper form of text file for it to be
```

```
?S: executable by the shell. On other systems it is a no-op.
```

```
?S:.
```

```
?V:define undef smallmach:rmlist
```

```
?X:
```

```
?X: Throughout the units, one may make use of $define and $undef to reference
```

```
?X: a defined symbol or an undefined one. There is no need to add them in
```

```
?X: the dependency line since this unit makes them visible via ?V:, and
```

```
?X: everyone inherits from those symbols since by convention Init.U is the
```

```

?X: root dependency.
?X:
?LINT:extern DJGPP
?LINT:extern _exe
?LINT:change _exe
?LINT:extern is_os2
: Detect odd OSs
define='define'
undef='undef'
smallmach='pdp11 i8086 z8000 i80286 iAPX286'
rmlist="

: We must find out about
Eunice early
eunicefix=':
if test -f /etc/unixtovms; then
eunicefix=/etc/unixtovms
fi
if test -f /etc/unixtovms.exe; then
eunicefix=/etc/unixtovms.exe
fi

: Set executable suffix now -- needed before hints available
if test -f "/libs/version.library"; then
: Amiga OS
_exe=""
elif test -f "/system/gnu_library/bin/ar.pm"; then
: Stratus VOS
_exe=".pm"
elif test -n "$DJGPP"; then
: DOS DJGPP
_exe=".exe"
elif test -f /kern/cookiejar; then
: MiNT
_exe=""
elif test -d c:/ -o -n "$is_os2" ; then
: OS/2 or cygwin
_exe=".exe"
fi

Found in path(s):
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/modified/Init.U
No license file was found, but licenses were detected in source scan.

?RCS: $Id: alignbytes.U,v 3.0.1.2 1994/10/29 16:02:28 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi

```

```

?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: alignbytes.U,v $
?RCS: Revision 3.0.1.2 1994/10/29 16:02:28 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 14:25:20 ram
?RCS: patch23: avoid ALIGNBYTES, since it conflicts on NetBSD
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:23 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:alignbytes: Myread Compile cat rm_try multiarch run test nvtype
?MAKE: -pick add $@ %<
?S:alignbytes:
?S: This
    variable holds the number of bytes required to align a
?S: double-- or a long double when applicable. Usual values are
?S: 2, 4 and 8. The default is eight, for safety.
?S:.
?X: This used to be called ALIGNBYTES, but that conflicts with
?X: <machines/param.h> in NetBSD.
?C:MEM_ALIGNBYTES (ALIGNBYTES):
?C: This symbol contains the number of bytes required to align a
?C: double, or a long double when applicable. Usual values are 2,
?C: 4 and 8. The default is eight, for safety. For cross-compiling
?C: or multiarch support, Configure will set a minimum of 8.
?C:.
?H:%<:#define MEM_ALIGNBYTES $alignbytes
?H:.
?F:!try
: check for alignment requirements
echo " "
case "$alignbytes" in
    ") echo "Checking alignment constraints..." >&4
$cat >try.c <<EOCP
#include <stdio.h>
struct foobar {
    char foo;
    $nvtype bar;
} try_algn;
int main()
{

```

```

printf("%d\n", (int)((char *)&try_algn.bar - (char *)&try_algn.foo));
return(0);
}
EOCP
set try
if eval $compile_ok; then
    dflt=`$run
./try`
else
    dflt='8'
    echo "(I can't seem to compile the test program...)"
fi
case "$multiarch" in
    *$define*)
        : The usual safe value is 8, but Darwin with -Duselongdouble
        : needs 16. Hence, we will take 8 as a minimum, but allow
        : Configure to pick a larger value if needed.
        if $test "$dflt" -lt 8; then
            dflt='8'
            echo "Setting alignment to 8 for multiarch support.">&4
        fi
        ;;
    esac
    ;;
    *) dflt="$alignbytes"
    ;;
    esac
rp="Doubles must be aligned on a how-many-byte boundary?"
./myread
alignbytes="$ans"
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/alignbytes.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_strtold: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_strtold:

?S: This variable conditionally defines the HAS\_STRTOLD symbol, which

?S: indicates to the C program that the strtold() routine is available.

?S:.

?C:HAS\_STRTOLD:

?C: This symbol, if defined, indicates that the strtold routine is

?C: available to convert strings to long doubles.

?C:.

?H:#\$d\_strtold HAS\_STRTOLD /\*\*/

?H:.

?LINT:set d\_strtold

: see if strtold exists

set strtold d\_strtold

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_strtold.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_pause.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_pause.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:09:54 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_pause: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_pause:

?S: This variable conditionally defines the HAS\_PAUSE symbol, which

?S: indicates to the C program that the pause() routine is available

?S: to suspend a process until a signal is received.

?S:.

?C:HAS\_PAUSE :

?C: This symbol,

if defined, indicates that the pause routine is

?C: available to suspend a process until a signal is received.

?C:.

?H:#\$d\_pause HAS\_PAUSE /\*\*/

?H:.

```
?LINT:set d_pause
: see if pause exists
set pause d_pause
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_pause.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: vendorscript.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1999, Andy Dougherty
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: vendorscript.U,v $
```

```
?RCS: Revision 1.1 1999/07/08 18:32:57 doughera
```

```
?RCS: Initial revision
```

```
?RCS:
```

```
?MAKE:d_vendorscript vendorscript vendorscriptexp installvendorscript: Getfile \
```

```
vendorbin cat Setprefixvar Oldconfig Prefixit test vendorprefix
```

```
?MAKE: -pick add $@ %<
```

```
?Y:TOP
```

```
?S:vendorscript:
```

```
?S: This variable contains the eventual value of the VENDORSRIPT symbol.
```

```
?S: It may have a ~ on the front.
```

```
?S: The standard distribution will put nothing in this
directory.
```

```
?S: Vendors who distribute perl may wish to place additional
```

```
?S: executable scripts in this directory with
```

```
?S: MakeMaker Makefile.PL INSTALLDIRS=vendor
```

```
?S: or equivalent. See INSTALL for details.
```

```
?S:.
```

```
?S:vendorscriptexp:
```

```
?S: This variable is the ~name expanded version of vendorscript, so that you
```

```
?S: may use it directly in Makefiles or shell scripts.
```

```
?S:.
```

```
?D:installvendorscript="
```

```
?S:installvendorscript:
```

```
?S: This variable is really the same as vendorscriptexp but may differ on
```

```
?S: those systems using AFS. For extra portability, only this variable
```

```
?S: should be used in makefiles.
```

```
?S:.
```

```

?S:d_vendorscript:
?S: This variable conditionally defines PERL_VENDORSRIPT.
?S:.
?C:PERL_VENDORSRIPT:
?C: If defined, this symbol contains the name of a directory
?C: for holding vendor-supplied executable scripts.
?C: It may have a ~ on the front.
?C: The standard distribution will put nothing in this directory.
?C: Vendors who distribute perl may wish to place additional
?C: executable
scripts in this directory with
?C: MakeMaker Makefile.PL INSTALLDIRS=vendor
?C: or equivalent. See INSTALL for details.
?C:.
?C:PERL_VENDORSRIPT_EXP:
?C: This symbol contains the ~name expanded version of VENDORSRIPT, to be used
?C: in programs that are not prepared to deal with ~ expansion at run-time.
?C:.
?H:#$d_vendorscript PERL_VENDORSRIPT "$vendorscript" /**/
?H:#$d_vendorscript PERL_VENDORSRIPT_EXP "$vendorscriptexp" /**/
?H:.
?LINT:change prefixvar
?LINT:set installvendorscript
: Set the vendorscript variables
case "$vendorprefix" in
") d_vendorscript="$undef"
vendorscript="
vendorscriptexp="
;;
*) d_vendorscript="$define"
: determine where vendor-supplied scripts go.
case "$vendorscript" in
") dflt=$vendorprefix/script
$test -d $dflt || dflt=$vendorbin ;;
*) dflt="$vendorscript" ;;
esac
$cat <<EOM

```

The installation process will create a directory for vendor-supplied scripts.

```

EOM
fn=d~+
rp='Pathname for the vendor-supplied scripts directory?'
./getfile
vendorscript="$ans"
vendorscriptexp="$ansexp"
;;

```



```
esac
prefixvar=vendorscript
.
./installprefix
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/vendorscript.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_times.U,v \$

?RCS: Revision 3.0.1.2 1995/07/25 14:07:50 ram

?RCS: patch56: typo fix, sytem -> system

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:14:00 ram

?RCS: patch32: now uses new Typedef unit to compute type information

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:46 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: What is the type returned by times() ?

?X:

?X: Force inclusion of <sys/types.h>

?X:INC: i\_systypes

?MAKE:d\_times clocktype: Csym Myread Typedef i\_systimes

?MAKE: -pick

add \$@ %<

?S:d\_times:

?S: This variable conditionally defines the HAS\_TIMES symbol, which indicates

?S: that the times() routine exists. The times() routine is normally

?S: provided on UNIX systems. You may have to include <sys/times.h>.

?S:.

?S:clocktype:

?S: This variable holds the type returned by times(). It can be long,

?S: or clock\_t on BSD sites (in which case <sys/types.h> should be

?S: included).

?S:.

?C:HAS\_TIMES (TIMES):

?C: This symbol, if defined, indicates that the times() routine exists.

?C: Note that this became obsolete on some systems (SUNOS), which now

?C: use getrusage(). It may be necessary to include <sys/times.h>.

?C:.

?C:Clock\_t (CLOCKTYPE):

?C: This symbol holds the type returned by times(). It can be long,

?C: or clock\_t on BSD sites (in which case <sys/types.h> should be

?C: included).

?C:.

```
?H:#$d_times HAS_TIMES /**/
```

```
?H:#define Clock_t $clocktype /* Clock time */
```

?H:.

```
?T:val inc
```

```
: see if times exists
```

```
echo " "
```

```
if set times val -f d_times; eval $csym;
```

```
 $val; then
```

```
 echo 'times() found.' >&4
```

```
 d_times="$define"
```

```
 inc="
```

```
 case "$i_systimes" in
```

```
 "$define") inc='sys/times.h';;
```

```
 esac
```

```
 set clock_t clocktype long stdio.h sys/types.h $inc
```

```
 eval $typedef
```

```
 dflt="$clocktype"
```

```
 echo " "
```

```
 rp="What type is returned by times() on this system?"
```

```
 . ./myread
```

```
 clocktype="$ans"
```

```
 else
```

```
 echo 'times() NOT found, hope that will do.' >&4
```

```
 d_times="$undef"
```

?X: The following is needed for typedef (won't like an empty variable)

```
 clocktype='int'
```

```
 fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_times.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

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```

?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:usemultiplicity: useithreads Myread Oldconfig Setvar
?MAKE: -pick add $@ %<
?Y:TOP
?S:usemultiplicity:
?S: This variable conditionally defines the MULTIPLICITY symbol,
?S: and indicates that Perl should be built to use multiplicity.
?S:.
?C:MULTIPLICITY:
?C: This symbol, if defined, indicates that Perl should
?C: be built to use multiplicity.
?C:.
?H:?%<:#ifndef MULTIPLICITY
?H:?%<:#$usemultiplicity MULTIPLICITY /**/
?H:?%<:#endif
?H:.
?LINT:set usemultiplicity
?INIT:: set usemultiplicity on the Configure command line to enable multiplicity.
: Check if multiplicity is required
?X: We should really have some explanatory text here, and some
?X: automatic setting of sensible defaults.
cat <<EOM

```

Perl

can be built so that multiple Perl interpreters can coexist  
within the same Perl executable.

EOM

```
case "$useithreads" in
```

```
$define)
```

```
cat <<EOM
```

This multiple interpreter support is required for interpreter-based threads.

EOM

```
val="$define"
```

```
::
```

```
*) case "$usemultiplicity" in
```

```
$define|true|[yY]*) dflt='y';;
```

```
*) dflt='n';;
```

```
esac
```

```
echo " "
```

```
echo "If this doesn't make any sense to you, just accept the default '$dflt'."
```

```
rp='Build Perl for multiplicity?'
```

```
. ./myread
```

```
case "$ans" in
```

```
y|Y) val="$define" ;;
```

```
*) val="$undef" ;;
```

```
esac
```

```
;;
esac
set usemultiplicity
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/usemultiplicity.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: charorder.U,v 3.0.1.1 1994/10/29 16:07:08 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: charorder.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:07:08 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:33 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:chorder\_int chorder\_short chorder\_long: Myread cat Compile rm

?MAKE: -pick add \$@ %<

?S:chorder\_short (d\_cos d\_bos):

?S: Holds the value describing the byte ordering of characters in a short.

?S: On a Big-Endian machine, that

would be "c0c1".

?S:.

?S:chorder\_int (charoder):

?S: Holds the value describing the byte ordering of characters in an int.

?S: For instance, on a Big-Endian machine, this would be: "c0c1c2c3".

?S:.

?S:chorder\_long (d\_col d\_bol):

?S: Holds the value describing the byte ordering of characters in a long.

?S: On a 64 bits Big-Endian machine, that would yield: "c0c1c2c3c4c5c6c7".

?S:.

?C:CHAR\_ORDER\_SHORT:

?C: Holds the byte ordering of characters in a short. It's a string

?C: value like "c0c1" on a Big-Endian machine.

?C:.

?C:CHAR\_ORDER\_INT:

?C: Holds the byte ordering of characters in an int. It's a string

?C: value like "c0c1c2c3" on a Big-Endian machine.

?C:.

?C:CHAR\_ORDER\_LONG:

?C: Holds the byte ordering of characters in a long. It's a string

?C: value like "c0c1c2c3c4c5c6c7" on a 64 bits Big-Endian machine.

?C:.

```
?H:#define CHAR_ORDER_SHORT "$chorder_short" /* byte order in a short */
```

```
?H:#define CHAR_ORDER_INT "$chorder_int" /* byte order in an int */
```

```
?H:#define CHAR_ORDER_LONG "$chorder_long"
```

```
/* byte order in a long */
```

?H:.

?F:!byteorder

: check for character ordering

echo " "

echo "Checking out byte order..." >&4

```
$cat >byteorder.c <<'EOCP'
```

```
#include <stdio.h>
```

```
int main(argc, argv)
```

```
int argc;
```

```
char *argv[]; {
```

```
int i;
```

```
int max;
```

```
union {
```

```
short u_s;
```

```
int u_i;
```

```
long u_l;
```

```
char u_c[sizeof(long)];
```

```
} u;
```

```
switch (argv[1][0]) {
```

```
case 'l':
```

```
u.u_l = 0L;
```

```
/* HMS: ASSERT: sizeof(long) < 10. */
```

```
for(i = 0; i < sizeof(long); ++i) {
```

```
u.u_l *= 0x100L;
```

```
u.u_l += (0xc0 + i);
```

```
}
```

```
max = sizeof(long);
```

```
break;
```

```
case 's':
```

```
u.u_s = 0;
```

```
/* HMS: ASSERT: sizeof(short) < 10. */
```

```
for(i = 0; i < sizeof(short); ++i) {
```

```
u.u_s *= 0x100L;
```

```
u.u_s += (0xc0 + i);
```

```
}
```

```
max = sizeof(short);
```

```
break;
```

```

case 'i':
    u.u_i = 0;
    /* RAM: ASSERT: sizeof(int) < 10. */
    for(i = 0; i < sizeof(int); ++i) {
        u.u_1 *= 0x100L;
        u.u_1 += (0xc0 + i);
    }
    max = sizeof(int);
    break;
default:
    max = 0;
    break;
}
for(i = 0; i < max; i++) {
    printf("%x", u.u_c[i] & 0x00FF);
}
printf("\n");
exit(0);
}
EOCP
set
byteorder
if eval $compile_ok ; then
: null statement
@if chorder_short
    chorder_short=`./byteorder s`
@end
@if chorder_int
    chorder_int=`./byteorder i`
@end
@if chorder_long
    chorder_long=`./byteorder l`
@end
else
$cat <<EOM
(I can't seem to get my test program to work. Guessing 32 bits big-endian.)
EOM
    chorder_short="c0c1"
    chorder_int="c0c1c2c3"
    chorder_long="c0c1c2c3"
fi
@if chorder_short
dflt=$chorder_short
rp="What is the order of characters in a short?"
./myread
chorder_short="$ans"
@end
@if chorder_int

```

```

dflt=$chorder_int
rp='What is the order of characters in an int?'
./myread
chorder_int="$ans"
@end
@if chorder_long
dflt=$chorder_long
rp='What is the order of characters in a long?'
./myread
chorder_long="$ans"
@end
$rm -f byteorder* core

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/charorder.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: registers.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: registers.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 16:19:41 ram
?RCS: patch61: removed empty ?LINT lines
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 16:28:33 ram
?RCS: patch36: call ./Cpplib explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:41 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:registers reg1 reg2 reg3 reg4 reg5 reg6 reg7 reg8 reg9 reg10 reg11 \
reg12 reg13 reg14 reg15 reg16: awk rm Cpplib
Myread Oldconfig
?MAKE: -pick add $@ %<
?S:registers:
?S: This variable contains the number of register declarations paid
?S: attention to by the C compiler.
?S:.
?S:reg1:
?S: This variable, along with reg2, reg3, etc. contains the eventual

```

?S: value for the symbols register1, register2, register3, etc. It has  
 ?S: either the value "register" or is null.  
 ?S:.  
 ?C:register1:  
 ?C: This symbol, along with register2, register3, etc. is either the word  
 ?C: "register" or null, depending on whether the C compiler pays attention  
 ?C: to this many register declarations. The intent is that you don't have  
 ?C: to order your register declarations in the order of importance, so you  
 ?C: can freely declare register variables in sub-blocks of code and as  
 ?C: function parameters. Do not use register<n> more than once per routine.  
 ?C:.  
 ?LINT:describe reg2 reg3 reg4 reg5 reg6 reg7 reg8 reg9 reg10 reg11  
 ?LINT:describe reg12 reg13 reg14 reg15 reg16  
 ?LINT:known register2 register3 register4 register5 register6  
 register7  
 ?LINT:known register8 register9 register10 register11 register12 register13  
 ?LINT:known register14 register15 register16  
 ?H:#define register1 \$reg1 /\*\*/  
 ?H:#define register2 \$reg2 /\*\*/  
 ?H:#define register3 \$reg3 /\*\*/  
 ?H:#define register4 \$reg4 /\*\*/  
 ?H:#define register5 \$reg5 /\*\*/  
 ?H:#define register6 \$reg6 /\*\*/  
 ?H:#define register7 \$reg7 /\*\*/  
 ?H:#define register8 \$reg8 /\*\*/  
 ?H:#define register9 \$reg9 /\*\*/  
 ?H:#define register10 \$reg10 /\*\*/  
 ?H:#define register11 \$reg11 /\*\*/  
 ?H:#define register12 \$reg12 /\*\*/  
 ?H:#define register13 \$reg13 /\*\*/  
 ?H:#define register14 \$reg14 /\*\*/  
 ?H:#define register15 \$reg15 /\*\*/  
 ?H:#define register16 \$reg16 /\*\*/  
 ?H:.  
 ?F:!.foo  
 : see how many register declarations we want to use  
 case "\$registers" in  
 ")  
 if ./Cpplib vax; then  
 dflt=6  
 elif ./Cpplib sun mc68000 mips; then  
 dflt=10  
 elif ./Cpplib pyr; then  
 dflt=14  
 elif ./Cpplib ns32000 ns16000; then  
 dflt=5  
 elif ./Cpplib \$smallmach; then  
 dflt=3



```

else
: if you have any other numbers
for me, please send them in
dflt=6
fi;;
*) dflt=$registers ;;
esac
?LINT:set reg2 reg3 reg4 reg5 reg6 reg7 reg8 reg9 reg10 reg11
?LINT:set reg12 reg13 reg14 reg15 reg16
cat <<EOM

```

Different C compilers on different machines pay attention to different numbers of register declarations. About how many register declarations in each routine does your C compiler pay attention to? (OK to guess)

```

EOM
rp="Maximum register declarations?"
./myread
registers=$ans
reg1="
$awk "BEGIN { for (i=1; i<=16; i++) printf \"reg%d=\\n\\\", i} \" \
</dev/null >.foo
./foo
$awk "BEGIN { for (i=1; i<=$registers; i++) printf \"reg%d=register\\n\\\", i} \" \
</dev/null >.foo
./foo
$rm -f .foo

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/registers.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: AAAAA.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: AAAAA.U,v $
?RCS: Revision 3.0.1.4 1994/06/20 06:50:26 ram
?RCS: patch30: changes from Jarkko Hietaniemi are tagged with JHI
?RCS:
?RCS: Revision 3.0.1.3 1994/05/06 14:01:39 ram

```

?RCS: patch23: initials for Wayne Davison are now WED  
?RCS: patch23: added initials for new unit contributor Andy Dougherty  
?RCS:  
?RCS: Revision 3.0.1.2 1994/01/24 14:01:09 ram  
?RCS: patch16: make metalint shut up on special unit definition for All target  
?RCS:  
?RCS: Revision  
3.0.1.1 1993/09/13 15:43:57 ram  
?RCS: patch10: documents initials used for Wayne Davison's contributions  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:44 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: The purpose of this file is to supply the head of the Makefile created  
?X: by metaconfig. For this reason it must be first in alphabetical order.  
?X: The leading '+' in front of the unit name is a hint for metalint, since  
?X: the use of that special unit name as a "made" unit is legitimate here.  
?X:  
?MAKE:+All: Finish  
?X:  
?X: Throughout the units, the following initials are used to identify comments:  
?X:  
?X: HMS: Harlan Stenn  
?X: RAM: Raphael Manfredi  
?X: WED: Wayne Davison (was WAD by mistake--RAM)  
?X: ADO: Andy Dougherty  
?X: JHI: Jarkko Hietaniemi  
?X:  
?X: Agreed, this is a weird place to document it, but I couldn't find a better  
?X: place to do so. I've bet on the curiosity of users, who would probably  
?X: want to know what's in this strangely-named file--RAM.

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/AAAAA.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_rusage.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:  
?RCS: \$Log: d\_rusage.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:57 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X: We may need to include <sys/resource.h> and <sys/time.h> FIXME  
?X:INC: i\_sysresrc i\_systime  
?MAKE:d\_rusage: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_rusage (d\_getrusg):  
?S: This variable conditionally defines the HAS\_GETRUSAGE symbol, which  
?S: indicates that the getrusage() routine exists. The getrusage() routine  
?S: supports sub-second accuracy  
for process cpu accounting. You may need  
?S: to include <sys/resource.h> and <sys/time.h>.  
?S:.  
?C:HAS\_GETRUSAGE (RUSAGE GETRUSAGE):  
?C: This symbol, if defined, indicates that the getrusage() routine is  
?C: available to get process statistics with a sub-second accuracy.  
?C: Inclusion of <sys/resource.h> and <sys/time.h> may be necessary.  
?C:.  
?H:#\$d\_rusage HAS\_GETRUSAGE /\*\*/  
?H:.  
?LINT:set d\_rusage  
: see if getrusage exists  
set getrusage d\_rusage  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_rusage.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: selecttype.U,v \$  
?RCS: Revision 3.0.1.3 1997/02/28 16:20:09 ram  
?RCS: patch61: always include <sys/select.h> when available for test

```

?RCS:
?RCS: Revision 3.0.1.2 1995/07/25 14:14:06 ram
?RCS: patch56: removed harmful spaces in assignment
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 07:06:31 ram
?RCS: patch30: created by ADO
?RCS:
?MAKE:selecttype: cat +cc +ccflags rm Oldconfig Myread \
d_fd_set d_select d_socket i_systime
i_sysselect
?MAKE: -pick add $@ %<
?S:selecttype:
?S: This variable holds the type used for the 2nd, 3rd, and 4th
?S: arguments to select. Usually, this is 'fd_set *', if HAS_FD_SET
?S: is defined, and 'int *' otherwise. This is only useful if you
?S: have select(), naturally.
?S:.
?C:Select_fd_set_t:
?C: This symbol holds the type used for the 2nd, 3rd, and 4th
?C: arguments to select. Usually, this is 'fd_set *', if HAS_FD_SET
?C: is defined, and 'int *' otherwise. This is only useful if you
?C: have select(), of course.
?C:.
?H:#define Select_fd_set_t $selecttype /**/
?H:.
?T:xxx yyy
: check for type of arguments to select. This will only really
: work if the system supports prototypes and provides one for
: select.
case "$d_select" in
$define)
: Make initial guess
case "$selecttype" in
"|' )
case "$d_fd_set" in
$define) xxx='fd_set *' ;;
*) xxx='int *' ;;
esac
;;
*) xxx="$selecttype"
;;
esac
: backup guess
case "$xxx" in
'fd_set *') yyy='int *'
;;
'int *') yyy='fd_set *' ;;
esac

```

```
$cat <<EOM
```

Checking to see what type of arguments are expected by select().

```
EOM
```

```
$cat >try.c <<EOCP
```

```
#$i_systime I_SYS_TIME
```

```
#$i_sysselect I_SYS_SELECT
```

```
#$d_socket HAS_SOCKET
```

```
#include <sys/types.h>
```

```
#ifdef HAS_SOCKET
```

```
#include <sys/socket.h> /* Might include <sys/bsdtypes.h> */
```

```
#endif
```

```
#ifdef I_SYS_TIME
```

```
#include <sys/time.h>
```

```
#endif
```

```
#ifdef I_SYS_SELECT
```

```
#include <sys/select.h>
```

```
#endif
```

```
int main()
```

```
{
```

```
int width;
```

```
Select_fd_set_t readfds;
```

```
Select_fd_set_t writefds;
```

```
Select_fd_set_t exceptfds;
```

```
struct timeval timeout;
```

```
select(width, readfds, writefds, exceptfds, &timeout);
```

```
exit(0);
```

```
}
```

```
EOCP
```

```
if $cc $ccflags -c -DSelect_fd_set_t="$xxx" try.c >/dev/null 2>&1 ; then
```

```
selecttype="$xxx"
```

```
echo "Your system uses $xxx for the arguments to select." >&4
```

```
elif $cc $ccflags -c -DSelect_fd_set_t="$yyy" try.c >/dev/null 2>&1 ; then
```

```
selecttype="$yyy"
```

```
echo "Your system uses $yyy for the arguments to select." >&4
```

```
else
```

```
rp='What is the type for the 2nd, 3rd, and 4th arguments
```

```
to select?'
```

```
dflt="$xxx"
```

```
./myread
```

```
selecttype="$ans"
```

```
fi
```

```
$rm -f try.[co]
```

```
::
```

```
*) selecttype='int *'
```

```
::
```

```
esac
```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/selecttype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_fork.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_fork.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:07:38 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_fork: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fork:

?S: This variable conditionally defines the HAS\_FORK symbol, which

?S: indicates to the C program that the fork() routine is available.

?S:.

?C:HAS\_FORK :

?C: This symbol, if defined, indicates that the fork routine is

?C: available.

?C:.

?H:#\$d\_fork

HAS\_FORK /\*\*/

?H:.

?LINT:set d\_fork

: see if fork exists

set fork d\_fork

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_fork.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: socksize.U,v \$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.

?RCS:  
?MAKE:socksizetype: \  
Protochk Oldconfig Myread cat d\_socket d\_socklen\_t sizetype \  
usesocks i\_socks i\_systypes extern\_C  
?MAKE: -pick add \$@ %<

?S:socksizetype:  
?S: This variable holds the type used for the size argument  
?S: for various socket calls like accept. Usual values include  
?S: socklen\_t, size\_t, and int.

?S:.  
?C:Sock\_size\_t:  
?C: This symbol holds the type used for the size argument of  
?C: various socket calls (just the base type, not the pointer-to).

?C:.  
?H:#define Sock\_size\_t \$socksizetype /\*\*/  
?H:.

?T:xxx yyy try  
@if Sock\_size\_t  
: check for type of the size argument to socket calls  
case "\$d\_socket" in  
"\$define")  
\$cat <<EOM

Checking to see what type is the last argument  
of accept().

```
EOM
yyy="
case "$d_socklen_t" in
"$define") yyy="$yyy socklen_t"
esac
yyy="$yyy $sizetype int long unsigned"
for xxx in $yyy; do
case "$socksizetype" in
") try="$extern_C int accept(int, struct sockaddr *, $xxx *);"
case "$usesocks" in
"$define")
if ./protochk "$try" $i_systypes sys/types.h $d_socket sys/socket.h literal '#define INCLUDE_PROTOTYPES'
$i_socks socks.h.; then
echo "Your system accepts '$xxx *' for the last argument of accept()."
socksizetype="$xxx"
fi
;;
*) if ./protochk "$try" $i_systypes sys/types.h $d_socket sys/socket.h; then
echo "Your system accepts '$xxx *' for the last argument of accept()."
socksizetype="$xxx"
```

```

fi
;;
esac
;;
esac
done
: In case none of those worked, prompt the user.
case "$socksizetype" in
") rp='What is the type for socket address structure sizes?'
dflt='int'
./myread
socksizetype=$ans
;;
esac
;;
*) : no sockets, so pick relatively harmless default
socksizetype='int'
;;
esac
@end

```

#### Found

in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/protos/socksizetype.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysun.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

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```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: i_sysun.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:42 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?X:
```

```
?X: This unit looks wether <sys/un.h> is available or not
```

```
?X:
```

```
?MAKE:i_sysun: Inhdr
```

```
?MAKE: -pick add $@ %<
```

```
?S:i_sysun:
```

```
?S: This variable conditionally defines I_SYS_UN, which indicates
```



?S: to the C program that it should include <sys/un.h> to get UNIX

?S: domain socket definitions.

?S:.

?C:I\_SYS\_UN:

?C: This symbol, if defined, indicates

to the C program that it should

?C: include <sys/un.h> to get UNIX domain socket definitions.

?C:.

?H:#\$i\_sysun I\_SYS\_UN /\*\*/

?H:.

?LINT:set i\_sysun

: see if this is a sys/un.h system

set sys/un.h i\_sysun

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_sysun.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: mansrc.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: mansrc.U,v \$

?RCS: Revision 3.0.1.9 1997/02/28 16:12:03 ram

?RCS: patch61: don't ask for AFS when they choose to not install pages

?RCS:

?RCS: Revision 3.0.1.8 1995/09/25 09:16:58 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.7 1995/02/15 14:15:31 ram

?RCS: patch51: was mistakenly duplicating /usr/local/man/man1 (ADO)

?RCS: patch51: added /opt/man/man1 to the lookpath (ADO)

?RCS:

?RCS: Revision

3.0.1.6 1995/01/30 14:39:34 ram

?RCS: patch49: can now handle installation prefix changes (from WED)

?RCS:

?RCS: Revision 3.0.1.5 1995/01/11 15:32:25 ram

?RCS: patch45: can now use Loc variables since path stripping is deferred

?RCS:

```

?RCS: Revision 3.0.1.4 1994/08/29 16:30:38 ram
?RCS: patch32: now uses installation prefix for default setting
?RCS:
?RCS: Revision 3.0.1.3 1994/05/06 15:11:10 ram
?RCS: patch23: added lint hint, assuring that nroff is used
?RCS:
?RCS: Revision 3.0.1.2 1994/01/24 14:14:39 ram
?RCS: patch16: now uses _nroff in case user asked for portability
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:09:31 ram
?RCS: patch10: allows for L1 man page extension (WAD)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:14 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:mansrc mansrcexp manext installmansrc: afs cat nroff Loc Oldconfig \
sysman spackage test Getfile Prefixit prefixexp Prefixup
?MAKE: -pick add $@ %<
?Y:TOP
?S:mansrc:
?S: This variable
contains the name of the directory in which manual
?S: source pages are to be put. It is the responsibility of the
?S: Makefile.SH to get the value of this into the proper command.
?S: You must be prepared to do the ~name expansion yourself.
?S:.
?S:mansrcexp:
?S: This variable is the same as the mansrc variable, but is filename
?S: expanded at configuration time, for convenient use in makefiles.
?S:.
?S:installmansrc:
?S: This variable is really the same as mansrcexp, unless you are using
?S: AFS in which case it points to the read/write location whereas
?S: mansrcexp only points to the read-only access location. For extra
?S: portability, you should only use this variable within your makefiles.
?S:.
?S:manext:
?S: This variable contains the extension that the manual page should
?S: have: one of 'n', 'l', or '1'. The Makefile must supply the '!'.
?S: See mansrc.
?S:.
?T:lookpath
: determine where manual pages go
set mansrc mansrc none
eval $prefixit
$cat <<EOM

$spackage has manual

```

pages available in source form.

EOM

```
case "$nroff" in
nroff)
echo "However, you don't have nroff, so they're probably useless to you."
case "$mansrc" in
") mansrc="none";;
esac;;
esac
echo "If you don't want the manual sources installed, answer 'none'."
case "$mansrc" in
")
lookpath="$prefixexp/share/man/man1 $prefixexp/man/man1"
lookpath="$lookpath $prefixexp/man/u_man/man1 $prefixexp/man/l_man/man1"
lookpath="$lookpath /usr/local/man/man1 /opt/man/man1 /usr/man/man1"
lookpath="$lookpath /usr/share/man/man1 /usr/local/share/man/man1"
lookpath="$lookpath /usr/man/local/man1 /usr/man/l_man/man1"
lookpath="$lookpath /usr/local/man/u_man/man1 /usr/local/man/l_man/man1"
lookpath="$lookpath /usr/man/man.L"
mansrc=`./loc . $prefixexp/man/man1 $lookpath`
if $test -d "$mansrc"; then
dflt="$mansrc"
else
dflt="$sysman"
fi
set dflt
eval $prefixup
;;
') dflt=none;;
*) dflt="$mansrc"
;;
esac
echo " "
fn=dn~
rp='Where do the manual pages (source) go?'
./getfile
if test
"$X$mansrcexp" != "$X$ansexp"; then
installmansrc="
fi
mansrc="$ans"
mansrcexp="$ansexp"
case "$mansrc" in
") mansrc=' '
installmansrc="";;
esac
if $safs && $test "$mansrc"; then
$cat <<EOM
```

Since you are running AFS, I need to distinguish the directory in which manual pages reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

EOM

```
case "$installmansrc" in
  *) dflt=`echo $mansrcexp | sed 's#^/afs/#/afs/.#`;;
*) dflt="$installmansrc";;
esac
fn=de~
rp='Where will man pages be installed?'
./getfile
installmansrc="$ans"
else
installmansrc="$mansrcexp"
fi
```

```
case "$mansrc" in
  ') manext='0';;
  *l) manext=l;;
  *n) manext=n;;
  *o) manext=l;;
  *p) manext=n;;
  *C) manext=C;;
  *L) manext=L;;
  *L1) manext=L1;;
  *) manext=1;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/mansrc.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_endhostent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_endhostent\_r\_endhostent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_endhostent\_r:

?S: This variable conditionally defines the HAS\_ENDHOSTENT\_R symbol,

?S: which indicates to the C program that the endhostent\_r()  
?S: routine is available.  
?S:.  
?S:endhostent\_r\_proto:  
?S: This variable encodes the prototype of endhostent\_r.  
?S: It is zero if d\_endhostent\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endhostent\_r  
?S: is defined.  
?S:.  
?C:HAS\_ENDHOSTENT\_R:  
?C: This symbol, if defined, indicates that the endhostent\_r routine  
?C: is  
available to endhostent re-entrantly.  
?C:.  
?C:ENDHOSTENT\_R\_PROTO:  
?C: This symbol encodes the prototype of endhostent\_r.  
?C: It is zero if d\_endhostent\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endhostent\_r  
?C: is defined.  
?C:.  
?H:#\$d\_endhostent\_r HAS\_ENDHOSTENT\_R /\*\*/  
?H:#define ENDHOSTENT\_R\_PROTO \$endhostent\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_endhostent\_r\_proto  
: see if endhostent\_r exists  
set endhostent\_r d\_endhostent\_r  
eval \$inlibc  
case "\$d\_endhostent\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"  
case "\$d\_endhostent\_r\_proto:\$usetthreads" in  
":define") d\_endhostent\_r\_proto=define  
set d\_endhostent\_r\_proto endhostent\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_endhostent\_r\_proto" in  
define)  
case "\$endhostent\_r\_proto" in  
"|0) try='int endhostent\_r(struct hostent\_data\*);'  
./protochk "\$extern\_C \$try" \$hdrs && endhostent\_r\_proto=I\_D ;;  
esac  
case "\$endhostent\_r\_proto" in  
"|0) try='void endhostent\_r(struct  
hostent\_data\*);'  
./protochk "\$extern\_C \$try" \$hdrs && endhostent\_r\_proto=V\_D ;;  
esac  
case "\$endhostent\_r\_proto" in

```

"|0) d_endhostent_r=undef
endhostent_r_proto=0
echo "Disabling endhostent_r, cannot determine prototype." >&4 ;;
*) case "$endhostent_r_proto" in
REENTRANT_PROTO*) ;;
*) endhostent_r_proto="REENTRANT_PROTO_$endhostent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "endhostent_r has no prototype, not using it." >&4 ;;
esac
d_endhostent_r=undef
endhostent_r_proto=0
;;
esac
;;
*) endhostent_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_endhostent_r.U

```

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_quad quadtype uquadtype quadkind: \
longsize intsize d\_longlong longlongsize d\_int64\_t \

Inhdr Setvar

?MAKE: -pick add \$@ %<

?S:d\_quad:

?S: This variable, if defined, tells that there's a 64-bit integer type,

?S: quadtype.

?S:.

?S:quadtype:

?S: This variable defines Quad\_t to be something like long, int,

?S: long long, int64\_t, or whatever type is used for 64-bit integers.

?S:.

?S:quadkind:

?S: This variable, if defined, encodes the type of a quad:

```

?S: 1 = int, 2 = long, 3 = long long, 4 = int64_t.
?S:.
?S:uquadtype:
?S: This variable defines Uquad_t to be something like unsigned long,
?S: unsigned int, unsigned long long, uint64_t, or whatever type is
?S: used for 64-bit integers.
?S:.
?C:HAS_QUAD:
?C: This
symbol, if defined, tells that there's a 64-bit integer type,
?C: Quad_t, and its unsigned counterpart, Uquad_t. QUADKIND will be one
?C: of QUAD_IS_INT, QUAD_IS_LONG, QUAD_IS_LONG_LONG, QUAD_IS_INT64_T,
?C: or QUAD_IS___INT64.
?C:.
?H:#$d_quad HAS_QUAD /**/
?H:%<:#ifdef HAS_QUAD
?H:%<:# define Quad_t $quadtype /**/
?H:%<:# define Uquad_t $uquadtype /**/
?H:%<:# define QUADKIND $quadkind /**/
?H:%<:# define QUAD_IS_INT 1
?H:%<:# define QUAD_IS_LONG 2
?H:%<:# define QUAD_IS_LONG_LONG 3
?H:%<:# define QUAD_IS_INT64_T 4
?H:%<:# define QUAD_IS___INT64 5
?H:%<:#endif
?H:.
?LINT:set quadtype
?LINT:set uquadtype
: Check if 64bit ints have a quad type
echo " "
echo "Checking which 64-bit integer type we could use..." >&4
?X: We prefer quad types in order of int, long, long long, int64_t.

case "$intsize" in
8) val=int
set quadtype
eval $setvar
val="unsigned int"
set uquadtype
eval $setvar
quadkind=1
;;
*) case "$longsize" in
8)
val=long
set quadtype
eval $setvar
val="unsigned long"

```

```

set uquadtype
eval $setvar
quadkind=2
;;
*) case "$d_longlong:$longlongsize" in
define:8)
val="long long"
set quadtype
eval $setvar
val="unsigned long long"
set uquadtype
eval $setvar
quadkind=3
;;
*) case "$d_int64_t" in
define)
val=int64_t
set quadtype
eval $setvar
val=uint64_t
set uquadtype
eval $setvar
quadkind=4
;;
esac
;;
esac
;;
esac
;;
esac

```

```

case "$quadtype" in
") echo "Alas, no 64-bit integer types in sight." >&4
d_quad="$undef"
;;
*) echo "We could use '$quadtype' for 64-bit integers." >&4
d_quad="$define"
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/a_dvisory/quadtype.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:



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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_safemcpy.U,v \$

?RCS: Revision 3.0.1.5 1997/02/28 15:41:12 ram

?RCS: patch61: improved overlapping copy check

?RCS: patch61: comfort them if they have memmove

?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.4 1995/07/25 13:58:46 ram

?RCS: patch56: re-arranged compile line to include ldflags before objects

?RCS:

?RCS: Revision 3.0.1.3 1995/03/21 08:47:26 ram

?RCS: patch52: swapped two first arguments of memcpy() calls

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:15:10  
ram

?RCS: patch36: added 'ldflags' to the test compile line (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 14:53:12 ram

?RCS: patch23: ensure string is not optimized in read-only memory (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:58 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_safemcpy: cat d\_memcpy +cc +optimize +ccflags +libs +ldflags rm \  
d\_memmove i\_memory i\_stdlib i\_string i\_unistd Oldconfig Setvar

?MAKE: -pick add \$@ %<

?S:d\_safemcpy:

?S: This variable conditionally defines the HAS\_SAFE\_MEMCPY symbol if  
?S: the memcpy() routine can do overlapping copies.

?S:.

?C:HAS\_SAFE\_MEMCPY (SAFE\_MEMCPY):

?C: This symbol, if defined, indicates that the memcpy routine is available  
?C: to copy potentially overlapping memory blocks. Otherwise you should  
?C: probably use memmove() or memcpy(). If neither is defined, roll your  
?C: own version.

?C:.

?H:#\$d\_safemcpy HAS\_SAFE\_MEMCPY /\*\*/

?H:.

?F:!safemcpy

?LINT: set d\_safemcpy  
: can memcpy handle overlapping blocks?

```

?X:
assume the worst
val="$undef"
case "$d_memcpy" in
"$define")
echo " "
echo "Checking to see if your memcpy() can do overlapping copies..." >&4
$cat >foo.c <<EOCP
#$i_memory I_MEMORY
#$i_stdlib I_STDLIB
#$i_string I_STRING
#$i_unistd I_UNISTD
EOCP
$cat >>foo.c <<'EOCP'
#include <stdio.h>
#ifdef I_MEMORY
# include <memory.h>
#endif
#ifdef I_STDLIB
# include <stdlib.h>
#endif
#ifdef I_STRING
# include <string.h>
#else
# include <strings.h>
#endif
#ifdef I_UNISTD
# include <unistd.h> /* Needed for NetBSD */
#endif
int main()
{
char buf[128], abc[128];
char *b;
int len;
int off;
int align;

/* Copy "abcde..." string to char abc[] so that gcc doesn't
try to store the string in read-only memory. */
memcpy(abc, "abcdefghijklmnopqrstuvwxy0123456789", 36);

for (align = 7; align >= 0; align--) {
for (len = 36; len; len--) {
b = buf+align;
memcpy(b, abc, len);
for (off = 1; off <= len; off++) {
memcpy(b+off, b, len);
memcpy(b, b+off, len);
}
}
}
}

```

```

    if (memcmp(b, abc, len))
        exit(1);
    }
}
}
exit(0);
}
EOCP
if
$cc $optimize $ccflags $ldflags \
    -o safemcpy foo.c $libs >/dev/null 2>&1; then
if ./safemcpy 2>/dev/null; then
    echo "Yes, it can."
    val="$define"
else
    echo "It can't, sorry."
    case "$d_memmove" in
"$define") echo "But that's Ok since you have memmove()." ;;
    esac
fi
else
    echo "(I can't compile the test program, so we'll assume not...)"
    case "$d_memmove" in
"$define") echo "But that's Ok since you have memmove()." ;;
    esac
fi
;;
esac
$rm -f foo.* safemcpy core
set d_safemcpy
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_safemcpy.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_readdir.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_readdir.U,v \$

?RCS: Revision 3.0.1.1 1994/05/06 14:46:37 ram  
?RCS: patch23: added support for seekdir, telldir and rewinddir (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:06:52 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X: Force checking for <dirent.h> inclusion  
?X:INC: i\_dirent  
?MAKE:d\_readdir d\_seekdir d\_telldir d\_rewinddir: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_readdir:  
?S: This variable conditionally defines HAS\_READDIR if readdir()  
is  
?S: available to read directory entries.  
?S:.  
?C:HAS\_READDIR (READDIR):  
?C: This symbol, if defined, indicates that the readdir routine is  
?C: available to read directory entries. You may have to include  
?C: <dirent.h>. See I\_DIRENT.  
?C:.  
?H:#\$d\_readdir HAS\_READDIR /\*\*/  
?H:.  
?S:d\_seekdir:  
?S: This variable conditionally defines HAS\_SEEKDIR if seekdir() is  
?S: available.  
?S:.  
?C:HAS\_SEEKDIR:  
?C: This symbol, if defined, indicates that the seekdir routine is  
?C: available. You may have to include <dirent.h>. See I\_DIRENT.  
?C:.  
?H:#\$d\_seekdir HAS\_SEEKDIR /\*\*/  
?H:.  
?S:d\_telldir:  
?S: This variable conditionally defines HAS\_TELLDIR if telldir() is  
?S: available.  
?S:.  
?C:HAS\_TELLDIR:  
?C: This symbol, if defined, indicates that the telldir routine is  
?C: available. You may have to include <dirent.h>. See I\_DIRENT.  
?C:.  
?H:#\$d\_telldir HAS\_TELLDIR /\*\*/  
?H:.  
?S:d\_rewinddir:  
?S: This variable conditionally defines HAS\_REWINDDIR if rewinddir() is  
?S: available.  
?S:.  
?C:HAS\_REWINDDIR:  
?C: This

symbol, if defined, indicates that the rewinddir routine is  
?C: available. You may have to include <dirent.h>. See I\_DIRENT.  
?C:.  
?H:#\$d\_rewinddir HAS\_REWINDDIR /\*\*/  
?H:.  
?LINT:set d\_readdir d\_seekdir d\_tellmdir d\_rewinddir  
: see if readdir and friends exist  
set readdir d\_readdir  
eval \$inlibc  
@if d\_seekdir || HAS\_SEEKDIR  
set seekdir d\_seekdir  
eval \$inlibc  
@end  
@if d\_tellmdir || HAS\_TELLDIR  
set tellmdir d\_tellmdir  
eval \$inlibc  
@end  
@if d\_rewinddir || HAS\_REWINDDIR  
set rewinddir d\_rewinddir  
eval \$inlibc  
@end

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_readdir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2019 Karl Williamson

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_towupper: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_towupper:

?S: This variable conditionally defines the HAS\_TOWUPPER symbol, which

?S: indicates to the C program that the towupper() routine is available.

?S:.

?C:HAS\_TOWUPPER:

?C: This symbol, if defined, indicates that the towupper () routine is

?C: available to do case conversion.

?C:.

?H:#\$d\_towupper HAS\_TOWUPPER /\*\*/  
?H:.

?LINT:set d\_towupper

: see if towupper exists

```
set towupper d_towupper
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_towupper.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_normsig.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
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```

```
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```

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```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_normsig.U,v $
```

```
?RCS: Revision 3.0.1.2 1997/02/28 15:37:03 ram
```

```
?RCS: patch61: replaced .a with $_a all over the place
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1994/10/29 16:14:48 ram
```

```
?RCS: patch36: call ./bsd explicitly instead of relying on PATH
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:06:44 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_normsig jobslib: test Setvar Guess _a
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_normsig:
```

```
?S: This variable conditionally
```

```
defines the NORMSIG symbol, which
```

```
?S: indicates to the C program that the normal signal handling routines
```

```
?S: should be used, as opposed to the ones in 4.1bsd (sigset, etc.).
```

```
?S:.
```

```
?S:jobslib:
```

```
?S: This variable holds the argument to be passed to the loader to include
```

```
?S: the strange signal handling routines from 4.1bsd. On systems that
```

```
?S: have NORMSIG defined this variable is null.
```

```
?S:.
```

```
?C:NORMSIG:
```

```
?C: This symbol, if defined, indicates that normal signal handling routines
```

```
?C: should be used, as opposed to the ones in 4.1bsd (sigset, etc.).
```

```
?C:.
```

```
?H:#$d_normsig NORMSIG /**/
```

```
?H:.
```

```
?LINT:set d_normsig
```

```

: see if we need -ljobs and if we have sigset, etc.
echo " "
if $test -r /usr/lib/libjobs$_a || $test -r /usr/local/lib/libjobs$_a ; then
echo "Jobs library found." >&4
val="$undef"
jobslib='-ljobs'
else
if ./bsd; then
echo "No jobs library found. (I suppose this is at least 4.2...)" >&4
else
echo "No jobs library found. (That's okay, we all have our faults.)" >&4
fi
val="$define"
jobslib=""
fi
set
d_normsig
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_normsig.U

```

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?RCS:

?MAKE:d\_strtoull: Inlibc d\_longlong Compile cat run

?MAKE: -pick add \$@ %<

?S:d\_strtoull:

?S: This variable conditionally defines the HAS\_STRTOULL symbol, which

?S: indicates to the C program that the strtoull() routine is available.

?S:.

?C:HAS\_STRTOULL:

?C: This symbol, if defined, indicates that the strtoull routine is

?C: available to convert strings to unsigned long longs.

?C:.

?H:#\$d\_strtoull HAS\_STRTOULL /\*\*/

?H:.

?F:!try

: see if strtoull exists

set strtoull d\_strtoull

eval \$inlibc

```

case "$d_longlong-$d_strtoull" in
"$define-$define")
$cat <<EOM
Checking whether your strtoull() works okay...
EOM
$cat >try.c <<'EOCP'
#include <stdlib.h>
#include <errno.h>
#ifdef __hpux
#define strtoull __strtoull
#endif
#include
<stdio.h>
static int bad = 0;
void check(const char *s, long long eull, int een) {
long long gull;
errno = 0;
gull = strtoull(s, 0, 10);
if (!(gull == eull) && (errno == een))
bad++;
}
int main() {
check(" 1",          1LL, 0);
check(" 0",          0LL, 0);
check("18446744073709551615", 18446744073709551615ULL, 0);
check("18446744073709551616", 18446744073709551615ULL, ERANGE);
/* if 0 /* strtoull() for /^-/ strings is undefined. */
check("-1",          18446744073709551615ULL, 0);
check("-18446744073709551614",          2LL, 0);
check("-18446744073709551615",          1LL, 0);
check("-18446744073709551616", 18446744073709551615ULL, ERANGE);
check("-18446744073709551617", 18446744073709551615ULL, ERANGE);
#endif
if (!bad)
printf("ok\n");
}
EOCP
set try
if eval $compile; then
case "$run ./try`" in
ok) echo "Your strtoull() seems to be working okay."
;;
*) cat <<EOM >&4
Your strtoull() doesn't seem to be working okay.
EOM
d_strtoull="$undef"
;;
esac

```



```
else
  echo "(I can't seem to compile the test program--assuming it doesn't)"
  d_strtoull="$Sundef"
fi
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_strtoull.U
```

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?RCS: \$Id: d\_pthread\_y.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_pthread\_yield sched\_yield d\_sched\_yield: \

Compile Setvar cat rm\_try usethreads

?MAKE: -pick add \$@ %<

?S:d\_pthread\_yield:

?S: This variable conditionally defines the HAS\_PTHREAD\_YIELD

?S: symbol if the pthread\_yield routine is available to yield

?S: the execution of the current thread.

?S:.

?S:sched\_yield:

?S: This variable defines the way to yield the execution

?S: of the current thread.

?S:.

?S:d\_sched\_yield:

?S: This variable conditionally defines the HAS\_SCHED\_YIELD

?S: symbol if the sched\_yield routine is available to yield

?S: the execution of the current thread.

?S:.

?C:HAS\_PTHREAD\_YIELD:

?C: This symbol, if defined, indicates that the pthread\_yield

?C: routine is available

to yield the execution of the current

?C: thread. sched\_yield is preferable to pthread\_yield.

?C:.

?C:SCHED\_YIELD:

?C: This symbol defines the way to yield the execution of

?C: the current thread. Known ways are sched\_yield,

?C: pthread\_yield, and pthread\_yield with NULL.

?C:.

?C:HAS\_SCHED\_YIELD:

?C: This symbol, if defined, indicates that the sched\_yield  
?C: routine is available to yield the execution of the current  
?C: thread. sched\_yield is preferable to pthread\_yield.  
?C:.

?H:#\$d\_pthread\_yield HAS\_PTHREAD\_YIELD /\*\*/

?H:#define SCHED\_YIELD \$sched\_yield /\*\*/

?H:#\$d\_sched\_yield HAS\_SCHED\_YIELD /\*\*/

?H:.

?LINT: set d\_pthread\_yield d\_sched\_yield

: see whether the various POSIXish \_yields exist

\$cat >try.c <<EOP

```
#include <pthread.h>
```

```
#include <stdio.h>
```

```
int main() {
```

```
#ifdef SCHED_YIELD
```

```
    sched_yield();
```

```
#else
```

```
#ifdef PTHREAD_YIELD
```

```
    pthread_yield();
```

```
#else
```

```
#ifdef PTHREAD_YIELD_NULL
```

```
    pthread_yield(NULL);
```

```
#endif
```

```
#endif
```

```
#endif
```

```
}
```

```
EOP
```

: see if sched\_yield exists

```
set try -DSCHED_YIELD
```

```
if eval $compile;
```

```
then
```

```
    val="$define"
```

```
    sched_yield='sched_yield()'
```

```
else
```

```
    val="$undef"
```

```
fi
```

```
case "$usethreads" in
```

```
$define)
```

```
case "$val" in
```

```
$define) echo 'sched_yield() found.' >&4 ;;
```

```
*) echo 'sched_yield() NOT found.' >&4 ;;
```

```
esac
```

```
esac
```

```
set d_sched_yield
```

```
eval $setvar
```

: see if pthread\_yield exists

```
set try -DPTHREAD_YIELD
```

```

if eval $compile; then
    val="$define"
    case "$sched_yield" in
        *) sched_yield='pthread_yield()' ;;
    esac
else
    set try -DPTHREAD_YIELD_NULL
    if eval $compile; then
        val="$define"
        case "$sched_yield" in
            *) sched_yield='pthread_yield(NULL)' ;;
        esac
    else
        val="$undef"
    fi
fi
case "$usetthreads" in
$define)
    case "$val" in
$define) echo 'pthread_yield() found.' >&4 ;;
*) echo 'pthread_yield() NOT found.' >&4 ;;
    esac
;;
esac
set d_pthread_yield
eval $setvar
case "$sched_yield" in
*) sched_yield=undef ;;
esac
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_pthread_y.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_usleep.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_usleep.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:07:53 ram
```

?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_usleep: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_usleep:  
?S: This variable conditionally defines HAS\_USLEEP if usleep() is  
?S: available to do high granularity sleeps.  
?S:.  
?C:HAS\_USLEEP (USLEEP):  
?C: This symbol, if defined, indicates that the usleep routine is  
?C: available to let the process sleep on a sub-second accuracy.  
?C:.  
?H:#\$d\_usleep  
HAS\_USLEEP /\*\*/  
?H:.  
?LINT:set d\_usleep  
: see if usleep exists  
set usleep d\_usleep  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_usleep.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_memset.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_memset.U,v \$  
?RCS: Revision 3.0.1.1 1993/09/13 16:03:11 ram  
?RCS: patch10: removed text recommending bzero over memset (WAD)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:06:36 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_memset: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_memset:  
?S: This variable conditionally defines the HAS\_MEMSET symbol, which  
?S: indicates to the C program that the memset() routine is available  
?S: to set blocks of memory.

?S:  
?C:HAS\_MEMSET  
(MEMSET):  
?C: This symbol, if defined, indicates that the memset routine is available  
?C: to set blocks of memory.  
?C:.  
?H:#\$d\_memset HAS\_MEMSET /\*\*/  
?H:.  
?LINT:set d\_memset  
: see if memset exists  
set memset d\_memset  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_memset.U

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?RCS: \$Id: Extensions.U,v\$  
?RCS:  
?RCS: Copyright (c) 1996-1998, Andy Dougherty  
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?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: \$Log: Extensions.U,v \$  
?RCS:  
?MAKE:known\_extensions extensions dynamic\_ext static\_ext nonxs\_ext \  
useposix useopcode uselanginfo : \  
Myread hint usedl d\_sem d\_socket i\_db i\_dbm i\_rpcsvdbm i\_gdbm \  
d\_ndbm package test cat rsrc \  
d\_msg d\_shm osname use64bitint \  
libs d\_cplusplus sed ls rm contains trnl sort  
?MAKE: -pick add \$@ %<  
?Y:BOTTOM  
?S:known\_extensions:  
?S: This variable holds a list of all extensions (both XS and non-xs)  
?S: included in the package source distribution. This information is  
?S: only really of use during the Perl build, as the list makes no  
?S: distinction between extensions which were build and installed, and  
?S: those which where not. See "extensions"  
for the list of extensions  
?S: actually built and available.  
?S:.  
?S:dynamic\_ext:  
?S: This variable holds a list of XS extension files we want to  
?S: link dynamically into the package. It is used by Makefile.  
?S:.

?S:static\_ext:  
 ?S: This variable holds a list of XS extension files we want to  
 ?S: link statically into the package. It is used by Makefile.  
 ?S:.  
 ?S:nonxs\_ext:  
 ?S: This variable holds a list of all non-xs extensions built and  
 ?S: installed by the package. By default, all non-xs extensions  
 ?S: distributed will be built, with the exception of platform-specific  
 ?S: extensions (currently only one VMS specific extension).  
 ?S:.  
 ?S:extensions:  
 ?S: This variable holds a list of all extension files (both XS and  
 ?S: non-xs) installed with the package. It is propagated to Config.pm  
 ?S: and is typically used to test whether a particular extension  
 ?S: is available.  
 ?S:.  
 ?S:useposix:  
 ?S: This variable holds either 'true' or 'false' to indicate  
 ?S: whether the POSIX extension should  
 ?S: be used. The sole  
 ?S: use for this currently is to allow an easy mechanism  
 ?S: for hints files to indicate that POSIX will not compile  
 ?S: on a particular system.  
 ?S:.  
 ?S:useopcode:  
 ?S: This variable holds either 'true' or 'false' to indicate  
 ?S: whether the Opcode extension should be used. The sole  
 ?S: use for this currently is to allow an easy mechanism  
 ?S: for users to skip the Opcode extension from the Configure  
 ?S: command line.  
 ?S:.  
 ?S:uselanginfo:  
 ?S: This variable holds either 'true' or 'false' to indicate  
 ?S: whether the I18N::Langinfo extension should be used. The sole  
 ?S: use for this currently is to allow an easy mechanism for users to skip  
 ?S: this extension from the Configure command line.  
 ?S:.  
 ?T:xxx avail\_ext this\_ext tdir xs\_extensions nonxs\_extensions find\_extensions  
 ?INIT:: set useposix=false in your hint file to disable the POSIX extension.  
 ?INIT:useposix=true  
 ?INIT:: set useopcode=false in your hint file to disable the Opcode extension.  
 ?INIT:useopcode=true  
 ?INIT::  
 set uselanginfo=false in your hint file to disable the I18N::Langinfo extension.  
 ?INIT:uselanginfo=true  
 ?LINT:extern noextensions  
 ?LINT:extern onlyextensions  
 ?T:keepextensions i

```

: Check extensions
echo " "
echo "Looking for extensions..." >&4
: If we are using the old config.sh, nonxs_extensions and xs_extensions may
: contain old or inaccurate or duplicate values.
nonxs_extensions="
xs_extensions="
: We do not use find because it might not be available.
: We do not just use MANIFEST because the user may have dropped
: some additional extensions into the source tree and expect them
: to be built.

: Function to recursively find available extensions, ignoring DynaLoader
: NOTE: recursion limit of 10 to prevent runaway in case of symlink madness
: In 5.10.1 and later, extensions are stored in directories
: like File-Glob instead of the older File/Glob/.
find_extensions='
  for xxx in *; do
case "$xxx" in
  DynaLoader|dynaload) ;;
  *)
  this_ext=`echo "$xxx" | $sed -e s/-/\//g`;

  case "$this_ext" in
Scalar/List/Utils) this_ext="List/Util" ;;
PathTools)      this_ext="Cwd" ;;
  esac;
  echo " $xs_extensions $nonxs_extensions" > "$tdir/$$tmp";
  if $contains " $this_ext " "$tdir/$$tmp"; then
echo >&4;
echo "Duplicate directories detected for extension $xxx" >&4;
echo "Configure cannot correctly recover from this - shall I abort?" >&4;
case "$knowitall" in
  "") dflt=y;;
  *) dflt=n;;
  esac;
  ../UU/myread;
case "$ans" in
n*|N*) ;;
*) echo >&4;
  echo "Ok. Stopping Configure." >&4;
  echo "Please remove the duplicate directory (e.g. using git clean) and then re-run Configure" >&4;
  exit 1;;
  esac;
echo "Ok. You will need to correct config.sh before running make." >&4;
fi;
$ls -l "$xxx" > "$tdir/$$tmp";
if $contains "\.xs$" "$tdir/$$tmp" > /dev/null 2>&1; then

```

```

xs_extensions="$xs_extensions $this_ext";
    elif $contains "\.c$" "$tdir/$$.tmp" > /dev/null 2>&1; then
xs_extensions="$xs_extensions
$this_ext";
    elif $test -d "$xxx"; then
nonxs_extensions="$nonxs_extensions $this_ext";
    fi;
    $rm -f "$tdir/$$.tmp";
    ;;
esac;
done'
tdir=`pwd`
cd "$rsrc/cpan"
set X
shift
eval $find_extensions
cd "$rsrc/dist"
set X
shift
eval $find_extensions
cd "$rsrc/ext"
set X
shift
eval $find_extensions
set X $xs_extensions
shift
xs_extensions=`echo "$*" | tr ' ' $trnl | $sort | tr $trnl ' '`
set X $nonxs_extensions
shift
nonxs_extensions=`echo "$*" | tr ' ' $trnl | $sort | tr $trnl ' '`
cd "$tdir"
known_extensions=`echo $nonxs_extensions $xs_extensions | tr ' ' $trnl | $sort | tr $trnl ' `

```

: Now see which are supported on this system.

?X: avail\_ext lists available XS extensions.

```
avail_ext="
```

```
for xxx in $xs_extensions ; do
```

```
case "$xxx" in
```

?X: Handle possible DOS 8.3 filename and case alterations

```
Amiga*)
```

```
case "$osname" in
```

```
amigaos) avail_ext="$avail_ext $xxx" ;;
```

```
esac
```

```
;;
```

```
DB_File|db_file)
```

```
case "$i_db" in
```

```
$define) avail_ext="$avail_ext $xxx"
```



```

;;
esac
;;
GDBM_File|gdbm_fil)
case "$i_gdbm" in
$define) avail_ext="$avail_ext $xxx" ;;
esac
;;
IPC/SysV|ipc/sysv)
: XXX Do we need a useipcsysv variable here
case "${d_msg}${d_sem}${d_shm}" in
*"${define}") avail_ext="$avail_ext $xxx" ;;
esac
;;
NDBM_File|ndbm_fil)
case "$d_ndbm" in
$define)
    case "$osname-$use64bitint" in
    hpux-define)
    case "$libs" in
*-Indbm*) avail_ext="$avail_ext $xxx" ;;
esac
;;
    *) avail_ext="$avail_ext $xxx" ;;
    esac
    ;;
esac
;;
ODBM_File|odbm_fil)
case "${i_dbm}${i_rpcsvcdbm}" in
*"${define}")
    case "$d_cplusplus" in
define) ;; # delete as a function name will not work
*) case "$osname-$use64bitint" in
hpux-define)
    case "$libs" in
*-ldb*) avail_ext="$avail_ext $xxx" ;;
esac
;;
    *) avail_ext="$avail_ext $xxx" ;;
esac
;;
    esac
    ;;
esac
;;
Opcode|opcode)
case "$useopcode" in

```

```

true|define|y) avail_ext="$avail_ext
$xxx" ;;
esac
;;
POSIX|posix)
case "$useposix" in
true|define|y) avail_ext="$avail_ext $xxx" ;;
esac
;;
Socket|socket)
case "$d_socket" in
true|$define|y) avail_ext="$avail_ext $xxx" ;;
esac
;;
I18N/Langinfo|langinfo)
case "$uselanginfo" in
true|define|y) avail_ext="$avail_ext $xxx" ;;
esac
;;
Sys/Syslog|sys/syslog)
case $osname in
amigaos) ;; # not really very useful on AmigaOS
*)
: XXX syslog requires socket
case "$d_socket" in
true|$define|y) avail_ext="$avail_ext $xxx" ;;
esac
;;
esac
;;
threads|threads/shared)
# threads and threads::shared are special cases.
# To stop people from asking "Perl 5.8.0 was supposed
# to have this new fancy threads implementation but my
# perl doesn't have it" and from people trying to
# (re)install the threads module using CPAN.pm and
# CPAN.pm then offering to reinstall Perl 5.8.0,
# the threads.pm and threads/shared.pm will always be
# there, croaking informatively ("you
need to rebuild
# all of Perl with threads, sorry") when threads haven't
# been compiled in.
# --jhi
avail_ext="$avail_ext $xxx"
;;
VMS*)
;;
Win32*)

```

```

case "$osname" in
cygwin) avail_ext="$savail_ext $xxx" ;;
esac
;;
XS/APItest|xs/apitest)
# This is just for testing. Skip it unless we have dynamic loading.

case "$usedl" in
$define) avail_ext="$savail_ext $xxx" ;;
esac
;;
XS/Typemap|xs/typemap)
# This is just for testing. Skip it unless we have dynamic loading.
case "$usedl" in
$define) avail_ext="$savail_ext $xxx" ;;
esac
;;
*) avail_ext="$savail_ext $xxx"
;;
esac
done

set X $savail_ext
shift
avail_ext="$*"

case "$onlyextensions" in
") ;;
*) keepextensions="
echo "You have requested that only certain extensions be included..." >&4
for i in $onlyextensions; do
case " $savail_ext " in
*" $i "*)
echo "Keeping extension $i."
keepextensions="$keepextensions $i"
;;
*) echo "Ignoring
extension $i." ;;
esac
done
avail_ext="$keepextensions"
;;
esac

case "$noextensions" in
") ;;
*) keepextensions="
echo "You have requested that certain extensions be ignored..." >&4

```

```

for i in $avail_ext; do
    case " $noextensions " in
        *" $i "*) echo "Ignoring extension $i." ;;
        *) echo "Keeping extension $i.";
            keepextensions="$keepextensions $i"
            ;;
    esac
done
avail_ext="$keepextensions"
;;
esac

```

: Now see which nonxs extensions are supported on this system.

: For now assume all are.

```

nonxs_ext=""
for xxx in $nonxs_extensions ; do
    case "$xxx" in
        VMS*)
            ;;
        *) nonxs_ext="$nonxs_ext $xxx"
            ;;
    esac
done

```

```

set X $nonxs_ext
shift
nonxs_ext="$*"

```

```

case $usedl in
    $define)
        $cat <<EOM

```

A number of extensions are supplied with \$package. You may choose to compile these extensions for dynamic loading (the default), compile them into the \$package executable (static loading), or not include them at all.

Answer "none" to include no extensions.

Note that DynaLoader is always built and need not be mentioned here.

EOM

```

case "$dynamic_ext" in
    ")
        : Exclude those listed in static_ext
        dflt=""
        for xxx in $avail_ext; do
            case " $static_ext " in
                *" $xxx "*) ;;
                *) dflt="$dflt $xxx" ;;
            esac

```

```

done
set X $dflt
shift
dflt="$*"
;;
*) dflt="$dynamic_ext"
# Perhaps we are reusing an old out-of-date config.sh.
case "$hint" in
previous)
if test X"$dynamic_ext" != X"$avail_ext"; then
$cat <<EOM

```

NOTICE: Your previous config.sh list may be incorrect.

The extensions now available to you are

```
{avail_ext}
```

but the default list from your previous config.sh is

```
{dynamic_ext}
```

EOM

```

fi
;;
esac
;;
esac
case "$dflt" in
") dflt=none;;
esac
rp="What extensions do you wish to load dynamically?"
. ./myread
case "$ans" in
?X: Use ' ' so a subsequent Configure will preserve that value.
none) dynamic_ext=' ' ;;
*) dynamic_ext="$ans" ;;
esac

```

```

case "$static_ext"
in
")
: Exclude those already listed in dynamic linking
dflt="
for xxx in $avail_ext; do
case " $dynamic_ext " in
*" $xxx "*) ;;
*) dflt="$dflt $xxx" ;;
esac
done
set X $dflt
shift
dflt="$*"

```

```
;;
*) dflt="$static_ext"
;;
esac
```

```
case "$dflt" in
") dflt=none;;
esac
```

```
rp="What extensions do you wish to load statically?"
. ./myread
```

```
case "$ans" in
```

?X: Use ' ' so a subsequent Configure will preserve that value.

```
none) static_ext=' ' ;;
*) static_ext="$ans" ;;
esac
```

```
;;
```

```
*)
```

```
$cat <<EOM
```

A number of extensions are supplied with \$package. Answer "none" to include no extensions.

Note that DynaLoader is always built and need not be mentioned here.

EOM

```
case "$static_ext" in
") dflt="$avail_ext" ;;
*) dflt="$static_ext"
```

# Perhaps we are reusing an old out-of-date config.sh.

```
case "$hint" in
```

```
previous)
```

```
if test X"$static_ext" != X"$avail_ext"; then
```

```
$cat <<EOM
```

NOTICE: Your previous config.sh list may be incorrect.

The extensions now available

to you are

```
${avail_ext}
```

but the default list from your previous config.sh is

```
${static_ext}
```

EOM

```
fi
```

```
;;
```

```
esac
```

```
;;
```

```
esac
```

: Exclude those that are not xs extensions

```
case "$dflt" in
```

```
") dflt=none;;
```

```
esac
```

```

rp="What extensions do you wish to include?"
. ./myread
case "$ans" in
?X: Use ' ' so a subsequent Configure will preserve that value.
none) static_ext=' ' ;;
*) static_ext="$ans" ;;
esac
;;
esac
#
# Encode is a special case. If we are building Encode as a static
# extension, we need to explicitly list its subextensions as well.
# For other nested extensions, this is handled automatically by
# the appropriate Makefile.PL.
case "$static_ext" in
*" Encode"*) # Add the subextensions of Encode
cd "$srsrc/cpan"
for xxx in `ls Encode/*/Makefile.PL|awk -F/ '{print $2}`; do
static_ext="$static_ext Encode/$xxx"
known_extensions="$known_extensions Encode/$xxx"
done
cd "$mdir"
;;
esac

set X $dynamic_ext $static_ext $nonxs_ext
shift
extensions="$*"

# Sanity check:
# We require an extension suitable for use with
# AnyDBM_File, as well as Fcntl and IO. (Failure to have these
# should show up as failures in the test suite, but it's helpful to
# catch them now.) The 'extensions' list is normally sorted
# alphabetically, so we need to accept either
# DB_File ... Fcntl ... IO ...
# or something like
# Fcntl ... NDBM_File ... IO ....
case "$extensions" in
*_File "*" Fcntl "*" IO "*" ) ;; # DB_File
*_File "*" Fcntl "*" IO "*" ) ;; # GDBM_File
*_File "*" IO "*" *_File "*" ) ;; # NDBM_File
*) echo "WARNING: Extensions DB_File or *_DBM_File, Fcntl, and IO not configured." >&4
echo "WARNING: The Perl you are building will be quite crippled." >&4
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/Extensions.U

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?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_backtrace.U,v \$

?RCS:

?MAKE:d\_backtrace: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_backtrace:

?S: This variable conditionally defines the HAS\_BACKTRACE symbol, which

?S: indicates to the C program that the backtrace() routine is available

?S: to get a stack trace.

?S:.

?C:HAS\_BACKTRACE:

?C: This symbol, if defined, indicates that the backtrace() routine is

?C: available to get a stack trace. The <execinfo.h> header must be

?C: included to use this routine.

?C:.

?H:#\$d\_backtrace HAS\_BACKTRACE /\*\*/

?H:.

?LINT:set d\_backtrace

:

see if backtrace exists

set backtrace d\_backtrace

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_backtrace.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_pwrite.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: You may reuse parts of this distribution only within the terms of



?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_pwrite.U,v \$  
?RCS:  
?MAKE:d\_pwrite: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_pwrite:  
?S: This variable conditionally defines the HAS\_PWRITE symbol, which  
?S: indicates to the C program that the pwrite() routine is available.  
?S:.  
?C:HAS\_PWRITE :  
?C: This symbol, if defined, indicates that the pwrite routine is  
?C: available to perform writes on a file descriptor at a given offset.  
?C:.  
?H:#\$d\_pwrite HAS\_PWRITE /\*\*/  
?H:.  
?LINT:set d\_pwrite  
: see if pwrite  
exists  
set pwrite d\_pwrite  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_pwrite.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_dbm.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: i\_dbm.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:48:20 ram  
?RCS: patch61: added I\_RPC SVC\_DBM check  
?RCS:  
?RCS: Revision 3.0.1.1 1995/05/12 12:16:05 ram  
?RCS: patch54: made more robust by checking both header and lib (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:08:15 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:

```

?MAKE:i_dbm i_rpcsvcdbm: Inhdr Inlibc Setvar
?MAKE: -pick add $@ %<
?S:i_dbm (d_odbm):
?S: This variable conditionally defines
the I_DBM symbol, which
?S: indicates to the C program that <dbm.h> exists and should
?S: be included.
?S:.
?S:i_rpcsvcdbm:
?S: This variable conditionally defines the I_RPC SVC_DBM symbol, which
?S: indicates to the C program that <rpcsvc/dbm.h> exists and should
?S: be included. Some System V systems might need this instead of <dbm.h>.
?S:.
?C:I_DBM (HAS_ODBM ODBM):
?C: This symbol, if defined, indicates that <dbm.h> exists and should
?C: be included.
?C:.
?C:I_RPC SVC_DBM:
?C: This symbol, if defined, indicates that <rpcsvc/dbm.h> exists and
?C: should be included.
?C:.
?H:#$i_dbm I_DBM /**/
?H:#$i_rpcsvcdbm I_RPC SVC_DBM /**/
?H:.
?T:d_dbmclose
?LINT:set i_dbm i_rpcsvcdbm
: see if dbm.h is available
?X: We might just have the header, not the library.
?X: We look for dbmclose() rather than dbminit() because
?X: some versions of SCO Unix have -ldb, but are missing dbmclose(). -- ADO
?X: Some System V systems have <rpcsvc/dbm.h> instead of <dbm.h>.
: see if dbmclose exists
set dbmclose
d_dbmclose
eval $inlibc

case "$d_dbmclose" in
$define)
set dbm.h i_dbm
eval $inhdr
case "$i_dbm" in
$define)
val="$undef"
set i_rpcsvcdbm
eval $setvar
;;
*) set rpcsvc/dbm.h i_rpcsvcdbm
eval $inhdr

```

```

;;
esac
;;
*) echo "We won't be including <dbm.h>"
val="$undef"
set i_dbm
eval $setvar
val="$undef"
set i_rpcsvcdbm
eval $setvar
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_dbm.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: ptrsize.U,v 3.0.1.1 1994/10/29 16:28:19 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: ptrsize.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:28:19 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:37 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:ptrsize: cat rm_try Myread Compile run use64bitall i_stdlib d_quad
?MAKE: -pick add $@ %<
?S:ptrsize:
?S: This variable contains the value of the PTRSIZE symbol, which
?S: indicates to the C program how many bytes there are in a pointer.
?S:.
?C:PTRSIZE:
?C: This
symbol contains the size of a pointer, so that the C preprocessor
?C: can make decisions based on it. It will be sizeof(void *) if
?C: the compiler supports (void *); otherwise it will be
?C: sizeof(char *).
?C:.

```

```

?H:#define PTRSIZE $ptrsize /**/
?H:.
?F:!try
?LINT:extern use64bitint
: check for length of pointer
echo " "
case "$ptrsize" in
")
echo "Checking to see how big your pointers are..." >&4
$cat >try.c <<EOCP
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main()
{
printf("%d\n", (int)sizeof(void *));
exit(0);
}
EOCP
set try
if eval $compile_ok; then
ptrsize=`$run ./try`
echo "Your pointers are $ptrsize bytes long."
else
dflt='4'
echo "(I can't seem to compile the test program. Guessing...)" >&4
rp="What is the size of a pointer (in bytes)?"
./myread
ptrsize="$ans"
fi
;;
esac
$rm_try
case "$use64bitall" in
"$define"|true|[yY]*)
case "$ptrsize" in
4) cat <<EOM >&4

*** You
have chosen a maximally 64-bit build,
*** but your pointers are only 4 bytes wide.
*** Please rerun Configure without -Duse64bitall.
EOM
case "$d_quad" in
define)
cat <<EOM >&4

```

\*\*\* Since you have quads, you could possibly try with -Duse64bitint.

EOM

```
;;
esac
cat <<EOM >&4
```

\*\*\* Cannot continue, aborting.

EOM

```
exit 1
;;
esac
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/ptrsize.U
```

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2017 H.Merijn Brand (original change by Tony Cook)

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_openat d\_unlinkat d\_renameat d\_linkat d\_fchmodat: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fchmodat:

?S: This variable conditionally defines the HAS\_FCHMODAT symbol, which

?S: indicates the POSIX fchmodat() function is available.

?S:.

?S:d\_linkat:

?S: This variable conditionally defines the HAS\_LINKAT symbol, which

?S: indicates the POSIX linkat() function is available.

?S:.

?S:d\_openat:

?S: This variable conditionally defines the HAS\_OPENAT symbol, which

?S: indicates the POSIX openat() function is available.

?S:.

?S:d\_renameat:

?S: This variable conditionally defines the HAS\_RENAMEAT symbol, which

?S: indicates the POSIX renameat() function is available.

?S:.

?S:d\_unlinkat:

?S: This variable

conditionally defines the HAS\_UNLINKAT symbol, which

?S: indicates the POSIX unlinkat() function is available.

?S:.

?C:HAS\_FCHMODAT:

?C: This symbol is defined if the fchmodat() routine is available.

?C:.

?C:HAS\_LINKAT:

?C: This symbol is defined if the linkat() routine is available.

?C:.

?C:HAS\_OPENAT:

?C: This symbol is defined if the openat() routine is available.

?C:.

?C:HAS\_RENAMEAT:

?C: This symbol is defined if the renameat() routine is available.

?C:.

?C:HAS\_UNLINKAT:

?C: This symbol is defined if the unlinkat() routine is available.

?C:.

?H:#\$d\_fchmodat HAS\_FCHMODAT /\*\*/

?H:#\$d\_linkat HAS\_LINKAT /\*\*/

?H:#\$d\_openat HAS\_OPENAT /\*\*/

?H:#\$d\_renameat HAS\_RENAMEAT /\*\*/

?H:#\$d\_unlinkat HAS\_UNLINKAT /\*\*/

?H:.

?LINT:set d\_openat d\_unlinkat d\_renameat d\_linkat d\_fchmodat

: check for openat, unlinkat, renameat, linkat, fchmodat

set openat d\_openat

eval \$inlibc

set unlinkat d\_unlinkat

eval \$inlibc

set renameat d\_renameat

eval \$inlibc

set linkat d\_linkat

eval \$inlibc

set fchmodat d\_fchmodat

eval

\$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_fsat.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_dbl\_dig.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

```

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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_dbl_dig.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:07:28 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_dbl_dig: Myread contains cat rm Setvar \
cppstdin cppflags cppminus
?MAKE: -pick add $@ %<
?S:d_dbl_dig:
?S: This variable conditionally defines d_dbl_dig if this system's
?S: header files provide DBL_DIG, which is the number of significant
?S: digits in a double precision
number.
?S:.
?C:HAS_DBL_DIG:
?C: This symbol, if defined, indicates that this system's <float.h>
?C: or <limits.h> defines the symbol DBL_DIG, which is the number
?C: of significant digits in a double precision number. If this
?C: symbol is not defined, a guess of 15 is usually pretty good.
?C:.
?H:#$d_dbl_dig HAS_DBL_DIG /**/
?H:.
?F:!dbl_dig.c
?LINT:set d_dbl_dig
: See if number of significant digits in a double precision number is known
echo " "
$cat >dbl_dig.c <<EOM
#include <limits.h>
#include <float.h>
#ifdef DBL_DIG
printf("Contains DBL_DIG");
#endif
EOM
$cppstdin $cppflags $cppminus < dbl_dig.c >dbl_dig.E 2>/dev/null
if $contains 'DBL_DIG' dbl_dig.E >/dev/null 2>&1; then
echo "DBL_DIG found." >&4
val="$define"
else
echo "DBL_DIG NOT found." >&4
val="$undef"
fi

```

```
$rm -f dbl_dig.?  
set d_dbl_dig  
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_dbl_dig.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_mkstemp.U,v 3.0.1.1 1994/08/29 16:11:57 ram Exp $  
?RCS:  
?RCS: Copyright (c) 1998 Andy Dougherty  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: $Log: d_mkstemp.U,v $  
?RCS:  
?MAKE:d_mkstemp: Inlibc  
?MAKE: -pick add $@ %<  
?S:d_mkstemp:  
?S: This variable conditionally defines the HAS_MKSTEMP symbol, which  
?S: indicates to the C program that the mkstemp() routine is available  
?S: to exclusively create and open a uniquely named temporary file.  
?S:.  
?C:HAS_MKSTEMP :  
?C: This symbol, if defined, indicates that the mkstemp routine is  
?C: available to exclusively create and open a uniquely named  
?C: temporary file.  
?C:.  
?H:#$d_mkstemp HAS_MKSTEMP /**/  
?H:.  
?LINT:set d_mkstemp  
: see if mkstemp exists  
set mkstemp d_mkstemp  
eval  
$inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_mkstemp.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:
```



```

?MAKE:usequadmath: Setvar cat uselongdouble
?MAKE: -pick add $@ %<
?S:usequadmath:
?S: This variable conditionally defines the USE_QUADMATH symbol,
?S: and indicates that the quadmath library __float128 long doubles
?S: should be used when available.
?S:.
?C:USE_QUADMATH:
?C: This symbol, if defined, indicates that the quadmath library should
?C: be used when available.
?C:.
?H:%<:#ifndef USE_QUADMATH
?H:%<:#$usequadmath USE_QUADMATH /**/
?H:%<:#endif
?H:.
: Check if quadmath is requested
case "$usequadmath" in
"$define"|true|[yY]*) usequadmath="$define" ;;
*) usequadmath="$undef" ;;
esac

: Fail if both uselongdouble and usequadmath are requested
case "$usequadmath:$uselongdouble" in
define:define)
$cat <<EOM >&4

*** You requested the use of
the quadmath library and use
*** of long doubles.
***
*** Please select one or the other.
EOM
exit 1
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/usequadmath.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: otherlibdirs.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1999-2000, Andy Dougherty

```

```

?RCS:

```

```

?RCS: You may redistribute only under the terms of the Artistic License,

```

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```

```

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```

```

?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: otherlibdirs.U,v $
?RCS: Revision 1.1 1999/07/08 18:32:57 doughera
?RCS: Initial revision
?RCS:
?RCS: Revision 1.1 1999/07/08 18:20:26 doughera
?RCS: Initial revision
?RCS:
?RCS:
?MAKE:otherlibdirs d_perl_otherlibdirs: Myread cat sitelib sitearch \
vendorarch vendorlib Setvar
?MAKE: -pick add $@ %<
?Y:TOP
?S:otherlibdirs:
?S: This variable contains a colon-separated set of paths for the perl
?S: binary to search for additional library files
or modules.
?S: These directories will be tacked to the end of @INC.
?S: Perl will automatically search below each path for version-
?S: and architecture-specific directories. See inc_version_list
?S: for more details.
?S: A value of '' means 'none' and is used to preserve this value
?S: for the next run through Configure.
?S:.
?S:d_perl_otherlibdirs:
?S: This variable conditionally defines PERL_OTHERLIBDIRS, which
?S: contains a colon-separated set of paths for the perl binary to
?S: include in @INC. See also otherlibdirs.
?S:.
?C:PERL_OTHERLIBDIRS:
?C: This variable contains a colon-separated set of paths for the perl
?C: binary to search for additional library files or modules.
?C: These directories will be tacked to the end of @INC.
?C: Perl will automatically search below each path for version-
?C: and architecture-specific directories. See PERL_INC_VERSION_LIST
?C: for more details.
?C:.
?H:#$d_perl_otherlibdirs PERL_OTHERLIBDIRS "$otherlibdirs" /**/
?H:.
?LINT: set d_perl_otherlibdirs
:
Final catch-all directories to search
$cat <<EOM

```

Lastly, you can have perl look in other directories for extensions and modules in addition to those already specified.

These directories will be searched after

\$sitearch

\$sitelib

EOM

```
test X"$vendorlib" != "X" && echo ' ' $vendorlib
```

```
test X"$vendorarch" != "X" && echo ' ' $vendorarch
```

```
echo ' '
```

```
case "$otherlibdirs" in
```

```
"|'|) dflt='none' ;;
```

```
*) dflt="$otherlibdirs" ;;
```

```
esac
```

```
$cat <<EOM
```

Enter a colon-separated set of extra paths to include in perl's @INC

search path, or enter 'none' for no extra paths.

EOM

```
rp='Colon-separated list of additional directories for perl to search?'
```

```
./myread
```

```
case "$ans" in
```

```
'|'|none) otherlibdirs=' ' ;;
```

```
*) otherlibdirs="$ans" ;;
```

```
esac
```

```
case "$otherlibdirs" in
```

```
' ') val=$undef ;;
```

```
*) val=$define ;;
```

```
esac
```

```
set d_perl_otherlibdirs
```

```
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/otherlibdirs.U
```

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```
?RCS: $Id: vendorlib.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1999, Andy Dougherty
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: vendorlib.U,v $
```

```
?RCS: Revision 1.1 1999/07/08 18:32:57 doughera
```

```
?RCS: Initial revision
```

?RCS:

?MAKE:d\_vendorlib vendorlib vendorlibexp installvendorlib vendorlib\_stem: \  
 Getfile Setprefixvar Oldconfig Prefixit package vendorprefix sed \  
 installstyle version

?MAKE: -pick add \$@ %<

?Y:TOP

?S:vendorlib:

?S: This variable contains the eventual value of the VENDORLIB symbol,  
 ?S: which is the name of the private library for this package.

?S: The standard  
 distribution will put nothing in this directory.

?S: Vendors who distribute perl may wish to place their own  
 ?S: modules in this directory with

?S: MakeMaker Makefile.PL INSTALLDIRS=vendor  
 ?S: or equivalent. See INSTALL for details.

?S:.

?S:vendorlibexp:

?S: This variable is the ~name expanded version of vendorlib, so that you  
 ?S: may use it directly in Makefiles or shell scripts.

?S:.

?D:installvendorlib="

?S:installvendorlib:

?S: This variable is really the same as vendorlibexp but may differ on  
 ?S: those systems using AFS. For extra portability, only this variable  
 ?S: should be used in makefiles.

?S:.

?S:d\_vendorlib:

?S: This variable conditionally defines PERL\_VENDORLIB.

?S:.

?S:vendorlib\_stem:

?S: This variable is \$vendorlibexp with any trailing version-specific component  
 ?S: removed. The elements in inc\_version\_list (inc\_version\_list.U) can  
 ?S: be tacked onto this variable to generate a list of directories to search.

?S:.

?C:PERL\_VENDORLIB:

?C: If defined, this symbol contains  
 the name of a private library.

?C: The library is private in the sense that it needn't be in anyone's  
 ?C: execution path, but it should be accessible by the world. The program  
 ?C: should be prepared to do ~ expansion.

?C: The standard distribution will put nothing in this directory.

?C: Vendors who distribute perl may wish to place their own  
 ?C: modules in this directory with

?C: MakeMaker Makefile.PL INSTALLDIRS=vendor  
 ?C: or equivalent. See INSTALL for details.

?C:.

?C:PERL\_VENDORLIB\_EXP:

?C: This symbol contains the ~name expanded version of VENDORLIB, to be used

?C: in programs that are not prepared to deal with ~ expansion at run-time.

?C:.

?C:PERL\_VENDORLIB\_STEM:

?C: This define is PERL\_VENDORLIB\_EXP with any trailing version-specific component

?C: removed. The elements in inc\_version\_list (inc\_version\_list.U) can

?C: be tacked onto this variable to generate a list of directories to search.

?C:.

?H:#\$d\_vendorlib PERL\_VENDORLIB "\$vendorlib" /\*\*/

?H:#\$d\_vendorlib PERL\_VENDORLIB\_EXP

"\$vendorlibexp" /\*\*/

?H:#\$d\_vendorlib PERL\_VENDORLIB\_STEM "\$vendorlib\_stem" /\*\*/

?H:.

?T:prog

?LINT:change prefixvar

?LINT:set installvendorlib

: Set the vendorlib variables

case "\$vendorprefix" in

\*) d\_vendorlib="\$undef"

vendorlib="

vendorlibexp="

;;

\*) d\_vendorlib="\$define"

: determine where vendor-supplied modules go.

: Usual default is /usr/local/lib/perl5/vendor\_perl/\$version

case "\$vendorlib" in

\*)

?X: remove any trailing -3.0 or other version identification

prog=`echo \$package | \$sed 's/-\*[0-9.]\*\$//`

case "\$installstyle" in

\*lib/perl5\*) dflt=\$vendorprefix/lib/\$package/vendor\_\$prog/\$version ;;

\*) dflt=\$vendorprefix/lib/vendor\_\$prog/\$version ;;

esac

;;

\*) dflt="\$vendorlib"

;;

esac

fn=d~+

rp='Pathname for the vendor-supplied library files?'

./getfile

vendorlib="\$ans"

vendorlibexp="\$ansexp"

;;

esac

vendorlib\_stem=`echo "\$vendorlibexp" | sed "s,/,\$version\$,,"`

prefixvar=vendorlib

./installprefix

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/vendorlib.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_modfl d\_modflproto: Inlibc Compile Hasproto cat \  
test ccflags uselongdouble \  
d\_sqrtl d\_aintl d\_copysignl d\_ilogbl d\_scalbnl d\_frexp d\_ldexpl \  
d\_truncl

?MAKE: -pick add \$@ %<

?S:d\_modfl:

?S: This variable conditionally defines the HAS\_MODFL symbol, which

?S: indicates to the C program that the modfl() routine is available.

?S:.

?S:d\_modflproto:

?S: This symbol, if defined, indicates that the system provides

?S: a prototype for the modfl() function. Otherwise, it is up

?S: to the program to supply one. C99 says it should be

?S: long double modfl(long double, long double \*);

?S:.

?C:HAS\_MODFL:

?C: This symbol, if defined, indicates that the modfl routine is

?C: available to split a long double

?C: x into a fractional part f and

?C: an integer part i such that  $|f| < 1.0$  and  $(f + i) = x$ .

?C:.

?C:HAS\_MODFL\_PROTO:

?C: This symbol, if defined, indicates that the system provides

?C: a prototype for the modfl() function. Otherwise, it is up

?C: to the program to supply one.

?C:.

?H:#\$d\_modfl HAS\_MODFL /\*\*/

?H:#\$d\_modflproto HAS\_MODFL\_PROTO /\*\*/

?H:.

?T:message

?LINT:set d\_modfl

?LINT:set d\_modflproto

?LINT:change ccflags

: see if modfl exists

set modfl d\_modfl

eval \$inlibc

```

: see if prototype for modfl is available
echo " "
set d_modflproto modfl define math.h
eval $hasproto

if $test "$uselongdouble" = "$define"; then
    message=""
    if $test "$d_sqrtl" != "$define"; then
message="$message sqrtl"
        fi
        if $test "$d_modfl" != "$define"; then
if $test "$d_trunc:$d_copysignl" = "$define:$define"; then
            echo "You have both trunc and copysignl, so I can emulate modfl."
        else
            if $test "$d_aint:$d_copysignl" = "$define:$define"; then
                echo "You have both aintl
and copysignl, so I can emulate modfl."
            else
                message="$message modfl"
            fi
        fi
        if $test "$d_frexp" != "$define"; then
if $test "$d_ilogbl:$d_scalbnl" = "$define:$define"; then
            echo "You have both ilogbl and scalbnl, so I can emulate frexp."
        else
            message="$message frexp"
        fi
        fi
        if $test "$d_ldexpl" != "$define"; then
message="$message ldexpl"
        fi
        fi

        if $test "$message" != ""; then
$cat <<EOM >&4

*** You requested the use of long doubles but you do not seem to have
*** the following mathematical functions needed for long double support:
*** $message
*** Please rerun Configure without -Duselongdouble and/or -Dusemorebits.
*** Cannot continue, aborting.

EOM

exit 1
fi
fi

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_modfl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Protochk.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?X: This unit generates a ./protochk script that is used internally

?X: by Configure to check if this system will accept a particular

?X: prototype.

?X:

?X: To use it, say something like:

?X: hdrs="\$define sys/types.h

?X: \$i\_systime sys/time.h

?X: \$i\_sysselect sys/select.h

?X: \$d\_socket sys/socket.h"

?X: \$xxx='fd\_set \*'

?X: try='extern int select \_((int, \$xxx, \$xxx, \$xxx, struct timeval \*));'

?X: if ./protochk "\$try" \$hdrs; then

?X: echo "Your system accepts \$xxx for the arguments to select."

?X: fi

?X: (Of course select is harder, since the first arg can be int,

?X: size\_t, or unsigned long, and the last arg may or may not have a

?X: 'const' before the 'struct timeval' :-(. Also SunOS

4.1.3 doesn't

?X: provide a select prototype so the compiler accepts anything :-).

?X:

?X: The C compiler on QNX warns about invalid pointer types, but

?X: still exits with a 0 exit status, so it's not much help here.

?X: (It does correctly detect incorrect non-pointer arguments).

?X: Still, since QNX is a POSIX-ish system, just make your first

?X: a POSIX-ish one, and QNX will probably accept it.

?X:

?X: For determining argument types, your compiler must support

?X: prototypes, and the header files must use them. Determining

?X: return types, however, is easier. Just give an ridiculous

?X: return type, something like

?X: ./protochk 'extern int atof \_((void));' \$i\_stdlib stdlib.h

?X: that should surely fail if atof() is defined in <stdlib.h>

?X:

?X: There is also an 'escape' hatch built in. If you have a pair

?X: of args 'literal 'stuff' then 'stuff' gets included literally

?X: into the test program. This could be useful for doing something



```

?X: like
?X: hdrs="$define stdio.h
?X: $define
sys/types.h"
?X: ./protochk 'extern int fsetpos(FILE *, Fpos_t);' $args \
?X: 'literal' '#define Fpos_t long long'
?X: but you have to be really careful about the spaces in "literal".
?X:
?X: Andy Dougherty Feb. 1998
?MAKE:Protochk: cat rm_try startsh eunicefix +cc +optimize +ccflags \
i_thread usethreads
?MAKE: -pick add $@ %<
?F:./protochk
?X: Comfort metalint. All these are actually used in the protochk script.
?T:foo status pthread_h_done
?LINT: change cc optimize ccflags define rm_try
?LINT: extern pthread_h_first
?LINT: change pthread_h_first
?LINT: change usethreads
?LINT: change i_thread
: define a function to check prototypes
$cat > protochk <<EOSH
$startsh
cc="$cc"
optimize="$optimize"
ccflags="$ccflags"
define="$define"
rm_try="$rm_try"
usethreads=$usethreads
i_thread=$i_thread
pthread_h_first=$pthread_h_first
EOSH

$cat >> protochk <<'EOSH'

$rm_try
foo="$1"
shift
while test $# -ge 2; do
case "$1" in
$define) echo "#include <$2>" >> try.c ;;
literal)
echo "$2" >> try.c ;;
esac

# Extra magic for the benefit of systems that need pthread.h
# to be included early to correctly detect threadsafe functions.
# Such functions must guarantee themselves, though, that the usethreads
# and i_thread have been defined, before calling protochk.

```

```

if test "$usethreads" = "$define" -a "$i_pthread" = "$define" -a "$pthread_h_first" = "$define" -a
"$pthread_h_done" = ""; then
echo "#include <pthread.h>" >> try.c
pthread_h_done=yes
fi
shift 2
done
cat >> try.c <<'EOCP'
#define _(args) args
EOCP
echo "$foo" >> try.c
?X: Just so we have something to compile.
echo 'int no_real_function_has_this_name _((void)) { return 0; }' >> try.c
$cc $optimize $ccflags -c try.c > /dev/null 2>&1
status=$?
$rm_try
exit $status
EOSH
chmod +x protochk
$unicefix protochk

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/protos/Protochk.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_gethbynm.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_gethbynm.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:08 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_gethbyname: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_gethbyname (d\_gethbynm d\_gethstby):

?S: This variable conditionally defines the HAS\_GETHOSTBYNAME symbol, which

?S: indicates to the C program that the gethostbyname() routine is available

?S: to look up host names in some data base or other.

?S:.

?C:HAS\_GETHOSTBYNAME (GETHOSTBYNAME):

?C: This  
symbol, if defined, indicates that the gethostbyname() routine is  
?C: available to look up host names in some data base or other.  
?C:.  
?H:#\$d\_gethbyname HAS\_GETHOSTBYNAME /\*\*/  
?H:.  
?LINT:set d\_gethbyname  
: see if gethostbyname exists  
set gethostbyname d\_gethbyname  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_gethbynm.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Config\_h.U,v \$  
?RCS: Revision 3.0.1.5 1997/02/28 14:57:43 ram  
?RCS: patch61: added support for src.U  
?RCS:  
?RCS: Revision 3.0.1.4 1995/09/25 09:10:49 ram  
?RCS: patch59: commented the purpose of the #un-def directive  
?RCS:  
?RCS: Revision 3.0.1.3 1995/01/30 14:25:39 ram  
?RCS: patch49: typo fixes in leading config.h comment (WED)  
?RCS:  
?RCS: Revision 3.0.1.2 1993/08/24 12:13:20 ram  
?RCS: patch3: added TOP as a local shell temporary variable  
?RCS:  
?RCS: Revision 3.0.1.1 1993/08/19 06:42:20  
ram  
?RCS: patch1: leading config.sh searching was not aborting properly  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:47 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This file ends up producing the config\_h.SH script, which is run to produce

?X: the config.h file. The file ./Config\_h below contains all the ?H: lines  
?X: extracted out of all the units. Metaconfig itself adds the !GROK!THIS!  
?X: Note that this code isn't included into Configure, but must be shipped with.  
?X:  
?X: For those who wish to know why the file is config\_h.SH instead of the more  
?X: natural config.h.SH, well... it is to support systems like MS-DOG. Only one  
?X: 'dot' is allowed within the file name, as it is part of the "extension" of  
?X: the file. MS-DOG will not let you have two 'dots' because that would mean  
?X: two "extensions".  
?X:  
?MAKE:Config\_h: Id End Config\_sh Obsol\_h myuname cf\_time cf\_by package src  
?MAKE: -pick c\_h\_weed \$@ %<  
?MAKE: -pick c\_h\_weed \$@ ./Config\_h  
?MAKE: -pick  
c\_h\_weed \$@ ./Obsol\_h  
?T:CONFIG TOP  
?LINT:unclosed !GROK!THIS!  
?LINT:extern CONFIG\_H CONFIG\_SH  
?LINT:change CONFIG\_H CONFIG\_SH  
?LINT:nocomment  
case "\$CONFIG\_SH" in  
") CONFIG\_SH=config.sh;;  
esac  
case "\$CONFIG\_H" in  
") CONFIG\_H=config.h;;  
esac  
case \$CONFIG in  
")  
if test -f \$CONFIG\_SH; then TOP=.;  
elif test -f ../\$CONFIG\_SH; then TOP=..;  
elif test -f ../../\$CONFIG\_SH; then TOP=../../;  
elif test -f ../../../\$CONFIG\_SH; then TOP=../../../;  
elif test -f ../../../../\$CONFIG\_SH; then TOP=../../../../;  
else  
echo "Can't find \$CONFIG\_SH."; exit 1  
fi  
. \$TOP/\$CONFIG\_SH  
;;  
esac  
?X: Make sure we are in the directory where the .SH file is located.  
case "\$0" in  
\*/\*) cd `expr X\$0 : 'X\(.\*/\)'` ;;  
esac  
echo "Extracting \$CONFIG\_H (with variable substitutions)"  
?X:  
?X: Since we unconditionally translate leading #undef into /\*#define, we're  
?X: stuck when we really want to have a #undef in config.h. That's why there  
?X: is provision here for #un-def, which is translated back into #undef after

?X:  
all original #undef have been processed.

?X:  
?X: Previously, we changed all  
?X: #undef FOO /\*\*/  
?X: into  
?X: /\*#define FOO /\*\*/  
?X: The xlc compiler (available on IBM's AIX) complains that this is  
?X: an illegal attempt to write a nested comment, and warns against it.  
?X: There's apparently no way to shut the compiler up, either.  
?X: This sed command from Hallvard B Furuseth <h.b.furuseth@usit.uio.no>  
?X: changes it to  
?X: /\*#define FOO / \*\*/  
sed <<!GROK!THIS!>\$CONFIG\_H -e 's!^#undef\(.\*\)\!/^#define\1 \!' -e 's!^#un-def!#undef!'  
/\*  
\* This file was produced by running the config\_h.SH script, which  
\* gets its values from \$CONFIG\_SH, which is generally produced by  
\* running Configure.  
\*  
\* Feel free to modify any of this as the need arises. Note, however,  
\* that running config\_h.SH again will wipe out any changes you've made.  
\* For a more permanent change edit \$CONFIG\_SH and rerun config\_h.SH.  
\*  
\* \Id: Config\_h.U 1 2006-08-24 12:32:52Z rmanfredi \$  
\*/  
  
/\*  
\* Package name  
: \$package  
\* Source directory : \$src  
\* Configuration time: \$cf\_time  
\* Configured by : \$cf\_by  
\* Target system : \$myuname  
\*/  
  
#ifdef \_config\_h\_  
#define \_config\_h\_  
  
Found in path(s):  
\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-  
5.38.0/dist/U/Config\_h.U  
No license file was found, but licenses were detected in source scan.  
  
?RCS: \$Id: d\_endnetent\_r.U,v 0RCS:  
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.

?RCS:  
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
?RCS:  
?MAKE:d\_endnetent\_r endnetent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_netdb extern\_C  
?MAKE: -pick add \$@ %<  
?S:d\_endnetent\_r:  
?S: This variable conditionally defines the HAS\_ENDNETENT\_R symbol,  
?S: which indicates to the C program that the endnetent\_r()  
?S: routine is available.  
?S:.  
?S:endnetent\_r\_proto:  
?S: This variable encodes the prototype of endnetent\_r.  
?S: It is zero if d\_endnetent\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endnetent\_r  
?S: is defined.  
?S:.  
?C:HAS\_ENDNETENT\_R:  
?C: This symbol, if defined, indicates that the endnetent\_r routine  
?C: is  
available to endnetent re-entrantly.  
?C:.  
?C:ENDNETENT\_R\_PROTO:  
?C: This symbol encodes the prototype of endnetent\_r.  
?C: It is zero if d\_endnetent\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endnetent\_r  
?C: is defined.  
?C:.  
?H:#\$d\_endnetent\_r HAS\_ENDNETENT\_R /\*\*/  
?H:#define ENDNETENT\_R\_PROTO \$endnetent\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_endnetent\_r\_proto  
: see if endnetent\_r exists  
set endnetent\_r d\_endnetent\_r  
eval \$inlibc  
case "\$d\_endnetent\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"  
case "\$d\_endnetent\_r\_proto:\$usethreads" in  
":define") d\_endnetent\_r\_proto=define  
set d\_endnetent\_r\_proto endnetent\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_endnetent\_r\_proto" in  
define)  
case "\$endnetent\_r\_proto" in  
"|0) try='int endnetent\_r(struct netent\_data\*);'

```

./protochk "$extern_C $try" $hdrs && endnetent_r_proto=I_D ;;
esac
case "$endnetent_r_proto" in
"|0) try='void endnetent_r(struct netent_data*);'
./protochk
"$extern_C $try" $hdrs && endnetent_r_proto=V_D ;;
esac
case "$endnetent_r_proto" in
"|0) d_endnetent_r=undef
endnetent_r_proto=0
echo "Disabling endnetent_r, cannot determine prototype." >&4 ;;
*) case "$endnetent_r_proto" in
REENTRANT_PROTO*) ;;
*) endnetent_r_proto="REENTRANT_PROTO_$endnetent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "endnetent_r has no prototype, not using it." >&4 ;;
esac
d_endnetent_r=undef
endnetent_r_proto=0
;;
esac
;;
*) endnetent_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_endnetent\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2009 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_inetpton: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_inetpton:

?S: This variable conditionally defines the HAS\_INETPTON symbol,

?S: which indicates to the C program that the inet\_pton() function

?S: is available.

?S:  
?C:HAS\_INETPTON:  
?C: This symbol, if defined, indicates that the inet\_pton() function  
?C: is available to parse IPv4 and IPv6 strings.

?C:  
?H:#\$d\_inetpton HAS\_INETPTON /\*\*/  
?H.:

?LINT:set d\_inetpton  
: see if inet\_pton exists  
set inet\_pton d\_inetpton  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_inetpton.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_float.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: i\_float.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:21:57 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:i\_float: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_float:

?S: This variable conditionally defines the I\_FLOAT symbol, and indicates

?S: whether a C program may include <float.h> to get symbols like DBL\_MAX

?S: or DBL\_MIN, i.e. machine dependent floating point values.

?S.:

?C:I\_FLOAT:

?C: This

symbol, if defined, indicates to the C program that it should

?C: include <float.h> to get definition of symbols like DBL\_MAX or

?C: DBL\_MIN, i.e. machine dependent floating point values.

?C.:

?H:#\$i\_float I\_FLOAT /\*\*/  
?H.:



```
?LINT:set i_float
: see if this is a float.h system
set float.h i_float
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_float.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 2003 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:usefaststdio: Myread Oldconfig Setvar rsrc
```

```
?MAKE: -pick add $@ %<
```

```
?Y:TOP
```

```
?S:usefaststdio:
```

```
?S: This variable conditionally defines the USE_FAST_STDIO symbol,
```

```
?S: and indicates that Perl should be built to use 'fast stdio'.
```

```
?S: Defaults to define in Perls 5.8 and earlier, to undef later.
```

```
?S:.
```

```
?C:USE_FAST_STDIO:
```

```
?C: This symbol, if defined, indicates that Perl should
```

```
?C: be built to use 'fast stdio'.
```

```
?C: Defaults to define in Perls 5.8 and earlier, to undef later.
```

```
?C:.
```

```
?H:?%<:#ifndef USE_FAST_STDIO
```

```
?H:?%<:#$usefaststdio USE_FAST_STDIO /**/
```

```
?H:?%<:#endif
```

```
?H:.
```

```
?T:xversion
```

```
?LINT:set usefaststdio
```

```
: Check if faststdio is requested and available
```

```
case "$usefaststdio" in
```

```
$define|true|[yY]*)
```

```
xversion=`awk
```

```
/define[ ]+PERL_VERSION/ {print $3}' $rsrc/patchlevel.h`
```

```
case "$xversion" in
```

```
[68]) dflt='y' ;;
```

```
*) dflt='n' ;;
```

```
esac
```

```
::
```

```
*) dflt='n';;
```

```
esac
```

```
cat <<EOM
```

Perl can be built to use 'fast stdio', which means using the stdio library but also directly manipulating the stdio buffers to enable faster I/O. Using stdio is better for backward compatibility (especially for Perl extensions), but on the other hand since Perl 5.8 the 'perlio' interface has been preferred instead of stdio.

If this doesn't make any sense to you, just accept the default '\$dflt'.

```
EOM
```

```
rp='Use the "fast stdio" if available?'
```

```
./myread
```

```
case "$ans" in
```

```
y|Y) val="$define" ;;
```

```
*)   val="$undef" ;;
```

```
esac
```

```
set usefaststdio
```

```
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/usefaststdio.U
```

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```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_access.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:05:42 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_access: test +cc cat +cppflags h_fcntl h_sysfile rm Inlibc Findhdr
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_access:
```

```
?S: This variable conditionally defines HAS_ACCESS if the access() system
```

```
?S: call is available to check for access permissions using real IDs.
```

```
?S:.
```

```
?C:HAS_ACCESS:
```

```
?C: This manifest constant lets the C program know that the access()
```

```
?C: system call is available to check for accessibility
```

```

using real UID/GID.
?C: (always present on UNIX.)
?C:.
?H:#$d_access HAS_ACCESS /**/
?H:.
?W:%<:R_OK W_OK X_OK F_OK
?LINT:set d_access
?LINT:change h_fcntl h_sysfile
: access call always available on UNIX
set access d_access
eval $inlibc

: locate the flags for 'access()'
case "$d_access" in
"$define")
echo " "
$cat >access.c <<'EOCP'
#include <sys/types.h>
#ifdef I_FCNTL
#include <fcntl.h>
#endif
#ifdef I_SYS_FILE
#include <sys/file.h>
#endif
#ifdef I_UNISTD
#include <unistd.h>
#endif
int main() {
exit(R_OK);
}
EOCP
: check sys/file.h first, no particular reason here
if $test `./findhdr sys/file.h` && \
$cc -o access $cppflags -DI_SYS_FILE access.c >/dev/null 2>&1 ; then
h_sysfile=true;
echo "<sys/file.h> defines the *_OK access constants." >&4
elif $test `./findhdr fcntl.h` && \
$cc -o access $cppflags -DI_FCNTL access.c >/dev/null 2>&1 ; then
h_fcntl=true;
echo "<fcntl.h> defines the *_OK access constants." >&4
@if I_UNISTD
elif $test `./findhdr unistd.h`
&& \
$cc -o access $cppflags -DI_UNISTD access.c >/dev/null 2>&1 ; then
echo "<unistd.h> defines the *_OK access constants." >&4
@end
else
echo "I can't find the four *_OK access constants--I'll use mine." >&4

```

```
fi
;;
esac
$rm -f access*
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_access.U
```

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?RCS: You may distribute under the terms of either the GNU General Public

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?RCS:

?MAKE:d\_rint: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_rint:

?S: This variable conditionally defines the HAS\_RINT symbol, which

?S: indicates to the C program that the rint() routine is available.

?S:.

?C:HAS\_RINT:

?C: This symbol, if defined, indicates that the rint routine is

?C: available to return the nearest integral value to x as double

?C: using the current rounding mode.

?C:.

?H:#\$d\_rint HAS\_RINT /\*\*/

?H:.

?LINT:set d\_rint

: see if rint exists

set rint d\_rint

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_rint.U
```

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?RCS:

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_recvmsg: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_recvmsg:

?S: This variable conditionally defines the HAS\_RECVMSG symbol, which

?S: indicates to the C program that the recvmsg() routine is available.

?S:  
?C:HAS\_RECVMSG:  
?C: This symbol, if defined, indicates that the recvmsg routine is  
?C: available to send structured socket messages.

?C:  
?H:#\$d\_recvmsg HAS\_RECVMSG /\*\*/

?H:  
?LINT:set d\_recvmsg  
: see if recvmsg exists  
set recvmsg d\_recvmsg  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_recvmsg.U

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?RCS: \$Id: Loc.U 14 2006-08-28 16:51:14Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Loc.U,v \$  
?RCS: Revision 3.0.1.10 1997/02/28 15:04:16 ram  
?RCS: patch61: allow users to specify paths on the command line  
?RCS: patch61: will now substitute cp for ln if not supported  
?RCS:  
?RCS: Revision 3.0.1.9 1995/09/25 09:11:24 ram  
?RCS: patch59: commented the purpose of the #un-def directive  
?RCS: patch59: abort Configure run when mandatory command is missing  
?RCS:  
?RCS: Revision 3.0.1.8 1995/07/25 13:40:40 ram  
?RCS: patch56: now knows about  
OS/2 platforms  
?RCS:  
?RCS: Revision 3.0.1.7 1995/01/11 15:13:37 ram  
?RCS: patch45: protected "sh -c" within backquotes for Linux and SGI  
?RCS: patch45: added path lookup for the 'comm' program  
?RCS:  
?RCS: Revision 3.0.1.6 1994/10/29 15:56:14 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS: patch36: be careful and guard against wildcard searching (ADO)  
?RCS:

?RCS: Revision 3.0.1.5 1994/06/20 06:54:55 ram  
?RCS: patch30: now locates find  
?RCS:  
?RCS: Revision 3.0.1.4 1994/05/13 15:18:15 ram  
?RCS: patch27: added byacc to the trylist (ADO)  
?RCS: patch27: lint lines reformatted (ADO)  
?RCS:  
?RCS: Revision 3.0.1.3 1994/01/24 14:01:44 ram  
?RCS: patch16: added metalint hint on changed PATH variable  
?RCS:  
?RCS: Revision 3.0.1.2 1993/12/15 08:16:52 ram  
?RCS: patch15: now set \_test variable when test is built-in  
?RCS: patch15: fixed rare cases where echo is not needed  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 15:47:13 ram  
?RCS: patch10: test program not always  
in /bin/test (WAD)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:05 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit produces a shell script "loc" which can be used to find out  
?X: where in a list of directories something is. It then uses loc to  
?X: determine the location of commonly used programs. It leaves loc sitting  
?X: around for other Configure units to use, but arranges for its demise  
?X: at the end of Configure.  
?X:  
?X: To add a new program to find, add it both to the ?MAKE: line and to either  
?X: the loclist or trylist variable.  
?X:  
?X: I put startsh at the end of the dependency list, in order to avoid the  
?X: loading of the spitshell unit before the instructions.  
?X:  
?MAKE:Loc awk ar bash bison byacc cat chgrp chmod chown \  
comm compress cp cpio cpp csh date echo egrep emacs expr find flex \  
gmake gzip grep inews ksh less line lint ln lp lpr ls mail mailx \  
make mkdir more mv nm nroff perl pg pmake pr rm rmail sed sendmail \  
shar sleep smail sort  
submit tail tar tbl tee test touch tr troff \  
uname uniq uuname vi zcat zip: eunicefix n c startsh Instruct sysroot  
?MAKE: -pick weed \$@ %<  
?LINT:describe awk ar bash bison byacc cat chgrp chmod chown \  
comm compress cp cpio cpp csh date echo egrep emacs expr find flex \  
gmake gzip grep inews ksh less line lint ln lp lpr ls mail mailx \  
make mkdir more mv nm nroff perl pg pmake pr rm rmail sed sendmail \  
shar sleep smail sort submit tail tar tbl tee test touch tr troff \  
uname uniq uuname vi zcat zip

```

?V::pth loclist trylist
?F:./loc test_h
?T:thisthing thing xxx dir file say _test DJGPP
?LINT:change PATH _egrep _ln _make _less
?LINT:extern _exe
: find out where common programs are
echo " "
echo "Locating common programs..." >&4
cat <<EOESC >loc
$startsh
case $# in
0) exit 1;;
esac
thing=\$1
shift
dflt=\$1
shift
for dir in \${*}; do
case "\$thing" in
.)
if test -d \$dir/\$thing; then
echo \$dir
exit 0
fi
;;
*)
?X: Be careful in case thing includes wildcards that might expand
to multiple
?X: files. Choose the last one. This happens when searching for shared
?X: libraries with version numbers. How to choose which one we want is
?X: probably an insoluble problem, in general.
?X: Some folks leave things like libc.so.orig around w/o read
?X: permission. A -r test would handle that, but since ./loc is
?X: also used to find executables (which are installed w/o read
?X: permission on SCO ODT 3.0, we can't include the -r test.
?X: If you need to use an _exe that is different from .exe
?X: you need to set it in Head.U.
for thisthing in \$dir/\$thing; do
: just loop through to pick last item
done
if test -f \$thisthing; then
echo \$thisthing
exit 0
elif test "X$_exe" != X -a -f \$thisthing$_exe; then
echo \$thisthing
exit 0
elif test -f \$dir/\$thing.exe; then
if test -n "$DJGPP"; then

```

```
    echo \${dir}/${thing}.exe
    elif test "$eunicefix" != ":"; then
      : on Eunice apparently
      echo \${dir}/${thing}
    fi
  exit 0
fi
;;
esac
done
echo \${dflt}
exit
1
EOSC
chmod +x loc
$eunicefix loc
loclist=""
?awk:awk
?cat:cat
?chgrp:chgrp
?chmod:chmod
?chown:chown
?comm:comm
?cp:cp
?echo:echo
?expr:expr
?find:find
?grep:grep
?ls:ls
?mkdir:mkdir
?mv:mv
?rm:rm
?sed:sed
?sleep:sleep
?sort:sort
?tail:tail
?touch:touch
?tr:tr
?uniq:uniq
"
trylist=""
?Mcc:Mcc
?ar:ar
?bash:bash
?bison:bison
?byacc:byacc
?compress:compress
?cpio:cpio
```



?cpp:cpp  
?csh:csh  
?date:date  
?egrep:egrep  
?emacs:emacs  
?flex:flex  
?gmake:gmake  
?gzip:gzip  
?inews:inews  
?ksh:ksh  
?less:less  
?line:line  
?lint:lint  
?ln:ln  
?lp:lp  
?lpr:lpr  
?mail:mail  
?mailx:mailx  
?make:make  
?more:more  
?nm:nm  
?nroff:nroff  
?perl:perl  
?pg:pg  
?pmake:pmake  
?pr:pr  
?rmail:rmail  
?sendmail:sendmail  
?shar:shar  
?smail:smail  
?submit:submit  
?tar:tar  
?tbl:tbl  
?tee:tee  
?test:test  
?troff:troff  
?uname:uname  
?uuname:uuname  
?vi:vi  
?zcat:zcat  
?zip:zip  
"  
?LINT:set awk ar bash bison byacc cat chgrp chmod chown \  
comm compress cp cpio cpp csh date echo emacs expr find flex \  
gmake gzip grep inews ksh line lint lp lpr ls mail mailx \  
mkdir more mv nm nroff perl pg pmake pr rm rmail sed sendmail \  
shar sleep smail sort submit tail tar tbl tee touch tr troff \

```

uname uniq uuname vi zcat zip
pth=`echo $PATH | sed -e "s/$p_/ /g"`
pth="$pth $sysroot/lib $sysroot/usr/lib"
for file in $loclist; do
?X:
?X: Allow them to -Dmake=pmake on the command line for instance...
?X: If the file is not fully qualified, as in -Dmake=pmake, then we
?X: look the for the specified command (pmake here). If they say
?X: -Dmake=/sbin/make for instance, then we make sure the file
?X: exists, or we die...
?X:
eval xxx=\$$file
case "$xxx" in
/*|?:[\\/]*)
if test -f "$xxx"; then
: ok
else
echo "WARNING: no $xxx -- ignoring your setting for $file." >&4
xxx=`./loc $file $file $pth`
fi
;;
*) xxx=`./loc $file $file $pth`;
*) xxx=`./loc $xxx $xxx $pth`;
esac
eval $file=$xxx$_exe
eval _$file=$xxx
case "$xxx" in
/*)
echo $file is in $xxx.
;;
?X: Under OS/2, we have PC-like paths
?:[\\/]*)
echo $file is in $xxx.
;;
*)
echo
"I don't know where '$file' is, and my life depends on it." >&4
echo "Go find a public domain implementation or fix your PATH setting!" >&4
exit 1
;;
esac
done
echo " "
echo "Don't worry if any of the following aren't found..."
say=offhand
for file in $trylist; do
?X: Allow them to -Dmake=pmake on the command line for instance (see above)
eval xxx=\$$file

```

```

case "$xxx" in
/*|?:[\\|/]*)
if test -f "$xxx"; then
: ok
else
echo "WARNING: no $xxx -- ignoring your setting for $file." >&4
xxx=`./loc $file $file $pth`
fi
;;
*) xxx=`./loc $file $file $pth`;
*) xxx=`./loc $xxx $xxx $pth`;
esac
eval $file=$xxx$_exe
eval _file=$xxx
case "$xxx" in
/*)
echo $file is in $xxx.
;;
?X: Under OS/2, we have PC-like paths
?:[\\|/]*)
echo $file is in $xxx.
;;
*)
echo "I don't see $file out there, $say."
say=either
;;
esac
done
case "$egrep" in
egrep)
echo "Substituting grep for egrep."
egrep=$grep
_egrep=$grep
;;
esac
@if less
case "$less"
in
") ;;
*) if $less -R </dev/null >/dev/null 2>&1; then
echo "Substituting less -R for less."
less="$less -R"
_less=$less
fi
;;
esac
@end
@if ln

```

```

case "$ln" in
ln)
echo "Substituting cp for ln."
ln=$cp
_ln=$cp
;;
esac
@end
@if make || gmake
case "$make" in
make)
case "$gmake" in
gmake)
echo "I can't find make or gmake, and my life depends on it." >&4
echo "Go find a public domain implementation or fix your PATH setting!" >&4
exit 1
;;
esac
;;
esac
case "$gmake" in
gmake) ;;
*) # We can't have osname yet.
if test -f "/system/gnu_library/bin/ar.pm"; then # Stratus VOS
# Assume that gmake, if found, is definitely GNU make
# and prefer it over the system make.
echo "Substituting gmake for make."
make=$gmake
_make=$gmake
fi
;;
esac
@end
case "$test" in
test)
echo "Hopefully test is built into your sh."
;;
*)
if `sh -c "PATH= test true" >/dev/null 2>&1`; then
echo "Using the test built into your sh."
?X:
?X: We need to set both test
and _test, since Oldconfig.U will use the _test
?X: value to systematically restore computed paths, which may be wrong if
?X: we choose to load an old config.sh generated on another platform.
?X:
test=test
_test=test

```

```

fi
;;
esac
?LINT:change n c
case "$echo" in
echo)
echo "Hopefully echo is built into your sh."
;;
?X: For those rare cases where we don't need $echo...
") ;;
*)
echo " "
echo "Checking compatibility between $echo and builtin echo (if any)..." >&4
$echo $n "hi there$c" >foo1
echo $n "hi there$c" >foo2
if cmp foo1 foo2 >/dev/null 2>&1; then
echo "They are compatible. In fact, they may be identical."
else
case "$n" in
'-n') n=" c='\c';;
*) n='-n' c="";;
esac
cat <<FOO

```

They are not compatible! You are probably running ksh on a non-USG system. I'll have to use \$echo instead of the builtin, since Bourne shell doesn't have echo built in and we may have to run some Bourne shell scripts. That means I'll have to use '\$n\$c' to suppress newlines now.

Life is ridiculous.

```

FOO
$echo $n "The star should be here-->$c"
$echo "*"
fi
$rm -f foo1 foo2
;;
esac

```

?X: The next part is irrelevant to the real process  
# This question was auctioned at YAPC::Europe-2007 in Vienna  
# I never promised you could answer it. I only auctioned the question.  
cat <<FOO

The following message is sponsored by

Dresden.pm<--The stars should be here.

Dear Perl user, system administrator or package maintainer, the Perl community sends greetings to you. Do you (emblematical) greet back [Y/n]? n

FOO

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Loc.U

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_wifstat.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:47:43 ram

?RCS: patch61: added a ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.2 1995/07/25 14:09:10 ram

?RCS: patch56: re-arranged compile line to include ldflags before objects

?RCS:

?RCS: Revision 3.0.1.1 1995/03/21 08:47:46 ram

?RCS: patch52: created

?RCS:

?MAKE:d\_wifstat: d\_uwait +cc +ccflags +ldflags +libs Oldconfig cat rm

?MAKE: -pick add \$@ %<

?S:d\_wifstat:

?S: This symbol conditionally defines USE\_WIFSTAT if the C program can

?S: safely

use the WIFxxx macros with the kind of wait() parameter

?S: declared in the program (see UNION\_WAIT), or if it can't. Should

?S: only matter on HP-UX, where the macros are incorrectly written and

?S: therefore cause programs using them with an 'union wait' variable

?S: to not compile properly.

?S:.

?C:USE\_WIFSTAT:

?C: This symbol, if defined, indicates to the C program that the argument

?C: for the WIFxxx set of macros such as WIFSIGNALED or WIFEXITED can

?C: be of the same kind as the one used to hold the wait() status. Should

?C: only matter on HP-UX, where the macros are incorrectly written and

?C: therefore cause programs using them with an 'union wait' variable

?C: to not compile properly. See also UNION\_WAIT.

?C:.

?H:#\$d\_wifstat USE\_WIFSTAT /\*\*/

```

?H:
?T:type
?F:!foo
: see if we can use WIFxxx macros
echo " "
case "$d_wifstat" in
"$define") echo "As before, you can safely use WIFEXITED and friends!" >&4;;
"$undef") echo "You still can't use WIFEXITED and friends!" >&4;;
*)
echo
"Let's see whether you can use the WIFEXITED(status) macro and its"
case "$d_uwait" in
"$define") type='union wait';
*) type='int';;
esac
echo "friends with status declared as '$type status'..."
$cat >foo.c <<EOCP
#include <sys/types.h>
#include <sys/wait.h>

int main()
{
$type status;
int e = 0;

#ifdef WIFEXITED
if (WIFEXITED(status))
printf("\n");
exit(0);
#else
exit(2);
#endif
}
EOCP
d_wifstat="$undef"
if $cc $ccflags $ldflags -o foo foo.c $libs >/dev/null 2>&1; then
if ./foo >/dev/null; then
echo "Great! Looks like we can use the WIFxxx macros." >&4
d_wifstat="$define"
else
echo "You don't seem to have WIFxxx macros, but that's ok." >&4
fi
else
echo "Apparently you can't use WIFxxx macros properly." >&4
fi
$rm -f foo.* foo core
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_wifstat.U

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?RCS: \$Id: d\_portable.U,v 3.0.1.2 1995/01/11 15:28:52 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: This file is included with or a derivative work of a file included

?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.

?RCS: In accordance with clause 7 of dist's modified Artistic License:

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_portable.U,v \$

?RCS: Revision 3.0.1.2 1995/01/11 15:28:52 ram

?RCS: patch45: executable path stripping moved to the end in Config\_sh.U

?RCS:

?RCS: Revision 3.0.1.1 1993/12/15 08:21:17 ram

?RCS: patch15: did not strip variables properly when needed

?RCS: patch15: now also strips down variables from trylist

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:48 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

This is the same as the dist version, except I don't bother

?X: prompting people since it makes no difference for perl5,

?X: and only confuses people.

?X:

?X: The Loc unit is wanted to get the definition of all the locating variables.

?X:

?MAKE:d\_portable: Loc Oldconfig

?MAKE: -pick add \$@ %<

?S:d\_portable:

?S: This variable conditionally defines the PORTABLE symbol, which

?S: indicates to the C program that it should not assume that it is

?S: running on the machine it was compiled on.

?S:.

?C:PORTABLE:

?C: This symbol, if defined, indicates to the C program that it should

?C: not assume that it is running on the machine it was compiled on.

?C: The program should be prepared to look up the host name, translate

?C: generic filenames, use PATH, etc.

?C:.



```
?H:#$d_portable PORTABLE /**/
?H:.
?D:d_portable="
: decide how portable to be. Allow command line overrides.
case "$d_portable" in
"$undef") ;;
*) d_portable="$define" ;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_portable.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: kernel.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
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```
?RCS: as specified in the README file that comes with the distribution.
```

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?RCS: You may reuse parts of this distribution only within the terms of
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?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: kernel.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:54 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:kernel: Getfile test
```

```
?MAKE: -pick add $@ %<
```

```
?S:kernel:
```

```
?S: This variable becomes the (fully rooted) path name of the kernel.
```

```
?S:.
```

```
: find the name of the kernel.
```

```
echo " "
```

```
case "$kernel" in
```

```
")
```

```
if $test -r /unix; then
```

```
  dflt=/unix
```

```
elif $test -r /vmunix; then
```

```
  dflt=/vmunix
```

```
elif $test -r /xenix; then
```

```
  dflt=/xenix
```

```
elif $test -r /mach; then
```

```
  dflt=/mach
```

```
elif
```

```
$test -r /dgux; then
```

```
  dflt=/dgux
```

```

elif $test -r /hp-ux; then
    dflt=/hp-ux
elif $test -r /syst; then
    dflt=/syst
elif $test -r /arix; then
    dflt=/arix
elif $test -r /irix; then
    dflt=/arix
else
    dflt='unknown'
    set X /*x
    shift
    case $# in
    1)
        if $test -r "$1"; then
            dflt="$1"
        fi
        ;;
    esac
    fi
    ;;
    *)
        dflt="$kernel"
        ;;
    esac
    fn=f
    rp='What is the name of your kernel?'
    ./getfile
    kernel="$ans"

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/kernel.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Obsol_h.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: Obsol_h.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:05:11 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
?X:
?X: This file is prepended to .MT/Obso_h if that file is not empty. That file
?X: contains the necessary mappings of new symbols to obsolete ones.
?X:
?MAKE:Obso_h:
?MAKE: -pick prepend $@ ./Obso_h
?LINT:nocomment
/*
* The following symbols are obsolete. They are mapped to the new
* symbols only to ease the transition process. The sources
  should be
* updated so as to use the new symbols only, as the support for these
* obsolete symbols may end without notice.
*/
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/Obso_h.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1999 Jarkko Hietaniemi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:d_telldirproto: Hasproto i_systypes i_dirent
?MAKE: -pick add $@ %<
?S:d_telldirproto:
?S: This variable conditionally defines the HAS_TELLDIR_PROTO symbol,
?S: which indicates to the C program that the system provides
?S: a prototype for the telldir() function. Otherwise, it is
?S: up to the program to supply one.
?S:.
?C:HAS_TELLDIR_PROTO:
?C: This symbol, if defined, indicates that the system provides
?C: a prototype for the telldir() function. Otherwise, it is up
?C: to the program to supply one. A good guess
  is
?C: extern long telldir(DIR*);
?C:.
?H:#$d_telldirproto HAS_TELLDIR_PROTO /**/
?H:.
```

```
?LINT:set d_telldirproto
: see if prototype for telldir is available
echo " "
set d_telldirproto telldir $i_systypes sys/types.h $i_dirent dirent.h
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_telldirproto.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

```
?MAKE:run to from targetarch targetdir targetmkdir targethost targetport \
usecrosscompile hostperl hostgenerate hostosname targetenv: \
src test rm echo sed mkdir cp chmod make touch
```

```
?MAKE: -pick add $@ %<
```

?Y:TOP

?S:usecrosscompile:

?S: This variable conditionally defines the USE\_CROSS\_COMPILE symbol,

?S: and indicates that Perl has been cross-compiled.

?S:.

?S:run:

?S: This variable contains the command used by Configure

?S: to copy and execute a cross-compiled executable in the

?S: target host. Useful and available only during Perl build.

?S: Empty string " if not cross-compiling.

?S:.

?S:from:

?S: This variable contains the command used by Configure

?S: to copy files from the target host. Useful

and available

?S: only during Perl build.

?S: The string ':' if not cross-compiling.

?S:.

?S:to:

?S: This variable contains the command used by Configure

?S: to copy to from the target host. Useful and available

?S: only during Perl build.

?S: The string ':' if not cross-compiling.

?S:.

?S:targetarch:

?S: If cross-compiling, this variable contains the target architecture.

?S: If not, this will be empty.

?S:.

?S:targetdir:

?S: This variable contains a path that will be created on the target

?S: host using targetmkdir, and then used to copy the cross-compiled

?S: executables to. Defaults to '/tmp' if not set.

?S:.

?S:targetmkdir:

?S: This variable contains the command used by Configure to create a

?S: new directory on the target host.

?S:.

?S:targethost:

?S: This variable contains the name of a separate host machine that

?S: can be used to run compiled test programs and perl tests on.

?S: Set to empty string if not in use.

?S:.

?S:targetport:

?S: This variable contains the number

?S: of a network port to be used to

?S: connect to the host in targethost, if unset defaults to 22 for ssh.

?S:.

?S:hostperl:

?S: This variable contains the path to a miniperl binary that can be

?S: run on the host OS when cross-compiling. Useful and available only

?S: during Perl build.

?S: Empty string " if not cross-compiling.

?S:.

?S:hostgenerate:

?S: This variable contains the path to a generate\_uudmap binary that

?S: can be run on the host OS when cross-compiling. Useful and

?S: available only during Perl build.

?S: Empty string " if not cross-compiling.

?S:.

?S:hostosname:

?S: This variable contains the original value of '\$^O' for hostperl

?S: when cross-compiling. This is useful to pick the proper tools

?S: when running build code in the host.

?S: Empty string " if not cross-compiling.

?S:.

?S:targetenv:

?S: If cross-compiling, this variable can be used to modify the

?S: environment on the target system.

?S: However, how and where it's used, and even if it's used at all, is

?S: entirely

?S: dependent on both the transport mechanism (targetrun) and

?S: what the target system is. Unless the relevant documentation says

?S: otherwise, it is generally not useful.

?S:.

```

?C:USE_CROSS_COMPILE:
?C: This symbol, if defined, indicates that Perl is being cross-compiled.
?C:.
?C:PERL_TARGETARCH:
?C: This symbol, if defined, indicates the target architecture
?C: Perl has been cross-compiled to. Undefined if not a cross-compile.
?C:.
?H:?%<:#ifndef USE_CROSS_COMPILE
?H:?%<:#$usecrosscompile USE_CROSS_COMPILE /**/
?H:?%<:#define PERL_TARGETARCH "$targetarch" /**/
?H:?%<:#endif
?H:.
?D:targetenv="
?D:targethost="
?D:targetmkdir="
?T:croak pwd exe f q cwd file xxx env
?LINT:extern usecrosscompile
?LINT:extern cc
?LINT:extern usrinc
?LINT:change ar
?LINT:change nm
?LINT:change ranlib
?LINT:change src
?LINT:extern targetenv
?LINT:extern targetport
?LINT:extern targetdir
?LINT:extern targetuser
?LINT:change targetuser
?LINT:extern targetrun
?LINT:extern targetfrom
?LINT:extern
targetto
?LINT:change targetrun
?LINT:change targetfrom
?LINT:change targetto
?LINT:extern incpth
?LINT:extern libpth
?LINT:extern locincpth
?LINT:extern loclibpth
?LINT:change locincpth
?LINT:change loclibpth
?LINT:extern hostperl
?LINT:extern hostgenerate
?LINT:extern before_host
?LINT:change before_host
?LINT:extern hostosname
?LINT:extern multiarch
: Check for Cross-Compilation

```

?X: targethost and targetenv mainly set to allow ?S: documentation

?X: otherwise it could have been declared extern

```
if $test "X$targethost" = "X"; then
    targethost=""
fi
if $test "X$targetenv" = "X"; then
    targetenv=""
fi
case "$susecrosscompile" in
$define|true|[yY]*)
    $echo "Cross-compiling..."
    croak=""
    case "$cc" in
*_gcc*|*_g++*) # A cross-compiling gcc, probably.
        # arm-linux-androideabi-gcc -> arm-linux-androideabi
        # x86_64-w64-mingw32-gcc.exe -> x86_64-w64-mingw32
        targetarch=`$echo $cc|$sed 's/-g[c\+][c\+].*$/'^
        ar=`$echo $cc|$sed 's/-g[c\+][c\+]/-ar'^
        # leave out ld,
        choosing it is more complex
        nm=`$echo $cc|$sed 's/-g[c\+][c\+]/-nm'^
        ranlib=`$echo $cc|$sed 's/-g[c\+][c\+]/-ranlib'^
        # We are in a weird spot. Just before us, some values
        # were 'saved', to be restored after the hints are
        # run. This means that the changes we made to ar,
        # nm and ranlib will get reverted.
        # To avoid that, we hijack the saving mechanism and
        # have it save our new values.
        for file in ar nm ranlib; do
            eval xxx=\$$file
            eval $file=$xxx$_exe
            eval _$file=$xxx
        done
        ;;
    esac
    case "$targetarch" in
    ") echo "Targetarch not defined." >&4; croak=y ;;
    *) echo "Using targetarch $targetarch." >&4 ;;
    esac
    case "$targethost" in
    ") echo "Targethost not defined." >&4; croak=n ;;
    *) echo "Using targethost $targethost." >&4
    esac
    locincpth=' '
    loclibpth=' '
    case "$croak" in
    y) echo "Cannot continue, aborting." >&4; exit 1 ;;
    esac
```

```

: compile a host miniperl and generate_uudmap, unless we got passed them
if
$test "X$hostperl" = X; then
    echo "Building host miniperl and generate_uudmap binaries" >&4
    before_host=`pwd`
    cd ..
    cd $src
    src=`pwd`
    rm -rf $src/host
    mkdir $src/host
    cd $src/host
    $src/Configure -des -Dusedevel -Dmksymlinks
    $make miniperl
    case "$hostgenerate" in
    *) $make generate_uudmap
        hostgenerate=$src/host/generate_uudmap
        ;;
    "$undef") hostgenerate="
        ;;
    esac
    hostperl=$src/host/miniperl
    cd $before_host
fi
hostosname=`$hostperl -le 'print $^O`
;;
*)
    usecrosscompile="$undef"
    ;;
esac

: Define -Dtargethost=somecomputer to run compiled tests on another machine
case "$targethost" in
    *) echo "Checking for cross-compile" >&4
        case "$usecrosscompile$multiarch" in
            *$define*) echo "Skipping the try tests in the rest of Configure as no targethost was defined when cross-
compiling" >&4
                if [ -f Makefile ]; then
                    echo
                    " "
                    echo "Now you must ensure config.sh, config.h and the generated headers exist and run a $make."
                else
                    echo "Configure done."
                fi
                exit 0
            ;;
        *) echo "No targethost for running compiler tests against defined, running locally" >&4
            run="
to=:

```



```

    from=;
    ;;
esac
;;
*) echo "Using targethost $targethost." >&4
case "$src" in
/*) run=$src/Cross/run
    targetmkdir=$src/Cross/mkdir
    to=$src/Cross/to
    from=$src/Cross/from
    ;;
*) pwd=`$test -f ../Configure & cd ..; pwd`
    run=$pwd/Cross/run
    targetmkdir=$pwd/Cross/mkdir
    to=$pwd/Cross/to
    from=$pwd/Cross/from
    ;;
esac
case "$targetrun" in
") targetrun=ssh ;;
esac
case "$targetto" in
") targetto=scp ;;
esac
case "$targetfrom" in
") targetfrom=scp ;;
esac
run=$run-$targetrun
to=$to-$targetto
from=$from-$targetfrom
case "$targetdir" in
") targetdir=/tmp
    echo "Guessing targetdir $targetdir."
>&4
    ;;
esac
case "$targetuser" in
") targetuser=root
    echo "Guessing targetuser $targetuser." >&4
    ;;
esac
case "$targetport" in
") targetport=22
    echo "Guessing targetport $targetport." >&4
    ;;
esac
case "$targetfrom" in
scp) q=-q ;;

```

```

*) q=" ;;
esac
case "$targetrun" in
ssh|rsh)
    cat >$run <<EOF
#!/bin/sh
env="
case "$1" in
-cwd)
    shift
    cwd=$1
    shift
    ;;
esac
case "$1" in
-env)
    shift
    env=$1
    shift
    ;;
esac
case "$1" in
*)
    shift
    exe=$1
    shift
    $to $exe
targetrun -p $targetport -l $targetuser $targethost "cd $1 && $env $exe @$@"
EOF
    ;;
adb)
    $touch $run
    ;;
*)
    echo "Unknown targetrun '$targetrun'" >&4
    exit 1
    ;;
esac
case "$targetmkdir" in
*/Cross/mkdir)
    cat >$targetmkdir <<EOF
#!/bin/sh
targetrun -p $targetport -l $targetuser $targethost "mkdir -p @$@"
EOF
    $chmod a+rx $targetmkdir
    ;;
*)
    echo "Unknown targetmkdir '$targetmkdir'" >&4
    exit 1
    ;;

```

```

esac
case
"$targetto" in
scp|rcp)
    cat >$to <<EOF
#!/bin/sh
for f in @$@
do
case "$f" in
/*)
    $targetmkdir `dirname $f`
    $targetto -P $targetport -r $q $f $targetuser@$targethost:$f 2>/dev/null || exit 1
    ;;
*)
    $targetmkdir $targetdir/`dirname $f`
    $targetto -P $targetport -r $q $f $targetuser@$targethost:$targetdir/$f 2>/dev/null || exit 1
    ;;
esac
done
exit 0
EOF
    ;;
cp) cat >$to <<EOF
#!/bin/sh
for f in @$@
do
case "$f" in
/*)
    $mkdir -p $targetdir/`dirname $f`
    $cp $f $targetdir/$f || exit 1
    ;;
*)
    $targetmkdir $targetdir/`dirname $f`
    $cp $f $targetdir/$f || exit 1
    ;;
esac
done
exit 0
EOF
    ;;
*) echo "Unknown targetto "$targetto" ">&4
    exit 1
    ;;
esac
case "$targetfrom" in
scp|rcp)
    cat >$from <<EOF
#!/bin/sh

```

```

for f in \$@
do
  $rm -f \$f
  $targetfrom -P $targetport $q $targetuser@$targethost:$targetdir/\$f . || exit 1
done
exit 0
EOF
;;
cp) cat >$from <<EOF
#!/bin/sh
for
  f in \$@
do
  $rm -f \$f
  cp $targetdir/\$f . || exit 1
done
exit 0
EOF
;;
*) echo "Unknown targetfrom '$targetfrom'" >&4
  exit 1
  ;;
esac
if $test ! -f $run; then
  echo "Target 'run' script '$run' not found." >&4
else
  $chmod a+rx $run
fi
if $test ! -f $to; then
  echo "Target 'to' script '$to' not found." >&4
else
  $chmod a+rx $to
fi
if $test ! -f $from; then
  echo "Target 'from' script '$from' not found." >&4
else
  $chmod a+rx $from
fi
if $test ! -f $run -o ! -f $to -o ! -f $from; then
  exit 1
fi
cat >&4 <<EOF
Using '$run' for remote execution,
and '$from' and '$to'
for remote file transfer.
EOF
;;
*) run="

```

```
to=:
from=:
usecrosscompile="$undef"
targetarch=""
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/Cross.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_sethent.U,v 3.0 1993/08/18 12:06:09 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: d_sethent.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:09 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_sethent: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_sethent:
```

```
?S: This variable conditionally defines HAS_SETHOSTENT if sethostent() is
```

```
?S: available.
```

```
?S:.
```

```
?C:HAS_SETHOSTENT:
```

```
?C: This symbol, if defined, indicates that the sethostent() routine is
```

```
?C: available.
```

```
?C:.
```

```
?H:#$d_sethent HAS_SETHOSTENT /**/
```

```
?H:.
```

```
?LINT:set d_sethent
```

```
: see if sethostent exists
```

```
set
```

```
sethostent d_sethent
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_sethent.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_systwgcf.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_systwgcf.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:39 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_systwgcf: Inhdr
?MAKE: -pick add $@ %<
?S:i_systwgcf:
?S: This variable conditionally defines the I_SYS_TWG_CF symbol, and
?S: indicates whether a C program should include sys/twg_config.h.
?S:.
?C:I_SYS_TWG_CF:
?C: This symbol, if defined, indicates to the C program that it should
?C: include sys/twg_config.h.
?C:.
?H:#$i_systwgcf
I_SYS_TWG_CF /**/
?H:.
?LINT:set i_systwgcf
: see if this is a sys/twg_config.h system
set sys/twg_config.h i_systwgcf
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_systwgcf.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: warnflags.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
```

```

?RCS:
?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>
?RCS:
?RCS: $Log: warnflags.U,v $
?RCS: Revision 3.0 1993/08/18 12:10:02 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:warnflags: cat cc contains Myread Guess Oldconfig Findhdr
?MAKE: -pick add $@ %<
?S:warnflags:
?S: This variable contains any additional C compiler flags to generate
?S: warnings from the compiler. It is up to the Makefile to use this.
?S:.
: offer additional
  warning flags for compilation
$cat <<EOH

```

You may wish to compile with extra compiler warnings enabled.  
 Note that doing so enhances your chance of receiving your free set of steak knives, particularly if you find any bugs and report them.  
 If you don't want extra warnings, answer "none".

```

EOH
case "$warnflags" in
  *) case "$cc" in
      *gcc*)
        dflt="-Wall -Wno-comment"
        if $contains 'fprintf' `./findhdr stdio.h` >/dev/null 2>&1; then
          :
        else
          dflt="$dflt -Wno-implicit"
        fi
      ;;
    *) dflt="none";;
  esac
  ;;
  *) dflt="none";;
  *) dflt="$warnflags";;
esac

```

```

rp="Any $cc flags to enable warnings?"
./myread
case "$ans" in
  none) warnflags=' ';;
  *) warnflags="$ans";;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/warnflags.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_havetlib.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_havetlib.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 15:36:31 ram
?RCS: patch61: replaced .a with $_a all over the place
?RCS: patch61: likewise for .o replaced by $_o
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 14:44:06 ram
?RCS: patch23: added AIX support to accept shared lib stub as termlib (WED)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:19 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_havetlib termlib: cat contains Myread Loc
Filexp Oldconfig libpth \
test uname _a _o
?MAKE: -pick add $@ %<
?S:d_havetlib:
?S: This variable conditionally defines the HAS_TERMLIB symbol, which
?S: indicates to the C program that termlib-style routines are available.
?S:.
?S:termlib:
?S: This variable contains the argument to pass to the loader to get
?S: termlib-style routines. It is up to the Makefile.SH to make sure
?S: the value gets to the right command. Note that on many systems the
?S: termlib routines are emulated by the curses or terminfo library.
?S:.
?C:HAS_TERMLIB (HAVETERMLIB):
?C: This symbol, when defined, indicates that termlib-style routines
?C: are available. There is nothing to include.
?C:.
?H:#$d_havetlib HAS_TERMLIB /**/
?H:.
?T:xxx
: where do we get termlib routines from
echo " "
```



```

xxx=`./loc libcurses$_a x $libpth`
case "$xxx" in
/*)
ar t $xxx >grimble
if $contains tputs$_o grimble >/dev/null 2>&1; then
termlib='-lcurses'
d_havetlib="$define"
echo "Terminfo library found." >&4
elif $test "x`$uname
2>/dev/null" = xAIX; then
# Ok, do the AIX shr.o fun thing
/usr/ccs/bin/nm -en $xxx 2>/dev/null >grimble
if $contains '^tputs.*|extern|' grimble >/dev/null 2>&1; then
termlib='-lcurses'
d_havetlib="$define"
echo "AIX Terminfo library found." >&4
else
xxx=x
fi
else
xxx=x
fi
rm -f grimble
;;
esac
case "$xxx" in
x)
xxx=`./loc libtermplib$_a x $libpth`
case "$xxx" in
/usr/lib*/lib*)
termlib='-ltermplib'
d_havetlib="$define"
echo "Termlib library found." >&4
;;
/*)
termlib="$xxx"
d_havetlib="$define"
echo "Termlib library found." >&4
;;
*)
xxx=`./loc libtermcap$_a x $libpth`
case "$xxx" in
/usr/lib*/lib*)
termlib='-ltermcap'
d_havetlib="$define"
echo "Termcap library found." >&4
;;
/*)

```

```

termlib="$xxx"
d_havetlib="$define"
echo "Termcap library found." >&4
;;
*)
case "$termlib" in
")
dflt=y
rp="Your system appears to NOT have termlib-style routines. Is this true?"
./myread
case "$ans"
in
n*|f*) d_havetlib="$define"
$cat <<'EOM'
Then where are the termlib-style routines kept? Specify either -llibname
or a full pathname (~name ok).

```

EOM

```

dflt="
rp='Specify termlib path:'
./myread
termlib=`./filexp $ans`
;;
*)
d_havetlib="$undef"
termlib="
echo "You will have to play around with term.c then." >&4
;;
esac
echo " ";;
*) echo "You said termlib was $termlib before." >&4;;
esac;;
esac;;
esac;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_havetlib.U

```

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?RCS: \$Id: d\_setlnbuf.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_setlnbuf.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:11:57 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_setlinebuf: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_setlinebuf:  
?S: This variable conditionally defines the HAS\_SETLINEBUF symbol, which  
?S: indicates to the C program that the setlinebuf() routine is available  
?S: to change stderr or stdout from block-buffered or unbuffered  
to a  
?S: line-buffered mode.  
?S:.  
?C:HAS\_SETLINEBUF :  
?C: This symbol, if defined, indicates that the setlinebuf routine is  
?C: available to change stderr or stdout from block-buffered or unbuffered  
?C: to a line-buffered mode.  
?C:.  
?H:#\$d\_setlinebuf HAS\_SETLINEBUF /\*\*/  
?H:.  
?LINT:set d\_setlinebuf  
: see if setlinebuf exists  
set setlinebuf d\_setlinebuf  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_setlnbuf.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: lns.U,v \$

```

?RCS: Revision 3.0.1.1 1994/06/20 07:05:52 ram
?RCS: patch30: created by ADO
?RCS:
?MAKE:issymlink: lns test rm
?MAKE: -pick add $@ %<
?S:issymlink:
?S: This variable holds the test command to test for a symbolic link
?S: (if they are supported). Typical values include 'test -h' and
?S: 'test -L'.
?S:.
?T:pth p
?LINT:change PATH test
?LINT:extern newsh
: determine whether symbolic links are supported
echo
" "
case "$lns" in
*"ln"* -s")
echo "Checking how to test for symbolic links..." >&4
$lns blurfl sym
if $test "X$sissymlink" = X; then
?X:
?X: In some AIX 4 versions the (ksh) builtin test (-h) is broken.
?X:
case "$newsh" in
") sh -c "PATH= test -h sym" >/dev/null 2>&1 ;;
*) $newsh -c "PATH= test -h sym" >/dev/null 2>&1 ;;
esac
if test $? = 0; then
issymlink="test -h"
else
echo "Your builtin 'test -h' may be broken." >&4
case "$stest" in
/*) ;;
*) pth=`echo $PATH | sed -e "s/$p_/ /g"`
for p in $pth
do
if test -f "$p/$stest"; then
test="$p/$stest"
break
fi
done
;;
esac
case "$stest" in
/*)
echo "Trying external '$stest -h'." >&4
issymlink="$stest -h"

```

```

if $test ! -h sym >/dev/null 2>&1; then
    echo "External 'test -h' is broken, too." >&4
    issymlink="
fi
;;
*) issymlink=" ;;
esac
fi
fi
if $test "X$issymlink" = X; then
if $test -L sym 2>/dev/null; then
    issymlink="$test
-L"
    echo "The builtin 'test -L' worked." >&4
fi
fi
if $test "X$issymlink" != X; then
    echo "You can test for symbolic links with 'test -L'." >&4
else
    echo "I do not know how you can test for symbolic links." >&4
fi
$rm -f blurfl sym
;;
*) echo "No symbolic links, so not testing for their testing..." >&4
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/issymlink.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_strtoq: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_strtoq:

?S: This variable conditionally defines the HAS\_STRTOQ symbol, which

?S: indicates to the C program that the strtoc() routine is available.

?S:.

?C:HAS\_STRTOQ:

?C: This symbol, if defined, indicates that the strtoc routine is

?C: available to convert strings to long longs (quads).

```
?C:
?H:#$d_strtoq HAS_STRTOQ /**/
?H:
?LINT:set d_strtoq
: see if strtoq exists
set strtoq d_strtoq
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_strtoq.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1999 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_statfs_s: \
Hasstruct i_sysparam i_sysmount i_systypes \
i_sysvfs i_sysstatfs Setvar
?MAKE: -pick add $@ %<
?S:d_statfs_s:
?S: This variable conditionally defines the HAS_STRUCTURE_STATFS symbol,
?S: which indicates that the struct statfs is supported.
?S:
?C:HAS_STRUCTURE_STATFS:
?C: This symbol, if defined, indicates that the struct statfs
?C: to do statfs() is supported.
?C:
?H:#$d_statfs_s HAS_STRUCTURE_STATFS /**/
?H:
?LINT:set d_statfs_s
: Check for statfs_s
echo " "
echo "Checking to see if your system supports struct statfs..." >&4
set d_statfs_s statfs $i_systypes sys/types.h $i_sysparam sys/param.h $i_sysmount sys/mount.h $i_sysvfs sys/vfs.h
$i_sysstatfs sys/statfs.h
eval $hasstruct
case "$d_statfs_s"
in
"$define") echo "Yes, it does." ;;
*) echo "No, it doesn't." ;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_staffs_s.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_limits.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
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```
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```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: i_limits.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:20 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:i_limits: Inhdr
```

```
?MAKE: -pick add $@ %<
```

```
?S:i_limits:
```

```
?S: This variable conditionally defines the I_LIMITS symbol, and indicates
```

```
?S: whether a C program may include <limits.h> to get symbols like WORD_BIT
```

```
?S: and friends.
```

```
?S:.
```

```
?C:I_LIMITS:
```

```
?C: This symbol, if defined, indicates to the C program that it should
```

```
?C: include <limits.h> to
```

```
get definition of symbols like WORD_BIT or
```

```
?C: LONG_MAX, i.e. machine dependant limitations.
```

```
?C:.
```

```
?H:#$i_limits I_LIMITS /**/
```

```
?H:.
```

```
?LINT:set i_limits
```

```
: see if this is a limits.h system
```

```
set limits.h i_limits
```

```
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_limits.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```

?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_sysun.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:42 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit looks wether <inttypes.h> is available or not
?X:
?MAKE:i_inttypes: Inhdr
?MAKE: -pick add $@ %<
?S:i_inttypes:
?S: This variable conditionally defines I_INTTYPES, which indicates
?S: to the C program that it should include <inttypes.h> to get
?S: format conversions of integer types.
?S:.
?C:I_INTTYPES:
?C: This symbol, if defined, indicates to the C program that it should
?C: include
?C: <inttypes.h> to get format conversions of integer types.
?C:.
?H:#$i_inttypes I_INTTYPES /**/
?H:.
?LINT:set i_inttypes
: see if this is a inttypes.h system
set inttypes.h i_inttypes
eval $inhdr

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/i_inttypes.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_getpgid.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_getpgid.U,v $

```



?RCS: Revision 3.0.1.1 1997/02/28 15:33:44 ram  
 ?RCS: patch61: created  
 ?RCS:  
 ?MAKE:d\_getpgid: Inlibc  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_getpgid:  
 ?S: This variable conditionally defines the HAS\_GETPGID symbol, which  
 ?S: indicates to the C program that the getpgid(pid) function  
 ?S: is available to get the process group id.  
 ?S:.  
 ?C:HAS\_GETPGID:  
 ?C: This symbol, if defined, indicates to the C program  
 that  
 ?C: the getpgid(pid) function is available to get the  
 ?C: process group id.  
 ?C:.  
 ?H:#\$d\_getpgid HAS\_GETPGID /\*\*/  
 ?H:.  
 ?LINT:set d\_getpgid  
 : see if getpgid exists  
 set getpgid d\_getpgid  
 eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_getpgid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_systimeb.U 1 2006-08-24 12:32:52Z rmanfredi \$  
 ?RCS:  
 ?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
 ?RCS:  
 ?RCS: You may redistribute only under the terms of the Artistic Licence,  
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 ?RCS: You may reuse parts of this distribution only within the terms of  
 ?RCS: that same Artistic Licence; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: \$Log: i\_systimeb.U,v \$  
 ?RCS: Revision 3.0 1993/08/18 12:08:37 ram  
 ?RCS: Baseline for dist 3.0 netwide release.  
 ?RCS:  
 ?X:  
 ?X: This unit looks wether <sys/timeb.h> should be included  
 ?X: or not when using ftime() (for struct timeb definition).  
 ?X:  
 ?X: Force looking for <sys/time.h> for struct timeb.  
 ?X:INC: i\_systime

```

?MAKE:i_systimeb: test contains Loc Setvar Findhdr
?MAKE: -pick add $@ %<
?S:i_systimeb:
?S: This variable conditionally defines I_SYS_TIMEB,
  which indicates
?S: to the C program that it should include <sys/timeb.h>.
?S:.
?C:I_SYS_TIMEB (I_SYSTIMEB):
?C: This symbol, if defined, indicates to the C program that it should
?C: include <sys/timeb.h>, in order to define struct timeb (some systems
?C: define this in <sys/time.h>). This is useful when using ftime().
?C: You should include <sys/time.h> if I_SYS_TIMEB is not defined,
?C: nor is I_SYS_TIME.
?C:.
?H:#$i_systimeb I_SYS_TIMEB /**/
?H:.
?T:xxx
?LINT:set i_systimeb
: see where struct timeb is defined
echo " "
xxx=`./findhdr sys/timeb.h`
if $test "$xxx"; then
if $contains 'struct timeb' $xxx >/dev/null 2>&1; then
  val="$define"
  echo "You have struct timeb defined in <sys/timeb.h>." >&4
else
  val="$undef"
  echo "Assuming struct timeb is defined in <sys/time.h>." >&4
fi
else
  val="$undef"
  echo "No <sys/timeb.h> -- Assuming struct timeb is defined in <sys/time.h>." >&4
fi
set i_systimeb
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/i_systimeb.U

```

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

```

?MAKE:d_siginfo_si_errno d_siginfo_si_pid d_siginfo_si_uid d_siginfo_si_addr d_siginfo_si_status
d_siginfo_si_band d_siginfo_si_value d_siginfo_si_fd: d_sigaction pidtype uidtype Hasfield_t

```

?MAKE: -pick add \$@ %<

?S:d\_siginfo\_si\_errno:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_ERRNO symbol,  
?S: which indicates that the siginfo\_t struct has the si\_errno member.  
?S:.

?S:d\_siginfo\_si\_pid:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_PID symbol,  
?S: which indicates that the siginfo\_t struct has the si\_pid member.  
?S:.

?S:d\_siginfo\_si\_uid:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_UID symbol,  
?S: which indicates that the siginfo\_t struct has the si\_uid member.  
?S:.

?S:d\_siginfo\_si\_addr:  
?S: This  
variable conditionally defines the HAS\_SIGINFO\_SI\_ADDR symbol,  
?S: which indicates that the siginfo\_t struct has the si\_addr member.  
?S:.

?S:d\_siginfo\_si\_status:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_STATUS symbol,  
?S: which indicates that the siginfo\_t struct has the si\_status member.  
?S:.

?S:d\_siginfo\_si\_band:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_BAND symbol,  
?S: which indicates that the siginfo\_t struct has the si\_band member.  
?S:.

?S:d\_siginfo\_si\_value:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_VALUE symbol,  
?S: which indicates that the siginfo\_t struct has the si\_value member.  
?S:.

?S:d\_siginfo\_si\_fd:  
?S: This variable conditionally defines the HAS\_SIGINFO\_SI\_FD symbol,  
?S: which indicates that the siginfo\_t struct has the si\_fd member.  
?S:.

?C:HAS\_SIGINFO\_SI\_ERRNO:  
?C: This symbol, if defined, indicates that siginfo\_t has the  
?C: si\_errno member  
?C:.

?C:HAS\_SIGINFO\_SI\_PID:  
?C: This  
symbol, if defined, indicates that siginfo\_t has the  
?C: si\_pid member  
?C:.

?C:HAS\_SIGINFO\_SI\_UID:  
?C: This symbol, if defined, indicates that siginfo\_t has the  
?C: si\_uid member  
?C:.

?C:HAS\_SIGINFO\_SI\_ADDR:

?C: This symbol, if defined, indicates that siginfo\_t has the

?C: si\_addr member

?C:.

?C:HAS\_SIGINFO\_SI\_STATUS:

?C: This symbol, if defined, indicates that siginfo\_t has the

?C: si\_status member

?C:.

?C:HAS\_SIGINFO\_SI\_BAND:

?C: This symbol, if defined, indicates that siginfo\_t has the

?C: si\_band member

?C:.

?C:HAS\_SIGINFO\_SI\_VALUE:

?C: This symbol, if defined, indicates that siginfo\_t has the

?C: si\_value member

?C:.

?C:HAS\_SIGINFO\_SI\_FD:

?C: This symbol, if defined, indicates that siginfo\_t has the

?C: si\_fd member

?C:.

?H:#\$d\_siginfo\_si\_errno HAS\_SIGINFO\_SI\_ERRNO /\*\*/

?H:#\$d\_siginfo\_si\_pid HAS\_SIGINFO\_SI\_PID /\*\*/

?H:#\$d\_siginfo\_si\_uid HAS\_SIGINFO\_SI\_UID /\*\*/

?H:#\$d\_siginfo\_si\_addr HAS\_SIGINFO\_SI\_ADDR /\*\*/

?H:#\$d\_siginfo\_si\_status HAS\_SIGINFO\_SI\_STATUS /\*\*/

?H:#\$d\_siginfo\_si\_band HAS\_SIGINFO\_SI\_BAND /\*\*/

?H:#\$d\_siginfo\_si\_value HAS\_SIGINFO\_SI\_VALUE /\*\*/

?H:#\$d\_siginfo\_si\_fd HAS\_SIGINFO\_SI\_FD /\*\*/

?H:.

:

see what siginfo fields we have

case "\$d\_sigaction" in

"\$define")

echo "Checking if your siginfo\_t has si\_errno field...">&4

set d\_siginfo\_si\_errno siginfo\_t int si\_errno \$d\_sigaction signal.h

eval \$hasfield\_t;

echo "Checking if your siginfo\_t has si\_pid field...">&4

set d\_siginfo\_si\_pid siginfo\_t \$pidtype si\_pid \$d\_sigaction signal.h

eval \$hasfield\_t;

echo "Checking if your siginfo\_t has si\_uid field...">&4

set d\_siginfo\_si\_uid siginfo\_t \$uidtype si\_uid \$d\_sigaction signal.h

eval \$hasfield\_t;

echo "Checking if your siginfo\_t has si\_addr field...">&4

set d\_siginfo\_si\_addr siginfo\_t "void \*" si\_addr \$d\_sigaction signal.h

eval \$hasfield\_t;

```

echo "Checking if your siginfo_t has si_status field...">&4
set d_siginfo_si_status siginfo_t int si_status $d_sigaction signal.h
eval $hasfield_t;

echo "Checking if your siginfo_t has si_band field...">&4
set
d_siginfo_si_band siginfo_t long si_band $d_sigaction signal.h
eval $hasfield_t;

echo "Checking if your siginfo_t has si_value field...">&4
set d_siginfo_si_value siginfo_t "union signal" si_value $d_sigaction signal.h
eval $hasfield_t;

echo "Checking if your siginfo_t has si_fd field...">&4
set d_siginfo_si_fd siginfo_t int si_fd $d_sigaction signal.h
eval $hasfield_t;

;;
*)
d_siginfo_si_errno="$undef"
d_siginfo_si_pid="$undef"
d_siginfo_si_uid="$undef"
d_siginfo_si_addr="$undef"
d_siginfo_si_status="$undef"
d_siginfo_si_band="$undef"
d_siginfo_si_value="$undef"
d_siginfo_si_fd="$undef"
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_siginfo_si.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: nblock\_io.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 16:17:14 ram

?RCS: patch61: simplify here document for shells that can't handle them well

?RCS: patch61: force use of "startsh" at the head of the generated script

?RCS: patch61: added new files to the ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.1 1995/07/25 14:13:22 ram

?RCS: patch56: created

?RCS:

?X:

?X: Simplify here document for shells that can't handle them well.

?X: (Problem reported on FreeBSD; it's unclear if this helps.) --AD

?X:

?MAKE:o\_nonblock

eagain rd\_nodata d\_eofnblk: cat rm\_try +cc +ccflags +ldflags \  
d\_open3 h\_sysfile h\_fcntl signal\_t hint Oldconfig Setvar startsh Warn

?MAKE: -pick add \$@ %<

?S:o\_nonblock:

?S: This variable bears the symbol value to be used during open() or fcntl()

?S: to turn on non-blocking I/O for a file descriptor. If you wish to switch

?S: between blocking and non-blocking, you may try ioctl(FIOSNBIO) instead,

?S: but that is only supported by some devices.

?S:.

?S:again:

?S: This variable bears the symbolic errno code set by read() when no

?S: data is present on the file and non-blocking I/O was enabled (otherwise,

?S: read() blocks naturally).

?S:.

?S:rd\_nodata:

?S: This variable holds the return code from read() when no data is

?S: present. It should be -1, but some systems return 0 when O\_NDELAY is

?S: used, which is a shame because you cannot make the difference between

?S: no data and an EOF.. Sigh!

?S:.

?S:d\_eofnblk:

?S: This variable conditionally defines EOF\_NONBLOCK

if EOF can be seen

?S: when reading from a non-blocking I/O source.

?S:.

?C:VAL\_O\_NONBLOCK:

?C: This symbol is to be used during open() or fcntl(F\_SETFL) to turn on

?C: non-blocking I/O for the file descriptor. Note that there is no way

?C: back, i.e. you cannot turn it blocking again this way. If you wish to

?C: alternatively switch between blocking and non-blocking, use the

?C: ioctl(FIOSNBIO) call instead, but that is not supported by all devices.

?C:.

?C:VAL\_EAGAIN:

?C: This symbol holds the errno error code set by read() when no data was

?C: present on the non-blocking file descriptor.

?C:.

?C:RD\_NODATA:

?C: This symbol holds the return code from read() when no data is present  
?C: on the non-blocking file descriptor. Be careful! If EOF\_NONBLOCK is  
?C: not defined, then you can't distinguish between no data and EOF by  
?C: issuing a read(). You'll have to find another way to tell for sure!  
?C:.

?C:EOF\_NONBLOCK:

?C: This symbol, if defined, indicates to the C program that a read() on  
?C: a

non-blocking file descriptor will return 0 on EOF, and not the value  
?C: held in RD\_NODATA (-1 usually, in that case!).

?C:.

?H:#define VAL\_O\_NONBLOCK \$o\_nonblock

?H:#define VAL\_EAGAIN \$eagain

?H:#define RD\_NODATA \$rd\_nodata

?H:#\$d\_eofnblk EOF\_NONBLOCK

?H:.

?F:!try !try.out !try.ret !try.err !mtry

?T:status

?LINT:use d\_open3

: check for non-blocking I/O stuff

case "\$h\_sysfile" in

true) echo "#include <sys/file.h>" > head.c;;

\*)

case "\$h\_fcntl" in

true) echo "#include <fcntl.h>" > head.c;;

\*) echo "#include <sys/fcntl.h>" > head.c;;

esac

::

esac

echo " "

echo "Figuring out the flag used by open() for non-blocking I/O..." >&4

case "\$o\_nonblock" in

")

\$cat head.c > try.c

\$cat >>try.c <<'EOCP'

int main() {

#ifdef O\_NONBLOCK

printf("O\_NONBLOCK\n");

exit(0);

#endif

#ifdef O\_NDELAY

printf("O\_NDELAY\n");

exit(0);

#endif

?X: Stevens "Advanced Programming in the UNIX Environment" page 364 mentions

?X: the FNDELAY symbol, used in 4.3BSD (source: Paul Marquess).

#ifdef FNDELAY

printf("FNDELAY\n");

```

exit(0);
#endif
exit(0);
}
EOCP
if
$cc $ccflags $ldflags -o try try.c >/dev/null 2>&1; then
o_nonblock=`./try`
case "$o_nonblock" in
") echo "I can't figure it out, assuming O_NONBLOCK will do.";;
*) echo "Seems like we can use $o_nonblock.";;
esac
else
echo "(I can't compile the test program; pray O_NONBLOCK is right!)"
fi
;;
*) echo "Using $hint value $o_nonblock.";;
esac
$rm_try

echo " "
echo "Let's see what value errno gets from read() on a $o_nonblock file..." >&4
case "$seagain" in
")
$cat head.c > try.c
$cat >>try.c <<EOCP
#include <errno.h>
#include <sys/types.h>
#include <signal.h>
#define MY_O_NONBLOCK $o_nonblock
extern int errno;
$signal_t blech(x) int x; { exit(3); }
EOCP
$cat >> try.c <<'EOCP'
int main()
{
int pd[2];
int pu[2];
char buf[1];
char string[100];

pipe(pd); /* Down: child -> parent */
pipe(pu); /* Up: parent -> child */
if (0 != fork()) {
int ret;
close(pd[1]); /* Parent reads from pd[0] */
close(pu[0]); /*

```



```

Parent writes (blocking) to pu[1] */
if (-1 == fcntl(pd[0], F_SETFL, MY_O_NONBLOCK))
    exit(1);
signal(SIGALRM, blech);
alarm(5);
if ((ret = read(pd[0], buf, 1)) > 0) /* Nothing to read! */
    exit(2);
sprintf(string, "%d\n", ret);
write(2, string, strlen(string));
alarm(0);
#ifdef EAGAIN
if (errno == EAGAIN) {
    printf("EAGAIN\n");
    goto ok;
}
#endif
#ifdef EWOULDBLOCK
if (errno == EWOULDBLOCK)
    printf("EWOULDBLOCK\n");
#endif
ok:
write(pu[1], buf, 1); /* Unblocks child, tell it to close our pipe */
sleep(2); /* Give it time to close our pipe */
alarm(5);
ret = read(pd[0], buf, 1); /* Should read EOF */
alarm(0);
sprintf(string, "%d\n", ret);
write(3, string, strlen(string));
exit(0);
}

close(pd[0]); /* We write to pd[1] */
close(pu[1]); /* We read from pu[0] */
read(pu[0], buf, 1); /* Wait for parent to signal us we may continue */
close(pd[1]); /* Pipe pd is now fully closed! */
exit(0); /* Bye bye, thank you for playing!
*/
}
EOCP
if $cc $ccflags $ldflags -o try try.c >/dev/null 2>&1; then
?X: Use script to avoid the possible 'alarm call' message
echo "$startsh" >mtry
echo "./try >try.out 2>try.ret 3>try.err || exit 4" >>mtry
chmod +x mtry
./mtry >/dev/null 2>&1
case $? in
0) eagain=`$cat try.out`;
1) echo "Could not perform non-blocking setting!";;

```

```

2) echo "I did a successful read() for something that was not there!";;
3) echo "Hmm... non-blocking I/O does not seem to be working!";;
*) echo "Something terribly wrong happened during testing.";;
esac
rd_nodata=`$cat try.ret`
echo "A read() system call with no data present returns $rd_nodata."
case "$rd_nodata" in
0|-1) ;;
*)
echo "(That's peculiar, fixing that to be -1.)"
rd_nodata=-1
;;
esac
case "$eagain" in
")
echo "Forcing errno EAGAIN on read() with no data available."
eagain=EAGAIN
;;
*)
echo "Your read() sets errno to $eagain when no data is available."
;;
esac
status=`$cat
try.err`
case "$status" in
0) echo "And it correctly returns 0 to signal EOF.";;
-1) echo "But it also returns -1 to signal EOF, so be careful!";;
*) echo "However, your read() returns '$status' on EOF??";;
esac
val="$define"
if test "$status" = "$rd_nodata"; then
./warn "your read() can't distinguish between EOF and no data!"
val="$undef"
fi
else
echo "I can't compile the test program--assuming errno EAGAIN will do."
eagain=EAGAIN
fi
set d_eofnblk
eval $setvar
;;
*)
echo "Using $hint value $eagain."
echo "Your read() returns $rd_nodata when no data is present."
case "$d_eofnblk" in
"$define") echo "And you can see EOF because read() returns 0.";;
"$undef") echo "But you can't see EOF status from read() returned value.";;
*)

```

```
?X: Should not happen, but if it does, assume the worst!  
  echo "(Assuming you can't see EOF status from read anyway.)"  
  d_eofnblk=$undef  
  ;;  
esac  
  ;;  
esac  
$rm_try head.c mtry
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/nblock_io.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_charsprf.U 1 2006-08-24 12:32:52Z rmanfredi $  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: $Log: d_charsprf.U,v $  
?RCS: Revision 3.0 1993/08/18 12:05:49 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d_charsprf: cat rm +cc Setvar  
?MAKE: -pick add $@ %<  
?S:d_charsprf:  
?S: This variable conditionally defines CHARSPRINTF if this system  
?S: declares "char *sprintf()" in stdio.h. The trend seems to be to  
?S: declare it as "int sprintf()".  
?S:.  
?C:CHARSPRINTF:  
?C: This symbol is defined if this system declares "char *sprintf()" in  
?C: stdio.h.  
  The trend seems to be to declare it as "int sprintf()". It  
?C: is up to the package author to declare sprintf correctly based on the  
?C: symbol.  
?C:.  
?H:#$d_charsprf CHARSPRINTF /**/  
?H:.  
?F:!ucbsprf.c !ucbsprf  
?LINT:set d_charsprf  
: see if sprintf is declared as int or pointer to char  
echo " "
```

```

$cat >ucbsprf.c <<'EOF'
int main()
{
int sprintf();
char buf[10];
exit((unsigned long)sprintf(buf,"%s","foo") > 10L);
}
EOF
if $cc -o ucbsprf ucbsprf.c >/dev/null 2>&1 && ./ucbsprf; then
echo "Your sprintf() returns (int)." >&4
val="$undef"
else
echo "Your sprintf() returns (char*)." >&4
val="$define"
fi
set d_charsprf
eval $setvar
$rm -f ucbsprf*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_charsprf.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_qgcvt: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_qgcvt:

?S: This variable conditionally defines the HAS\_QGCVT symbol, which

?S: indicates to the C program that the qgcvt() routine is available.

?S:.

?C:HAS\_QGCVT:

?C: This symbol, if defined, indicates that the qgcvt routine is

?C: available to convert long doubles ("quad doubles") to strings.

?C: This is a low-level routine hopefully faster than sprintf.

?C:.

?H:#\$d\_qgcvt HAS\_QGCVT /\*\*/

?H:.

?LINT:set d\_qgcvt

: see if qgcvt exists

set qgcvt d\_qgcvt

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_qgcvt.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Unix.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:20:06 ram

?RCS: patch61: created

?RCS:

?X:

?X: The purpose of this unit is to define things that are common across all

?X: known UNIX platforms. If Configure is ported/used on a non-UNIX

?X: environment, then some of the following variables can be redefined in hint

?X: files.

?X:

?MAKE:Unix \_a \_o firstmakefile archobjs: Oldconfig

?MAKE: -pick add \$@ %<

?S:\_a (lib\_ext):

?S: This variable defines the extension  
used for ordinary libraries.

?S: For unix, it is 'a'. The '.' is included. Other possible

?S: values include '.lib'.

?S:.

?S:\_o (obj\_ext):

?S: This variable defines the extension used for object files.

?S: For unix, it is 'o'. The '.' is included. Other possible

?S: values include '.obj'.

?S:.

?S:firstmakefile:

?S: This variable defines the first file searched by make. On unix,

?S: it is makefile (then Makefile). On case-insensitive systems,

?S: it might be something else. This is only used to deal with

?S: convoluted make depend tricks.

?S:.

?S:archobjs:

?S: This variable defines any additional objects that must be linked

?S: in with the program on this architecture. On unix, it is usually  
?S: empty. It is typically used to include emulations of unix calls  
?S: or other facilities. For perl on OS/2, for example, this would  
?S: include os2/os2.obj.

?S:.

?INIT:: Extra object files, if any, needed on this platform.

?INIT:archobjs="

: Define several unixisms.

: Hints files

or command line option can be used to override them.

case "\$\_a" in

") \_a='.a';;

esac

case "\$\_o" in

") \_o='.o';;

esac

@if firstmakefile

: Which makefile gets called first. This is used by make depend.

case "\$firstmakefile" in

") firstmakefile='makefile';;

esac

@end

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Unix.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_flockproto: Hasproto i\_sysfile

?MAKE: -pick add \$@ %<

?S:d\_flockproto:

?S: This variable conditionally defines the HAS\_FLOCK\_PROTO symbol,

?S: which indicates to the C program that the system provides

?S: a prototype for the flock() function. Otherwise, it is

?S: up to the program to supply one.

?S:.

```
?C:HAS_FLOCK_PROTO:
?C: This symbol, if defined, indicates that the system provides
?C: a prototype for the flock() function. Otherwise, it is up
?C: to the program to supply one. A good guess is
?C: extern int flock(int,
int);
?C:
?H:#$d_flockproto HAS_FLOCK_PROTO /**/
?H:
?LINT:set d_flockproto
: see if prototype for flock is available
echo " "
set d_flockproto flock $i_sysfile sys/file.h
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_flockproto.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Filexp.U,v $
?RCS: Revision 3.0.1.2 1994/10/29 15:52:53 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS: patch36: added HOME to the ?T: line since metalint now checks ${HOME}
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 14:03:00 ram
?RCS: patch23: made sure error status from csh is propagated (WED)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:53 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit produces a shell script which will expand filenames beginning
?X:
with tildes. The script is deleted at the end of Configure.
?X:
?MAKE:Filexp: startsh sed test expr eunicefix
?MAKE: -pick add $@ %<
```

```

?F:./filexp
?T:HOME LOGDIR dir me name failed
: set up shell script to do ~ expansion
cat >filexp <<EOSS
$startsh
: expand filename
?X:
?X: The case entries below escape the ~ as some shells have shown expansion
?X: of the ~ during here-doc processing.
?X:
case "$1" in
|~/*|~)
echo \ $1 | $sed "s|~|${HOME}-${LOGDIR}|"
;;
|~*)
if $test -f /bin/csh; then
/bin/csh -f -c "glob \ $1"
failed=\ $?
echo ""
exit \ $failed
else
name=\ ` $expr x\ $1 : '.*\ ([^/]*)\ `
dir=\ ` $sed -n -e "/^\${name}:/ {s/^[^:]*:[^:]*:[^:]*:[^:]*:[^:]*:[^:]*:([^\:]*).*""\$/1/" -e p -e q -e '}' </etc/passwd\ `
if $test ! -d "\ $dir"; then
me=\ `basename \ $0\ `
echo "\ $me: can't locate home directory for: \ $name" >&2
exit 1
fi
case "\ $1" in
|*/*)
echo \ $dir\ ` $expr x\ $1 : '.*\ ([^/]*\ ([^.]*)\ `
;;
|*)
echo \ $dir
;;
esac
fi
;;
*)
echo \ $1
;;
esac
EOSS
chmod
+x filexp
$unicefix filexp

```

Found in path(s):



\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Filexp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_preadv.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_preadv.U,v \$

?RCS:

?MAKE:d\_preadv: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_preadv:

?S: This variable conditionally defines the HAS\_PREADV symbol, which

?S: indicates to the C program that the preadv() routine is available.

?S:.

?C:HAS\_PREADV :

?C: This symbol, if defined, indicates that the preadv routine is

?C: available to perform vectored reads on a file descriptor at a

?C: given offset.

?C:.

?H:#\$d\_preadv HAS\_PREADV /\*\*/

?H:.

?LINT:set d\_preadv

:

see if preadv exists

set preadv d\_preadv

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_preadv.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999, Jarkko Hietaniemi

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?RCS: of the source tree for dist 3.0.  
?RCS:  
?MAKE:d\_ustat: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_ustat:  
?S: This variable conditionally defines HAS\_USTAT if ustat() is  
?S: available to query file system statistics by dev\_t.  
?S:.  
?C:HAS\_USTAT:  
?C: This symbol, if defined, indicates that the ustat system call is  
?C: available to query file system statistics by dev\_t.  
?C:.  
?H:#\$d\_ustat HAS\_USTAT /\*\*/  
?H:.  
?LINT:set d\_ustat  
: see if ustat exists  
set ustat d\_ustat  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_ustat.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_tzname.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_tzname.U,v \$  
?RCS: Revision 3.0.1.2 1994/08/29 16:14:43 ram  
?RCS: patch32: forgot to set proper value in the val variable  
?RCS:  
?RCS: Revision 3.0.1.1 1994/06/20 06:57:55 ram  
?RCS: patch30: created  
?RCS:  
?MAKE:d\_tzname: Csym Setvar  
?MAKE: -pick add \$@ %<  
?S:d\_tzname:  
?S: This variable conditionally defines HAS\_TZNAME if tzname[] is  
?S: available to access timezone names.  
?S:.  
?C:HAS\_TZNAME:

```

?C: This symbol, if defined, indicates that the tzname[]
array is
?C: available to access timezone names.
?C:.
?H:#$d_tzname HAS_TZNAME /**/
?H:.
?LINT:set d_tzname
: see if tzname[] exists
echo " "
if set tzname val -a d_tzname; eval $csym; $val; then
val="$define"
echo 'tzname[] found.' >&4
else
val="$undef"
echo 'tzname[] NOT found.' >&4
fi
set d_tzname
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/d_tzname.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$

```

```

?RCS:

```

```

?RCS: Copyright (c) 2005, H.Merijn Brand

```

```

?RCS:

```

```

?RCS: You may redistribute only under the terms of the Artistic License,

```

```

?RCS: as specified in the README file that comes with the distribution.

```

```

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```

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```

```

?RCS: of the source tree for dist 3.0.

```

```

?RCS:

```

```

?MAKE:d_malloc_size d_malloc_good_size d_malloc_usable_size: Inlibc

```

```

?MAKE: -pick add $@ %<

```

```

?S:d_malloc_size:

```

```

?S: This symbol, if defined, indicates that the malloc_size

```

```

?S: routine is available for use.

```

```

?S:.

```

```

?S:d_malloc_good_size:

```

```

?S: This symbol, if defined, indicates that the malloc_good_size

```

```

?S: routine is available for use.

```

```

?S:.

```

```

?S:d_malloc_usable_size:

```

```

?S: This symbol, if defined, indicates that the malloc_usable_size

```

```

?S: routine is available for use.

```

```

?S:.

```

?C:HAS\_MALLOC\_SIZE:

?C: This symbol, if defined, indicates that  
the malloc\_size

?C: routine is available for use.

?C:.

?H:#\$d\_malloc\_size HAS\_MALLOC\_SIZE /\*\*/

?H:.

?C:HAS\_MALLOC\_GOOD\_SIZE:

?C: This symbol, if defined, indicates that the malloc\_good\_size

?C: routine is available for use.

?C:.

?H:#\$d\_malloc\_good\_size HAS\_MALLOC\_GOOD\_SIZE /\*\*/

?H:.

?C:HAS\_MALLOC\_USABLE\_SIZE:

?C: This symbol, if defined, indicates that the malloc\_usable\_size

?C: routine is available for use.

?C:.

?H:#\$d\_malloc\_usable\_size HAS\_MALLOC\_USABLE\_SIZE /\*\*/

?H:.

?LINT:set d\_malloc\_size

?LINT:set d\_malloc\_good\_size

?LINT:set d\_malloc\_usable\_size

: see if malloc\_size exists

set malloc\_size d\_malloc\_size

eval \$inlibc

: see if malloc\_size\_good exists

set malloc\_good\_size d\_malloc\_good\_size

eval \$inlibc

: see if malloc\_usable\_size exists

set malloc\_usable\_size d\_malloc\_usable\_size

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_malloc\_size.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_msgsnd.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

```

?RCS:
?RCS: $Log: d_msgsnd.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:41 ram
?RCS: Baseline for dist 3.0 worldwide release.
?RCS:
?MAKE:d_msgsnd: Inlibc
?MAKE: -pick add $@ %<
?S:d_msgsnd:
?S: This variable conditionally defines the HAS_MSGSND symbol, which
?S: indicates to the C program that the msgsnd() routine is available.
?S:.
?C:HAS_MSGSND:
?C: This symbol, if defined, indicates that the msgsnd() routine is
?C: available to send a message into the message queue.
?C:.
?H:#$d_msgsnd
HAS_MSGSND /**/
?H:.
?LINT:set d_msgsnd
: see if msgsnd exists
set msgsnd d_msgsnd
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_msgsnd.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_endservent_r.U,v ORCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_endservent_r endservent_r_proto: Inlibc Protochk Hasproto i_systypes \
usethreads i_netdb extern_C
?MAKE: -pick add $@ %<
?S:d_endservent_r:
?S: This variable conditionally defines the HAS_ENDSERVENT_R symbol,
?S: which indicates to the C program that the endservent_r()
?S: routine is available.
?S:.
?S:endservent_r_proto:
?S: This variable encodes the prototype of endservent_r.
?S: It is zero if d_endservent_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_endservent_r

```

?S: is defined.

?S:.

?C:HAS\_ENDSERVENT\_R:

?C: This symbol, if defined, indicates that the endservent\_r routine

?C: is

available to endservent re-entrantly.

?C:.

?C:ENDSERVENT\_R\_PROTO:

?C: This symbol encodes the prototype of endservent\_r.

?C: It is zero if d\_endservent\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_endservent\_r

?C: is defined.

?C:.

?H:#\$d\_endservent\_r HAS\_ENDSERVENT\_R /\*\*/

?H:#define ENDSERVENT\_R\_PROTO \$endservent\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_endservent\_r\_proto

: see if endservent\_r exists

set endservent\_r d\_endservent\_r

eval \$inlibc

case "\$d\_endservent\_r" in

"\$define")

hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"

case "\$d\_endservent\_r\_proto:\$usetthreads" in

":define") d\_endservent\_r\_proto=define

set d\_endservent\_r\_proto endservent\_r \$hdrs

eval \$hasproto ;;

\*) ;;

esac

case "\$d\_endservent\_r\_proto" in

define)

case "\$endservent\_r\_proto" in

"|0) try='int endservent\_r(struct servent\_data\*);'

./protochk "\$extern\_C \$try" \$hdrs && endservent\_r\_proto=I\_D ;;

esac

case "\$endservent\_r\_proto" in

"|0) try='void endservent\_r(struct

servent\_data\*);'

./protochk "\$extern\_C \$try" \$hdrs && endservent\_r\_proto=V\_D ;;

esac

case "\$endservent\_r\_proto" in

"|0) d\_endservent\_r=undef

endservent\_r\_proto=0

echo "Disabling endservent\_r, cannot determine prototype." >&4 ;;

\* ) case "\$endservent\_r\_proto" in

REENTRANT\_PROTO\*) ;;

\*) endservent\_r\_proto="REENTRANT\_PROTO\_\$endservent\_r\_proto" ;;

esac

```

echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "endservent_r has no prototype, not using it." >&4 ;;
esac
d_endservent_r=undef
endservent_r_proto=0
;;
esac
;;
*) endservent_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_endservent_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_ttyname\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_ttyname\_r ttyname\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usetthreads i\_unistd extern\_C

?MAKE: -pick add \$@ %<

?S:d\_ttyname\_r:

?S: This variable conditionally defines the HAS\_TTYNAME\_R symbol,

?S: which indicates to the C program that the ttyname\_r()

?S: routine is available.

?S:.

?S:ttyname\_r\_proto:

?S: This variable encodes the prototype of ttyname\_r.

?S: It is zero if d\_ttyname\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_ttyname\_r

?S: is defined.

?S:.

?C:HAS\_TTYNAME\_R:

?C: This symbol, if defined, indicates that the ttyname\_r routine

?C: is available to ttyname re-entrantly.

?C:.

?C:TTYNAME\_R\_PROTO:

?C: This

```

symbol encodes the prototype of ttyname_r.
?C: It is zero if d_ttyname_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_ttyname_r
?C: is defined.
?C:.
?H:#$d_ttyname_r HAS_TTYNAME_R /**/
?H:#define TTYNAME_R_PROTO $ttyname_r_proto /**/
?H:.
?T:try hdrs d_ttyname_r_proto
: see if ttyname_r exists
set ttyname_r d_ttyname_r
eval $inlibc
case "$d_ttyname_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_unistd unistd.h"
case "$d_ttyname_r_proto:$susetheads" in
":define") d_ttyname_r_proto=define
set d_ttyname_r_proto ttyname_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_ttyname_r_proto" in
define)
case "$ttyname_r_proto" in
"|0) try='int ttyname_r(int, char*, size_t);'
./protochk "$sextern_C $try" $hdrs && ttyname_r_proto=I_IBW ;;
esac
case "$ttyname_r_proto" in
"|0) try='int ttyname_r(int, char*, int);'
./protochk "$sextern_C $try" $hdrs && ttyname_r_proto=I_IBI ;;
esac
case "$ttyname_r_proto"
in
"|0) try='char* ttyname_r(int, char*, int);'
./protochk "$sextern_C $try" $hdrs && ttyname_r_proto=B_IBI ;;
esac
case "$ttyname_r_proto" in
"|0) d_ttyname_r=undef
ttyname_r_proto=0
echo "Disabling ttyname_r, cannot determine prototype." >&4 ;;
* ) case "$ttyname_r_proto" in
REENTRANT_PROTO*) ;;
*) ttyname_r_proto="REENTRANT_PROTO_$ttyname_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susetheads" in

```



```

define) echo "ttyname_r has no prototype, not using it." >&4 ;;
esac
d_ttyname_r=undef
ttyname_r_proto=0
;;
esac
;;
*) ttyname_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_ttyname_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_const.U,v \$

?RCS: Revision 3.0.1.1 1993/11/10 17:33:41 ram

?RCS: patch14: stronger const check with added typedef for MIPS cc

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:51 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_const: cat rm cc cflags Setvar

?MAKE: -pick add \$@ %<

?S:d\_const:

?S: This variable conditionally defines the HASCONST symbol, which

?S: indicates to the C program that this C compiler knows about the

?S: const type.

?S:.

?C:HASCONST ~ %<:

?C: This symbol,

if defined, indicates that this C compiler knows about

?C: the const type. There is no need to actually test for that symbol

?C: within your programs. The mere use of the "const" keyword will

?C: trigger the necessary tests.

?C:.

?H:%<:#\$d\_const HASCONST /\*\*/

```

?H:%<:#ifndef HASCONST
?H:%<:#define const
?H:%<:#endif
?H:.
?W:%<:const
?F:const.c const.o
?LINT:set d_const
?LINT:known const
: check for const keyword
echo " "
echo 'Checking to see if your C compiler knows about "const"...' >&4
$cat >const.c <<'EOCP'
?X: mmcg@bruce.cs.monash.edu.au reports that:
?X: The MIPS cc compiler (V2.10) on a dec 5000 running Ultrix 4.2A
?X: pretends to understand `const' but doesn't - it'll also fail to
?X: handle typedefs properly if they're declared const. To guard
?X: against this, boost up the test by using an explicit typedef...
typedef struct spug { int drokk; } spug;
int main()
{
const char *foo;
const spug y;
}
EOCP
if $cc -c $ccflags const.c >/dev/null 2>&1 ; then
val="$define"
echo "Yup,
it does."
else
val="$undef"
echo "Nope, it doesn't."
fi
set d_const
eval $setvar
$rm -f const.c const.o

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/d_const.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
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```

```

?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: sbrksmart.U,v $
?RCS: Revision 3.0.1.2 1995/01/11 15:35:41 ram
?RCS: patch45: now sets sbrksmart to undef explicitly when lacking sbrk()
?RCS: patch45: forgot a cast when using return value from sbrk()
?RCS:
?RCS: Revision 3.0.1.1 1994/01/24 14:16:45 ram
?RCS: patch16: created
?RCS:
?MAKE:sbrksmart: cat d_sbrk +cc +ccflags +libs rm
?MAKE: -pick add $@ %<
?S:sbrksmart:
?S: This variable conditionally defines HAS_SMART_SBRK if the sbrk()
?S: routine honors a negative argument to lower the break
value.
?S:.
?C:HAS_SMART_SBRK:
?C: This symbol is defined when the sbrk() system call may be used with
?C: a negative argument to lower the break value, therefore releasing
?C: core to the system. If not, you'd probably be better off using the
?C: mmap() system call.
?C:.
?H:#$sbrksmart HAS_SMART_SBRK /**/
?H:.
?T:dumb
?F:!sbrk
: see whether sbrk can release core to the kernel
echo " "
case "$d_sbrk" in
"$define")
echo "Let's see if your sbrk() is smart enough to release core..." >&4
$cat > sbrk.c <<EOC
#define INC 256 /* Small enough to be less than a page size */

int main()
{
char *obrk = (char *) sbrk(0);
char *nbrk;

nbrk = (char *) sbrk(INC);
if (nbrk == (char *) -1)
exit(1); /* Not enough memory */
if (nbrk != obrk)
exit(2); /* Unreliable sbrk() */
nbrk = (char *) sbrk(-INC);
if (nbrk == (char *) -1)

```

```

exit(3); /* May have understood negative arg as huge positive */
if (obrk != (char *) sbrk(0))
exit(4); /* Not smart, definitely */

exit(0); /* Ok */
}
EOC
sbrksmart="$undef"
dumb='--
assuming dumb sbrk().'
if $cc $ccflags -o sbrk sbrk.c $libs >/dev/null 2>&1; then
./sbrk >/dev/null 2>&1
case $? in
0) sbrksmart="$define"
echo "Yes, it can be used with negative values." ;;
1) echo "Sorry, not enough memory $dumb" ;;
2) echo "No it's not, and besides it seems to be buggy..." ;;
3) echo "No, it fails with negative values." ;;
4) echo "Nope, your sbrk() is too dumb." ;;
*) echo "Err... Unexpected result $dumb" ;;
esac
else
echo "(Could not compile test program $dumb)"
fi
;;
*)
echo "Since you don't have sbrk(), let's forget about the smart test!"
sbrksmart="$undef"
;;
esac
$rm -f sbrk sbrk.* core

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/sbrksmart.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_dosuid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Tye McQueen <tye@metronet.com> added safe setuid script checks.

?RCS:  
?RCS: \$Log: d\_dosuid.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:33:03 ram  
?RCS: patch61: moved unit to TOP via a ?Y: layout directive  
?RCS: patch61: tell them /dev/fd is not about floppy disks  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:12:08 ram  
?RCS: patch36: added checks for secure setuid scripts (Tye McQueen)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:55 ram  
?RCS: Baseline for  
dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_dosuid d\_suidsafes: cat contains ls rm test Myread Setvar \  
Oldconfig Guess package hint patchlevel  
?MAKE: -pick add \$@ %<  
?S:d\_suidsafes:  
?S: This variable conditionally defines SETUID\_SCRIPTS\_ARE\_SECURE\_NOW  
?S: if setuid scripts can be secure. This test looks in /dev/fd/.  
?S:.  
?S:d\_dosuid:  
?S: This variable conditionally defines the symbol DOSUID, which  
?S: tells the C program that it should insert setuid emulation code  
?S: on hosts which have setuid #! scripts disabled.  
?S:.  
?C:SETUID\_SCRIPTS\_ARE\_SECURE\_NOW:  
?C: This symbol, if defined, indicates that the bug that prevents  
?C: setuid scripts from being secure is not present in this kernel.  
?C:.  
?C:DOSUID:  
?C: This symbol, if defined, indicates that the C program should  
?C: check the script that it is executing for setuid/setgid bits, and  
?C: attempt to emulate setuid/setgid on systems that have disabled  
?C: setuid #! scripts because the kernel can't do it securely.  
?C: It is up to the package  
designer to make sure that this emulation  
?C: is done securely. Among other things, it should do an fstat on  
?C: the script it just opened to make sure it really is a setuid/setgid  
?C: script, it should make sure the arguments passed correspond exactly  
?C: to the argument on the #! line, and it should not trust any  
?C: subprocesses to which it must pass the filename rather than the  
?C: file descriptor of the script to be executed.  
?C:.  
?H:#\$d\_suidsafes SETUID\_SCRIPTS\_ARE\_SECURE\_NOW /\*\*/  
?H:#\$d\_dosuid DOSUID /\*\*/  
?H:.  
?Y:TOP  
?F:!reflect

```
?LINT: set d_suidsafes
: see if setuid scripts can be secure
$cat <<EOM
```

Some kernels have a bug that prevents setuid #! scripts from being secure. Some sites have disabled setuid #! scripts because of this.

First let's decide if your kernel supports secure setuid #! scripts.  
(If setuid #! scripts would be secure but have been disabled anyway, don't say that they are secure if asked.)

EOM

```
val="$undef"
if $test -d /dev/fd; then
echo "#!$ls" >reflect
chmod
+x,u+s reflect
./reflect >flect 2>&1
if $contains "/dev/fd" flect >/dev/null; then
echo "Congratulations, your kernel has secure setuid scripts!" >&4
val="$define"
else
$cat <<EOM
```

If you are not sure if they are secure, I can check but I'll need a username and password different from the one you are using right now.  
If you don't have such a username or don't want me to test, simply enter 'none'.

EOM

```
rp='Other username to test security of setuid scripts with?'
dflt='none'
./myread
case "$ans" in
n|none)
case "$d_suidsafes" in
") echo "I'll assume setuid scripts are *not* secure." >&4
dflt=n;;
"$undef")
echo "Well, the $hint value is *not* secure." >&4
dflt=n;;
*) echo "Well, the $hint value *is* secure." >&4
dflt=y;;
esac
;;
*)
$rm -f reflect flect
echo "#!$ls" >reflect
```

```

chmod +x,u+s reflect
echo >flect
chmod a+w flect
echo "'su" will (probably) prompt you for "'$ans's password.'"
su $ans -c './reflect
>flect'
if $contains "/dev/fd" flect >/dev/null; then
    echo "Okay, it looks like setuid scripts are secure." >&4
    dflt=y
else
    echo "I don't think setuid scripts are secure." >&4
    dflt=n
fi
;;
esac
rp='Does your kernel have *secure* setuid scripts?'
./myread
case "$ans" in
[yY]*) val="$define";;
*) val="$undef";;
esac
fi
else
echo "I don't think setuid scripts are secure (no /dev/fd directory)." >&4
echo "(That's for file descriptors, not floppy disks.)"
val="$undef"
fi
set d_suidsafes
eval $setvar

$rm -f reflect flect

```

```

: now see if they want to do setuid emulation
if $test $patchlevel -lt 11; then
echo " "
val="$undef"
case "$d_suidsafes" in
"$define")
val="$undef"
echo "No need to emulate SUID scripts since they are secure here." >&4
;;
*)
$cat <<EOM

```

Some systems have disabled setuid scripts, especially systems where setuid scripts cannot be secure. On systems where setuid scripts have been disabled, the setuid/setgid bits on scripts are currently useless. It is possible for \$package to detect those bits and emulate

setuid/setgid in a secure fashion. This emulation will only work if setuid scripts have been disabled in your kernel.

EOM

```
case "$d_dosuid" in
"$define") dflt=y ;;
*) dflt=n ;;
esac
rp="Do you want to do setuid/setgid emulation?"
. ./myread
case "$ans" in
[yY]*) val="$define";;
*) val="$undef";;
esac
;;
esac
set d_dosuid
eval $setvar
else
  case "$d_dosuid" in
"$define")
cat >&4 <<EOH
```

SUID emulation has been removed for 5.12  
Please re-run Configure without -Dd\_dosuid

EOH

```
exit 1;
;;
esac
d_dosuid=undef
fi
```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_dosuid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Loc\_sed.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

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?RCS:

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```

?RCS:
?X: This is used in perl.c.
?MAKE:full_sed: sed
?MAKE: -pick add $@ %<
?S:full_sed:
?S: This variable contains the full pathname to 'sed', whether or
?S: not the user has specified 'portability'. This is only used
?S: in the compiled C program, and we assume that all systems which
?S: can share this executable will have the same full pathname to
?S: 'sed.'
?S:.
?X: Yes, I know about the C symbol PORTABLE, but I think sed
?X: is
    unlikely to move, and I'm too lazy to add all the
?X: #ifdef PORTABLE sections to the perl source.
?X:
?C:LOC_SED:
?C: This symbol holds the complete pathname to the sed program.
?C:.
?H:#define LOC_SED "$full_sed" /**/
?H:.
: Store the full pathname to the sed program for use in the C program
full_sed=$sed

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/Loc_sed.U

```

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```

?RCS: $Id: d_ctermid_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_ctermid_r ctermid_r_proto: Inlibc Protochk Hasproto i_systypes \
    usethreads extern_C
?MAKE: -pick add $@ %<
?S:d_ctermid_r:
?S: This variable conditionally defines the HAS_CTERMID_R symbol,
?S: which indicates to the C program that the ctermid_r()
?S: routine is available.
?S:.
?S:ctermid_r_proto:
?S: This variable encodes the prototype of ctermid_r.
?S: It is zero if d_ctermid_r is undef, and one of the

```

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_ctermid\_r

?S: is defined.

?S:.

?C:HAS\_CTERMID\_R:

?C: This symbol, if defined, indicates that the ctermid\_r routine

?C: is available to ctermid re-entrantly.

?C:.

?C:CTERMID\_R\_PROTO:

?C: This

symbol encodes the prototype of ctermid\_r.

?C: It is zero if d\_ctermid\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_ctermid\_r

?C: is defined.

?C:.

?H:#\$d\_ctermid\_r HAS\_CTERMID\_R /\*\*/

?H:#define CTERMID\_R\_PROTO \$ctermid\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_ctermid\_r\_proto

: see if ctermid\_r exists

set ctermid\_r d\_ctermid\_r

eval \$inlibc

case "\$d\_ctermid\_r" in

"\$define")

hdrs="\$i\_systypes sys/types.h define stdio.h "

case "\$d\_ctermid\_r\_proto:\$usetthreads" in

":define") d\_ctermid\_r\_proto=define

set d\_ctermid\_r\_proto ctermid\_r \$hdrs

eval \$hasproto ;;

\*) ;;

esac

case "\$d\_ctermid\_r\_proto" in

define)

case "\$ctermid\_r\_proto" in

"|0) try='char\* ctermid\_r(char\*);'

./protochk "\$extern\_C \$try" \$hdrs && ctermid\_r\_proto=B\_B ;;

esac

case "\$ctermid\_r\_proto" in

"|0) d\_ctermid\_r=undef

ctermid\_r\_proto=0

echo "Disabling ctermid\_r, cannot determine prototype." >&4 ;;

\* ) case "\$ctermid\_r\_proto" in

REENTRANT\_PROTO\*) ;;

\*)

ctermid\_r\_proto="REENTRANT\_PROTO\_\${ctermid\_r\_proto}" ;;

esac

echo "Prototype: \$try" ;;

esac

;;

```

*) case "$usethreads" in
define) echo "ctermid_r has no prototype, not using it." >&4 ;;
esac
d_ctermid_r=undef
ctermid_r_proto=0
;;
esac
;;
*) ctermid_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_ctermid_r.U

```

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?RCS: \$Id\$

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?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_dlopen.U,v \$

?RCS: Revision 3.0.1.2 1995/07/25 13:52:56 ram

?RCS: patch56: force compile-link test since symbol might lie in crt0.o (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:07:34 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_dlopen: Inlibc runnm

?MAKE: -pick add \$@ %<

?S:d\_dlopen:

?S: This variable conditionally defines the HAS\_DLOPEN symbol, which

?S: indicates to the C program that the dlopen() routine

is available.

?S:.

?C:HAS\_DLOPEN :

?C: This symbol, if defined, indicates that the dlopen routine is

?C: available.

?C:.

?H:#\$d\_dlopen HAS\_DLOPEN /\*\*/

?H:  
?T: xxx\_runnm  
?LINT:set d\_dlopen  
?X: We don't permanently change runnm, but we do temporarily.  
?LINT: change runnm  
: see if dlopen exists  
?X: On NetBSD and FreeBSD, dlopen is available, but it is in  
?X: /usr/lib/crt0.o, not in any of the libraries. Therefore, do not  
?X: use the nm extraction, but use a real compile and link test instead.  
xxx\_runnm="\$runnm"  
runnm=false  
set dlopen d\_dlopen  
eval \$inlibc  
runnm="\$xxx\_runnm"

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_dlopen.U

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?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_ualarm: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_ualarm:  
?S: This variable conditionally defines the HAS\_UALARM symbol, which  
?S: indicates to the C program that the ualarm() routine is available.  
?S:  
?C:HAS\_UALARM:  
?C: This symbol, if defined, indicates that the ualarm routine is  
?C: available to do alarms with microsecond granularity.  
?C:  
?H:#\$d\_ualarm HAS\_UALARM /\*\*/  
?H:  
?LINT:set d\_ualarm  
: see if ualarm exists  
set ualarm d\_ualarm  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_ualarm.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
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?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:d_getespwnam: Inlibc
?MAKE: -pick add $@ %<
?S:d_getespwnam:
?S: This variable conditionally defines HAS_GETESPWNAM if getespwnam() is
?S: available to retrieve enhanced (shadow) password entries by name.
?S:.
?C:HAS_GETESPWNAM:
?C: This symbol, if defined, indicates that the getespwnam system call is
?C: available to retrieve enhanced (shadow) password entries by name.
?C:.
?H:$d_getespwnam HAS_GETESPWNAM /**/
?H:.
?LINT:set d_getespwnam
: see if getespwnam exists
set getespwnam d_getespwnam
eval $inlibc
```

Found in

```
path(s):
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/perl/d_getespwnam.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1999 Jarkko Hietaniemi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
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?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:sitehtml3dir sitehtml3direxp installsitehtml3dir: Getfile \
Setprefixvar prefix siteprefix html3dir sed
?MAKE: -pick add $@ %<
```

```

?Y:TOP
?D:sitehtml3dir="
?S:sitehtml3dir:
?S: This variable contains the name of the directory in which site-specific
?S: library html source pages are to be put. It is the responsibility of the
?S: Makefile.SH to get the value of this into the proper command.
?S: You must be prepared to do the ~name expansion yourself.
?S: The standard distribution will put nothing in this directory.
?S: After
perl has been installed, users may install their own local
?S: library html pages in this directory with
?S: MakeMaker Makefile.PL
?S: or equivalent. See INSTALL for details.
?S:.
?D:sitehtml3direxp="
?S:sitehtml3direxp:
?S: This variable is the same as the sitehtml3dir variable, but is filename
?S: expanded at configuration time, for convenient use in makefiles.
?S:.
?D:installsitehtml3dir="
?S:installsitehtml3dir:
?S: This variable is really the same as sitehtml3direxp, unless you are using
?S: AFS in which case it points to the read/write location whereas
?S: html3direxp only points to the read-only access location. For extra
?S: portability, you should only use this variable within your makefiles.
?S:.
?LINT:change prefixvar
?LINT:set installsitehtml3dir
?LINT:set sitehtml3dir
?LINT:set sitehtml3direxp
: determine where add-on library html pages go
: There is no standard location, so try to copy the previously-selected
: directory structure for the core html pages.
case
"$sitehtml3dir" in
")  dflt=`echo "$html3dir" | $sed "s#^$prefix#$siteprefix#"` ;;
*)  dflt=$sitehtml3dir ;;
esac
case "$dflt" in
"| ") dflt=none ;;
esac
fn=dn+~
rp=Pathname where the site-specific library html pages should be installed?
./getfile
prefixvar=sitehtml3dir
./setprefixvar

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/sitehtml3dir.U

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_atanh: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_atanh:

?S: This variable conditionally defines the HAS\_ATANH symbol, which

?S: indicates to the C program that the atanh() routine is available.

?S:.

?C:HAS\_ATANH:

?C: This symbol, if defined, indicates that the atanh routine is

?C: available to do the inverse hyperbolic tangent function.

?C:.

?H:#\$d\_atanh HAS\_ATANH /\*\*/

?H:.

?LINT:set d\_atanh

: see if atanh exists

set atanh d\_atanh

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_atanh.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: sockopt.U,v 3.0.1.1 1995/07/25 14:16:14 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: sockopt.U,v \$

?RCS: Revision 3.0.1.1 1995/07/25 14:16:14 ram

?RCS: patch56: obsoleted KEEPALIVE in favor of CAN\_KEEPALIVE for consistency

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:48 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_keepalive: cat rm contains +cc +ccflags +ldflags socketlib sockethdr \

d\_oldsock libs Oldconfig Setvar Findhdr

```

?MAKE: -pick add $@ %<
?S:d_keepalive:
?S: This symbol conditionally defines CAN_KEEPALIVE which
indicates to the C
?S: program that setsockopt SO_KEEPALIVE will work properly.
?S:.
?C:CAN_KEEPALIVE (KEEPALIVE):
?C: This symbol if defined indicates to the C program that the SO_KEEPALIVE
?C: option of setsockopt() will work as advertised in the manual.
?C:.
?H:#$d_keepalive CAN_KEEPALIVE /**/
?H:.
?F:!socket
?LINT:set d_keepalive
: see if setsockopt with SO_KEEPALIVE works as advertised
echo " "
case "$d_oldsock" in
"$undef")
if $contains SO_KEEPALIVE `./findhdr sys/socket.h` \
/dev/null >/dev/null 2>&1
then
echo "OK, let's see if SO_KEEPALIVE works as advertised..." >&4
$cat > socket.c <<EOP
#include <sys/types.h>
#include <sys/socket.h>
#include <netinet/in.h>
#include <netdb.h>

int main()
{
int s = socket(AF_INET, SOCK_STREAM, 0);
if (s == -1)
exit(1);
if (-1 == setsockopt(s, SOL_SOCKET, SO_KEEPALIVE, 0, 0))
exit(2);
exit(0);
}
EOP
if $cc $ccflags $sockethdr $ldflags -o socket socket.c $libs \
$socketlib >/dev/null 2>&1; then
./socket >/dev/null 2>&1
case
$? in
0) echo "Yes, it does!"
val="$define";;
1) $cat <<EOM
(Something went wrong -- Assuming SO_KEEPALIVE is broken)
EOM

```



```

    val="$undef";;
2) echo "No, it doesn't. Don't trust your manuals!!"
    val="$undef";;
esac
else
    cat <<EOM
(I can't compile the test program -- Assuming SO_KEEPALIVE is broken)
EOM
    val="$undef"
fi
else
    echo "Strange!! You have BSD 4.2 sockets but no SO_KEEPALIVE option."
    val="$undef"
fi;;
*) cat <<EOM
As you have an old socket interface, you can't have heard of SO_KEEPALIVE.
EOM
    val="$undef";;
esac
set d_keepalive
eval $setvar
$rm -f socket socket.c

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/sockopt.U
```

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?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_finite: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_finite:

?S: This variable conditionally defines the HAS\_FINITE symbol, which

?S: indicates to the C program that the finite() routine is available.

?S:.

?C:HAS\_FINITE:

?C: This symbol, if defined, indicates that the finite routine is

?C: available to check whether a double is finite (non-infinity non-NaN).

?C:.

?H:#\$d\_finite HAS\_FINITE /\*\*/

?H:.

?LINT:set d\_finite

```
: see if finite exists
set finite d_finite
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_finite.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_waitpid.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
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```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_waitpid.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:02 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_waitpid: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_waitpid:
```

```
?S: This variable conditionally defines HAS_WAITPID if waitpid() is
```

```
?S: available to wait for child process.
```

```
?S:.
```

```
?C:HAS_WAITPID (WAITPID):
```

```
?C: This symbol, if defined, indicates that the waitpid routine is
```

```
?C: available to wait for child process.
```

```
?C:.
```

```
?H:#$d_waitpid HAS_WAITPID /**/
```

```
?H:.
```

```
?LINT:set
```

```
d_waitpid
```

```
: see if waitpid exists
```

```
set waitpid d_waitpid
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_waitpid.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

?RCS: Copyright (c) 2001, Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.

?RCS:

?RCS:

?MAKE:d\_dirfd: Compile cat rm Setvar i\_dirent i\_sysdir i\_sysndir i\_systypes i\_stdlib  
?MAKE: -pick add \$@ %<

?S:d\_dirfd:

?S: This variable conditionally defines the HAS\_DIRFD constant,  
?S: which indicates to the C program that dirfd() is available  
?S: to return the file descriptor of a directory stream.

?S:.

?C:HAS\_DIRFD:

?C: This manifest constant lets the C program know that dirfd  
?C: is available.

?C:.

?H:#\$d\_dirfd HAS\_DIRFD /\*\*/  
?H:.

?LINT:set d\_dirfd

?X: Can't use Inlibc because dirfd() might be a macro.

: Look  
for dirfd  
echo " "  
\$cat >dirfd.c <<EOM  
#include <stdio.h>  
#\$i\_stdlib I\_STDLIB  
#ifdef I\_STDLIB  
#include <stdlib.h>  
#endif  
#\$i\_dirent I\_DIRENT /\*\*/  
#\$i\_sysdir I\_SYS\_DIR /\*\*/  
#\$i\_sysndir I\_SYS\_NDIR /\*\*/  
#\$i\_systypes I\_SYS\_TYPES /\*\*/  
#if defined(I\_SYS\_TYPES)  
#include <sys/types.h>  
#endif  
#if defined(I\_DIRENT)  
#include <dirent.h>  
#else  
#ifdef I\_SYS\_NDIR  
#include <sys/ndir.h>  
#else  
#ifdef I\_SYS\_DIR  
#include <sys/dir.h>

```

#endif
#endif
#endif
int main() {
    DIR *dirp = opendir(".");
    if (dirfd(dirp) >= 0)
        exit(0);
    else
        exit(1);
}
EOM
val=$undef
set dirfd
if eval $compile; then
    val="$define"
fi
case "$val" in
$define) echo "dirfd() found." >&4 ;;
*) echo "dirfd() NOT found." >&4 ;;
esac
set d_dirfd
eval $setvar
$rm -f dirfd*

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_dirfd.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setservent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_setservent\_r setservent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_setservent\_r:

?S: This variable conditionally defines the HAS\_SETSERVENT\_R symbol,

?S: which indicates to the C program that the setservent\_r()

?S: routine is available.

?S:.

?S:setservent\_r\_proto:

?S: This variable encodes the prototype of setservent\_r.

?S: It is zero if d\_setservent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setservent\_r

?S: is defined.

?S:.

?C:HAS\_SETSERVENT\_R:

?C: This symbol, if defined, indicates that the setservent\_r routine

?C: is

available to setservent re-entrantly.

?C:.

?C:SETSERVENT\_R\_PROTO:

?C: This symbol encodes the prototype of setservent\_r.

?C: It is zero if d\_setservent\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setservent\_r

?C: is defined.

?C:.

?H:#\$d\_setservent\_r HAS\_SETSERVENT\_R /\*\*/

?H:#define SETSERVENT\_R\_PROTO \$setservent\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_setservent\_r\_proto

: see if setservent\_r exists

set setservent\_r d\_setservent\_r

eval \$inlibc

case "\$d\_setservent\_r" in

"\$define")

hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"

case "\$d\_setservent\_r\_proto:\$usetthreads" in

":define") d\_setservent\_r\_proto=define

set d\_setservent\_r\_proto setservent\_r \$hdrs

eval \$hasproto ;;

\*) ;;

esac

case "\$d\_setservent\_r\_proto" in

define)

case "\$setservent\_r\_proto" in

"|0) try='int setservent\_r(int, struct servent\_data\*);'

./protochk "\$extern\_C \$try" \$hdrs && setservent\_r\_proto=I\_ID ;;

esac

case "\$setservent\_r\_proto" in

"|0) try='void

setservent\_r(int, struct servent\_data\*);'

./protochk "\$extern\_C \$try" \$hdrs && setservent\_r\_proto=V\_ID ;;

esac

case "\$setservent\_r\_proto" in

"|0) d\_setservent\_r=undef

setservent\_r\_proto=0

echo "Disabling setservent\_r, cannot determine prototype." >&4 ;;

\* ) case "\$setservent\_r\_proto" in

REENTRANT\_PROTO\*) ;;

\*) setservent\_r\_proto="REENTRANT\_PROTO\_\$setservent\_r\_proto" ;;

```

esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "setservent_r has no prototype, not using it." >&4 ;;
esac
d_setservent_r=undef
setservent_r_proto=0
;;
esac
;;
*) setservent_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_setservent_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: h_sysfile.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: h_sysfile.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:13 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:h_sysfile: Nothing
```

```
?MAKE: -pick add $@ %<
```

```
?S:h_sysfile:
```

```
?S: This is variable gets set in various places to tell i_sys_file that
```

```
?S: <sys/file.h> should be included.
```

```
?S:.
```

```
: Initialize h_sysfile
```

```
h_sysfile=false
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/h_sysfile.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_ffs.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_ffs.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:03 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_ffs d_ffsl: Inlibc
?MAKE: -pick add $@ %<
?S:d_ffs:
?S: This variable conditionally defines the HAS_FFS symbol, which
?S: indicates to the C program that the ffs() routine is available
?S: to find the first bit which is set in its integer argument.
?S:.
?S:d_ffsl:
?S: This variable conditionally defines the HAS_FFSL symbol, which
?S: indicates
?S: to the C program that the ffs() routine is available
?S: to find the first bit which is set in its long integer argument.
?S:.
?C:HAS_FFS:
?C: This symbol, if defined, indicates that the ffs routine is available
?C: to find the first bit set in its argument. If it's not available,
?C: roll your own.
?C:.
?C:HAS_FFSL:
?C: This symbol, if defined, indicates that the ffs() routine is available
?C: to find the first bit set in its argument. If it's not available,
?C: roll your own.
?C:.
?H:#$d_ffs HAS_FFS /**/
?H:#$d_ffsl HAS_FFSL /**/
?H:.
?LINT:set d_ffs d_ffsl
: see if ffs exists
set ffs d_ffs
eval $inlibc
: see if ffs() exists
set ffs() d_ffsl
```

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_ffs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_group.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_group.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:34:52 ram

?RCS: patch61: useless unit dropped.

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:07:48 ram

?RCS: patch32: created by ADO

?RCS:

?X:

?X: Useless unit dropped.

?X:

?LINT:empty

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_group.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_grp.U,v 3.0 1993/08/18 12:08:20 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: GRPASSWD detection added by Andy Dougherty July 14, 1998.

?RCS:



```

?RCS: $Log: i_grp.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:20 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_grp d_grpasswd: \
contains rm cppstdin cppflags cppminus Inhdr Findhdr Setvar
?MAKE: -pick add $@ %<
?S:i_grp:
?S: This variable conditionally defines the I_GRP symbol, and indicates
?S: whether a C program should include <grp.h>.
?S:.
?S:d_grpasswd:
?S: This variable conditionally
defines GRPASSWD, which indicates
?S: that struct group in <grp.h> contains gr_passwd.
?S:.
?C:I_GRP:
?C: This symbol, if defined, indicates to the C program that it should
?C: include <grp.h>.
?C:.
?C:GRPASSWD:
?C: This symbol, if defined, indicates to the C program that struct group
?C: in <grp.h> contains gr_passwd.
?C:.
?H:#$i_grp I_GRP /**/
?H:#$d_grpasswd GRPASSWD /**/
?H:.
?LINT:set i_grp d_grpasswd
?T: xxx
: see if this is an grp system
set grp.h i_grp
eval $inhdr

case "$i_grp" in
$define)
xxx=`./findhdr grp.h`
$cppstdin $cppflags $cppminus < $xxx >$$h

if $contains 'gr_passwd' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_grpasswd
eval $setvar

$rm -f $$h
;;

```

```
*)
val="$undef";
set d_grpasswd; eval $setvar
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/i_grp.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: patchlevel.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:18:41 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:31 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:patchlevel: package baserev test rsrc

?MAKE: -pick add \$@ %<

?T:Revision

?S:patchlevel:

?S: The patchlevel level of this package.

?S: The value of patchlevel comes from the patchlevel.h file.

?S:.

: get the patchlevel

echo " "

echo "Getting the current patchlevel..." >&4

if \$test -r

\$rsrc/patchlevel.h;then

patchlevel=`awk \

/'^#[ ]\*define[ ][\*]PATCHLEVEL/ {print \$3}' \

< \$rsrc/patchlevel.h`

else

patchlevel=0

fi

echo "(You have \$package \$baserev PL\$patchlevel.)"

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/patchlevel.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setegid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_setegid.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:07 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setegid: Inlibc

?MAKE: -pick add @\$ %<

?S:d\_setegid:

?S: This variable conditionally defines the HAS\_SETEGID symbol, which

?S: indicates to the C program that the setegid() routine is available

?S: to change the effective gid of the current program.

?S:.

?C:HAS\_SETEGID (SETEGID):

?C: This symbol, if defined, indicates that the setegid  
routine is available

?C: to change the effective gid of the current program.

?C:.

?H:#\$d\_setegid HAS\_SETEGID /\*\*/

?H:.

?LINT:set d\_setegid

: see if setegid exists

set setegid d\_setegid

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_setegid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_accessx: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_accessx:

?S: This variable conditionally defines the HAS\_ACCESSX symbol, which

?S: indicates to the C program that the accessx() routine is available.

?S:.

?C:HAS\_ACCESSX :

?C: This symbol, if defined, indicates that the accessx routine is

?C: available to do extended access checks.

?C:.

?H:#\$d\_accessx HAS\_ACCESSX /\*\*/

?H:.

?LINT:set d\_accessx

: see if accessx exists

set accessx d\_accessx

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/acl/d\_accessx.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_shmget.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_shmget.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:20 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_shmget: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_shmget:

?S: This variable conditionally defines the HAS\_SHMGET symbol, which

?S: indicates to the C program that the shmget() routine is available.

?S:.

?C:HAS\_SHMGET:

?C: This symbol, if defined, indicates that the shmget() routine is

?C: available to request a shared memory segment from

```
the kernel.
?C:.
?H:#$d_shmget HAS_SHMGET /**/
?H:.
?LINT:set d_shmget
: see if shmget exists
set shmget d_shmget
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_shmget.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_internet.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_internet.U,v $
?RCS: Revision 3.0.1.1 1993/09/13 16:02:04 ram
?RCS: patch10: most mailers support Internet addresses nowadays (WAD)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:24 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_internet: Myread Oldconfig Setvar
?MAKE: -pick add $@ %<
?S:d_internet:
?S: This variable conditionally defines the INTERNET symbol, which
?S: indicates to the C program that there is a mailer available
which
?S: supports internet-style addresses (user@site.domain).
?S:.
?C:INTERNET:
?C: This symbol, if defined, indicates that there is a mailer available
?C: which supports internet-style addresses (user@site.domain).
?C:.
?H:#$d_internet INTERNET /**/
?H:.
?LINT:set d_internet
: check for internet mailer
dflt=y
```

```
case "$d_internet" in
"$undef") dflt=n;;
esac
cat <<EOM
```

Most mailers can deliver mail to addresses of the INTERNET persuasion, such as user@host.edu. Some older mailers, however, require the complete path to the destination to be specified in the address.

```
EOM
rp="Does your mailer understand INTERNET addresses?"
. ./myread
case "$ans" in
y*) val="$define";;
*) val="$undef";;
esac
set d_internet
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_internet.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Setprefixvar.U,v 3.0 2006/04/01 17:25:29 hmbrand $
?RCS:
?RCS: Copyright (c) 2006-2006, H.Merijn Brand & Nicholas Clark
?RCS:
?RCS: This file is included with or a derivative work of a file included
?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.
?RCS: In accordance with clause 7 of dist's modified Artistic License:
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?X:
?X: This unit sets up the scripts installprefix and setprefixvar, so code
?X: in other parts can be more simple and maintainable
?X:
?MAKE:Setprefixvar: Myread Getfile startsh eunicefix test \
prefix prefixexp installprefix installprefixexp
?MAKE: -pick add $@ %<
?LINT:extern prefixvar
?X: metalint still sees "`\${prefixvar}exp`" as variable :(
?T:prefixvarexp
?F:./setprefixvar
?F:./installprefix
: Perform
```

```

the prefixexp/installprefixexp correction if necessary
cat <<EOS >installprefix
$startsh
EOS
cat <<'EOESC' >>installprefix
: Change installation prefix, if necessary.
if $test X"$prefix" != X"$installprefix"; then
    eval "install${prefixvar}=\`echo \${${prefixvar}exp | sed \"s#^\${prefixexp#\$installprefixexp#\"`\"
else
    eval "install${prefixvar}=\\"${${prefixvar}exp}\"
fi
EOESC
chmod +x installprefix
$unicefix installprefix

```

: Set variables such as privlib and privlibexp from the output of ./getfile

: performing the prefixexp/installprefixexp correction if necessary.

```

cat <<EOS >setprefixvar
$startsh
EOS
cat <<'EOESC' >>setprefixvar
eval "${prefixvar}=\\"$ans\"
eval "${prefixvar}exp=\\"$ansexp\"
. ./installprefix
EOESC
chmod +x setprefixvar
$unicefix setprefixvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/installdirs/Setprefixvar.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_uwait.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_uwait.U,v \$

?RCS: Revision 3.0.1.1 1994/01/24 14:10:49 ram

?RCS: patch16: added knowledge about wait3()

?RCS: patch16: revised 'union wait' look-up algorithm

?RCS: patch16: fixed make dependency line accordingly

?RCS:  
?RCS: Revision 3.0 1993/08/18 12:07:54 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_uwait d\_uwait3: cat contains cppstdin cppminus +cppflags rm \  
Setvar Findhdr  
?MAKE: -pick add \$@ %<  
?S:d\_uwait:  
?S: This symbol  
conditionally defines UNION\_WAIT which indicates to the C  
?S: program that argument for the wait() system call should be declared as  
?S: 'union wait status' instead of 'int status'.  
?S:.  
?S:d\_uwait3:  
?S: This symbol conditionally defines UNION\_WAIT3 which indicates to the C  
?S: program that the first argument for the wait3() system call should be  
?S: declared as 'union wait status' instead of 'int status'.  
?S:.  
?C:UNION\_WAIT:  
?C: This symbol if defined indicates to the C program that the argument  
?C: for the wait() system call should be declared as 'union wait status'  
?C: instead of 'int status'. You probably need to include <sys/wait.h>  
?C: in the former case (see I\_SYSWAIT).  
?C:.  
?C:UNION\_WAIT3:  
?C: This symbol if defined indicates to the C program that the first argument  
?C: for the wait3() system call should be declared as 'union wait status'  
?C: instead of 'int status'. You probably need to include <sys/wait.h>  
?C: in the former case (see I\_SYSWAIT). It seems safe to assume that  
the  
?C: same rule applies to the second parameter of wait4().  
?C:.  
?H:#\$d\_uwait UNION\_WAIT /\*\*/  
?H:#\$d\_uwait3 UNION\_WAIT3 /\*\*/  
?H:.  
?T:val2 flags f also  
?LINT:set d\_uwait d\_uwait3  
: see if union wait is available  
echo " "  
?X:  
?X: Unfortunately, we can't just grep <sys/wait.h> for "union wait" because  
?X: some weird systems (did I hear HP-UX?) define union wait only when \_BSD  
?X: is defined. The same thing happens on OSF/1, who is pushing weirdness to  
?X: its limits by requiring wait() to use (int \*) but wait3() to use  
?X: (union wait \*), unless \_BSD is defined and -lbsd is used, in which case  
?X: wait() also expects (union wait \*). Aaargh!--RAM  
?X:  
set X \$cppflags



```

shift
flags="
also="
for f in $*; do
case "$f" in
*NO_PROTO*) ;;
*) flags="$flags $f";;
esac
done
$cat `./findhdr sys/wait.h` /dev/null | \
$cppstdin $flags $cppminus >wait.out 2>/dev/null
if $contains 'union.*wait.*{' wait.out >/dev/null 2>&1 ; then
echo "Looks like your <sys/wait.h> knows about 'union wait'..."
>&4
val="$define"
@if UNION_WAIT
also='also '
if $contains 'extern.*wait[ ]*([ ]*int' wait.out >/dev/null 2>&1
then
echo "But wait() seems to expect an 'int' pointer (POSIX way)." >&4
val="$undef"
also="
elif $contains 'extern.*wait[ ]*([ ]*union' wait.out >/dev/null 2>&1
then
echo "And indeed wait() expects an 'union wait' pointer (BSD way)." >&4
else
echo "So we'll use that for wait()." >&4
fi
@end
@if UNION_WAIT3 || d_uwait3
val2="$define"
@end
@if UNION_WAIT3
if $contains 'extern.*wait3[ ]*([ ]*int' wait.out >/dev/null 2>&1
then
echo "However wait3() seems to expect an 'int' pointer, weird." >&4
val2="$undef"
elif $contains 'extern.*wait3[ ]*([ ]*union' wait.out >/dev/null 2>&1
then
echo "And wait3() ${also} expects an 'union wait' pointer, fine." >&4
else
echo "As expected, wait3() ${also} uses an 'union wait' pointer." >&4
fi
@end
else
echo "No trace of 'union wait' in <sys/wait.h>..." >&4
val="$undef"
@if UNION_WAIT && UNION_WAIT3

```

```

echo
"Both wait() and wait3() will use a plain 'int' pointer then." >&4
@elsif UNION_WAIT
echo "Your wait() should be happy with a plain 'int' pointer." >&4
@elsif UNION_WAIT3
echo "Your wait3() should be happy with a plain 'int' pointer." >&4
@end
fi
set d_uwait
eval $setvar
@if UNION_WAIT3 || d_uwait3
val="$val2"; set d_uwait3
eval $setvar
@end
$rm -f wait.out

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_uwait.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: so.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: so.U,v $
?RCS: Revision 3.0.1.2 1994/10/29 16:30:04 ram
?RCS: patch36: now tells user how he can suppress shared lib lookup (ADO)
?RCS: patch36: removed echo at the top, since it's now in the here-doc (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 07:07:02 ram
?RCS: patch30: created
?RCS:
?X:
?X: This unit computes the shared-object / shared-lib extension
?X:
?MAKE:so d_libname_unique: test libpth Loc Myread Oldconfig cat Setvar
?MAKE: -pick add $@ %<
?S:so:
?S: This
variable holds the extension used to identify shared libraries
?S: (also known as shared objects) on the system. Usually set to 'so'.

```

```

?S:.
?S:d_libname_unique:
?S: This variable is defined if the target system insists on unique
?S: basenames for shared library files. This is currently true on Android,
?S: false everywhere else we know of.
?S: Defaults to 'undef'.
?S:.
?LINT:set d_libname_unique
?T: xxx
: compute shared library extension
case "$so" in
")
if xxx=`./loc libc.sl X $libpth`; $test -f "$xxx"; then
dflt='sl'
else
dflt='so'
fi
;;
*) dflt="$so";;
esac
$cat <<EOM

```

On some systems, shared libraries may be available. Answer 'none' if you want to suppress searching of shared libraries for the remainder of this configuration.

```

EOM
rp='What is the file extension used for shared libraries?'
./myread
so="$ans"

```

```

: Does target system insist that shared library basenames are unique
$cat << EOM

```

Some dynamic loaders assume that the \*basename\* of shared library filenames are globally unique. We'll default this to undef as we assume your system is not this weird. Set to defined if you're on one of them.

```

EOM

dflt='n'
rp='Make shared library basenames unique?'
./myread
case "$ans" in
y|Y) val="$define" ;;
*) val="$undef" ;;
esac

```

set d\_libname\_unique

eval \$setvar

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/so.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getnetent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getnetent\_r getnetent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getnetent\_r:

?S: This variable conditionally defines the HAS\_GETNETENT\_R symbol,

?S: which indicates to the C program that the getnetent\_r()

?S: routine is available.

?S:.

?S:getnetent\_r\_proto:

?S: This variable encodes the prototype of getnetent\_r.

?S: It is zero if d\_getnetent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getnetent\_r

?S: is defined.

?S:.

?C:HAS\_GETNETENT\_R:

?C: This symbol, if defined, indicates that the getnetent\_r routine

?C: is

available to getnetent re-entrantly.

?C:.

?C:GETNETENT\_R\_PROTO:

?C: This symbol encodes the prototype of getnetent\_r.

?C: It is zero if d\_getnetent\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getnetent\_r

?C: is defined.

?C:.

?H:#\$d\_getnetent\_r HAS\_GETNETENT\_R /\*\*/

?H:#define GETNETENT\_R\_PROTO \$getnetent\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getnetent\_r\_proto

: see if getnetent\_r exists

set getnetent\_r d\_getnetent\_r

eval \$inlibc

```

case "$d_getnetent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_getnetent_r_proto:$usetthreads" in
":define") d_getnetent_r_proto=define
set d_getnetent_r_proto getnetent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getnetent_r_proto" in
define)
case "$getnetent_r_proto" in
"|0) try='int getnetent_r(struct netent*, char*, size_t, struct netent**, int*);'
./protochk "$extern_C $try" $hdrs && getnetent_r_proto=I_SBWRE ;;
esac
case "$getnetent_r_proto" in
"|0) try='int getnetent_r(struct
netent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && getnetent_r_proto=I_SBIE ;;
esac
case "$getnetent_r_proto" in
"|0) try='struct netent* getnetent_r(struct netent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && getnetent_r_proto=S_SBIE ;;
esac
case "$getnetent_r_proto" in
"|0) try='struct netent* getnetent_r(struct netent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getnetent_r_proto=S_SBI ;;
esac
case "$getnetent_r_proto" in
"|0) try='int getnetent_r(struct netent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getnetent_r_proto=I_SBI ;;
esac
case "$getnetent_r_proto" in
"|0) try='int getnetent_r(struct netent*, struct netent_data*);'
./protochk "$extern_C $try" $hdrs && getnetent_r_proto=I_SD ;;
esac
case "$getnetent_r_proto" in
"|0) d_getnetent_r=undef
getnetent_r_proto=0
echo "Disabling getnetent_r, cannot determine prototype." >&4 ;;
* ) case "$getnetent_r_proto" in
REENTRANT_PROTO*) ;;
*) getnetent_r_proto="REENTRANT_PROTO_$getnetent_r_proto"
;;
esac
echo "Prototype: $try" ;;
esac
;;

```

```

*) case "$usethreads" in
define) echo "getnetent_r has no prototype, not using it." >&4 ;;
esac
d_getnetent_r=undef
getnetent_r_proto=0
;;
esac
;;
*) getnetent_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_getnetent_r.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_malloc.U,v 3.1 2003/01/21 18:51:51 merijn Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: i_malloc.U,v $
?RCS: Revision 3.1 2003/01/21 18:51:51 merijn
?RCS: Moved to modified: Ihdr replaced with Compile
?RCS:
?RCS: $Log: i_malloc.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:21 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_malloc: cat rm_try Compile Setvar i_mallocmalloc
?MAKE: -pick add $@ %<
?S:i_malloc:
?S: This variable conditionally defines the I_MALLOC symbol, and indicates
?S: whether a C program should include <malloc.h>.
?S:.
?C:I_MALLOC:
?C: This
symbol, if defined, indicates to the C program that it should
?C: include <malloc.h>.
?C:.
?H:#$i_malloc I_MALLOC /**/
?H:.

```

```

?LINT:set i_malloc
: see if this is a malloc.h system
: we want a real compile instead of Inhdr because some systems have a
: malloc.h that just gives a compile error saying to use stdlib.h instead
echo " "
$cat >try.c <<EOCP
#include <stdlib.h>
#include <malloc.h>
#$i_mallocmalloc I_MALLOCMALLOC
#ifdef I_MALLOCMALLOC
# include <malloc/malloc.h>
#endif

int main () { return 0; }
EOCP
set try
if eval $compile; then
    echo "<malloc.h> found." >&4
    val="$define"
else
    echo "<malloc.h> NOT found." >&4
    val="$undef"
fi
$rm_try
set i_malloc
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/i_malloc.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpwent\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getpwent\_r getpwent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_pwd extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getpwent\_r:

?S: This variable conditionally defines the HAS\_GETPWENT\_R symbol,

?S: which indicates to the C program that the getpwent\_r()

?S: routine is available.

?S:.

?S:getpwent\_r\_proto:  
 ?S: This variable encodes the prototype of getpwent\_r.  
 ?S: It is zero if d\_getpwent\_r is undef, and one of the  
 ?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getpwent\_r  
 ?S: is defined.  
 ?S:.  
 ?C:HAS\_GETPWENT\_R:  
 ?C: This symbol, if defined, indicates that the getpwent\_r routine  
 ?C: is available to  
 getpwent re-entrantly.  
 ?C:.  
 ?C:GETPWENT\_R\_PROTO:  
 ?C: This symbol encodes the prototype of getpwent\_r.  
 ?C: It is zero if d\_getpwent\_r is undef, and one of the  
 ?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getpwent\_r  
 ?C: is defined.  
 ?C:.  
 ?H:#\$d\_getpwent\_r HAS\_GETPWENT\_R /\*\*/  
 ?H:#define GETPWENT\_R\_PROTO \$getpwent\_r\_proto /\*\*/  
 ?H:.  
 ?T:try hdrs d\_getpwent\_r\_proto  
 : see if getpwent\_r exists  
 set getpwent\_r d\_getpwent\_r  
 eval \$inlibc  
 case "\$d\_getpwent\_r" in  
 "\$define")  
 hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_pwd pwd.h"  
 case "\$d\_getpwent\_r\_proto:\$usetthreads" in  
 ":define") d\_getpwent\_r\_proto=define  
 set d\_getpwent\_r\_proto getpwent\_r \$hdrs  
 eval \$hasproto ;;  
 \*) ;;  
 esac  
 case "\$d\_getpwent\_r\_proto" in  
 define)  
 case "\$getpwent\_r\_proto" in  
 "|0) try='int getpwent\_r(struct passwd\*, char\*, size\_t, struct passwd\*\*);'  
 ./protochk "\$extern\_C \$try" \$hdrs && getpwent\_r\_proto=I\_SBWR ;;  
 esac  
 case "\$getpwent\_r\_proto" in  
 "|0) try='int getpwent\_r(struct passwd\*, char\*, int, struct passwd\*\*);'  
 ./protochk  
 "\$extern\_C \$try" \$hdrs && getpwent\_r\_proto=I\_SBIR ;;  
 esac  
 case "\$getpwent\_r\_proto" in  
 "|0) try='struct passwd\* getpwent\_r(struct passwd\*, char\*, size\_t);'  
 ./protochk "\$extern\_C \$try" \$hdrs && getpwent\_r\_proto=S\_SBW ;;  
 esac



```

case "$getpwent_r_proto" in
"|0) try='struct passwd* getpwent_r(struct passwd*, char*, int);'
./protochk "$extern_C $try" $hdrs && getpwent_r_proto=S_SBI ;;
esac
case "$getpwent_r_proto" in
"|0) try='int getpwent_r(struct passwd*, char*, int);'
./protochk "$extern_C $try" $hdrs && getpwent_r_proto=I_SBI ;;
esac
case "$getpwent_r_proto" in
"|0) try='int getpwent_r(struct passwd*, char*, int, FILE**);'
./protochk "$extern_C $try" $hdrs && getpwent_r_proto=I_SBIH ;;
esac
case "$getpwent_r_proto" in
"|0) d_getpwent_r=undef
getpwent_r_proto=0
echo "Disabling getpwent_r, cannot determine prototype." >&4 ;;
*) case "$getpwent_r_proto" in
REENTRANT_PROTO*) ;;
*) getpwent_r_proto="REENTRANT_PROTO_$getpwent_r_proto" ;;
esac
echo
"Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "getpwent_r has no prototype, not using it." >&4 ;;
esac
d_getpwent_r=undef
getpwent_r_proto=0
;;
esac
;;
*) getpwent_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_getpwent_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_chsize.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_chsize.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:05:50 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_chsize: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_chsize:  
?S: This variable conditionally defines the CHSIZE symbol, which  
?S: indicates to the C program that the chsize() routine is available  
?S: to truncate files. You might need a -lx to get this routine.  
?S:.  
?C:HAS\_CHSIZE (CHSIZE):  
?C: This symbol, if defined, indicates that the chsize  
routine is available  
?C: to truncate files. You might need a -lx to get this routine.  
?C:.  
?H:#\$d\_chsize HAS\_CHSIZE /\*\*/  
?H:.  
?LINT:set d\_chsize  
: see if chsize exists  
set chsize d\_chsize  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_chsize.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1998, Jarkko Hietaniemi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?MAKE:i\_inttypes: Inhdr cat rm\_try Setvar Compile  
?MAKE: -pick add \$@ %<  
?S:i\_inttypes:  
?S: This variable conditionally defines the I\_INTTYPES symbol,  
?S: and indicates whether a C program should include <inttypes.h>.  
?S:.  
?C:I\_INTTYPES:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <inttypes.h>.

?C:.

?H:#\$i\_inttypes I\_INTTYPES /\*\*/

?H:.

?LINT:set i\_inttypes

: see if inttypes.h is available

: we want a real compile instead of Inhdr because some systems

: have an inttypes.h

which includes non-existent headers

echo " "

\$cat >try.c <<EOCP

#include <inttypes.h>

int main() {

static int32\_t foo32 = 0x12345678;

}

EOCP

set try

if eval \$compile; then

echo "<inttypes.h> found." >&4

val="\$define"

else

echo "<inttypes.h> NOT found." >&4

val="\$undef"

fi

\$rm\_try

set i\_inttypes

eval \$setvar

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_inttypes.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_strftime: Inlibc

?MAKE:-pick add \$@ %<

?S:d\_strftime:

?S: This variable conditionally defines the HAS\_STRFTIME symbol, which

?S: indicates to the C program that the strftime() routine is available.

?S:.

?C:HAS\_STRFTIME:

?C: This symbol, if defined, indicates that the strftime routine is

?C: available to do time formatting.

?C:.

?H:#\$d\_strftime HAS\_STRFTIME /\*\*/

?H:.

?LINT:set d\_strftime

: see if strftime exists

set strftime d\_strftime

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_strftime.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_off64\_t: \

Inlibc Setvar Compile rm\_try cat lseeksize

?MAKE: -pick add \$@ %<

?S:d\_off64\_t:

?S: This symbol will be defined if the C compiler supports off64\_t.

?S:.

?C:HAS\_OFF64\_T:

?C: This symbol will be defined if the C compiler supports off64\_t.

?C:.

?H:#\$d\_off64\_t HAS\_OFF64\_T /\*\*/

?H:.

?LINT:set d\_off64\_t

: check for off64\_t

echo " "

echo "Checking to see if you have off64\_t..." >&4

\$cat >try.c <<EOCP

#include <sys/types.h>

#include <unistd.h>

int main() { off64\_t x = 7; }

EOCP

set try

if eval \$compile; then

val="\$define"

echo "You have off64\_t."

else

val="\$undef"

```
echo "You do not have off64_t."
case "$lseeksize" in
8) echo "(Your off_t is 64 bits, so you could use that.)" ;;
esac
fi
$rm_try
set
d_off64_t
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_off64_t.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: libs.U,v 3.0.1.6 1997/02/28 16:09:11 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: libs.U,v $
?RCS: Revision 3.0.1.6 1997/02/28 16:09:11 ram
?RCS: patch61: replaced .a with $_a all over the place
?RCS:
?RCS: Revision 3.0.1.5 1995/07/25 14:12:05 ram
?RCS: patch56: now knows about OS/2 platforms
?RCS:
?RCS: Revision 3.0.1.4 1994/10/29 16:24:22 ram
?RCS: patch36: removed old broken thislib/thatlib processing (ADO)
?RCS:
?RCS: Revision 3.0.1.3 1994/06/20 07:05:44 ram
?RCS: patch30: code cleanup with if/elif by ADO and RAM
?RCS: patch30:
undone patch23 for libswanted default setting
?RCS:
?RCS: Revision 3.0.1.2 1994/05/06 15:08:45 ram
?RCS: patch23: now includes ordered default libswanted variable (ADO)
?RCS: patch23: major cleanup for library lookups (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1993/08/25 14:02:31 ram
?RCS: patch6: added default for libs
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:03 ram
```

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:libs ignore\_versioned\_solibs libsfound libsfiles libsdirs libspath: \  
test cat Myread Oldconfig Loc libpth package xlibpth so \_a \  
usesocks sed uselongdouble

?MAKE: -pick add \$@ %<

?S:libs:

?S: This variable holds the additional libraries we want to use.

?S: It is up to the Makefile to deal with it. The list can be empty.

?S:.

?S:libsfound:

?S: This variable holds the full pathnames of the libraries

?S: we found and accepted.

?S:.

?S:libsfiles:

?S: This variable holds the filenames aka basenames of the libraries

?S: we found and accepted.

?S:.

?S:libsdirs:

?S: This  
variable holds the directory names aka dirnames of the libraries

?S: we found and accepted, duplicates are removed.

?S:.

?S:libspath:

?S: This variable holds the directory names probed for libraries.

?S:.

?S:ignore\_versioned\_solibs:

?S: This variable should be non-empty if non-versioned shared  
libraries (libfoo.so.x.y) are to be ignored (because they  
cannot be linked against).

?S:.

?T:xxx yyy thislib thisdir libswanted libstyle

?D:libs="

?X:

?X: This order is chosen so that libraries -lndir, -ldir, -lucb, -lbsd,  
?X: -lBSD, -lPW, and -lx only get used if there are unresolved  
?X: routines at link time. Usually, these are backwards compatibility  
?X: libraries, and may not be as reliable as the standard c library.

?X:

?X: The -lsocket -linet -lnsl order has been reported to be necessary  
?X: for at least one SVR4 implementation.

?X: -lc must proceed -lucb or -lbsd for most Solaris applications.

?X: -lc\_s proceeds -lc so we pick up the shared library version, if  
?X: it is  
available.

?X:

?X: The ordering of c, posix, and cposix is a guess and almost  
?X: certainly wrong on about half of all systems.

```

?X:
?X: Set proper libswanted in your private Myinit.U if needed.
?X:
?X:: default ordered library list
?X:libswanted='net socket inet bind nsl nm sdbm gdbm ndbm dbm malloc dl'
?X:libswanted="$libswanted dld sun m c_s c posix cposix ndir dir ucb"
?X:libswanted="$libswanted bsd BSD PW x"
?X:
?INIT:: default library list
?INIT:libswanted=""
?INIT:: some systems want to use only the non-versioned libso:s
?INIT:ignore_versioned_solibs=""
?LINT:extern usecbacktrace
?LINT:extern libscheck
?LINT:extern p
?LINT:use uselongdouble
: Looking for optional libraries
echo " "
echo "Checking for optional libraries..." >&4
case "$libs" in
'|') dflt="";;
*) dflt="$libs";;
esac
case "$libswanted" in
") libswanted='c_s';;
esac
?X: libsocks has nasty naming scheme.
?X: This does not work if somebody wants SOCKS 4.
case "$susesocks" in
"$define") libswanted="$libswanted socks5
socks5_sh" ;;
esac
case "$susecbacktrace" in
"$define") libswanted="$libswanted bfd" ;;
esac
libsfound=""
libsfiles=""
libsdirs=""
libspath=""
for thisdir in $libpth $xlibpth; do
test -d $thisdir && libspath="$libspath $thisdir"
done
for thislib in $libswanted; do
for thisdir in $libspath; do
xxx=""
if $test ! -f "$xxx" -a "X$ignore_versioned_solibs" = "X"; then
xxx=`ls $thisdir/lib$thislib.$so.[0-9] 2>/dev/null|sed -n '$p`
$test -f "$xxx" && eval $libscheck

```

```

$test -f "$xxx" && libstyle=shared
xxx=`ls $thisdir/lib$thislib.[0-9]$.sso 2>/dev/null|sed -n '$p`
    $test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle=shared
fi
if test ! -f "$xxx"; then
xxx=$thisdir/lib$thislib.$so$_a
$test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle="import"
fi
if test ! -f "$xxx"; then
xxx=$thisdir/$thislib.$so$_a
$test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle="import"
fi
if test ! -f "$xxx";
then
xxx=$thisdir/lib$thislib.$so
    $test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle=shared
fi
if test ! -f "$xxx"; then
xxx=$thisdir/lib$thislib$_a
    $test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle=static
fi
if test ! -f "$xxx"; then
xxx=$thisdir/$thislib$_a
    $test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle=static
fi
if test ! -f "$xxx"; then
xxx=$thisdir/lib${thislib}_s$_a
    $test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle=static
$test -f "$xxx" && thislib=${thislib}_s
fi
if test ! -f "$xxx"; then
xxx=$thisdir/Slib$thislib$_a
    $test -f "$xxx" && eval $libscheck
$test -f "$xxx" && libstyle=static
fi
if $test -f "$xxx"; then
case "$libstyle" in
shared) echo "Found -l$thislib (shared)." ;;
static) echo "Found -l$thislib." ;;
*) echo "Found -l$thislib ($libstyle)." ;;
esac

```



```

case " $dflt " in
*"-$thislib "*);;
*)
dflt="$dflt -$thislib"
  libsfound="$libsfound $xxx"
  yyy=`basename $xxx`
  libsfiles="$libsfiles $yyy"
  yyy=`echo $xxx|sed -e "s%/$yyy\\$%%"`
  case " $libsdirs " in
  "*" $yyy "*");;
  *) libsdirs="$libsdirs $yyy" ;;
  esac
  ;;
esac
break
fi
done
if $test ! -f "$xxx"; then
  echo "No -$thislib."
fi
done
set X $dflt
shift
dflt="$*"
case "$libs" in
") dflt="$dflt";;
*) dflt="$libs";;
esac
case "$dflt" in
'|') dflt='none';;
esac

$cat <<EOM

```

In order to compile \$package on your machine, a number of libraries are usually needed. Include any other special libraries here as well.

Say "none" for none. The default list is almost always right.

EOM

```

echo " "
rp="What libraries to use?"
./myread
case "$ans" in
none) libs='';;
*) libs="$ans";;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/libs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Ins.U,v 3.0.1.1 1994/06/20 07:05:52 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: Ins.U,v \$

?RCS: Revision 3.0.1.1 1994/06/20 07:05:52 ram

?RCS: patch30: created by ADO

?RCS:

?X:

?X: This unit checks whether symbolic links are really supported.

?X: We can't rely on d\_symlink because that may be listed in the

?X: C library but unimplemented.

?X:

?MAKE:lns: ln rm touch

?MAKE: -pick add \$@ %<

?S:lns:

?S: This variable holds the name of the command to make

?S: symbolic

links (if they are supported). It can be used

?S: in the Makefile. It is either 'ln -s' or 'ln'

?S:.

: determine whether symbolic links are supported

echo " "

\$touch blurfl

if \$ln -s blurfl sym > /dev/null 2>&1 ; then

echo "Symbolic links are supported." >&4

lns="\$ln -s"

else

echo "Symbolic links are NOT supported." >&4

lns="\$ln"

fi

\$rm -f blurfl sym

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/lns.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: orgname.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: orgname.U,v $
?RCS: Revision 3.0.1.1 1993/09/13 16:10:25 ram
?RCS: patch10: added support for /local/src to the search (WAD)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:27 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:orgname: sed cat Myread Loc Oldconfig
?MAKE: -pick add $@ %<
?S:orgname:
?S: This variable contains the eventual value of the ORGNAME symbol,
?S: which contains either the organization name or the full pathname
?S: of
    a file containing the organization name.
?S:
?C:ORGNAME:
?C: This symbol contains either the organization name or the full pathname
?C: of a file containing the organization name, which the program must
?C: be prepared to open and substitute the contents of.
?C:
?H:#define ORGNAME "$orgname" /**/
?H:
?T:longshots xxx
: get organization name
longshots=/local/src /usr/src/new /usr/src/local /usr/local/src'
case "$orgname" in
*) if xxx=`./loc news/src/defs.h x $longshots`; then
    dflt=`$sed -n 's/^.*MYORG[ ]*"(.*)".*$/\1/p' $xxx`
    else
        dflt=""
    fi
;;
*) dflt="$orgname";;
esac
$cat << 'EOH'
```

Please type the name of your organization as you want it to appear on the Organization line of outgoing articles. (It's nice if this also specifies your location. Your city name is probably sufficient if well known.)  
For example:

University of Southern North Dakota, Hoople

You may also put the name of a file, as long as it begins with a slash.  
For example:

/etc/organization

```
EOH
orgname=""
while
test "X$orgname" = "X"; do
rp='Organization:'
. ./myread
orgname="$ans"
done
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/orgname.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_syssyscall.U,v $
?RCS:
?RCS: Copyright (c) 2023 Tony Cook & H.Merijn Brand
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:i_syssyscall: Inhdr Hasfield
?MAKE: -pick add $@ %<
?S:i_syssyscall (i_syssyscall.U):
?S: This variable conditionally defines the I_SYS_SYSCALL symbol,
?S: and indicates whether a C program should include <sys/syscall.h>.
?S:.
?C:I_SYS_SYSCALL:
?C: This symbol, if defined, indicates that <sys/syscall.h> exists.
?C:.
?H:#$i_syssyscall I_SYS_SYSCALL /**/
?H:.
?LINT:set i_syssyscall
: see if this is a sys/syscall.h system
set sys/syscall.h i_syssyscall
eval $inhdr
```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_syssyscall.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_mkstemp: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mkstemp:

?S: This variable conditionally defines the HAS\_MKSTEMPS symbol, which

?S: indicates to the C program that the mkstemp() routine is available

?S: to exclusively create and open a uniquely named (with a suffix)

?S: temporary file.

?S:.

?C:HAS\_MKSTEMPS :

?C: This symbol, if defined, indicates that the mkstemp routine is

?C: available to exclusively create and open a uniquely named

?C: (with a suffix) temporary file.

?C:.

?H:#\$d\_mkstemp HAS\_MKSTEMPS /\*\*/

?H:.

?LINT:set d\_mkstemp

: see if mkstemp exists

set mkstemp d\_mkstemp

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_mkstemp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: html1dir.U,v \$

?RCS:

?RCS: Copyright (c) 1999 Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

```

?RCS: $Log: html1dir.U,v $
?RCS:
?MAKE:html1dir html1direxp installhtml1dir: cat Loc Myread \
  spackage test Getfile Setprefixvar Prefixit Prefixup
?MAKE: -pick add $@ %<
?Y:TOP
?D:html1dir="
?S:html1dir:
?S: This variable contains the name of the directory in which html
?S: source pages are to be put. This directory is for pages
?S: that describe whole programs, not libraries or modules. It
?S: is intended to correspond roughly to section 1 of the Unix
?S: manuals.
?S:.
?D:html1direxp="
?S:html1direxp:
?S: This
  variable is the same as the html1dir variable, but is filename
?S: expanded at configuration time, for convenient use in makefiles.
?S:.
?D:installhtml1dir="
?S:installhtml1dir:
?S: This variable is really the same as html1direxp, unless you are
?S: using a different installprefix. For extra portability, you
?S: should only use this variable within your makefiles.
?S:.
?LINT:change prefixvar
?LINT:set html1direxp
?LINT:set installhtml1dir
: determine where html pages for programs go
set html1dir html1dir none
eval $prefixit
$cat <<EOM

```

If you wish to install html files for programs in \$spackage, indicate the appropriate directory here. To skip installing html files, answer "none".

```

EOM
case "$html1dir" in
  "|none|$undef" ) dflt=none ;;
  *) dflt=$html1dir ;;
esac
fn=dn+~
rp="Directory for the main $spackage html pages?"
./getfile
prefixvar=html1dir
./setprefixvar
: Use ' ' for none so value is preserved next time through Configure

```

\$test X"\$html1dir" = "X" && html1dir=' '

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/html1dir.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_fchmod.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_fchmod.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:59 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_fchmod: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fchmod:

?S: This variable conditionally defines the HAS\_FCHMOD symbol, which

?S: indicates to the C program that the fchmod() routine is available

?S: to change mode of opened files.

?S:.

?C:HAS\_FCHMOD (FCHMOD):

?C: This symbol, if defined, indicates that the fchmod routine is available

?C: to

change mode of opened files. If unavailable, use chmod().

?C:.

?H:#\$d\_fchmod HAS\_FCHMOD /\*\*/

?H:.

?LINT:set d\_fchmod

: see if fchmod exists

set fchmod d\_fchmod

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_fchmod.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: sitearch.U,v 3.1 1999/07/08 18:32:29 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1996-1998, Andy Dougherty  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: sitearch.U,v \$  
?RCS: Revision 3.1 1999/07/08 18:32:29 doughera  
?RCS: Updated for perl5.005\_5x  
?RCS:  
?RCS: Revision 3.0.1.1 1997/02/28 16:21:30 ram  
?RCS: patch61: created  
?RCS:  
?MAKE:sitearch sitearchexp installsitearch d\_sitearch: cat sed Getfile \  
Oldconfig Setprefixvar Prefixit test archname sitelib  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?D:sitearch="  
?S:sitearch:  
?S: This variable contains the eventual  
value of the SITEARCH symbol,  
?S: which is the name of the private library for this package. It may  
?S: have a ~ on the front. It is up to the makefile to eventually create  
?S: this directory while performing installation (with ~ substitution).  
?S: The standard distribution will put nothing in this directory.  
?S: After perl has been installed, users may install their own local  
?S: architecture-dependent modules in this directory with  
?S: MakeMaker Makefile.PL  
?S: or equivalent. See INSTALL for details.  
?S:.  
?D:sitearchexp="  
?S:sitearchexp:  
?S: This variable is the ~name expanded version of sitearch, so that you  
?S: may use it directly in Makefiles or shell scripts.  
?S:.  
?D:installsitearch="  
?S:installsitearch:  
?S: This variable is really the same as sitearchexp but may differ on  
?S: those systems using AFS. For extra portability, only this variable  
?S: should be used in makefiles.  
?S:.  
?D:d\_sitearch="  
?S:d\_sitearch:  
?S: This variable conditionally defines SITEARCH to hold the



```

pathname
?S: of architecture-dependent library files for $package. If
?S: $sitearch is the same as $archlib, then this is set to undef.
?S:.
?C:SITEARCH:
?C: This symbol contains the name of the private library for this package.
?C: The library is private in the sense that it needn't be in anyone's
?C: execution path, but it should be accessible by the world. The program
?C: should be prepared to do ~ expansion.
?C: The standard distribution will put nothing in this directory.
?C: After perl has been installed, users may install their own local
?C: architecture-dependent modules in this directory with
?C: MakeMaker Makefile.PL
?C: or equivalent. See INSTALL for details.
?C:.
?C:SITEARCH_EXP:
?C: This symbol contains the ~name expanded version of SITEARCH, to be used
?C: in programs that are not prepared to deal with ~ expansion at run-time.
?C:.
?H:#$d_sitearch SITEARCH "$sitearch" /**/
?H:#$d_sitearch SITEARCH_EXP "$sitearchexp" /**/
?H:.
?LINT:change prefixvar
?LINT:set installsitearch
?LINT:set
sitearch
?LINT:set sitearchexp
: determine where site specific architecture-dependent libraries go.
: sitelib default is /usr/local/lib/perl5/site_perl/$version
: sitearch default is /usr/local/lib/perl5/site_perl/$version/$archname
: sitelib may have an optional trailing /share.
case "$sitearch" in
") dflt=`echo $sitelib | $sed 's,/share$,,'`
dflt="$dflt/$archname"
;;
*) dflt="$sitearch"
;;
esac
set sitearch sitearch none
eval $prefixit
$cat <<EOM

```

The installation process will also create a directory for architecture-dependent site-specific extensions and modules.

```

EOM
fn=d~+
rp='Pathname for the site-specific architecture-dependent library files?'

```

```
./getfile
prefixvar=sitearch
./setprefixvar
if $test X"$sitearch" = X"$sitelib"; then
  d_sitearch="$undef"
else
  d_sitearch="$define"
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/sitearch.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_syslog.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:i_syslog: Inhdr Hasfield
```

```
?MAKE:-pick add $@ %<
```

```
?S:i_syslog:
```

```
?S: This variable conditionally defines the I_SYSLOG symbol,
```

```
?S: and indicates whether a C program should include <syslog.h>.
```

```
?S:.
```

```
?C:I_SYSLOG:
```

```
?C: This symbol, if defined, indicates that <syslog.h> exists and
```

```
?C: should be included.
```

```
?C:.
```

```
?H:#$i_syslog I_SYSLOG /**/
```

```
?H:.
```

```
?LINT:set i_syslog
```

```
: see if this is a syslog.h system
```

```
set syslog.h i_syslog
```

```
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i_syslog.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_casti32.U,v 3.0.1.3 1995/05/12 12:10:45 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_casti32.U,v \$

?RCS: Revision 3.0.1.3 1995/05/12 12:10:45 ram

?RCS: patch54: made sure cc and cflags are conditional dependencies

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:09:37 ram

?RCS: patch36: declare signal handler correctly (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:07:06 ram

?RCS: patch32: created by ADO

?RCS:

?X:

?X: Can the compiler cast large floats to

32-bit integers?

?X:

?MAKE:d\_casti32: cat Compile rm\_try intsize Setvar test signal\_t run i\_stdlib

?MAKE: -pick add \$@ %<

?S:d\_casti32:

?S: This variable conditionally defines CASTI32, which indicates

?S: whether the C compiler can cast large floats to 32-bit ints.

?S:.

?C:CASTI32:

?C: This symbol is defined if the C compiler can cast negative

?C: or large floating point numbers to 32-bit ints.

?C:.

?H:#\$d\_casti32 CASTI32 /\*\*/

?H:.

?T:xxx yyy

?F:!try

?LINT:set d\_casti32

: check for ability to cast large floats to 32-bit ints.

echo " "

echo 'Checking whether your C compiler can cast large floats to int32.' >&4

if \$test "\$intsize" -ge 4; then

xxx=int

else

xxx=long

fi

\$cat >try.c <<EOCP

#include <stdio.h>

#\$i\_stdlib I\_STDLIB

#ifdef I\_STDLIB

```

#include <stdlib.h>
#endif
#include <sys/types.h>
#include <signal.h>
$signal_t blech(int s) { exit(3); }
int main()
{
  $xxx i32;
  double f, g;
  int result = 0;
  char str[16];
  signal(SIGFPE, blech);

  /* Don't let compiler optimize the test away.
   Store the number
   in a writable string for gcc to pass to sscanf under HP-UX.
  */
  sprintf(str, "2147483647");
  sscanf(str, "%lf", &f); /* f = (double) 0x7fffffff; */
  g = 10 * f;
  i32 = ($xxx) g;

  /* x86 processors will probably give 0x8000 0000, which is a
   sign change. We don't want that. We want to mimic SPARC
   behavior here, which is to preserve the sign and give
   back 0x7ff ffff.
  */
  if (i32 != ($xxx) f)
    result |= 1;
  exit(result);
}
EOCP
set try
if eval $compile_ok; then
  $run ./try 2>/dev/null
  yyy=$?
else
  echo "(I can't seem to compile the test program--assuming it can't)"
  yyy=1
fi
case "$yyy" in
0) val="$define"
  echo "Yup, it can."
  ;;
*) val="$undef"
  echo "Nope, it can't."
  ;;
esac

```

```
set d_casti32
eval $setvar
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_casti32.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_socks5\_init: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_socks5\_init:

?S: This variable conditionally defines the HAS\_SOCKS5\_INIT symbol, which

?S: indicates to the C program that the socks5\_init() routine is available.

?S:.

?C:HAS\_SOCKS5\_INIT:

?C: This symbol, if defined, indicates that the socks5\_init routine is

?C: available to initialize SOCKS 5.

?C:.

?H:#\$d\_socks5\_init HAS\_SOCKS5\_INIT /\*\*/

?H:.

?LINT:set d\_socks5\_init

: see if socks5\_init exists

set socks5\_init d\_socks5\_init

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_socks5_init.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

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?RCS:

?MAKE:d\_isfinitel: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_isfinitel:

?S: This variable conditionally defines the HAS\_ISFINITEL symbol, which

?S: indicates to the C program that the isfinitel() routine is available.

?S:.

?C:HAS\_ISFINITEL:

?C: This symbol, if defined, indicates that the isfinitel routine is

?C: available to check whether a long double is finite.

?C: (non-infinity non-NaN).

?C:.

?H:#\$d\_isfinitel HAS\_ISFINITEL /\*\*/

?H:.

?LINT:set d\_isfinitel

: see if isfinitel exists

set isfinitel d\_isfinitel

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_isfinitel.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1996,1998 Andy Dougherty

?RCS: Copyright (c) 1996, Sven Verdoolaege

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?RCS:

?MAKE:d\_gnulibc gnulibc\_version: Myread Oldconfig Setvar rm\_try \

cat Compile run

?MAKE: -pick add \$@ %<

?S:d\_gnulibc:

?S: Defined if we're dealing with the GNU C Library.

?S:.

?S:gnulibc\_version:

?S: This variable contains the version number of the GNU C library.

?S: It is usually something like '2.2.5'. It is a plain " if this

?S: is not the GNU C library, or if the version is unknown.

?S:.

?C:HAS\_GNULIBC ~ %<:

?C: This

symbol, if defined, indicates to the C program that

?C: the GNU C library is being used. A better check is to use

?C: the \_\_GLIBC\_\_ and \_\_GLIBC\_MINOR\_\_ symbols supplied with glibc.

```

?C:.
?H:?%<:#$d_gnulibc HAS_GNULIBC /**/
?H:?%<:#if defined(HAS_GNULIBC) && !defined(_GNU_SOURCE)
?H:?%<:#define _GNU_SOURCE
?H:?%<:#endif
?H:.
?F:!glibc.ver !try.c !try
?LINT: set d_gnulibc
?LINT: usefile try.c
?LINT: known _GNU_SOURCE
?X: glibc can be executed by calling __libc_main().
?X: Ulrich Drepper doesn't think any other libc does that,
?X: but we check if it says 'GNU C Library' to be sure.
?X:
?X: Alas, as of 3/1998 glibc 2.0.7 reportedly isn't going to
?X: have __libc_main() anymore. :-(. Fortunately, all released
?X: versions of glibc 2.x.x _do_ have CPP variables. For 2.0.6,
?X: they are:
?X: #define __GLIBC__ 2
?X: #define __GLIBC_MINOR__ 0.
?X: (The '6' isn't available :-(.
?X: glibc2.1 will also have
?X: extern const char * __gnu_get_libc_release(void);
?X: extern const char *
__gnu_get_libc_version(void);
?X: functions. --thanks to Andreas Jaeger. --AD 6/1998.
?X: Although the exact format isn't documented, __gnu_get_libc_version()
?X: returns a simple string '2.1.3' in glibc 2.1.3.
?X:
: determine whether we are using a GNU C library
echo " "
echo "Checking for GNU C Library..." >&4
cat >try.c <<'EOCP'
/* Find out version of GNU C library. __GLIBC__ and __GLIBC_MINOR__
alone are insufficient to distinguish different versions, such as
2.0.6 and 2.0.7. The function gnu_get_libc_version() appeared in
libc version 2.1.0. A. Dougherty, June 3, 2002.
*/
#include <stdio.h>
int main(void)
{
#ifdef __GLIBC__
# ifdef __GLIBC_MINOR__
# if __GLIBC__ >= 2 && __GLIBC_MINOR__ >= 1
# include <gnu/libc-version.h>
printf("%s\n", gnu_get_libc_version());
# else
printf("%d.%d\n", __GLIBC__, __GLIBC_MINOR__);

```

```

# endif
# else
printf("%d\n", __GLIBC__);
# endif
return 0;
#else
return 1;
#endif
}
EOCP
set
try
if eval $compile_ok && $run ./try > glibc.ver; then
val="$define"
gnulibc_version=`$cat glibc.ver`
echo "You are using the GNU C Library version $gnulibc_version"
else
val="$undef"
gnulibc_version=""
echo "You are not using the GNU C Library"
fi
$rm_try glibc.ver
set d_gnulibc
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_gnulibc.U
```

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?RCS: \$Id\$

?RCS:

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?RCS:

?RCS: \$Log: d\_memchr.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:32 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_memchr: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_memchr:

?S: This variable conditionally defines the HAS\_MEMCHR symbol, which



?S: indicates to the C program that the memchr() routine is available

?S: to scan a block of memory for a character.

?S:.

?C:HAS\_MEMCHR:

?C: This symbol, if defined, indicates that the memchr routine is available

?C: to scan a block of memory for a character.

If undefined, roll your own.

?C:.

?H:#\$d\_memchr HAS\_MEMCHR /\*\*/

?H:.

?LINT:set d\_memchr

: see if memchr exists

set memchr d\_memchr

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_memchr.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: libflex.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: libflex.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:57:48 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS:

?RCS: Revision 3.0.1.2 1994/05/06 15:07:02 ram

?RCS: patch23: now uses full library path instead of -l notation

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:13:25 ram

?RCS: patch16: un-obsolete this unit to allow smooth lex/flex compilations

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:59 ram

?RCS: Baseline for dist 3.0 netwide

release.

?RCS:

?MAKE:libflex: Loc lex libpth \_a

?MAKE: -pick add \$@ %<

?S:libflex:

?S: This variable contains the argument to pass to the loader in order

```

?S: to get the flex/lex library routines. If there is no flex or flex
?S: library, it is null.
?S:.
?T:xxx
: see if we should include -lfl
echo " "
case "$lex" in
*flex)
xxx=`./loc libl$_a x $libpth`
case "$xxx" in
x)
echo "No flex library found." >&4
libflex="
;;
*)
echo "flex library found in $xxx." >&4
libflex="$xxx"
;;
esac
;;
*lex)
xxx=`./loc libl$_a x $libpth`
case "$xxx" in
x)
echo "No lex library found." >&4
libflex="
;;
*)
echo "lex library found in $xxx." >&4
libflex="$xxx"
;;
esac
;;
*)
echo "You don't seem to have lex or flex, so I won't look for libraries." >&4
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/libflex.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_sbrk.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_sbrk.U,v \$

?RCS: Revision 3.0.1.1 1994/01/24 14:06:31 ram

?RCS: patch16: created

?RCS:

?MAKE:d\_sbrk: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_sbrk:

?S: This variable conditionally defines HAS\_SBRK if sbrk() is

?S: available to add more core to the process.

?S:.

?C:HAS\_SBRK:

?C: This symbol, if defined, indicates that the sbrk system call is

?C: available to add/release core. Always true on Unix.

?C:.

?H:#\$d\_sbrk HAS\_SBRK /\*\*/

?H:.

?LINT:set d\_sbrk

: see

if sbrk exists

set sbrk d\_sbrk

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_sbrk.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: netdbtype.U,v \$

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: netdbtype.U,v \$

?RCS:

?MAKE:netdb\_host\_type netdb\_hlen\_type netdb\_name\_type netdb\_net\_type: \

Protochk Oldconfig Myread cat \

d\_gethbyaddr d\_gethbyname d\_getnbyaddr \

i\_niin i\_netdb i\_unistd d\_socket sizetype extern\_C

?MAKE: -pick add \$@ %<

?S:netdb\_host\_type:  
 ?S: This variable holds the type used for the 1st argument to  
 ?S: gethostbyaddr(). Usually, this is char \* or void \*, possibly  
 ?S: with or without a const prefix.  
 ?S: This is only useful if you have gethostbyaddr(), naturally.  
 ?S:.

?S:netdb\_hlen\_type:  
 ?S: This variable holds the type used for the 2nd argument to  
 ?S: gethostbyaddr(). Usually,  
 this is int or size\_t or unsigned.  
 ?S: This is only useful if you have gethostbyaddr(), naturally.  
 ?S:.

?S:netdb\_name\_type:  
 ?S: This variable holds the type used for the argument to  
 ?S: gethostbyname(). Usually, this is char \* or const char \*.  
 ?S: This is only useful if you have gethostbyname(), naturally.  
 ?S:.

?S:netdb\_net\_type:  
 ?S: This variable holds the type used for the 1st argument to  
 ?S: getnetbyaddr(). Usually, this is int or long.  
 ?S: This is only useful if you have getnetbyaddr(), naturally.  
 ?S:.

?C:Netdb\_host\_t:  
 ?C: This symbol holds the type used for the 1st argument  
 ?C: to gethostbyaddr().  
 ?C:.

?C:Netdb\_hlen\_t:  
 ?C: This symbol holds the type used for the 2nd argument  
 ?C: to gethostbyaddr().  
 ?C:.

?C:Netdb\_name\_t:  
 ?C: This symbol holds the type used for the argument to  
 ?C: gethostbyname().  
 ?C:.

?C:Netdb\_net\_t:  
 ?C: This symbol holds the type used for the 1st argument to  
 ?C: getnetbyaddr().  
 ?C:.

?H:#define Netdb\_host\_t \$netdb\_host\_type /\*\*/  
 ?H:#define Netdb\_hlen\_t \$netdb\_hlen\_type  
 /\*\*/  
 ?H:#define Netdb\_name\_t \$netdb\_name\_type /\*\*/  
 ?H:#define Netdb\_net\_t \$netdb\_net\_type /\*\*/  
 ?H:.

?T:xxx yyy try hdrs  
 @if netdb\_host\_type || Netdb\_host\_t || netdb\_hlen\_type || Netdb\_hlen\_t  
 : check for type of arguments to gethostbyaddr.  
 if test "X\$netdb\_host\_type" = X -o "X\$netdb\_hlen\_type" = X; then

```
case "$d_gethbyaddr" in
$define)
$cat <<EOM
```

Checking to see what type of arguments are accepted by gethostbyaddr().

EOM

```
hdrs="$define sys/types.h
$d_socket sys/socket.h
$i_niin netinet/in.h
$i_netdb netdb.h
$i_unistd unistd.h"
: The first arg can 'char *' or 'void *'
: The second arg is some of integral type
for xxx in in_addr_t 'const void *' 'const char *' 'void *' 'char *'; do
for yyy in size_t long int; do
case "$netdb_host_type" in
") try="$extern_C struct hostent *gethostbyaddr($xxx, $yyy, int);"
if ./protochk "$try" $hdrs; then
echo "Your system accepts $xxx for the first arg."
echo "...and $yyy for the second arg."
netdb_host_type="$xxx"
netdb_hlen_type="$yyy"
fi
;;
esac
done
done
:
```

In case none of those worked, prompt the user.

```
case "$netdb_host_type" in
") rp='What is the type for the 1st argument to gethostbyaddr?'
dflt='char *'
./myread
netdb_host_type=$ans
rp='What is the type for the 2nd argument to gethostbyaddr?'
dflt="$sizetype"
./myread
netdb_hlen_type=$ans
;;
esac
;;
*) : no gethostbyaddr, so pick harmless defaults
netdb_host_type='char *'
netdb_hlen_type="$sizetype"
;;
esac
# Remove the "const" if needed. -- but then we'll have a
# prototype clash!
```

```
# netdb_host_type=`echo "$netdb_host_type" | sed 's/^const //'`  
fi  
@end
```

```
@if netdb_name_type || Netdb_name_t  
: check for type of argument to gethostbyname.  
if test "X$netdb_name_type" = X ; then  
case "$d_gethbyname" in  
$define)  
$cat <<EOM
```

Checking to see what type of argument is accepted by gethostbyname().  
EOM

```
hdrs="$define sys/types.h  
$d_socket sys/socket.h  
$i_niin  
netinet/in.h  
$i_netdb netdb.h  
$i_unistd unistd.h"  
for xxx in "const char *" "char *"; do  
case "$netdb_name_type" in  
) try="$extern_C struct hostent *gethostbyname($xxx);"  
if ./protochk "$try" $hdrs; then  
echo "Your system accepts $xxx."  
netdb_name_type="$xxx"  
fi  
;;  
esac  
done  
: In case none of those worked, prompt the user.  
case "$netdb_name_type" in  
) rp='What is the type for the 1st argument to gethostbyname?'  
dflt='char *'  
./myread  
netdb_name_type=$ans  
;;  
esac  
*) : no gethostbyname, so pick harmless default  
netdb_name_type='char *'  
;;  
esac  
fi  
@end
```

```
@if netdb_net_type || Netdb_net_t  
: check for type of 1st argument to getnetbyaddr.  
if test "X$netdb_net_type" = X ; then
```

```
case "$d_getnbyaddr" in
$define)
$cat <<EOM
```

Checking to see what type of 1st argument is accepted by getnetbyaddr().

EOM

```
hdrs="$define sys/types.h
$d_socket sys/socket.h
$i_niin netinet/in.h
$i_netdb netdb.h
$i_unistd
unistd.h"
for xxx in in_addr_t "unsigned long" long "unsigned int" int; do
case "$netdb_net_type" in
") try="$xtern_C struct netent *getnetbyaddr($xxx, int);"
if ./protochk "$stry" $hdrs; then
echo "Your system accepts $xxx."
netdb_net_type="$xxx"
fi
;;
esac
done
: In case none of those worked, prompt the user.
case "$netdb_net_type" in
") rp='What is the type for the 1st argument to getnetbyaddr?'
dflt='long'
./myread
netdb_net_type=$ans
;;
esac
*) : no getnetbyaddr, so pick harmless default
netdb_net_type='long'
;;
esac
fi
@end
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/protos/netdbtype.U
```

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?RCS: \$Id\$

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: charorder.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:07:08 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:33 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:chorder\_int chorder\_short chorder\_long: Myread cat +cc +ccflags rm

?MAKE: -pick add \$@ %<

?S:chorder\_short (d\_cos d\_bos):

?S: Holds the value describing the byte ordering of characters in a short.

?S: On a Big-Endian machine, that would be "c0c1".

?S:.

?S:chorder\_int

(charoder):

?S: Holds the value describing the byte ordering of characters in an int.

?S: For instance, on a Big-Endian machine, this would be: "c0c1c2c3".

?S:.

?S:chorder\_long (d\_col d\_bol):

?S: Holds the value describing the byte ordering of characters in a long.

?S: On a 64 bits Big-Endian machine, that would yield: "c0c1c2c3c4c5c6c7".

?S:.

?C:CHAR\_ORDER\_SHORT:

?C: Holds the byte ordering of characters in a short. It's a string

?C: value like "c0c1" on a Big-Endian machine.

?C:.

?C:CHAR\_ORDER\_INT:

?C: Holds the byte ordering of characters in an int. It's a string

?C: value like "c0c1c2c3" on a Big-Endian machine.

?C:.

?C:CHAR\_ORDER\_LONG:

?C: Holds the byte ordering of characters in a long. It's a string

?C: value like "c0c1c2c3c4c5c6c7" on a 64 bits Big-Endian machine.

?C:.

?H:#define CHAR\_ORDER\_SHORT "\$chorder\_short" /\* byte order in a short \*/

?H:#define CHAR\_ORDER\_INT "\$chorder\_int" /\* byte order in an int \*/

?H:#define CHAR\_ORDER\_LONG "\$chorder\_long" /\* byte order in a long \*/

?H:.

?F:!byteorder

:

check for character ordering

echo " "

echo "Checking out byte order..." >&4



```

$cat >byteorder.c <<'EOCP'
#include <stdio.h>

main(argc, argv)
int argc;
char *argv[]; {
int i;
int max;
union {
short u_s;
int u_i;
long u_l;
char u_c[sizeof(long)];
} u;
switch (argv[1][0]) {
case 'l':
u.u_l = 0L;
/* HMS: ASSERT: sizeof(long) < 10. */
for(i = 0; i < sizeof(long); ++i) {
u.u_l *= 0x100L;
u.u_l += (0xc0 + i);
}
max = sizeof(long);
break;
case 's':
u.u_s = 0;
/* HMS: ASSERT: sizeof(short) < 10. */
for(i = 0; i < sizeof(short); ++i) {
u.u_s *= 0x100L;
u.u_s += (0xc0 + i);
}
max = sizeof(short);
break;
case 'i':
u.u_i = 0;
/* RAM: ASSERT: sizeof(int) < 10. */
for(i = 0; i < sizeof(int); ++i) {
u.u_l *= 0x100L;
u.u_l += (0xc0 + i);
}
max = sizeof(int);
break;
default:
max = 0;
break;
}
for(i = 0; i < max; i++) {
printf("%x", u.u_c[i] & 0x00FF);

```

```

}
printf("\n");
exit(0);
}
EOCP
if $cc $ccflags -o
byteorder byteorder.c >/dev/null 2>&1 ; then
: null statement
@if chorder_short
chorder_short=`./byteorder s`
@end
@if chorder_int
chorder_int=`./byteorder i`
@end
@if chorder_long
chorder_long=`./byteorder l`
@end
else
$cat <<EOM
(I can't seem to get my test program to work. Guessing 32 bits big-endian.)
EOM

```

```

chorder_short="c0c1"
chorder_int="c0c1c2c3"
chorder_long="c0c1c2c3"
fi
@if chorder_short
dflt=$chorder_short
rp="What is the order of characters in a short?"
./myread
chorder_short="$ans"
@end
@if chorder_int
dflt=$chorder_int
rp="What is the order of characters in an int?"
./myread
chorder_int="$ans"
@end
@if chorder_long
dflt=$chorder_long
rp="What is the order of characters in a long?"
./myread
chorder_long="$ans"
@end
$rm -f byteorder* core

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/charorder.U

```

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?RCS:

?RCS: \$Log: bin.U,v \$

?RCS: Revision 3.0.1.4 1995/09/25 09:15:32 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.3 1995/01/30 14:32:40 ram

?RCS: patch49: can now handle installation prefix changes (from WED)

?RCS:

?RCS: Revision 3.0.1.2 1994/08/29 16:05:28 ram

?RCS: patch32: now uses installation prefix

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 15:56:51 ram

?RCS: patch10: made prompting more explicit (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18

12:05:26 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:bin binexp installbin: Prefixit Getfile Oldconfig afs cat test

?MAKE: -pick add \$@ %<

?Y:TOP

?S:bin:

?S: This variable holds the name of the directory in which the user wants

?S: to put publicly executable images for the package in question. It

?S: is most often a local directory such as /usr/local/bin. Programs using

?S: this variable must be prepared to deal with ~name substitution.

?S:.

?S:binexp:

?S: This is the same as the bin variable, but is filename expanded at

?S: configuration time, for use in your makefiles.

?S:.

?S:installbin:

?S: This variable is the same as binexp unless AFS is running in which case

?S: the user is explicitly prompted for it. This variable should always

?S: be used in your makefiles for maximum portability.

?S:.

?C:BIN:

?C: This symbol holds the path of the bin directory where the package will  
?C: be installed. Program must be prepared to deal with ~name substitution.  
?C:.  
?C:BIN\_EXP:  
?C: This  
symbol is the filename expanded version of the BIN symbol, for  
?C: programs that do not want to deal with that at run-time.  
?C:.

```
?H:#define BIN "$bin" /**/  
?H:#define BIN_EXP "$binexp" /**/  
?H:.  
?D:bin='/usr/local/bin'  
: determine where public executables go  
echo " "  
set dflt bin bin  
eval $prefixit  
fn=d~  
rp='Pathname where the public executables will reside?'  
./getfile  
if $test "X$sansexp" != "X$binexp"; then  
installbin="  
fi  
bin="$ans"  
binexp="$sansexp"  
if $afs; then  
$cat <<EOM
```

Since you are running AFS, I need to distinguish the directory in which  
executables reside from the directory in which they are installed (and from  
which they are presumably copied to the former directory by occult means).

```
EOM  
case "$installbin" in  
") dflt=`echo $binexp | sed 's#^/afs/#/afs/.#`";  
*) dflt="$installbin";;  
esac  
fn=de~  
rp='Where will public executables be installed?'  
./getfile  
installbin="$ans"  
else  
installbin="$binexp"  
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-  
5.38.0/dist/U/bin.U
```

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```
?RCS: $Id: d_killpg.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_killpg.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:27 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_killpg: Inlibc
?MAKE: -pick add $@ %<
?S:d_killpg:
?S: This variable conditionally defines the HAS_KILLPG symbol, which
?S: indicates to the C program that the killpg() routine is available
?S: to kill process groups.
?S:.
?C:HAS_KILLPG (KILLPG):
?C: This symbol, if defined, indicates that the killpg routine is available
?C: to kill
    process groups. If unavailable, you probably should use kill
?C: with a negative process number.
?C:.
?H:#$d_killpg HAS_KILLPG /**/
?H:.
?LINT:set d_killpg
: see if killpg exists
set killpg d_killpg
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_killpg.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 2001, Jarkko Hietaniemi
?RCS:
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```

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_u32align: Compile cat rm\_try Oldconfig run i\_stdlib \  
byteorder u32type Myread Setvar u8type signal\_t

?MAKE: -pick add \$@ %<

?S:d\_u32align:

?S: This variable tells whether you must access character data

?S: through U32-aligned pointers.

?S:.

?C:U32\_ALIGNMENT\_REQUIRED:

?C: This symbol, if defined, indicates that you must access

?C: character data through U32-aligned pointers.

?C:.

?H:?%<:#ifndef U32\_ALIGNMENT\_REQUIRED

?H:?%<:#\$d\_u32align U32\_ALIGNMENT\_REQUIRED /\*\*/

?H:?%<:#endif

?H:.

?F:!try

: Checking 32bit alignedness

\$cat

<<EOM

Checking to see whether you can access character data unalignedly...

EOM

case "\$d\_u32align" in

) \$cat >try.c <<EOCP

#include <stdio.h>

#\$i\_stdlib I\_STDLIB

#ifdef I\_STDLIB

#include <stdlib.h>

#endif

#define U32 \$u32type

#define BYTEORDER 0x\$byteorder

#define U8 \$u8type

#include <signal.h>

#ifdef SIGBUS

\$signal\_t blech(int s) { exit(4); }

#endif

int main() {

#if BYTEORDER == 0x1234 || BYTEORDER == 0x4321

volatile U8 buf[8];

volatile U32 \*up;

int i;

if (sizeof(U32) != 4) {

printf("sizeof(U32) is not 4, but %d\n", sizeof(U32));

exit(1);

```

}

fflush(stdout);

#ifdef SIGBUS
    signal(SIGBUS, blech);
#endif

buf[0] = 0;
buf[1] = 0;
buf[2] = 0;
buf[3] = 1;
buf[4] = 0;
buf[5] = 0;
buf[6] = 0;
buf[7] = 1;

for (i = 0; i < 4; i++) {
    up = (U32*)(buf + i);
    if (!( (*up == 1 << (8*i)) || /* big-endian */
           (*up == 1 << (8*(3-i))) /* little-endian */
         ))
    {
        printf("read failed (%x)\n", *up);

        exit(2);
    }
}

/* write test */
for (i = 0; i < 4; i++) {
    up = (U32*)(buf + i);
    *up = 0xBeef;
    if (*up != 0xBeef) {
        printf("write failed (%x)\n", *up);
        exit(3);
    }
}

exit(0);
#else
    printf("1\n");
    exit(1);
#endif
return 0;
}
EOCP

```

```
set try
if eval $compile_ok; then
echo "(Testing for character data alignment may crash the test. That's okay.)" >&4
$run ./try 2>&1 >/dev/null
case "$?" in
0) cat >&4 <<EOM
```

You can access character data pretty unalignedly.

EOM

```
  d_u32align="$undef"
;;
*) cat >&4 <<EOM
```

It seems that you must access character data in an aligned manner.

EOM

```
  d_u32align="$define"
;;
esac
else
rp='Can you access character data at unaligned addresses?'
dflt='n'
. ./myread
case "$ans" in
[yY]*) d_u32align="$undef" ;;
*) d_u32align="$define" ;;
esac
fi
$rm_try
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_u32align.U
```

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?RCS: \$Id: maildir.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

?RCS: \$Log: maildir.U,v \$

?RCS: Revision 3.0.1.1 1993/12/15 08:21:56 ram

?RCS: patch15: now also looks under /var/mail for BSD/386

?RCS:



```

?RCS: Revision 3.0 1993/08/18 12:09:09 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:maildir maildirexp: Getfile Loc Oldconfig
?MAKE: -pick add $@ %<
?S:maildir:
?S: This variable contains the name of the directory in which mail is
?S: spooled. Programs using this variable must be prepared to deal with
?S: ~name
substitutions.
?S:.
?S:maildirexp:
?S: This is the same as the maildir variable, but is filename expanded
?S: at configuration time, for programs not willing to deal with it at
?S: run-time.
?S:.
: determine where mail is spooled
case "$maildir" in
") dflt=`./loc ./usr/spool/mail /usr/spool/mail /usr/mail /var/mail`;;
*) dflt="$maildir";;
esac
echo " "
fn=d~
rp="Where is yet-to-be-read mail spooled?"
./getfile
maildir="$sans"
maildirexp="$sansexp"

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/maildir.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_msem_lck.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_msem_lck.U,v $
?MAKE:d_msem_lck: Inlibc
?MAKE: -pick add $@ %<
?S:d_msem_lck:
?S: This variable conditionally defines HAS_MSEM_LOCK if msem_lock() is

```

?S: available, thereby indicating kernel support for memory semaphores.

?S:.

?C:HAS\_MSEM\_LOCK:

?C: This symbol, if defined, indicates that memory semaphores are

?C: available to protect mmap()'ed regions.

?C:.

?H:#\$d\_msem\_lck HAS\_MSEM\_LOCK /\*\*/

?H:.

?LINT:set d\_msem\_lck

: see if msem\_lock exists

set

msem\_lock d\_msem\_lck

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_msem\_lck.U

No license file was found, but licenses were detected in source scan.

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_setproctitle: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setproctitle:

?S: This variable conditionally defines the HAS\_SETPROCTITLE symbol,

?S: which indicates to the C program that the setproctitle() routine

?S: is available.

?S:.

?C:HAS\_SETPROCTITLE:

?C: This symbol, if defined, indicates that the setproctitle routine is

?C: available to set process title.

?C:.

?H:#\$d\_setproctitle HAS\_SETPROCTITLE /\*\*/

?H:.

?LINT:set d\_setproctitle

: see if setproctitle exists

set setproctitle d\_setproctitle

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_setproctitle.U

No license file was found, but licenses were detected in source scan.

```
?RCS:
?RCS: Copyright (c) 1999, Jarkko Hietaniemi
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:uidsign: Myread Typedef uidtype Compile run
?MAKE: -pick add $@ %<
?S:uidsign:
?S: This variable contains the signedness of a uidtype.
?S: 1 for unsigned, -1 for signed.
?S:.
?C:Uid_t_sign:
?C: This symbol holds the signedness of a Uid_t.
?C: 1 for unsigned, -1 for signed.
?C:.
?H:#define Uid_t_sign $uidsign /* UID sign */
?H:.
?T:yyy zzz
?F:!try
: Check if UID is signed
echo " "
case "$uidtype" in
*_t) zzz="$uidtype" ;;
*) zzz="uid" ;;
esac
echo "Checking the sign of $zzz..." >&4
cat > try.c <<EOCP
#include <sys/types.h>
#include
<stdio.h>
int main() {
    $uidtype foo = -1;
    if (foo < 0)
        printf("-1\n");
    else
        printf("1\n");
}
EOCP
set try
if eval $compile; then
    yyy=`$run ./try`
    case "$yyy" in
```

```

") uidsign=1
echo "(I can't execute the test program--guessing unsigned.)" >&4
;;
*) uidsign=$yyy
case "$uidsign" in
  1) echo "Your $zzz is unsigned." ;;
  -1) echo "Your $zzz is signed." ;;
  esac
;;
esac
else
uidsign=1
echo "(I can't compile the test program--guessing unsigned.)" >&4
fi

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/uidsign.U

```

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: sizetype.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:32:10 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:sizetype: Myread Typedef

?MAKE: -pick add \$@ %<

?S:sizetype:

?S: This variable defines sizetype to be something like size\_t,

?S: unsigned long, or whatever type is used to declare length

?S: parameters for string functions.

?S:.

?C:Size\_t:

?C: This symbol holds the type used to declare length parameters

?C: for string

functions. It is usually size\_t, but may be

?C: unsigned long, int, etc. It may be necessary to include

```
?C: <sys/types.h> to get any typedef'ed information.
?C:.
?H:#define Size_t $sizetype /* length paramater for string functions */
?H:.
: see what type is used for size_t
set size_t sizetype 'unsigned int' stdio.h sys/types.h
eval $typedef
dflt="$sizetype"
echo " "
rp="What type is used for the length parameter for string functions?"
./myread
sizetype="$ans"
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/sizetype.U
```

No license file was found, but licenses were detected in source scan.

```
case $CONFIG in
")
if test -f config.sh; then TOP=.;
elif test -f ../config.sh; then TOP=..;
elif test -f ../../config.sh; then TOP=../../.;
elif test -f ../../../config.sh; then TOP=../../../.;
elif test -f ../../../../config.sh; then TOP=../../../../.;
else
echo "Can't find config.sh."; exit 1
fi
. $TOP/config.sh
;;
esac
case "$0" in
*/*) cd `expr X$0 : 'X\(.*/'` ;;
esac
echo "Extracting makedepend (with variable substitutions)"
$spitshell >makedepend <<!GROK!THIS!
$startsh
# $Id: makedepend.sh,v 3.0.1.1 1994/01/24 14:00:05 ram Exp ram $
#
# Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
#
# You may redistribute only under the terms of the Artistic Licence,
# as specified in the README file that comes with the distribution.
# You may reuse parts of this distribution only within the terms of
# that same Artistic Licence; a copy of which may be found at the root
# of the source tree for dist 4.0.
#
#
```

Original Author: Larry Wall <lwall@netlabs.com>

#

# \$Log: makedepend.sh,v \$

# Revision 3.0.1.1 1994/01/24 14:00:05 ram

# patch16: changed top ln-style config.sh lookup into test-style one

#

# Revision 3.0 1993/08/18 12:04:37 ram

# Baseline for dist 3.0 netwide release.

#

export PATH || (echo "OOPS, this isn't sh. Desperation time. I will feed myself to sh."; sh \\${0}; kill \\${0})

cat='\$cat'

cppflags='\$cppflags'

cp='\$cp'

cpp='\$cppstdin'

echo='\$echo'

egrep='\$egrep'

expr='\$expr'

mv='\$mv'

rm='\$rm'

sed='\$sed'

sort='\$sort'

test='\$test'

tr='\$tr'

uniq='\$uniq'

!GROK!THIS!

\$spitshell >>makedepend <<'!NO!SUBS!'

\$cat /dev/null >.deptmp

\$rm -f \*.c.c c/\*.\*c

if test -f Makefile; then

mf=Makefile

else

mf=makefile

fi

if test -f \$mf; then

defrule=`\$mf sed -n \

-e '/^\.c\.o:.\*;/{' \

-e 's/^\\$\*\c//' \

-e 's/^[^;]\*[ ]\*//p' \

-e q \

-e '}' \

-e '/^\.c\.o: \*\$/{' \

-e N \

-e 's/^\\$\*\c//' \

-e 's/^\.\*\n[ ]\*//p' \

```

-e q \
-e }'^
fi
case
"$defrule" in
") defrule=$(CC) -c $(CFLAGS)' ;;
esac

make clist || ($echo "Searching for .c files..."; \
$echo *.c | $tr ' ' '\012' | $egrep -v '*' >.clist)
gotnone=true
for file in `scat .clist`; do
# for file in `cat /dev/null`; do
case "$file" in
*.c) filebase=`basename $file .c` ;;
*.y) filebase=`basename $file .c` ;;
") continue ;;
esac
gotnone=false
$echo "Finding dependencies for $filebase.o."
$sed -n <$file >$file.c \
-e "/^${filebase}_init(/q" \
-e '/^#/{' \
-e 's/^\*.*$|' \
-e 's\\$|' \
-e p \
-e }'
$cpp -I/usr/local/include -I. $cppflags $file.c | \
$sed \
-e '/^# *[0-9]/!d' \
-e 's/^\*"\(.*\)".*$/${filebase}.o: \1/' \
-e 's: \./: |' \
-e 's\,c\.c|.c'| \
$uniq | $sort | $uniq >> .deptmp
done

$sed <Makefile >Makefile.new -e '1,/^# AUTOMATICALLY/!d'

make shlist || ($echo "Searching for .SH files..."; \
$echo *.SH | $tr ' ' '\012' | $egrep -v '*' >.shlist)
if $gotnone || $test -s .deptmp; then

for file in `cat .shlist`; do
$echo `sexpr X$file : 'X(.*)\.SH` : $file config.sh \; \
/bin/sh $file >> .deptmp
done
$echo "Updating Makefile..."
$echo "# If this runs make out of memory, delete /usr/include lines." \

```

```

>> Makefile.new
$sed 's/^(.*\o:)*(.*/.*.c) *$|1 \2; ""$defrule \2|" .deptmp \
  >>Makefile.new
else
  make hlist || ($echo "Searching for .h files..."; \
$echo *.h | $tr ' ' '\012' | $grep -v '*' >.hlist)
  $echo "You don't seem to have a proper C preprocessor. Using grep instead."
  $grep '^#include ' `cat .clist` `cat .hlist` >.deptmp
  $echo "Updating Makefile..."
  <.clist $sed -n \
-e '/\{/ \
-e 's/^(.*)^(.*)\c\2.o: \1\2.c; ""$defrule \1\2.c)p' \
-e d \
-e '}' \
-e 's/^(.*)\c\1.o: \1.c)p' >> Makefile.new
  <.hlist $sed -n 's|(.*^)\(.*)|s= \2= \1\2=p' >.hsed
  <.deptmp $sed -n 's|c:#include "(.*)".*|o: \1|p' | \
    $sed 's^[^;]*/|' | \
    $sed -f
.hsed >> Makefile.new
  <.deptmp $sed -n 's|c:#include <(.*>.*|o: /usr/include/\1|p' \
    >> Makefile.new
  <.deptmp $sed -n 's|h:#include "(.*)".*|h: \1|p' | \
    $sed -f .hsed >> Makefile.new
  <.deptmp $sed -n 's|h:#include <(.*>.*|h: /usr/include/\1|p' \
    >> Makefile.new
  for file in `scat .shlist`; do
$echo `sexpr X$file : 'X(.*).SH` : $file config.sh \; \
  /bin/sh $file >> Makefile.new
  done
fi
$rm -f Makefile.old
$cp Makefile Makefile.old
$cp Makefile.new Makefile
$rm Makefile.new
$echo "# WARNING: Put nothing here or make depend will gobble it up!" >> Makefile
$rm -f .deptmp `sed 's/\c/.c.c/' .clist` .shlist .clist .hlist .hsed

!NO!SUBS!
$eunicefix makedepend
chmod +x makedepend
case `pwd` in
*SH)
  $rm -f ./makedepend
  ln makedepend ./makedepend
  ;;
esac

```



Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/lib/makedepend.SH

No license file was found, but licenses were detected in source scan.

\* You may redistribute only under the terms of the Artistic Licence,

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/files/Jmake.tmpl

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_fp.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_fp: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_fp:

?S: This variable conditionally defines the I\_FP symbol, and indicates

?S: whether a C program should include <fp.h>.

?S:.

?C:I\_FP:

?C: This symbol, if defined, indicates that <fp.h> exists and

?C: should be included.

?C:.

?H:#\$i\_fp I\_FP /\*\*/

?H:.

?LINT:set i\_fp

: see if this is a fp.h system

set fp.h i\_fp

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_fp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998, Jarkko Hietaniemi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:i\_machcthr: Inhdr usethreads

?MAKE: -pick add \$@ %<

?S:i\_machcthr:

?S: This variable conditionally defines the I\_MACH\_CTHREADS symbol,

?S: and indicates whether a C program should include <mach/cthreads.h>.

?S:.

?C:I\_MACH\_CTHREADS:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <mach/cthreads.h>.

?C:.

?H:#\$i\_machcthr I\_MACH\_CTHREADS /\*\*/

?H:.

: see if mach cthreads are available

if test "X\$usethreads" = "X\$define"; then

set mach/cthreads.h i\_machcthr

eval \$inhdr

else

i\_machcthr="\$undef"

fi

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/i\_machcthr.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_stat.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_stat.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:28 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_stat: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_stat:

?S: This variable conditionally defines HAS\_STAT if stat() is

?S: available to get file status.

```
?S:.
?C:HAS_STAT (STAT):
?C: This symbol, if defined, indicates that the stat routine is
?C: available to get file status.
?C:.
?H:#$d_stat HAS_STAT /**/
?H:.
?LINT:set d_stat
: see if stat exists
set
stat d_stat
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_stat.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_statblks.U,v 3.0 1993/08/18 12:07:29 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_statblks.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:29 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_statblks: Hasfield i_sysstat
?MAKE: -pick add $@ %<
?S:d_statblks:
?S: This variable conditionally defines USE_STAT_BLOCKS
?S: if this system has a stat structure declaring
?S: st_blksize and st_blocks.
?S:.
?C:USE_STAT_BLOCKS (STATBLOCKS):
?C: This symbol is defined if this system has a stat structure declaring
?C: st_blksize and st_blocks.
?C:.
?H:?%<:#ifndef
USE_STAT_BLOCKS
?H:?%<:#$d_statblks USE_STAT_BLOCKS /**/
?H:?%<:#endif
?H:.
```

```
?LINT:set d_statblks
: see if stat knows about block sizes
echo " "
echo "Checking to see if your struct stat has st_blocks field..." >&4
set d_statblks stat st_blocks $i_sysstat sys/stat.h
eval $hasfield
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_statblks.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Typedef.U,v \$

?RCS: Revision 3.0.1.3 1995/07/25 13:42:07 ram

?RCS: patch56: added backslash escapes within evals to prevent space problems

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:01:16 ram

?RCS: patch36: don't clobber visible 'val' variable, use 'varval' instead

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:05:14 ram

?RCS: patch32: created

?RCS:

?X:

?X: This unit checks for the definition of a given typedef.

?X:

?X: To use it, say:

?X: set typedef val\_t default [includes]

?X: eval \$typedef

?X:

?MAKE:Typedef:

cppstdin cppminus cppflags rm contains Oldconfig

?MAKE: -pick add \$@ %<

?F:!temp.c

?LINT:define typedef

?V:typedef

?S:typedef:

?S: This shell variable is used internally by Configure to check

?S: whether a given typedef is defined or not. A typical use is:

```

?S: set typedef val_t default [includes]
?S: eval $typedef
?S: That will return val_t set to default if the typedef was not found,
?S: to typedef otherwise. If no includes are specified, look in sys/types.h.
?S:.
?T:type var def inclist varval inc
: define an is-a-typedef? function
typedef='type=$1; var=$2; def=$3; shift; shift; shift; inclist=$@;
case "$inclist" in
"" ) inclist="sys/types.h";;
esac;
eval "varval=\$$var";
case "$varval" in
"" )
$rm -f temp.c;
for inc in $inclist; do
echo "#include <$inc>" >>temp.c;
done;
$cpstdin $cppflags $cppminus < temp.c >temp.E 2>/dev/null;
if $contains $type temp.E >/dev/null 2>&1; then
eval "$var=\$type";
else
eval "$var=\$def";
fi;
$rm -f temp.?.;
*) eval
"$var=\$varval";;
esac'

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Typedef.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: lintlib.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: lintlib.U,v $
?RCS: Revision 3.0 1993/08/18 12:09:05 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:

```

```

?MAKE:lintlib lintlibexp: Getfile Loc Oldconfig
?MAKE: -pick add $@ %<
?S:lintlib:
?S: This variable holds the name of the directory in which the user wants
?S: to put public lint-library files for the package in question. It is
?S: most often a local directory such as /usr/local/lib/lint. Programs using
?S: this variable must be prepared to
    deal with ~name expansion.
?S:.
?S:lintlibexp:
?S: This variable is the same as the lintlib variable, but is filename
?S: expanded at configuration time, for convenient use in your makefiles.
?S:.
: determine where public lint libraries go
case "$lintlib" in
") dflt=`./loc . ." /usr/local/lib/lint /usr/lib/lint /usr/lib`;
*) dflt="$lintlib" ;;
esac
echo " "
fn=d~
rp='Where do you want to put the public lint libraries?'
./getfile
lintlib="$ans"
lintlibexp="$ansexp"

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/lintlib.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_msgget.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_msgget.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:39 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_msgget: Inlibc
?MAKE: -pick add $@ %<
?S:d_msgget:
?S: This variable conditionally defines the HAS_MSGGET symbol, which

```

?S: indicates to the C program that the msgget() routine is available.

?S:.

?C:HAS\_MSGGET:

?C: This symbol, if defined, indicates that the msgget() routine is

?C: available to get a new message queue.

?C:.

?H:#\$d\_msgget

HAS\_MSGGET /\*\*/

?H:.

?LINT:set d\_msgget

: see if msgget exists

set msgget d\_msgget

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_msgget.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: patchlevel.U,v 3.0.1.1 1997/02/28 16:18:41 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: This file is included with or a derivative work of a file included

?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.

?RCS: In accordance with clause 7 of dist's modified Artistic License:

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: patchlevel.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:18:41 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:31 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:patchlevel revision version subversion \

perl\_patchlevel version\_patchlevel\_string \

api\_revision api\_version api\_subversion api\_versionstring: \

package test rsrc echo awk osname

?MAKE: -pick

add \$@ %<

?S:revision:

?S: The value of revision comes from the patchlevel.h file.

?S: In a version number such as 5.6.1, this is the "5".

?S: In patchlevel.h, this is referred to as "PERL\_REVISION".

?S:.

?S:patchlevel:

?S: The patchlevel level of this package.

?S: The value of patchlevel comes from the patchlevel.h file.

?S: In a version number such as 5.6.1, this is the "6".

?S: In patchlevel.h, this is referred to as "PERL\_VERSION".

?S:.

?S:subversion:

?S: The subversion level of this package.

?S: The value of subversion comes from the patchlevel.h file.

?S: In a version number such as 5.6.1, this is the "1".

?S: In patchlevel.h, this is referred to as "PERL\_SUBVERSION".

?S: This is unique to perl.

?S:.

?S:version:

?S: The full version number of this package, such as 5.6.1 (or 5\_6\_1).

?S: This combines revision, patchlevel, and subversion to get the

?S: full version number, including any possible subversions.

?S: This is suitable for use as a directory name, and hence is

?S: filesystem

dependent.

?S:.

?S:api\_revision:

?S: The three variables, api\_revision, api\_version, and

?S: api\_subversion, specify the version of the oldest perl binary

?S: compatible with the present perl. In a full version string

?S: such as '5.6.1', api\_revision is the '5'.

?S: Prior to 5.5.640, the format was a floating point number,

?S: like 5.00563.

?S:

?S: perl.c:incpush() and lib/lib.pm will automatically search in

?S: \$sitelib/.. for older directories back to the limit specified

?S: by these api\_ variables. This is only useful if you have a

?S: perl library directory tree structured like the default one.

?S: See INSTALL for how this works. The versioned site\_perl

?S: directory was introduced in 5.005, so that is the lowest

?S: possible value. The version list appropriate for the current

?S: system is determined in inc\_version\_list.U.

?S:

?S: XXX To do: Since compatibility can depend on compile time

?S: options (such as bincompat, longlong, etc.) it should

?S: (perhaps) be set by

Configure, but currently it isn't.

?S: Currently, we read a hard-wired value from patchlevel.h.

?S: Perhaps what we ought to do is take the hard-wired value from

?S: patchlevel.h but then modify it if the current Configure

?S: options warrant. patchlevel.h then would use an #ifdef guard.

?S:.

?S:api\_version:



?S: The three variables, api\_revision, api\_version, and  
?S: api\_subversion, specify the version of the oldest perl binary  
?S: compatible with the present perl. In a full version string  
?S: such as '5.6.1', api\_version is the '6'. See api\_revision for  
?S: full details. As a special case, 5.5.0 is rendered in the  
?S: old-style as 5.005. (In the 5.005\_0x maintenance series,  
?S: this was the only versioned directory in \$sitelib.)  
?S:.  
?S:api\_subversion:  
?S: The three variables, api\_revision, api\_version, and  
?S: api\_subversion, specify the version of the oldest perl binary  
?S: compatible with the present perl. In a full version string  
?S: such as '5.6.1', api\_subversion is the  
'1'. See api\_revision for  
?S: full details.  
?S:.  
?S:api\_versionstring:  
?S: This variable combines api\_revision, api\_version, and  
?S: api\_subversion in a format such as 5.6.1 (or 5\_6\_1) suitable  
?S: for use as a directory name. This is filesystem dependent.  
?S:.  
?S:perl\_patchlevel:  
?S: This is the Perl patch level, a numeric change identifier,  
?S: as defined by whichever source code maintenance system  
?S: is used to maintain the patches; currently Perforce.  
?S: It does not correlate with the Perl version numbers or  
?S: the maintenance versus development dichotomy except  
?S: by also being increasing.  
?S:.  
?S:version\_patchlevel\_string:  
?S: This is a string combining version, subversion and  
?S: perl\_patchlevel (if perl\_patchlevel is non-zero).  
?S: It is typically something like  
?S: 'version 7 subversion 1' or  
?S: 'version 7 subversion 1 patchlevel 11224'  
?S: It is computed here to avoid duplication of code in myconfig.SH  
?S: and lib/Config.pm.  
?S:.  
?LINT:extern LC\_ALL  
?LINT:extern LANGUAGE  
:  
get the patchlevel  
echo " "  
echo "Getting the current patchlevel..." >&4  
if \$test -r \$rsrc/patchlevel.h;then  
revision=`awk '/define[ ]+PERL\_REVISION/ {print \$3}' \$rsrc/patchlevel.h`  
patchlevel=`awk '/define[ ]+PERL\_VERSION/ {print \$3}' \$rsrc/patchlevel.h`  
subversion=`awk '/define[ ]+PERL\_SUBVERSION/ {print \$3}' \$rsrc/patchlevel.h`

```

api_revision=`awk '/define[ ]+PERL_API_REVISION/ {print $3}' $rsrc/patchlevel.h`
api_version=`awk '/define[ ]+PERL_API_VERSION/ {print $3}' $rsrc/patchlevel.h`
api_subversion=`awk '/define[ ]+PERL_API_SUBVERSION/ {print $3}' $rsrc/patchlevel.h`
perl_patchlevel=`egrep ',(MAINT|SMOKE)[0-9][0-9]*"' $rsrc/patchlevel.h|tail -1|sed 's/[^0-9]//g`
else
revision=0
patchlevel=0
subversion=0
api_revision=0
api_version=0
api_subversion=0
perl_patchlevel=0
$echo "(You do not have patchlevel.h. Eek.)"
fi
: Define a handy string here to avoid duplication in myconfig.SH and configpm.
version_patchlevel_string="version $patchlevel subversion $subversion"
case
"$perl_patchlevel" in
0|") ;;
*) perl_patchlevel=`echo $perl_patchlevel | sed 's/.* //'`
   version_patchlevel_string="$version_patchlevel_string patch $perl_patchlevel"
   ;;
esac

$echo "(You have $package $version_patchlevel_string.)"

case "$osname" in
dos|vms)
: XXX Should be a Configure test for double-dots in filenames.
version=`echo $revision $patchlevel $subversion | \
  $sawk '{ printf "%d_%d_%d", $1, $2, $3 }`
api_versionstring=`echo $api_revision $api_version $api_subversion | \
  $sawk '{ printf "%d_%d_%d", $1, $2, $3 }`
;;
*)
version=`echo $revision $patchlevel $subversion | \
  $sawk '{ printf "%d.%d.%d", $1, $2, $3 }`
api_versionstring=`echo $api_revision $api_version $api_subversion | \
  $sawk '{ printf "%d.%d.%d", $1, $2, $3 }`
;;
esac
: Special case the 5.005_xx maintenance series, which used 5.005
: without any subversion label as a subdirectory in $sitelib
if test "${api_revision}${api_version}${api_subversion}" = "550"; then
api_versionstring='5.005'
fi

```

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/patchlevel.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setsid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_setsid.U,v \$

?RCS: Revision 3.0.1.1 1994/01/24 14:06:49 ram

?RCS: patch16: created

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:56 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setsid: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setsid:

?S: This variable conditionally defines HAS\_SETSID if setuid() is

?S: available to set the process group ID.

?S:.

?C:HAS\_SETSID:

?C: This symbol, if defined, indicates that the setuid routine is

?C: available

to set the process group ID.

?C:.

?H:#\$d\_setsid HAS\_SETSID /\*\*/

?H:.

?LINT:set d\_setsid

: see if setuid exists

set setuid d\_setsid

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_setsid.U

No license file was found, but licenses were detected in source scan.

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?RCS:

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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?MAKE:d\_mkostemp: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_mkostemp:  
?S: This variable conditionally defines HAS\_MKOSTEMP if mkostemp() is  
?S: available to exclusively create and open a uniquely named (with a  
?S: suffix) temporary file.  
?S:.  
?C:HAS\_MKOSTEMP:  
?C: This symbol, if defined, indicates that the mkostemp routine is  
?C: available to exclusively create and open a uniquely named (with a  
?C: suffix) temporary file.  
?C:.  
?H:#\$d\_mkostemp HAS\_MKOSTEMP /\*\*/  
?H:.  
?LINT:set d\_mkostemp  
: see if mkostemp exists  
set mkostemp d\_mkostemp  
eval \$inlibc

#### Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_mkostemp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_stdlib.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: i\_stdlib.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:27 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:i\_stdlib: Inhdr  
?MAKE: -pick add \$@ %<  
?S:i\_stdlib:  
?S: This variable conditionally defines the I\_STDLIB symbol, which

?S: indicates to the C program that <stdlib.h> exists and should  
?S: be included.  
?S:.  
?C:I\_STDLIB:  
?C: This symbol, if defined, indicates that <stdlib.h> exists and should  
?C: be included.  
?C:.  
?H:#\$i\_stdlib I\_STDLIB /\*\*/  
?H:.  
?LINT:set  
i\_stdlib  
: see if stdlib is available  
set stdlib.h i\_stdlib  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_stdlib.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: byteorder.U,v 3.0.1.2 1997/02/28 15:24:55 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: byteorder.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:24:55 ram  
?RCS: patch61: no longer ask the user if the test runs ok  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:02:58 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:28 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:byteorder: cat Myread Oldconfig Loc Compile rm\_try run \  
multiarch uvtype uvsize i\_stdlib i\_inttypes  
?MAKE: -pick  
add \$@ %<  
?S:byteorder:  
?S: This variable holds the byte order in a UV. In the following,  
?S: larger digits indicate more significance. The variable byteorder  
?S: is either 4321 on a big-endian machine, or 1234 on a little-endian,

```

?S: or 87654321 on a Cray ... or 3412 with weird order !
?S:.
?C:BYTEORDER:
?C: This symbol holds the hexadecimal constant defined in byteorder,
?C: in a UV, i.e. 0x1234 or 0x4321 or 0x12345678, etc...
?C: If the compiler supports cross-compiling or multiple-architecture
?C: binaries, use compiler-defined macros to
?C: determine the byte order.
?C:.
?H:%<:#if defined(MULTIARCH)
?H:%<:# ifdef __LITTLE_ENDIAN__
?H:%<:# if LONGSIZE == 4
?H:%<:# define BYTEORDER 0x1234
?H:%<:# else
?H:%<:# if LONGSIZE == 8
?H:%<:# define BYTEORDER 0x12345678
?H:%<:# endif
?H:%<:# endif
?H:%<:# else
?H:%<:# ifdef __BIG_ENDIAN__
?H:%<:# if LONGSIZE == 4
?H:%<:# define BYTEORDER 0x4321
?H:%<:# else
?H:%<:#
?H:%<:# if LONGSIZE == 8
?H:%<:# define BYTEORDER 0x87654321
?H:%<:# endif
?H:%<:# endif
?H:%<:# endif
?H:%<:# endif
?H:%<:#endif
?H:%<:#define BYTEORDER 0x$byteorder /* large digits for MSB */
?H:%<:#endif
?H:.
?T:xxx_prompt
?F:!try
: check for ordering of bytes in a UV
echo " "
case "$multiarch" in
*$define*)
$cat <<EOM
You seem to be doing a multiarchitecture build,
skipping the byteorder check.

EOM
byteorder='ffff'
;;
*)

```

```
case "$byteorder" in
")
```

```
$cat <<'EOM'
```

In the following, larger digits indicate more significance. A big-endian machine like a Pyramid or a Motorola 680?0 chip will come out to 4321. A little-endian machine like a Vax or an Intel 80?86 chip would be 1234. Other machines may have weird orders like 3412. A Cray will report 87654321, an Alpha will report 12345678. If the test program works the default is probably right.

I'm now running the test program...

```
EOM
```

```
$cat >try.c <<EOCP
```

```
#include <stdio.h>
```

```
#$i_stdlib I_STDLIB
```

```
#ifdef I_STDLIB
```

```
#include
```

```
<stdlib.h>
```

```
#endif
```

```
#$i_inttypes I_INTTYPES
```

```
#ifdef I_INTTYPES
```

```
#include <inttypes.h>
```

```
#endif
```

```
#include <sys/types.h>
```

```
typedef $vstype UV;
```

```
int main()
```

```
{
```

```
int i;
```

```
union {
```

```
UV l;
```

```
char c[$vsize];
```

```
} u;
```

```
if ($vsize > 4)
```

```
u.l = (((UV)0x08070605) << 32) | (UV)0x04030201;
```

```
else
```

```
u.l = (UV)0x04030201;
```

```
for (i = 0; i < $vsize; i++)
```

```
printf("%c", u.c[i]+'0');
```

```
printf("\n");
```

```
exit(0);
```

```
}
```

```
EOCP
```

```
xxx_prompt=y
```

```
set try
```

```
if eval $compile && $run ./try > /dev/null; then
```

```
dflt=`$run ./try`
```

```
case "$dflt" in
```

```
[1-4][1-4][1-4][1-4]|12345678|87654321)
```

```

echo "(The test program ran ok.)"
echo "byteorder=$dflt"
xxx_prompt=n
;;
????|????????) echo "(The test program ran ok.)" ;;
*) echo "(The test program didn't run right for some reason.)" ;;
esac
else
dflt='4321'
cat <<'EOM'

```

(I can't seem to compile the test program. Guessing big-endian...)

EOM

```

fi
case "$xxx_prompt" in
y)
rp="What is the order of bytes in $svtype?"
./myread
byteorder="$ans"
;;
*) byteorder=$dflt
;;
esac
;;
esac
$rm_try
;;
esac

```

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/byteorder.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_nan: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_nan:

?S: This variable conditionally defines HAS\_NAN if nan() is

?S: available to generate NaN.

?S:.

?C:HAS\_NAN:

?C: This symbol, if defined, indicates that the nan routine is

?C: available to generate NaN.

?C:.

?H:#\$d\_nan HAS\_NAN /\*\*/



```
?H:
?LINT:set d_nan
: see if nan exists
set nan d_nan
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_nan.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
```

```
?RCS:
```

```
?RCS: $Log: d_attribut.U,v $
```

```
?RCS: Revision 3.0.1.3 1995/01/30 14:33:45 ram
```

```
?RCS: patch49: test C program now includes <stdio.h> (WED)
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1995/01/11 15:25:47 ram
```

```
?RCS: patch45: fixed typo in the d_attribut variable (ADO)
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1994/10/29 16:08:55 ram
```

```
?RCS: patch36: created by ADO
```

```
?RCS:
```

```
?MAKE:d_attribut: Myread Oldconfig cat cc cflags rm Setvar contains
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_attribut
```

```
(d_attrib):
```

```
?S: This variable conditionally defines HASATTRIBUTE, which
```

```
?S: indicates the C compiler can check for function attributes,
```

```
?S: such as printf formats.
```

```
?S:.
```

```
?C:HASATTRIBUTE ~ %< (GNUC_ATTRIBUTE_CHECK):
```

```
?C: This symbol indicates the C compiler can check for function attributes,
```

```
?C: such as printf formats. This is normally only supported by GNU cc.
```

```
?C:.
```

```
?H:%<:#$d_attribut HASATTRIBUTE /**/
```

```
?H:%<:#ifndef HASATTRIBUTE
```

```
?H:%<:#define __attribute__( _arg_ )
```

```

?H:?%<:#endif
?H:.
?W:%<:__attribute__
?LINT:set d_attribut
?LINT:known __attribute__
: Look for GNU-cc style attribute checking
echo " "
echo "Checking whether your compiler can handle __attribute__ ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
void croak (char* pat,...) __attribute__((format(printf,1,2),noreturn));
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $contains 'warning' attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't fully support __attribute__."
val="$undef"
else
echo
echo
"Your C compiler supports __attribute__."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
set d_attribut
eval $setvar
$rm -f attrib*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_attribut.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_gconvert.U,v 3.0.1.3 1997/02/28 15:33:38 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_gconvert.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 15:33:38 ram

```

?RCS: patch61: integrated new unit from perl5

?RCS:

?RCS: Revision 3.0.1.2 1995/07/25 13:55:59 ram

?RCS: patch56: improved comments about the Gconvert macro (ADO)

?RCS: patch56: force compile-link test since it may exist but be unusable (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:12:51 ram

?RCS: patch36:

created by ADO

?RCS:

?MAKE:d\_Gconvert: \  
 Compile cat Inlibc rm \_o rm\_try i\_stdlib d\_qgcvt run \  
 uselongdouble d\_longdbl d\_PRIgldbl sPRIgldbl

?MAKE: -pick add \$@ %<

?S:d\_Gconvert:

?S: This variable holds what Gconvert is defined as to convert  
 ?S: floating point numbers into strings. By default, Configure  
 ?S: sets this macro to use the first of gconvert, gcvt, or sprintf  
 ?S: that pass sprintf-%g-like behavior tests. If perl is using  
 ?S: long doubles, the macro uses the first of the following  
 ?S: functions that pass Configure's tests: qgcvt, sprintf (if  
 ?S: Configure knows how to make sprintf format long doubles--see  
 ?S: sPRIgldbl), gconvert, gcvt, and sprintf (casting to double).  
 ?S: The gconvert\_preference and gconvert\_ld\_preference variables  
 ?S: can be used to alter Configure's preferences, for doubles and  
 ?S: long doubles, respectively. If present, they contain a  
 ?S: space-separated list of one or more of the above function  
 ?S: names in the order they should be tried.

?S:

?S: d\_Gconvert  
 may be set to override Configure with a platform-  
 ?S: specific function. If this function expects a double, a  
 ?S: different value may need to be set by the uselongdouble.cbu  
 ?S: call-back unit so that long doubles can be formatted without  
 ?S: loss of precision.

?S:.

?C:Gconvert:

?C: This preprocessor macro is defined to convert a floating point  
 ?C: number to a string without a trailing decimal point. This  
 ?C: emulates the behavior of sprintf("%g"), but is sometimes much more  
 ?C: efficient. If gconvert() is not available, but gcvt() drops the  
 ?C: trailing decimal point, then gcvt() is used. If all else fails,  
 ?C: a macro using sprintf("%g") is used. Arguments for the Gconvert  
 ?C: macro are: value, number of digits, whether trailing zeros should  
 ?C: be retained, and the output buffer.

?C: The usual values are:

?C: d\_Gconvert='gconvert((x),(n),(t),(b))'

?C: d\_Gconvert='gcvt((x),(n),(b))'

```

?C: d_Gconvert='sprintf((b),"%.*g",(n),(x))'
?C: The last two assume trailing zeros should
    not be kept.
?C:.
?H:#define Gconvert(x,n,t,b) $d_Gconvert
?H:.
?T: xxx_list xxx_convert xxx_ld_list
?F:!try
?LINT:extern gconvert_preference
?LINT:extern gconvert_ld_preference
: Check how to convert floats to strings.

if test "X$d_Gconvert" = X; then

echo " "
echo "Checking for an efficient way to convert floats to strings."
echo " " > try.c
case "$uselongdouble" in
"$define") echo "#define USE_LONG_DOUBLE" >>try.c ;;
esac
case "$d_longdbl" in
"$define") echo "#define HAS_LONG_DOUBLE" >>try.c ;;
esac
case "$d_PRIgldbl" in
"$define") echo "#define HAS_PRIgldbl" >>try.c ;;
esac
$cat >>try.c <<EOP
#ifdef TRY_gconvert
#define Gconvert(x,n,t,b) gconvert((x),(n),(t),(b))
const char *myname = "gconvert";
#endif
#ifdef TRY_gcvt
#define Gconvert(x,n,t,b) gcvt((x),(n),(b))
const char *myname = "gcvt";
#endif
#ifdef TRY_qgcvt
#define Gconvert(x,n,t,b) qgcvt((x),(n),(b))
const char *myname = "qgcvt";
#define DOUBLETYP long double
#endif
#ifdef TRY_sprintf
#if defined(USE_LONG_DOUBLE) &&
    defined(HAS_LONG_DOUBLE)
#ifdef HAS_PRIgldbl
#define Gconvert(x,n,t,b) sprintf((b),"%.*"$sPRIgldbl,(n),(x))
#else
#define Gconvert(x,n,t,b) sprintf((b),"%.*g",(n),(double)(x))
#endif
#endif

```

```

#else
#define Gconvert(x,n,t,b) sprintf((b),"%.*g", (n),(x))
#endif
const char *myname = "sprintf";
#endif

#ifndef DOUBLETYPED
#if defined(USE_LONG_DOUBLE) && defined(HAS_LONG_DOUBLE)
#define DOUBLETYPED long double
#else
#define DOUBLETYPED double
#endif
#endif

#include <stdio.h>

#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <string.h>

void checkit(const char *expect, char *got)
{
    if (strcmp(expect, got) {
        printf("%s oddity: Expected %s, got %s\n",
            myname, expect, got);
        exit(1);
    }
}

void lencheck(int expect, int got)
{
    if (expect != got) {
        printf("%s length mismatch: Expected %d, got %d\n",
            myname, expect, got);
        exit(1);
    }
}

int main()
{
    char buf[64];
    buf[63] = '\0';

    /* This must be 1st test on (which?) platform */
    /* Alan Burlison <AlanBurlison@unn.unisys.com>

```

```
*/
Gconvert((DOUBLETTYPE)0.1, 8, 0, buf);
checkit("0.1", buf);

Gconvert((DOUBLETTYPE)0.01, 8, 0, buf);
checkit("0.01", buf);

Gconvert((DOUBLETTYPE)0.001, 8, 0, buf);
checkit("0.001", buf);

Gconvert((DOUBLETTYPE)0.0001, 8, 0, buf);
checkit("0.0001", buf);

Gconvert((DOUBLETTYPE)0.00009, 8, 0, buf);
if (strlen(buf) > 5)
    checkit("9e-005", buf); /* for Microsoft ?? */
else
    checkit("9e-05", buf);

Gconvert((DOUBLETTYPE)1.0, 8, 0, buf);
checkit("1", buf);

Gconvert((DOUBLETTYPE)1.1, 8, 0, buf);
checkit("1.1", buf);

Gconvert((DOUBLETTYPE)1.01, 8, 0, buf);
checkit("1.01", buf);

Gconvert((DOUBLETTYPE)1.001, 8, 0, buf);
checkit("1.001", buf);

Gconvert((DOUBLETTYPE)1.0001, 8, 0, buf);
checkit("1.0001", buf);

Gconvert((DOUBLETTYPE)1.00001, 8, 0, buf);
checkit("1.00001", buf);

Gconvert((DOUBLETTYPE)1.000001, 8, 0, buf);
checkit("1.000001", buf);

Gconvert((DOUBLETTYPE)0.0, 8, 0, buf);
checkit("0", buf);

Gconvert((DOUBLETTYPE)-1.0, 8, 0, buf);
checkit("-1",
buf);

/* Some Linux gcvt's give 1.e+5 here. */
```

```

Gconvert((DOUBLETYP)100000.0, 8, 0, buf);
checkit("100000", buf);

/* Some Linux gcvt's give -1.e+5 here. */
Gconvert((DOUBLETYP)-100000.0, 8, 0, buf);
checkit("-100000", buf);

Gconvert((DOUBLETYP)123.456, 8, 0, buf);
checkit("123.456", buf);

/* Testing of 1e+129 in bigintpm.t must not get extra '.' here. */
Gconvert((DOUBLETYP)1e34, 8, 0, buf);
/* 34 should be enough to scare even long double
 * places into using the e notation. */
if (strlen(buf) > 5)
    checkit("1e+034", buf); /* for Microsoft */
else
    checkit("1e+34", buf);

/* Test for an Ubuntu/Debian bug in gcvt and qgcvt. See:      *
 * https://bugs.launchpad.net/ubuntu/+source/glibc/+bug/1899553 */

Gconvert((DOUBLETYP)0.4, 53, 0, buf);
lencheck(55, (int)strlen(buf));

/* For Perl, if you add additional tests here, also add them to
 * t/base/num.t for benefit of platforms not using Configure or
 * overriding d_Gconvert */

exit(0);
}
EOP
?X:
List of order in which to search for functions.
?X: Usual order of efficiency is gconvert gcvt sprintf
?X: If a hint file sets a d_Gconvert="gconvert" or "gcvt" or "sprintf",
?X: then that is taken as a hint for which function to try first.
?X: (e.g. that function may be in a problematic /usr/ucblib library, and
?X: the user may or may not choose to use -lucb stuff.)
?X: Any other hint file (or previous config.sh) setting is left intact.
: first add preferred functions to our list
xxx_list=""
for xxx_convert in $gconvert_preference; do
    case $xxx_convert in
        gcvt|gconvert|sprintf) xxx_list="$xxx_list $xxx_convert" ;;
        *) echo "Discarding unrecognized gconvert_preference $xxx_convert" >&4 ;;
    esac
done

```

```

: then add any others
for xxx_convert in gconvert gcvf printf; do
  case "$xxx_list" in
    *$xxx_convert*) ;;
    *) xxx_list="$xxx_list $xxx_convert" ;;
  esac
done

case "$d_longdbl$uselongdouble" in
"$define$define")
  : again, add preferred functions to our
list first
  xxx_ld_list=""
  for xxx_convert in $gconvert_ld_preference; do
    case $xxx_convert in
      qgcvf|gcvf|gconvert|printf) xxx_ld_list="$xxx_ld_list $xxx_convert" ;;
      *) echo "Discarding unrecognized gconvert_ld_preference $xxx_convert" ;;
    esac
  done
  : then add qgcvf, printf--then, in xxx_list order, gconvert and gcvf
  for xxx_convert in qgcvf printf $xxx_list; do
    case "$xxx_ld_list" in
      $xxx_convert*|*" $xxx_convert"*) ;;
      *) xxx_ld_list="$xxx_ld_list $xxx_convert" ;;
    esac
  done
  : if printf cannot do long doubles, move it to the end
  if test "$d_PRIgdbl" != "$define"; then
    xxx_ld_list="$xxx_ld_list|sed s/sprintf/^ printf"
  fi
  : if no qgcvf, remove it
  if test "$d_qgcvf" != "$define"; then
    xxx_ld_list="$xxx_ld_list|sed s/qgcvf/^"
  fi
  : use the ld_list
  xxx_list="$xxx_ld_list"
  ;;
esac

for xxx_convert in $xxx_list; do
  echo "Trying $xxx_convert..."
?X:
  Do NOT use $rm_try here, as we need to keep try.c
  $rm -f try try$_o core
  set try -DTRY_$xxx_convert
  if eval $compile; then
    echo "$xxx_convert() found." >&4
    if $run ./try; then

```



```

    echo "I'll use $xxx_convert to convert floats into a string." >&4
    break;
else
    echo "...But $xxx_convert didn't work as I expected."
    xxx_convert=""
fi
else
    echo "$xxx_convert NOT found." >&4
    xxx_convert=""
fi
done

if test X$xxx_convert = X; then
    echo "*** WHOA THERE!!! ***" >&4
    echo "None of ($xxx_list) seemed to work properly. I'll use sprintf." >&4
    xxx_convert=sprintf
fi

case "$xxx_convert" in
gconvert) d_Gconvert='gconvert((x),(n),(t),(b))' ;;
gcvt) d_Gconvert='gcvt((x),(n),(b))' ;;
qgcvt) d_Gconvert='qgcvt((x),(n),(b))' ;;
*) case "$uselongdouble$d_longdbl$d_PRIgldbl" in
"$define$define$define")
    d_Gconvert="sprintf((b),\"%.*\"$sPRIgldbl,(n),(x))" ;;
"$define$define$undef")
    d_Gconvert='sprintf((b),"%.*g",(n),(double)(x))' ;;
*) d_Gconvert='sprintf((b),"%.*g",(n),(x))'
;;
esac
;;
esac

fi
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_gconvert.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_sjis2jis.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_sjis2jis.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:25 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_sjis2jis: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_sjis2jis:

?S: This variable conditionally defines the HAS\_SJIS2JIS symbol, which

?S: indicates to the C program that the sjis2jis() routine is available

?S: to convert SJIS to JIS.

?S:.

?C:HAS\_SJIS2JIS:

?C: This symbol, if defined, indicates that the sjis2jis routine is

?C: available

?C: to convert SJIS to JIS.

?C:.

?H:#\$d\_sjis2jis HAS\_SJIS2JIS /\*\*/

?H:.

?LINT:set d\_sjis2jis

: see if sjis2jis exists

set sjis2jis d\_sjis2jis

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_sjis2jis.U

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?RCS:

?MAKE:d\_llround: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_llround:

?S: This variable conditionally defines the HAS\_LLROUND symbol, which

?S: indicates to the C program that the llround() routine is available

?S: to return the long long value nearest to x.

?S:.

?C:HAS\_LLROUND:

?C: This symbol, if defined, indicates that the llround routine is

?C: available to return the nearest long long value.

?C:.

?H:#\$d\_llround HAS\_LLROUND /\*\*/

?H:.

?LINT:set d\_llround

```
: see if llround exists
set llround d_llround
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_llround.U
```

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?RCS:

?RCS: \$Log: d\_dladdr.U,v \$

?RCS:

?MAKE:d\_dladdr: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_dladdr:

?S: This variable conditionally defines the HAS\_DLADDR symbol, which

?S: indicates to the C program that the dladdr() routine is available

?S: to get a stack trace.

?S:.

?C:HAS\_DLADDR:

?C: This symbol, if defined, indicates that the dladdr() routine is

?C: available to query dynamic linker information for an address.

?C: The <dlfcn.h> header must be included to use this routine.

?C:.

?H:#\$d\_dladdr HAS\_DLADDR /\*\*/

?H:.

?LINT:set d\_dladdr

:

```
see if dladdr exists
```

```
set dladdr d_dladdr
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_dladdr.U
```

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?RCS:

?RCS: \$Log: d\_vfork.U,v \$

?RCS: Revision 3.0.1.6 1994/08/29 16:18:21 ram

?RCS: patch32: set default to 'y' the first time

?RCS:

?RCS: Revision 3.0.1.5 1994/06/20 06:59:14 ram

?RCS: patch30: usevfork was not always properly set

?RCS:

?RCS: Revision 3.0.1.4 1994/05/13 15:20:56 ram

?RCS: patch27: modified to avoid spurious Whoa warnings (ADO)

?RCS:

?RCS: Revision 3.0.1.3 1994/05/06 14:59:09 ram

?RCS: patch23: now explicitly ask whether vfork() should be used (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1993/10/16  
13:49:39 ram

?RCS: patch12: added magic for vfork()

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 16:06:57 ram

?RCS: patch10: removed automatic remapping of vfork on fork (WAD)

?RCS: patch10: added compatibility code for older config.sh (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:55 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_vfork usevfork: Inlibc Myread Oldconfig Setvar

?MAKE: -pick add \$@ %<

?S:d\_vfork:

?S: This variable conditionally defines the HAS\_VFORK symbol, which  
?S: indicates the vfork() routine is available.

?S:.

?S:usevfork:

?S: This variable is set to true when the user accepts to use vfork.  
?S: It is set to false when no vfork is available or when the user  
?S: explicitly requests not to use vfork.

?S:.

?C:HAS\_VFORK (VFORK):

?C: This symbol, if defined, indicates that vfork() exists.

?C:.

?H:#\$d\_vfork HAS\_VFORK /\*\*/

?H:.

```
?M:vfork: HAS_VFORK
?M:#ifndef HAS_VFORK
?M:#define vfork fork
?M:#endif
?M:.
?LINT:set d_vfork
: see if there is a vfork
val="
set
vfork val
eval $inlibc
```

```
: Ok, but do we want to use it. vfork is reportedly unreliable in
: perl on Solaris 2.x, and probably elsewhere.
case "$val" in
$define)
echo " "
case "$usevfork" in
false) dflt='n';;
*) dflt='y';;
esac
rp="Some systems have problems with vfork(). Do you want to use it?"
./myread
case "$ans" in
y|Y) ;;
*)
echo "Ok, we won't use vfork()."
val="$undef"
;;
esac
;;
esac
?X:
?X: Only set it when final value is known to avoid spurious Whoas
?X: Then set usevfork accordingly to the current value, for next run
?X:
set d_vfork
eval $setvar
case "$d_vfork" in
$define) usevfork='true';;
*) usevfork='false';;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_vfork.U
```

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?RCS: \$Id: d\_cbrt.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
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?RCS:  
?RCS: \$Log: d\_cbrt.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:05:48 ram  
?RCS: Baseline for dist 3.0 netwide release.

?RCS:  
?MAKE:d\_cbrt: Inlibc  
?MAKE: -pick add \$@ %<

?S:d\_cbrt:  
?S: This variable conditionally defines the HAS\_CBRT symbol, which  
?S: indicates to the C program that the cbrt() (cube root) function  
?S: is available.

?S:  
?C:HAS\_CBRT (CBRT):  
?C: This symbol, if defined, indicates that the cbrt() (cube root)  
?C: function is available.

?C:  
?H:#\$d\_cbrt HAS\_CBRT /\*\*/

?H:  
?LINT:set  
d\_cbrt  
: see if cbrt exists  
set cbrt d\_cbrt  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_cbrt.U

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?RCS:  
?MAKE:d\_fpclassify d\_fp\_classify: Inlibc cat Compile rm\_try Setvar  
?MAKE: -pick add \$@ %<  
?X:the short story is that C99 says use fpclassify. But the story is confused  
?X:by systems "partially C99" (or fully "pre C99") which either user fpclassify  
?X:but with different return values, or they use fp\_classify (with the expected)

?X:return values, or they use some other spelling of \*fp\*class\* (sometimes even

?X:without the \*fp\* part), with yet another set(s) of return values ...

?S:d\_fpclassify:

?S: This variable conditionally defines the HAS\_FPCLASSIFY symbol, which

?S: indicates to the C program that the fpclassify() routine is available.

?S:.

?S:d\_fp\_classify:

?S: This variable conditionally defines the HAS\_FP\_CLASSIFY

symbol, which

?S: indicates to the C program that the fp\_classify() routine is available.

?S:.

?C:HAS\_FPCLASSIFY:

?C: This symbol, if defined, indicates that the fpclassify routine is

?C: available to classify doubles. Available for example in HP-UX.

?C: The returned values are defined in <math.h> and are

?C:

?C: FP\_NORMAL Normalized

?C: FP\_ZERO Zero

?C: FP\_INFINITE Infinity

?C: FP\_SUBNORMAL Denormalized

?C: FP\_NAN NaN

?C:

?C:.

?C:HAS\_FP\_CLASSIFY:

?C: This symbol, if defined, indicates that the fp\_classify routine is

?C: available to classify doubles. The values are defined in <math.h>

?C:

?C: FP\_NORMAL Normalized

?C: FP\_ZERO Zero

?C: FP\_INFINITE Infinity

?C: FP\_SUBNORMAL Denormalized

?C: FP\_NAN NaN

?C:

?C:.

?H:#\$d\_fpclassify HAS\_FPCLASSIFY /\*\*/

?H:#\$d\_fp\_classify HAS\_FP\_CLASSIFY /\*\*/

?H:.

?LINT:set d\_fpclassify

?LINT:set d\_fp\_classify

: check for fpclassify

?X:classified (Comment by jhi)

?X:fpclassify i\_math

?X:fp\_classify i\_math

?X:fpclass i\_math

i\_ieeefp i\_fp

?X:fp\_class i\_math i\_fp\_class

?X: No i\_fp\_class yet. But the systems that have

?X: this (Tru64 and IRIX) both had <fp\_class.h>

```

?X:class i_math
echo "Checking to see if you have fpclassify..." >&4
$cat >try.c <<EOCP
#include <math.h>
int main() { return fpclassify(1.0) == FP_NORMAL ? 0 : 1; }
EOCP
set try
if eval $compile; then
  val="$define"
  echo "You have fpclassify."
else
  val="$undef"
  echo "You do not have fpclassify."
fi
$rm_try
set d_fpclassify
eval $setvar

```

```

: see if fp_classify exists
set fp_classify d_fp_classify
eval $inlibc

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_fpclassify.U

```

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```

?RCS: $Id: floatsize.U,v 3.0.1.1 1994/10/29 16:17:09 ram Exp $
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: floatsize.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:17:09 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:09 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:floatsize: cat rm Myread Compile run
?MAKE: -pick add $@ %<
?S:floatsize:
?S: This variable contains the value of the FLOATSIZE symbol, which

```



?S: indicates to the C program how many bytes there are in a float.

?S:.

?C:FLOATSIZE:

?C: This

symbol contains the size of a float, so that the C preprocessor

?C: can make decisions based on it.

?C:.

?H:#define FLOATSIZE \$floatsize /\*\*/

?H:.

?F:!try

: check for length of float

echo " "

case "\$floatsize" in

")

echo "Checking to see how big your floating point numbers are..." >&4

\$cat >try.c <<'EOCP'

#include <stdio.h>

int main()

{

printf("%d\n", (int)sizeof(float));

exit(0);

}

EOCP

set try

if eval \$compile\_ok; then

floatsize=`\$run ./try`

else

dflt='4'

echo "(I can't seem to compile the test program. Guessing...)"

rp="What is the size of a floating point number (in bytes)?"

./myread

floatsize="\$ans"

fi

::

esac

\$rm -f try.c try

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/floatsize.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_strctcpy.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:34 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_strctcpy: cat rm\_try cc Setvar  
?MAKE: -pick add \$@ %<  
?S:d\_strctcpy:  
?S: This variable conditionally defines the USE\_STRUCTURE\_COPY symbol, which  
?S: indicates to the C program that this C compiler knows how to copy  
?S: structures.  
?S:.  
?C:USE\_STRUCTURE\_COPY (STRUCTCOPY):  
?C: This symbol, if defined, indicates that this C compiler knows how  
?C: to copy structures. If undefined, you'll  
?C: need to use a block copy  
?C: routine of some sort instead.  
?C:.  
?H:#\$d\_strctcpy USE\_STRUCTURE\_COPY /\*\*/  
?H:.  
?LINT:set d\_strctcpy  
: check for structure copying  
echo " "  
echo "Checking to see if your C compiler can copy structs..." >&4  
\$cat >try.c <<'EOCP'  
int main()  
{  
struct blurfl {  
int dyick;  
} foo, bar;  
  
foo = bar;  
}  
EOCP  
if \$cc -c try.c >/dev/null 2>&1 ; then  
val="\$define"  
echo "Yup, it can."  
else  
val="\$undef"  
echo "Nope, it can't."  
fi  
set d\_strctcpy  
eval \$setvar  
\$rm\_try

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_strctcpy.U

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?RCS: \$Id: scriptdir.U,v 3.1 1999/07/09 18:20:13 doughera Exp doughera \$

?RCS:

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?RCS:

?RCS: \$Log: scriptdir.U,v \$

?RCS: Revision 3.1 1999/07/09 18:20:13 doughera

?RCS: Updated for installprefix

?RCS:

?RCS: Revision 3.0.1.3 1995/09/25 09:17:15 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.2 1995/01/30 14:46:13 ram

?RCS: patch49: can now handle installation prefix changes (from WED)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:32:04 ram

?RCS: patch32: now uses installation prefix

?RCS:

?RCS:

Revision 3.0 1993/08/18 12:09:45 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:scriptdir scriptdirexp installscript: cat test Getfile Loc \

Oldconfig +bin Prefixit Setprefixvar prefixexp Prefixup

?MAKE: -pick add \$@ %<

?Y:TOP

?D:scriptdir="

?S:scriptdir:

?S: This variable holds the name of the directory in which the user wants

?S: to put publicly scripts for the package in question. It is either

?S: the same directory as for binaries, or a special one that can be

?S: mounted across different architectures, like /usr/share. Programs

?S: must be prepared to deal with ~name expansion.

?S:.

?D:scriptdirexp="

?S:scriptdirexp:

?S: This variable is the same as scriptdir, but is filename expanded

?S: at configuration time, for programs not wanting to bother with it.

```

?S:.
?S:installscript:
?S: This variable is usually the same as scriptdirexp, unless you are on
?S: a system running AFS, in which case they may differ slightly. You
?S: should always use this variable
    within your makefiles for portability.
?S:.
?C:SCRIPTDIR:
?C: This symbol holds the name of the directory in which the user wants
?C: to put publicly executable scripts for the package in question. It
?C: is often a directory that is mounted across diverse architectures.
?C: Programs must be prepared to deal with ~name expansion.
?C:.
?C:SCRIPTDIR_EXP:
?C: This is the same as SCRIPTDIR, but is filename expanded at
?C: configuration time, for use in programs not prepared to do
?C: ~name substitutions at run-time.
?C:.
?H:#define SCRIPTDIR "$scriptdir" /**/
?H:#define SCRIPTDIR_EXP "$scriptdirexp" /**/
?H:.
?T:installscriptdir
?LINT:change prefixvar
?LINT:set scriptdir
?LINT:set scriptdirexp
: determine where public executable scripts go
set scriptdir scriptdir
eval $prefixit
case "$scriptdir" in
")
    dflt="$bin"
: guess some guesses
$test -d /usr/share/scripts && dflt=/usr/share/scripts
$test -d /usr/share/bin && dflt=/usr/share/bin
$test -d /usr/local/script && dflt=/usr/local/script
$test
-d /usr/local/scripts && dflt=/usr/local/scripts
$test -d $prefixexp/script && dflt=$prefixexp/script
set dflt
eval $prefixup
;;
*) dflt="$scriptdir"
;;
esac
$cat <<EOM

```

Some installations have a separate directory just for executable scripts so that they can mount it across multiple architectures but keep the scripts in

one spot. You might, for example, have a subdirectory of /usr/share for this. Or you might just lump your scripts in with all your other executables.

EOM

fn=d~

rp="Where do you keep publicly executable scripts?"

./getfile

if \$test "X\$ansexp" != "X\$scriptdirexp"; then

installscript="

fi

installscriptdir="

prefixvar=scriptdir

./setprefixvar

: A little fix up for an irregularly named variable.

installscript="\$installscriptdir"

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/scriptdir.U

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?RCS:

?RCS: \$Log: d\_vprintf.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:59 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_vprintf d\_charvspr: Guess cat +cc +ccflags Csym Setvar

?MAKE: -pick add \$@ %<

?S:d\_vprintf:

?S: This variable conditionally defines the HAS\_VPRINTF symbol, which

?S: indicates to the C program that the vprintf() routine is available

?S: to printf with a pointer to an argument list.

?S:.

?S:d\_charvspr:

?S: This variable conditionally defines CHARVSPRINTF if this system

?S: has

vsprintf returning type (char\*). The trend seems to be to

?S: declare it as "int vsprintf()".

?S:.

```

?C:HAS_VPRINTF (VPRINTF):
?C: This symbol, if defined, indicates that the vprintf routine is available
?C: to printf with a pointer to an argument list. If unavailable, you
?C: may need to write your own, probably in terms of _doprnt().
?C:.
?C:USE_CHAR_VSPRINTF (CHARVSPRINTF):
?C: This symbol is defined if this system has vsprintf() returning type
?C: (char*). The trend seems to be to declare it as "int vsprintf()". It
?C: is up to the package author to declare vsprintf correctly based on the
?C: symbol.
?C:.
?H:#$d_vprintf HAS_VPRINTF /**/
?H:#$d_charvspr USE_CHAR_VSPRINTF /**/
?H:.
?F:!vprintf !vprintf.c
?T:val2
?LINT:set d_vprintf d_charvspr
: see if vprintf exists
echo " "
if set vprintf val -f d_vprintf; eval $csym; $val; then
echo 'vprintf() found.' >&4
val="$define"
$cat >vprintf.c <<'EOF'
#include <varargs.h>

int main() { xxx("foo"); }

xxx(va_alist)
va_dcl
{
va_list args;
char
buf[10];

va_start(args);
exit(((unsigned long)vsprintf(buf,"%s",args) > 10L);
}
EOF
if $cc $cflags -o vprintf vprintf.c >/dev/null 2>&1 && ./vprintf; then
echo "Your vsprintf() returns (int)." >&4
val2="$undef"
else
echo "Your vsprintf() returns (char*)." >&4
val2="$define"
fi
else
echo 'vprintf() NOT found.' >&4
val="$undef"

```

```
val2="$undef"  
fi  
set d_vprintf  
eval $setvar  
val=$val2  
set d_charvspr  
eval $setvar
```

Found in path(s):

```
*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_vprintf.U
```

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?RCS:

?MAKE:ptrsize: cat rm\_try Myread +cc +ccflags

?MAKE: -pick add \$@ %<

?S:ptrsize:

?S: This variable contains the value of the PTRSIZE symbol, which

?S: indicates to the C program how many bytes there are in a pointer.

?S:.

?C:PTRSIZE:

?C: This symbol contains the size of a pointer, so that the C preprocessor

?C: can make decisions based on it.

?C:.

?H:#define PTRSIZE \$ptrsize /\*\*/

?H:.

?F:!try

: check for length of pointer

echo " "

case "\$ptrsize" in

")

echo "Checking to see how big your pointers are..."

>&4

\$cat >try.c <<'EOCP'

#include <stdio.h>

int main()

{

printf("%d\n", sizeof(char \*));

}

```
EOCP
if $cc $cflags -o try try.c >/dev/null 2>&1 ; then
  dflt=`./try`
else
  dflt='4'
  echo "(I can't seem to compile the test program.  Guessing...)"
fi
;;
*)
  dflt="$ptrsize"
  ;;
esac
rp="What is the size of a pointer (in bytes)?"
./myread
ptrsize="$ans"
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/ptrsize.U
```

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?RCS:

?MAKE:st\_dev\_size st\_dev\_sign: cat echo i\_stdlib Setvar Compile run rm\_try

?MAKE: -pick add \$@ %<

?S:st\_dev\_sign:

?S: This variable contains the signedness of struct stat's st\_dev.

?S: 1 for unsigned, -1 for signed.

?S:.

?S:st\_dev\_size:

?S: This variable contains the size of struct stat's st\_dev in bytes.

?S:.

?C:ST\_DEV\_SIZE:

?C: This variable contains the size of struct stat's st\_dev in bytes.

?C:.

?C:ST\_DEV\_SIGN:

?C: This symbol holds the signedness of struct stat's st\_dev.

?C: 1 for unsigned, -1 for signed.

?C:.

?H:#define ST\_DEV\_SIGN



```

$st_dev_sign /* st_dev sign */
?H:#define ST_DEV_SIZE $st_dev_size /* st_dev size */
?H:
?F:!try
: Check the size of st_dev
$echo " "
$echo "Checking the size of st_dev..." >&4
$cat > try.c <<EOCP
#include <sys/stat.h>
#include <stdio.h>
#i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main() {
    struct stat st;
    printf("%d\n", (int)sizeof(st.st_dev));
    exit(0);
}
EOCP
set try
if eval $compile_ok; then
    val=`$run ./try`
    case "$val" in
        *) st_dev_size=4
            $echo "(I can't execute the test program--guessing $st_dev_size.)" >&4
            ;;
        *) st_dev_size=$val
            $echo "Your st_dev is $st_dev_size bytes long."
            ;;
    esac
else
    st_dev_size=4
    $echo "(I can't compile the test program--guessing $st_dev_size.)" >&4
fi
$rm_try

: Check if st_dev is signed
$echo " "
$echo "Checking the sign of st_dev..." >&4
$cat > try.c <<EOCP
#include <sys/stat.h>
#include <stdio.h>
int main() {
    struct stat foo;
    foo.st_dev = -1;
    if (foo.st_dev < 0)
        printf("-1\n");
}
EOCP
$rm_try

```

```

else
  printf("1\n");
}
EOCP
set
try
if eval $compile; then
  val=`$run ./try`
  case "$val" in
  *) st_dev_sign=1
    $echo "(I can't execute the test program--guessing unsigned.)" >&4
    ;;
  *) st_dev_sign=$val
    case "$st_dev_sign" in
    1) $echo "Your st_dev is unsigned." ;;
    -1) $echo "Your st_dev is signed." ;;
    esac
    ;;
  esac
else
  st_dev_sign=1
  $echo "(I can't compile the test program--guessing unsigned.)" >&4
fi
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/st_dev_def.U
```

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?RCS: \$Id: defeditor.U 1 2006-08-24 12:32:52Z rmanfredi \$

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?RCS:

?RCS: \$Log: defeditor.U,v \$

?RCS: Revision 3.0.1.1 1995/01/11 15:30:16 ram

?RCS: patch45: can now use the 'vi' variable since path stripping is deferred

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:05 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE: defeditor: Getfile Oldconfig Loc vi

```

?MAKE: -pick add $@ %<
?S:defeditor:
?S: This variable contains the eventual value of the DEFEDITOR symbol,
?S: which contains the name of the default editor.
?S:.
?C:DEFEDITOR:
?C: This
symbol contains the full pathname of the default editor.
?C:.
?H:#define DEFEDITOR "$defeditor" /**/
?H:.
: determine default editor
echo " "
case "$defeditor" in
")
case "$vi" in
*/*) dflt="$vi";;
*) dflt=/usr/ucb/vi;;
esac
;;
*) dflt="$defeditor"
;;
esac
fn=f/
rp="What is the default editor on your system?"
./getfile
defeditor="$ans"

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/defeditor.U

```

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?RCS:

?RCS: \$Log: Guess.U,v \$

?RCS: Revision 3.0.1.5 1995/07/25 13:37:14 ram

?RCS: patch56: now knows about OS/2 platforms

?RCS:

?RCS: Revision 3.0.1.4 1994/10/29 15:53:55 ram

?RCS: patch36: added ?F: line for metalint file checking  
?RCS: patch36: call ./xenix explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0.1.3 1993/12/15 08:14:35 ram  
?RCS: patch15: variable d\_bsd was not always set properly  
?RCS:  
?RCS: Revision 3.0.1.2 1993/08/30 08:57:14 ram  
?RCS: patch8: fixed comment which wrongly  
attributed the usrinc symbol  
?RCS: patch8: no more ugly messages when no /usr/include/ctype.h  
?RCS:  
?RCS: Revision 3.0.1.1 1993/08/27 14:37:37 ram  
?RCS: patch7: added support for OSF/1 machines  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:57 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit hazards some guesses as to what the general nature of the system  
?X: is. The information it collects here is used primarily to establish default  
?X: answers to other questions.  
?X:  
?MAKE:Guess d\_eunice d\_xenix d\_bsd d\_linux d\_dos d\_os2: cat test echo n c \  
contains rm tr Loc eunicefix  
?MAKE: -pick add \$@ %<  
?S:d\_eunice:  
?S: This variable conditionally defines the symbols EUNICE\_SYSTEM, which  
?S: alerts the C program that it must deal with ideosyncracies of VMS.  
?S:.  
?S:d\_xenix:  
?S: This variable conditionally defines the symbol XENIX\_SYSTEM, which alerts  
?S: the C program that it runs under Xenix.  
?S:.  
?S:d\_dos:  
?S: This symbol conditionally defines the symbol DOS\_SYSTEM  
when running on  
?S: DOS with DJGPP or Cygwin.  
?S:.  
?S:d\_os2:  
?S: This symbol conditionally defines the symbol OS2\_SYSTEM when running on  
?S: an OS/2 system.  
?S:.  
?S:d\_bsd:  
?S: This symbol conditionally defines the symbol BSD\_SYSTEM when running on a  
?S: BSD system.  
?S:.  
?S:d\_linux:  
?S: This symbol conditionally defines the symbol LINUX\_SYSTEM when running

```

?S: on a Linux system.
?S:.
?C:EUNICE_SYSTEM (EUNICE):
?C: This symbol, if defined, indicates that the program is being compiled
?C: under the EUNICE package under VMS. The program will need to handle
?C: things like files that don't go away the first time you unlink them,
?C: due to version numbering. It will also need to compensate for lack
?C: of a respectable link() command.
?C:.
?C:VMS_SYSTEM (VMS):
?C: This symbol, if defined, indicates that the program is running under
?C: VMS. It is currently only set in conjunction with the EUNICE symbol.
?C:.
?C:XENIX_SYSTEM (XENIX):
?C: This symbol, if defined, indicates that the program
?C: is running under
?C: Xenix (at least 3.0 ?).
?C:.
?C:DOS_SYSTEM:
?C: This symbol, if defined, indicates that the program is running under
?C: DOS with DJGPP.
?C:.
?C:OS2_SYSTEM:
?C: This symbol, if defined, indicates that the program is running under
?C: an OS/2 system.
?C:.
?C:BSD_SYSTEM:
?C: This symbol, if defined, indicates that the program is running under
?C: a BSD system.
?C:.
?C:LINUX_SYSTEM:
?C: This symbol, if defined, indicates that the program is running under
?C: a Linux system.
?C:.
?H:#$d_eunice EUNICE_SYSTEM /**/
?H:#$d_eunice VMS_SYSTEM /**/
?H:#$d_xenix XENIX_SYSTEM /**/
?H:#$d_dos DOS_SYSTEM /**/
?H:#$d_os2 OS2_SYSTEM /**/
?H:#$d_bsd BSD_SYSTEM /**/
?H:#$d_linux LINUX_SYSTEM /**/
?H:.
?F:./bsd ./usg ./v7 ./osf1 ./eunice ./xenix ./venix ./dos ./os2 ./gnu ./linux
?T:xxx DJGPP MACHTYPE
: make some quick guesses about what we are up against
echo " "
$echo $n "Hmm... $c"
echo exit 1 >bsd

```

```

echo exit 1 >usg
echo exit 1 >v7
echo exit 1 >osf1
echo exit 1 >eunice
echo
exit 1 >xenix
echo exit 1 >venix
echo exit 1 >os2
echo exit 1 >gnu
echo exit 1 >linux
echo exit 1 >dos
d_bsd="$undef"
d_linux="$undef"
d_dos="$undef"
d_os2="$undef"
?X:
?X: Do not use 'usrinc', or we get a circular dependency. because
?X: usrinc is defined in usrinc.U, which relies on us...
?X:
$cat /usr/include/signal.h /usr/include/sys/signal.h >foo 2>/dev/null
if test -f /osf_boot || $contains 'OSF/1' /usr/include/ctype.h >/dev/null 2>&1
then
echo "Looks kind of like an OSF/1 system, but we'll see..."
echo exit 0 >osf1
elif test `echo abc | $tr a-z A-Z` = Abc ; then
xxx=`./loc addbib blurfl $pth`
if $test -f $xxx; then
echo "Looks kind of like a USG system with BSD features, but we'll see..."
echo exit 0 >bsd
echo exit 0 >usg
else
if $contains SIGTSTP foo >/dev/null 2>&1 ; then
echo "Looks kind of like an extended USG system, but we'll see..."
else
echo "Looks kind of like a USG system, but we'll see..."
fi
echo exit 0 >usg
fi
elif $contains SIGTSTP foo >/dev/null
2>&1 ; then
echo "Looks kind of like a BSD system, but we'll see..."
d_bsd="$define"
echo exit 0 >bsd
elif
$rm --version 2>/dev/null >foo;
$contains "Free Software Foundation" foo >/dev/null
then
xxx=`uname`

```

```

echo exit 0 >gnu
echo "Looks kind of like a GNU/$xxx system, but we'll see..."
if $test X$xxx = XLinux; then
  d_linux="$define"
  echo exit 0 >linux
fi
else
  echo "Looks kind of like a Version 7 system, but we'll see..."
  echo exit 0 >v7
fi
case "$eunicefix" in
*unixtovms*)
  $cat <<'EOI'
  There is, however, a strange, musty smell in the air that reminds me of
  something...hmm...yes...I've got it...there's a VMS nearby, or I'm a Blit.
  EOI
  echo exit 0 >eunice
  d_eunice="$define"
  : it so happens the Eunice I know will not run shell scripts in Unix format
  ;;
*)
  echo " "
  echo "Congratulations. You aren't running Eunice."
  d_eunice="$undef"
  ;;
esac
case "$p_" in
:) ;;
*)
  $cat <<'EOI'
  I have the feeling something is not exactly right, however...don't tell me...
  EOI
  if
  test -n "$DJGPP"; then
  case "X${MACHTYPE:-nonetheless}" in
  cygwin) echo "hah!... you're running under Cygwin!";;
  *) echo "got it... you're running DOS with DJGPP!";;
  esac
  echo exit 0 >dos
  d_dos="$define"
  else
  $cat <<'EOI'
  lemme think...does HAL ring a bell?...no, of course, you're only running OS/2!
  EOI
  echo exit 0 >os2
  d_os2="$define"
  fi
  ;;

```

```

esac
if test -f /xenix; then
    echo "Actually, this looks more like a XENIX system..."
    echo exit 0 >xenix
    d_xenix="$define"
else
    echo " "
    echo "It's not Xenix..."
    d_xenix="$undef"
fi
chmod +x xenix
$unicefix xenix
if test -f /venix; then
    echo "Actually, this looks more like a VENIX system..."
    echo exit 0 >venix
else
    echo " "
    if ./xenix; then
        : null
    else
        echo "Nor is it Venix..."
    fi
fi
chmod +x bsd usg v7 osf1 eunice xenix venix dos os2 gnu linux
$unicefix bsd usg v7 osf1 eunice xenix venix dos os2 gnu linux
$rm -f foo

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Guess.U
```

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?RCS:

?MAKE:d\_memrchr: Inlibc Hasproto d\_gnulibc

?MAKE: -pick add \$@ %<

?S:d\_memrchr:

?S: This variable conditionally defines the HAS\_MEMRCHR symbol, which

?S: indicates to the C program that the memrchr() routine is available

?S: to return a pointer to the last occurrence of a byte in a memory

?S: area (or NULL if not found).

?S:.

?C:HAS\_MEMRCHR:

?C: This symbol, if defined, indicates that the memrchr routine is

?C: available to return a pointer to the last occurrence of a byte in

?C: a memory area (or NULL if not found).

?C:.



```

?H:#$d_memrchr HAS_MEMRCHR /**/
?H:.
?T:d_memrchr_proto xx1 xx2 xx3 xx4
?LINT:set d_memrchr
: see if memrchr exists
: We need both a prototype in string.h and the symbol in libc.
echo " "
d_memrchr_proto="
xx1="#$d_gnulibc HAS_GNULIBC"
xx2="#if defined(HAS_GNULIBC)
  && !defined(_GNU_SOURCE)'
xx3="# define _GNU_SOURCE'
xx4="#endif"
set d_memrchr_proto memrchr literal "$xx1" literal "$xx2" literal "$xx3" literal "$xx4" define string.h
eval $hasproto
case "$d_memrchr_proto" in
  define) # see if memrchr exists
    set memrchr d_memrchr
    eval $inlibc
    ;;
  *) val=$undef
    set d_memrchr
    eval $setvar
    ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_memrchr.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999, Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_stdio\_stream\_array stdio\_stream\_array: run \

Compile cat rm\_try Oldconfig Myread Setvar

?MAKE: -pick add \$@ %<

?S:d\_stdio\_stream\_array:

?S: This variable tells whether there is an array holding

?S: the stdio streams.

?S:.

?S:stdio\_stream\_array:  
 ?S: This variable tells the name of the array holding the stdio streams.  
 ?S: Usual values include \_iob, \_\_iob, and \_\_sF.  
 ?S:.  
 ?C:HAS\_STDIO\_STREAM\_ARRAY:  
 ?C: This symbol, if defined, tells that there is an array  
 ?C: holding the stdio streams.  
 ?C:.  
 ?C:STDIO\_STREAM\_ARRAY:  
 ?C: This  
 symbol tells the name of the array holding the stdio streams.  
 ?C: Usual values include \_iob, \_\_iob, and \_\_sF.  
 ?C:.  
 ?H:#\$d\_stdio\_stream\_array HAS\_STDIO\_STREAM\_ARRAY /\*\*/  
 ?H:?%<:#ifdef HAS\_STDIO\_STREAM\_ARRAY  
 ?H:?%<:#define STDIO\_STREAM\_ARRAY \$stdio\_stream\_array  
 ?H:?%<:#endif  
 ?H:.  
 ?T:s  
 ?F:!try  
 : Check stream access  
 \$cat >&4 <<EOM  
 Checking how to access stdio streams by file descriptor number...  
 EOM  
 case "\$stdio\_stream\_array" in  
 ") \$cat >try.c <<EOCP  
 #include <stdio.h>  
 int main() {  
 if (&STDIO\_STREAM\_ARRAY[fileno(stdin)] == stdin)  
 printf("yes\n");  
 }  
 EOCP  
 for s in \_iob \_\_iob \_\_sF  
 do  
 set try -DSTDIO\_STREAM\_ARRAY=\$s  
 if eval \$compile; then  
 case "\$run ./try`" in  
 yes) stdio\_stream\_array=\$s; break ;;  
 esac  
 fi  
 done  
 \$rm\_try  
 esac  
 case "\$stdio\_stream\_array" in  
 ") \$cat >&4 <<EOM  
 I can't figure out how to access stdio streams by file descriptor number.  
 EOM  
 d\_stdio\_stream\_array="\$undef"

```

;;
*) $cat >&4 <<EOM
You can access stdio streams by file descriptor number
by the $stdio_stream_array array.
EOM
d_stdio_stream_array="$define"
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/stdio_streams.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_setpgid.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_setpgid.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 15:41:49 ram
?RCS: patch61: reworded symbol comments
?RCS:
?RCS: Revision 3.0.1.1 1994/01/24 14:06:40 ram
?RCS: patch16: created
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:56 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_setpgid: Inlibc
?MAKE: -pick add $@ %<
?S:d_setpgid:
?S: This variable conditionally defines the HAS_SETPGID symbol if the
?S: setpgid(pid, gpid) function is
?S: available to set process group ID.
?S:
?C:HAS_SETPGID:
?C: This symbol, if defined, indicates that the setpgid(pid, gpid)
?C: routine is available to set process group ID.
?C:
?H:#$d_setpgid HAS_SETPGID /**/
?H:
?LINT:set d_setpgid

```

```
: see if setpgid exists
set setpgid d_setpgid
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_setpgid.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: Config_sh.U,v $
```

```
?RCS: Revision 3.0.1.3 1997/02/28 14:57:53 ram
```

```
?RCS: patch61: added support for src.U
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1995/01/11 14:53:31 ram
```

```
?RCS: patch45: moved path stripping from d_portable.U to end of Configure
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1994/10/29 15:50:37 ram
```

```
?RCS: patch36: added ?F: line for metalint file checking
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:04:48 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?X:
```

```
?X: This unit ends up producing the config.sh
```

```
script, which contains all the
```

```
?X: definitions figured out by Configure. The add.Config_sh command knows
```

```
?X: which variables need to be remembered. It also adds the EOT (ends the
```

```
?X: here document redirection with variable substitution).
```

```
?X:
```

```
?MAKE:Config_sh: cf_time cf_by test spitshell startsh myuname Myread \
```

```
End Obsol_sh Loc +d_portable package src cat sed
```

```
?MAKE: -pick add.Config_sh $@ %<
```

```
?MAKE: -pick add $@ ./Obsol_sh
```

```
?MAKE: -pick close.Config_sh $@ %<
```

```
?F:!config.over !config.arch
```

```
?T:file sfile xsed
```

```
?LINT:unclosed EOT
```

```
: back to where it started
```

```
if test -d ../UU; then
```

```
cd ..
```

```
fi
```

: configuration may be unconditionally patched via a 'config.arch' file

```
if $test -f config.arch; then
```

```
echo "I see a config.arch file, loading it." >&4
```

```
. ./config.arch
```

```
fi
```

: configuration may be patched via a 'config.over' file

```
if $test -f config.over; then
```

```
echo " "
```

```
dflt=y
```

```
rp='I see a config.over file. Do you wish to load it?'
```

```
. UU/myread
```

```
case "$ans" in
```

```
n*) echo "OK, I'll ignore it.";;
```

```
*) . ./config.over
```

```
echo
```

```
"Configuration override changes have been loaded."
```

```
::
```

```
esac
```

```
fi
```

```
@if d_portable
```

: in case they want portability, strip down executable paths

```
?X:
```

?X: Strip down paths in located executables. For each file, e.g. vi, there

?X: is a \$vi variable whose value is for instance '/usr/bin/vi'. By resetting

?X: \$vi to 'vi', we rely on the PATH variable to locate the executable...

?X: In order to allow vi='/usr/bin/nvi' which will strip down to vi='nvi',

?X: we can't just say 'eval \$file="\\$file"', we have to recourse to sed.

?X: We don't use basename since it is less portable than sed.

```
?X:
```

```
case "$d_portable" in
```

```
"$define")
```

```
echo " "
```

```
echo "Stripping down executable paths..." >&4
```

```
xsed=$sed
```

```
for file in $loclist $trylist; do
```

```
eval sfile="\$file"
```

```
sfile=`echo $sfile | $xsed -e 's,.*^(.*)\,1,`
```

```
eval $file="$sfile"
```

```
done
```

```
::
```

```
esac
```

```

@end
: create config.sh file
echo " "
echo "Creating config.sh...">&4
$spitshell <<EOT >config.sh
$startsh
#
# This file was produced by running the
# Configure script. It holds all the
# definitions figured out by Configure. Should you modify one of these values,
# do not forget to propagate your changes by running "Configure -der". You may
# instead choose to run each of the .SH files by yourself, or "Configure -S".
#

# Package name    : $package
# Source directory : $src
# Configuration time: $cf_time
# Configured by   : $cf_by
# Target system   : $myuname

EOT
?X: Command line options are saved by the Options.U unit in the
?X: temporary file UU/cmdline.opt
$stest -f UU/cmdline.opt && $cat UU/cmdline.opt >> config.sh
$spitshell <<EOT >>config.sh

Found in path(s):
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/Config_sh.U
No license file was found, but licenses were detected in source scan.

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1998, Jarkko Hietaniemi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:i_netinettcp: Inhdr
?MAKE:-pick add $@ %<
?S:i_netinettcp:
?S: This variable conditionally defines the I_NETINET_TCP symbol,
?S: and indicates whether a C program should include <netinet/tcp.h>.
?S:.
?C:I_NETINET_TCP:

```

?C: This symbol, if defined, indicates to the C program that it should

?C: include <netinet/tcp.h>.

?C:.

?H:#\$i\_netinettcp I\_NETINET\_TCP /\*\*/

?H:.

?LINT:set i\_netinettcp

: see if netinet/tcp.h is available

set netinet/tcp.h i\_netinettcp

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_netinettcp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_memory.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_memory.U,v \$

?RCS: Revision 3.0.1.3 1994/06/20 07:01:55 ram

?RCS: patch30: cosmetic changes

?RCS:

?RCS: Revision 3.0.1.2 1994/05/13 15:23:56 ram

?RCS: patch27: modified to avoid spurious Whoa warnings (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 15:02:25 ram

?RCS: patch23: avoid conflicts with <string.h>

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:22 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_memory: Inhdr strings cppstdin

cppflags cppminus contains rm Setvar

?MAKE: -pick add \$@ %<

?S:i\_memory:

?S: This variable conditionally defines the I\_MEMORY symbol, and indicates

?S: whether a C program should include <memory.h>.

?S:.

?C:I\_MEMORY:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <memory.h>.

```
?C:.
?H:#$i_memory I_MEMORY /**/
?H:.
?LINT:set i_memory
?X:
?X: Unfortunately, the definitions of memory functions sometimes
?X: conflict with those in <string.h>. We'll assume that if
?X: <string.h> contains memcpy, then we don't need memory.h
?X:
: see if memory.h is available.
val="
set memory.h val
eval $inhdr
```

```
: See if it conflicts with string.h
case "$val" in
$define)
case "$strings" in
") ;;
*)
$cpptestin $cppflags $cppminus < $strings > mem.h
if $contains 'memcpy' mem.h >/dev/null 2>&1; then
echo " "
echo "We won't be including <memory.h>."
val="$undef"
fi
$rm -f mem.h
;;
esac
esac
set i_memory
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_memory.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_static_inline.U,v $
?RCS:
?RCS: Copyright (c) 2010 Andrew Dougherty
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
```



```

?RCS: Original Author: Andy Dougherty <doughera@lafayette.edu>
?RCS:
?MAKE:d_static_inline perl_static_inline: Compile Setvar gccversion \
cat echo run hint rm rm_try
?MAKE: -pick add $@ %<
?S:d_static_inline:
?S: This variable conditionally defines the HAS_STATIC_INLINE symbol,
?S: which indicates that the C compiler supports C99-style static
?S: inline. That is, the function can't be called from another
?S: translation unit.
?S:.
?S:perl_static_inline:
?S: This variable defines the PERL_STATIC_INLINE
symbol to
?S: the best-guess incantation to use for static inline functions.
?S: Possibilities include
?S: static inline    (c99)
?S: static __inline__ (gcc -ansi)
?S: static __inline  (MSVC)
?S: static _inline   (older MSVC)
?S: static           (c89 compilers)
?S:.
?C:HAS_STATIC_INLINE :
?C: This symbol, if defined, indicates that the C compiler supports
?C: C99-style static inline. That is, the function can't be called
?C: from another translation unit.
?C:.
?C:PERL_STATIC_INLINE:
?C: This symbol gives the best-guess incantation to use for static
?C: inline functions. If HAS_STATIC_INLINE is defined, this will
?C: give C99-style inline. If HAS_STATIC_INLINE is not defined,
?C: this will give a plain 'static'. It will always be defined
?C: to something that gives static linkage.
?C: Possibilities include
?C: static inline    (c99)
?C: static __inline__ (gcc -ansi)
?C: static __inline  (MSVC)
?C: static _inline   (older MSVC)
?C: static
      (c89 compilers)
?C:.
?H:#$d_static_inline HAS_STATIC_INLINE /**/
?H:#define PERL_STATIC_INLINE $perl_static_inline /**/
?H:.
?LINT:set d_static_inline
?T:inline xxx
?F:!try
: see what flavor, if any, of static inline is supported

```

```

echo " "
echo "Checking to see if your system supports static inline..."
?X: Build two programs. The first uses static inline in file a.c and
?X: should work. The second also includes b.c which tries to link against
?X: the static function in a.c. This should fail.
?X:.
$cat > try.c <<'EOCP'
#include <stdlib.h>
extern int f_via_a(int x);
extern int f_via_b(int x);
int main(int argc, char **argv)
{
    int y;

    y = f_via_a(0);
#ifdef USE_B
    y = f_via_b(0);
#endif
    if (y == 42) {
        return EXIT_SUCCESS;
    }
    else {
        return EXIT_FAILURE;
    }
}
EOCP
$cat > a.c <<'EOCP'
static INLINE int f(int x) {
    int y;
    y = x + 42;
    return y;
}

int f_via_a(int x)
{
    return f(x);
}
EOCP
$cat > b.c <<'EOCP'
extern int f(int x);

int
f_via_b(int x)
{
    return f(x);
}
EOCP

```

```
# Respect a hint (or previous) value for perl_static_inline, if there is one.
```

```
case "$perl_static_inline" in
```

```
) # Check the various possibilities, and break out on success.
```

```
# For gcc, prefer __inline__, which will still permit
```

```
# cflags.SH to add in -ansi.
```

```
case "$gccversion" in
```

```
) xxx="inline __inline__ __inline _inline";;
```

```
*) xxx="__inline__ inline __inline _inline";;
```

```
esac
```

```
for inline in $xxx; do
```

```
set try -DINLINE=$inline a.c
```

```
if eval $compile && $run ./try; then
```

```
# Now make sure there is no external linkage of static
```

```
# functions
```

```
set try -DINLINE=$inline -DUSE_B a.c b.c
```

```
if eval $compile && $run ./try; then
```

```
$echo "Your compiler supports static $inline, " >&4
```

```
$echo "but it also creates an external definition," >&4
```

```
$echo "so I won't use it." >&4
```

```
val=$undef
```

```
else
```

```
$echo "Your compiler supports static $inline." >&4
```

```
val=$define
```

```
perl_static_inline="static $inline";
```

```
break;
```

```
fi
```

```
else
```

```
$echo
```

```
"Your compiler does NOT support static $inline." >&4
```

```
val="$undef"
```

```
fi
```

```
done
```

```
::
```

```
*inline*) # Some variant of inline exists.
```

```
echo "Keeping your $hint value of $perl_static_inline."
```

```
val=$define
```

```
::
```

```
static) # No inline capabilities
```

```
echo "Keeping your $hint value of $perl_static_inline."
```

```
val=$undef
```

```
::
```

```
*) # Unrecognized previous value -- blindly trust the supplied
```

```
# value and hope it makes sense. Use old value for
```

```
# d_static_inline, if there is one.
```

```
echo "Keeping your $hint value of $perl_static_inline."
```

```
case "$d_static_inline" in
```

```
) val=$define ;;
```

```
*) val=$d_static_inline ;;
```

```

esac
;;
esac
# Fallback to plain 'static' if nothing worked.
case "$perl_static_inline" in
")
perl_static_inline="static"
val=$undef
;;
esac
set d_static_inline
eval $setvar
$rm -f a.[co] b.[co]
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_static_inline.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_ieeeep.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_ieeeep: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_ieeeep:

?S: This variable conditionally defines the I\_IEEEFP symbol, and indicates

?S: whether a C program should include <ieeeep.h>.

?S:.

?C:I\_IEEEFP:

?C: This symbol, if defined, indicates that <ieeeep.h> exists and

?C: should be included.

?C:.

?H:#\$i\_ieeeep I\_IEEEFP /\*\*/

?H:.

?LINT:set i\_ieeeep

: see if this is a ieeeep.h system

case "\$i\_ieeeep" in

" ) set ieeeep.h i\_ieeeep

eval \$inhdr

;;

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_jeefp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: randfunc.U,v 3.0 1993/08/18 12:09:39 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: randfunc.U,v \$

?RCS: Revision 3.0 1993/08/18 12:09:39 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This is the new unit that should be used when random

?X: functions are to be used. It thus makes randbits.U obsolete.

?X:

?X: This unit gives a simple #define for Drand01, which produces

?X: doubles in the range [0,1) using the "best" random number

?X: generator available. The source should just call Drand01

?X: and not worry about the underlying

implementation.

?X: Andy Dougherty July 1998

?X:

?MAKE:randfunc drand01 seedfunc randbits randseedtype: \  
Compile Myread Csym ccflags

?MAKE: -pick add \$@ %<

?S:randfunc:

?S: Indicates the name of the random number function to use.

?S: Values include drand48, random, and rand. In C programs,

?S: the 'Drand01' macro is defined to generate uniformly distributed

?S: random numbers over the range [0., 1.[ (see drand01 and nrand).

?S:.

?S:drand01:

?S: Indicates the macro to be used to generate normalized

?S: random numbers. Uses randfunc, often divided by

?S: (double) (((unsigned long) 1 << randbits)) in order to

?S: normalize the result.

?S: In C programs, the macro 'Drand01' is mapped to drand01.

?S:.

?S:randseedtype:

?S: Indicates the type of the argument of the seedfunc.

?S:.

?S:seedfunc:  
?S: Indicates the random number generating seed function.  
?S: Values include srand48, srandom, and srand.  
?S:.  
?S:randbits:  
?S: Indicates how many bits are produced by the function used to  
?S: generate  
normalized random numbers.  
?S:.  
?C:RANDFUNC:  
?C: This symbol defines the random function used to define Drand01().  
?C:.  
?C:Drand01:  
?C: This macro is to be used to generate uniformly distributed  
?C: random numbers over the range [0., 1.[. You may have to supply  
?C: an 'extern double drand48();' in your program since SunOS 4.1.3  
?C: doesn't provide you with anything relevant in its headers.  
?C: See HAS\_DRAND48\_PROTO.  
?C:.  
?C:Rand\_seed\_t:  
?C: This symbol defines the type of the argument of the  
?C: random seed function.  
?C:.  
?C:seedDrand01:  
?C: This symbol defines the macro to be used in seeding the  
?C: random number generator (see Drand01).  
?C:.  
?C:RANDBITS:  
?C: This symbol indicates how many bits are produced by the  
?C: function used to generate normalized random numbers.  
?C: Values include 15, 16, 31, and 48.  
?C:.  
?H:#define RANDFUNC \$randfunc /\*\*/  
?H:#define Drand01() \$drand01 /\*\*/  
?H:#define Rand\_seed\_t \$randseedtype /\*\*/  
?H:#define seedDrand01(x) \$seedfunc((Rand\_seed\_t)x) /\*\*/  
?H:#define  
RANDBITS \$randbits /\*\*/  
?H:.  
?LINT:change ccflags  
?LINT:unclosed \$randbits))"  
: How can we generate normalized random numbers ?  
echo " "  
echo "Using our internal random number implementation..." >&4  
  
case "\$ccflags" in  
\*-Dmy\_rand=\*|\*-Dmy\_srand=\*)  
echo "Removing obsolete -Dmy\_rand, -Dmy\_srand, and -Drandbits from ccflags." >&4

```
ccflags="`echo $ccflags | sed -e 's/-Dmy_rand=random/ /'"
ccflags="`echo $ccflags | sed -e 's/-Dmy_srand=srandom/ /'"
ccflags="`echo $ccflags | sed -e 's/-Drandbits=[0-9][0-9]*/ /'"
;;
esac
```

```
randfunc=Perl_drand48
drand01="Perl_drand48()"
seedfunc="Perl_drand48_init"
randbits=48
randseedtype=U32
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/randfunc.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_tminsys.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_tminsys.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:47 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_tminsys: contains Setvar Findhdr
?MAKE: -pick add $@ %<
?S:d_tminsys:
?S: This variable conditionally defines TM_IN_SYS if this system
?S: declares "struct tm" in <sys/time.h> rather than <time.h>.
?S:
?C:TM_IN_SYS (TMINSYS):
?C: This symbol is defined if this system declares "struct tm" in
?C: <sys/time.h> rather than <time.h>.
  We can't just say
?C: -I/usr/include/sys because some systems have both time files, and
?C: the -I trick gets the wrong one.
?C:
?H:#$d_tminsys TM_IN_SYS /**/
?H:
?LINT:set d_tminsys
: see if struct tm is defined in sys/time.h
```

```
echo " "
if $contains 'struct tm' `./findhdr time.h` >/dev/null 2>&1 ; then
echo "You have struct tm defined in <time.h> rather than <sys/time.h>." >&4
val="$undef"
else
echo "You have struct tm defined in <sys/time.h> rather than <time.h>." >&4
val="$define"
fi
set d_tminsys
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_tminsys.U
```

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```
?RCS: $Id: d_passwd.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_passwd.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 15:37:21 ram
?RCS: patch61: useless unit dropped.
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:09:51 ram
?RCS: patch32: created by ADO
?RCS:
?X:
?X: Useless unit dropped.
?X:
?LINT:empty
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_passwd.U
```

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```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```



?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
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?RCS: of the source tree for dist 4.0.

?RCS:  
?RCS: \$Log: fpostype.U,v \$  
?RCS: Revision 3.0.1.2 1994/08/29 16:20:52 ram  
?RCS: patch32: now uses new Typedef unit to compute type information

?RCS:  
?RCS: Revision 3.0.1.1 1994/06/20 06:59:59 ram  
?RCS: patch30: created

?RCS:  
?MAKE:fpostype: Myread Typedef

?MAKE: -pick add \$@ %<

?S:fpostype:  
?S: This variable defines Fpos\_t to be something like fpost\_t, long,  
?S: uint, or whatever type is used to declare file positions in libc.

?S:.

?C:Fpos\_t:  
?C: This symbol holds the type used to declare file positions  
in libc.

?C: It can be fpos\_t, long, uint, etc... It may be necessary to include

?C: <sys/types.h> to get any typedef'ed information.

?C:.

?H:#define Fpos\_t \$fpostype /\* File position type \*/

?H:.

: see what type file positions are declared as in the library

set fpos\_t fpostype long stdio.h sys/types.h

eval \$typedef

echo " "

dflt="\$fpostype"

rp="What is the type for file position used by fsetpos()?"

./myread

fpostype="\$ans"

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/fpostype.U

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_log1p: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_log1p:

?S: This variable conditionally defines the HAS\_LOG1P symbol, which

?S: indicates to the C program that the logp1() routine is available

?S: to compute  $\log(1 + x)$  for values of  $x$  close to zero.

?S:.

?C:HAS\_LOG1P:

?C: This symbol, if defined, indicates that the log1p routine is

?C: available to do the logarithm of 1 plus argument function.

?C:.

?H:#\$d\_log1p HAS\_LOG1P /\*\*/

?H:.

?LINT:set d\_log1p

: see if log1p exists

set log1p d\_log1p

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_log1p.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: models.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 16:13:17 ram

?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:02:39 ram

?RCS: patch6: added default for large

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:17 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:models split small medium large huge: test cat Myread sysman Oldconfig \

Loc Warn contains rm

?MAKE: -pick add \$@ %<

?S:models:

?S: This variable contains the list of memory models supported by this

?S: system. Possible component values are none, split, unsplit, small,

?S: medium, large, and huge. The component values are space separated.

?S:.

?S:split:

?S: This variable contains a flag which will tell the C compiler and loader  
?S: to produce a program that will run in separate I and D space, for those  
?S: machines that support separation of instruction and data space. It is  
?S: up to the Makefile to use this.

?S:.

?S:small:

?S: This variable contains a flag which will tell the C compiler and loader  
?S: to produce a program running with a small memory model. It is up to  
?S: the Makefile to use this.

?S:.

?S:medium:

?S: This variable contains a flag which will tell the C compiler and loader  
?S: to produce a program running with a medium memory model. If the  
?S: medium model is not supported, contains the flag to produce large  
?S: model programs. It is up to the Makefile to use this.

?S:.

?S:large:

?S: This variable contains a flag which will tell the C compiler and loader  
?S: to  
produce a program running with a large memory model. It is up to  
?S: the Makefile to use this.

?S:.

?S:huge:

?S: This variable contains a flag which will tell the C compiler and loader  
?S: to produce a program running with a huge memory model. If the  
?S: huge model is not supported, contains the flag to produce large  
?S: model programs. It is up to the Makefile to use this.

?S:.

?T:unsplit tans modelcc

?F:!pdp11

?D:large="

?LINT:extern cc

: see what memory models we can support

case "\$models" in

")

?X: We may not use Cppsym or we get a circular dependency through cc.

?X: But this should work regardless of which cc we eventually use.

\$cat >pdp11.c <<'EOP'

int main() {

#ifdef pdp11

exit(0);

#else

exit(1);

#endif

}

EOP

?X: Run cc in a subshell in case they don't have a 'cc' command.

?X: Presumably they do have gcc or something.

```
case "$cc" in
  ") modelcc="$cc" ;;
  *) modelcc="cc" ;;
esac
( $modelcc -o pdp11 pdp11.c ) >/dev/null 2>&1
if $test -f pdp11 && ./pdp11 2>/dev/null;
then
  dflt='unsplit split'
else
  tans=`./loc . X /lib/small /lib/large /usr/lib/small /usr/lib/large /lib/medium /usr/lib/medium /lib/huge`
  case "$tans" in
    X) dflt='none';;
    *) if $test -d /lib/small || $test -d /usr/lib/small; then
        dflt='small'
      else
        dflt="
      fi
      if $test -d /lib/medium || $test -d /usr/lib/medium; then
        dflt="$dflt medium"
      fi
      if $test -d /lib/large || $test -d /usr/lib/large; then
        dflt="$dflt large"
      fi
      if $test -d /lib/huge || $test -d /usr/lib/huge; then
        dflt="$dflt huge"
      fi
    esac
  fi;;
  *) dflt="$models";;
esac
$cat <<EOM
```

Some systems have different model sizes. On most systems they are called small, medium, large, and huge. On the PDP11 they are called unsplit and split. If your system doesn't support different memory models, say "none". If you wish to force everything to one memory model, say "none" here and put the appropriate flags later when it asks you for other cc and ld flags.

Venix systems may wish

to put "none" and let the compiler figure things out.

(In the following question multiple model names should be space separated.)

The default for most systems is "none".

EOM

rp="Which memory models are supported?"

./myread

```

models="$ans"

case "$models" in
none)
small="
medium="
large="
huge="
unsplit="
split="
;;
*split)
case "$split" in
") if $contains \-i' $sysman/ld.1 >/dev/null 2>&1 || \
    $contains \-i' $sysman/cc.1 >/dev/null 2>&1; then
    dflt='-i'
else
    dflt='none'
fi;;
*) dflt="$split";;
esac
rp="What flag indicates separate I and D space?"
./myread
tans="$ans"
case "$tans" in
none) tans="";;
esac
split="$tans"
unsplit="";;
*large*|*small*|*medium*|*huge*)
case "$models" in
*large*)
case "$large" in
") dflt='-M!';;
*) dflt="$large";;
esac
rp="What flag indicates large model?"
./myread
tans="$ans"
case "$tans" in
none) tans="";;
esac
large="$tans";;
*) large="";;
esac
case "$models" in
*huge*) case "$huge" in
")

```

```

dflt='-Mh';;
*) dflt="$huge";;
esac
rp="What flag indicates huge model?"
./myread
tans="$sans"
case "$tans" in
none) tans="";
esac
huge="$tans";;
*) huge="$large";;
esac
case "$models" in
*medium*) case "$medium" in
") dflt='-Mm';;
*) dflt="$medium";;
esac
rp="What flag indicates medium model?"
./myread
tans="$sans"
case "$tans" in
none) tans="";
esac
medium="$tans";;
*) medium="$large";;
esac
case "$models" in
*small*) case "$small" in
") dflt='none';;
*) dflt="$small";;
esac
rp="What flag indicates small model?"
./myread
tans="$sans"
case "$tans" in
none) tans="";
esac
small="$tans";;
*) small="";;
esac
;;
*)
./warn "Unrecognized memory models--you may have to edit Makefile.SH"
;;
esac
$rm -f pdp11.* pdp11

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/models.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getnetbyaddr\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getnetbyaddr\_r getnetbyaddr\_r\_proto: Inlibc Protochk Hasproto \  
i\_systypes usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getnetbyaddr\_r:

?S: This variable conditionally defines the HAS\_GETNETBYADDR\_R symbol,

?S: which indicates to the C program that the getnetbyaddr\_r()

?S: routine is available.

?S:.

?S:getnetbyaddr\_r\_proto:

?S: This variable encodes the prototype of getnetbyaddr\_r.

?S: It is zero if d\_getnetbyaddr\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getnetbyaddr\_r

?S: is defined.

?S:.

?C:HAS\_GETNETBYADDR\_R:

?C: This symbol, if defined, indicates that  
the getnetbyaddr\_r routine

?C: is available to getnetbyaddr re-entrantly.

?C:.

?C:GETNETBYADDR\_R\_PROTO:

?C: This symbol encodes the prototype of getnetbyaddr\_r.

?C: It is zero if d\_getnetbyaddr\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getnetbyaddr\_r

?C: is defined.

?C:.

?H:#\$d\_getnetbyaddr\_r HAS\_GETNETBYADDR\_R /\*\*/

?H:#define GETNETBYADDR\_R\_PROTO \$getnetbyaddr\_r\_proto /\*\*/

?H:.

?T:try hdrs d\_getnetbyaddr\_r\_proto

: see if getnetbyaddr\_r exists

set getnetbyaddr\_r d\_getnetbyaddr\_r

eval \$inlibc

case "\$d\_getnetbyaddr\_r" in

"\$define")

hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"

case "\$d\_getnetbyaddr\_r\_proto:\$usethreads" in

```

":define") d_getnetbyaddr_r_proto=define
set d_getnetbyaddr_r_proto getnetbyaddr_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getnetbyaddr_r_proto" in
define)
case "$getnetbyaddr_r_proto" in
"|0) try='int getnetbyaddr_r(unsigned long, int, struct netent*, char*, size_t, struct netent**, int*);'
./protochk
"$extern_C $try" $hdrs && getnetbyaddr_r_proto=I_UISBWRE ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='int getnetbyaddr_r(long, int, struct netent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getnetbyaddr_r_proto=I_LISBI ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='struct netent* getnetbyaddr_r(in_addr_t, int, struct netent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getnetbyaddr_r_proto=S_TISBI ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='struct netent* getnetbyaddr_r(long, int, struct netent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getnetbyaddr_r_proto=S_LISBI ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='int getnetbyaddr_r(in_addr_t, int, struct netent*, struct netent_data*);'
./protochk "$extern_C $try" $hdrs && getnetbyaddr_r_proto=I_TISD ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='int getnetbyaddr_r(long, int, struct netent*, struct netent_data*);'
./protochk "$extern_C $try" $hdrs && getnetbyaddr_r_proto=I_LISD
;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='int getnetbyaddr_r(int, int, struct netent*, struct netent_data*);'
./protochk "$extern_C $try" $hdrs && getnetbyaddr_r_proto=I_IISD ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) try='int getnetbyaddr_r(uint32_t, int, struct netent*, char*, size_t, struct netent**, int*);'
./protochk "$extern_C $try" $hdrs && getnetbyaddr_r_proto=I_uISBWRE ;;
esac
case "$getnetbyaddr_r_proto" in
"|0) d_getnetbyaddr_r=undef
getnetbyaddr_r_proto=0
echo "Disabling getnetbyaddr_r, cannot determine prototype." >&4 ;;
*) case "$getnetbyaddr_r_proto" in
REENTRANT_PROTO*) ;;
*) getnetbyaddr_r_proto="REENTRANT_PROTO_$getnetbyaddr_r_proto" ;;

```



```

esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "getnetbyaddr_r has no prototype, not using it." >&4 ;;
esac
d_getnetbyaddr_r=undef
getnetbyaddr_r_proto=0
;;
esac
;;
*) getnetbyaddr_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_getnetbyaddr\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_fcntl.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_fcntl.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:01 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_fcntl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fcntl:

?S: This variable conditionally defines the HAS\_FCNTL symbol, and indicates

?S: whether the fcntl() function exists

?S:.

?C:HAS\_FCNTL:

?C: This symbol, if defined, indicates to the C program that

?C: the fcntl() function exists.

?C:.

?H:#\$d\_fcntl HAS\_FCNTL /\*\*/

?H:.

?LINT:set d\_fcntl

:  
see if this is an fcntl system  
set fcntl d\_fcntl  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_fcntl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_madvise: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_madvise:

?S: This variable conditionally defines HAS\_MADVISE if madvise() is

?S: available to map a file into memory.

?S:.

?C:HAS\_MADVISE:

?C: This symbol, if defined, indicates that the madvise system call is

?C: available to map a file into memory.

?C:.

?H:#\$d\_madvise HAS\_MADVISE /\*\*/

?H:.

?LINT:set d\_madvise

: see if madvise exists

set madvise d\_madvise

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_madvise.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2017, Karl Williamson

?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:i\_wchar: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_wchar:

?S: This variable conditionally defines the I\_WCHAR symbol,

?S: that indicates whether a C program may include <wchar.h>.

?S:.

?C:I\_WCHAR:

?C: This symbol, if defined, indicates to the C program that <wchar.h>

?C: is available for inclusion

?C:.

?H:#\$i\_wchar I\_WCHAR /\*\*/

?H:.

?LINT:set i\_wchar

: see if wchar.h is present

set wchar.h i\_wchar

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_wchar.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_usleepproto: Hasproto i\_unistd

?MAKE: -pick add \$@ %<

?S:d\_usleepproto:

?S: This variable conditionally defines the HAS\_USLEEP\_PROTO symbol,

?S: which indicates to the C program that the system provides

?S: a prototype for the usleep() function. Otherwise, it is

?S: up to the program to supply one.

?S:.

?C:HAS\_USLEEP\_PROTO:

?C: This symbol, if defined, indicates that the system provides

?C: a prototype for the usleep() function. Otherwise, it is up

?C: to the program to supply one. A good guess is

```
?C: extern int
usleep(useconds_t);
?C:.
?H:#$d_usleepproto HAS_USLEEP_PROTO /**/
?H:.
?LINT:set d_usleepproto
: see if prototype for usleep is available
echo " "
set d_usleepproto usleep $i_unistd unistd.h
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_usleepproto.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_inetd.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_inetd.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:23 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_inetd: cat test package Myread Setvar
?MAKE: -pick add $@ %<
?S:d_inetd:
?S: This symbol conditionally defines USE_INETD which indicates to the C
?S: program that the initial socket connection will be done via inetd.
?S:.
?C:USE_INETD (INETD):
?C: This symbol if defined indicates to the C program that inetd will be
?C: in charge of the
?C: initial socket connection. The file descriptors 0 and
?C: 1 have been dup()ed from the original connected socket descriptor and
?C: are ready for send() and recv().
?C:.
?H:#$d_inetd USE_INETD /**/
?H:.
?LINT:set d_inetd
: ask whether initial socket connection is to be done via inetd
echo " "
```

```
dflt=n
case "$d_inetd" in
") if $test -f /etc/inetd.conf; then
  $cat <<EOM
```

Your system provides a so called "Internet super-server", the inetd daemon. Network services like ftp or rlogin are usually handled via ftpd and rlogind daemons. Without inetd, these daemons must always be running for the service to be on. On the contrary, inetd listens to specific ports defined in file /etc/inetd.conf and will run the appropriate daemon upon request. This scheme avoids eating up the process table and memory with useless daemons.

I can set up things so that internet connections for \$package will be done using inetd, in which case you will have to edit /etc/inetd.conf to add some specific informations.

```
EOM
  dflt=y
  else
  $cat
<<EOM
```

I do not see any trace of a configuration file for inetd, hence I assume your system does not support the so called "Internet super-server". This means \$package will need to have a daemon process running on this machine to allow network connections.

```
EOM
fi;;
*) case "$d_inetd" in
"$define") dflt=y;;
esac;;
esac
rp="Do you wish to use inetd for network connections?"
. ./myread
val="$undef"
case "$ans" in
y*|Y*) val="$define";;
esac
set d_inetd
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_inetd.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysutsname.U,v \$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:i\_sysutsname: Inhdr Hasfield  
?MAKE: -pick add \$@ %<  
?S:i\_sysutsname:  
?S: This variable conditionally defines the I\_SYSUTSNAME symbol,  
?S: and indicates whether a C program should include <sys/utsname.h>.  
?S:.  
?C:I\_SYSUTSNAME:  
?C: This symbol, if defined, indicates that <sys/utsname.h> exists and  
?C: should be included.  
?C:.  
?H:#\$i\_sysutsname I\_SYSUTSNAME /\*\*/  
?H:.  
?LINT:set i\_sysutsname  
: see if this is a sys/utsname.h system  
set sys/utsname.h i\_sysutsname  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_sysutsname.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: mkdep.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: mkdep.U,v \$  
?RCS: Revision 3.0.1.4 1997/02/28 16:13:07 ram  
?RCS: patch61: replaced .o with \$\_o all over the place  
?RCS:  
?RCS: Revision 3.0.1.3 1994/10/29 16:25:02 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS:  
?RCS: Revision 3.0.1.2 1994/01/24 14:15:12 ram  
?RCS: patch16: cppflags is now an optional dependency  
?RCS:  
?RCS: Revision 3.0.1.1 1993/12/15 08:22:39 ram  
?RCS: patch15: force zero exit status in all mkdep scripts

```

?RCS:
?RCS:
Revision 3.0 1993/08/18 12:09:16 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit generates the script 'mkdep' in the top-level directory.
?X: It is up to the makefile to use it for automatic dependencies
?X: generation (usage: 'mkdep [cppflags] -- *.c').
?X:
?MAKE:mkdep: spitshell startsh cpp +cppflags grep contains rm sed sort uniq \
Getfile Oldconfig eunicefix cat +cc cppminus test pkgsrc _o
?MAKE: -pick add $@ %<
?S:mkdep:
?S: This variable holds the name of a command to generate makefile
?S: dependencies on the standard output. It is the pathname of the
?S: generated mkdep script.
?S:.
?F:mkdep
?T:IFS arg flags takeflags srcfile toplev filebase inc dir files file dep c
: find out how to generate dependencies
echo " "
echo "Checking how to generate makefile dependencies on your machine..." >&4
?X: We are in the UU directory
toplev=`cd ../pwd`
$cat >dep.c <<'EOCP'
#include "dep.h"
EOCP
?X: Empty dep.h causes RIOS to barf
$cat >dep.h <<'EOCP'

EOCP
takeflags='flags=""'
case
"$@" in
*_**)
for arg
do
shift
case "$arg" in
--) break;;
*) flags="$flags $arg";;
esac
done;;
esac'
case "$mkdep" in
")
;;

```

```

*)
if test -f "$mkdep" &&
  $mkdep dep.c >dep.out 2>/dev/null &&
  $contains "dep$_o:.*dep\.h" dep.out >/dev/null 2>&1
then
  echo "$mkdep works."
?X: If they copied a config.sh from some other place, they'll have a working
?X: mkdep script probably, but not located at the top of the sources. And
?X: the Makefiles generated by jmake expect an mkdep script in the top dir.
  case "$mkdep" in
    "$pkgsrc/mkdep");;
    *) echo "(copying it to $pkgsrc)"
      cp $mkdep $pkgsrc/mkdep 2>/dev/null
        if $pkgsrc/mkdep dep.c >dep.out 2>/dev/null &&
          $contains "dep$_o:.*dep\.h" dep.out >/dev/null 2>&1; then
            mkdep=$pkgsrc/mkdep
          else
            echo "Hmm... The copy failed or something... Guessing again..."
            mkdep=
          fi
        ;;
      esac
    else
      mkdep=
    fi
  esac

  case "$mkdep" in
    ")
?X: have to figure something out: Try cpp
?X: have
  to pass source names one by one to cpp...
  $spitshell > ../mkdep <<EOM
  $startsh
  $takeflags
  for srcfile
  do
    $cpp -M $cppflags \ $flags \ $srcfile 2>/dev/null
  done
  exit 0
  EOM
  mkdep=$toplev/mkdep
  chmod +x $mkdep
  $unicefix $mkdep
  if $mkdep dep.c >dep.out 2>/dev/null &&
    $contains "dep$_o:.*dep\.h" dep.out >/dev/null 2>&1
  then
    echo "Looks like we can use $cpp -M."

```



```

else
  mkdep=
fi
;;
esac

case "$mkdep" in
")
?X: have to figure something out: on NeXT, use cc -MM
?X: have to pass source names one by one to cc...
  $spitshell > ./mkdep <<EOM
$startsh
$takeflags
for srcfile
do
  $cc -MM $scppflags \ $flags \ $srcfile 2>/dev/null
done
exit 0
EOM
mkdep=$stoplev/mkdep
chmod +x $mkdep
$unicefix $mkdep
if $mkdep dep.c >dep.out 2>/dev/null &&
  $contains "dep$_o: dep.h" dep.out >/dev/null 2>&1
then
  echo "Looks like we can use $cc -MM."
else
  mkdep=
fi
;;
esac

case "$mkdep" in
")
?X: still no luck -- try something fancier.
  $spitshell > ./mkdep <<EOS
$startsh
$takeflags
for srcfile
do
  case
  "\ $srcfile" in
  *.c) c='.c';;
  *.y) c='.y';;
  *.l) c='.l';;
  esac
  filebase=`basename \ $srcfile \ $c`
  <\ $srcfile $cpp $cppminus $scppflags \ $flags 2>/dev/null | \

```

```

$sed -e '/^# *[0-9]/!d' \
-e 's/^\.*"(.*)".*$/^\$filebase$_o: \1/' \
-e 's| \./: |' \
-e 's|: *$|: ^\$srcfile|' \
$grep -v '^#' | $sort | $uniq
done
exit 0
EOS
mkdep=$toplev/mkdep
chmod +x $mkdep
$unicefix $mkdep
if $mkdep dep.c >dep.out 2>/dev/null &&
  $contains "dep$_o:.*dep\.h" dep.out >/dev/null 2>&1
then
  echo "A shell script using $cpp does the trick."
else
  echo "$cpp doesn't seem to be any use at all."
  $spitshell >../mkdep <<EOS
$startsh
$takeflags
files="\$@"
set X \$flags
shift
inc='.'
while test \$# -gt 0
do
  case "\$1" in
  -I)
    shift
    inc="\$inc:\$1"
    ;;
  -I*)
    dir=\`echo \$1 | sed -e 's/^-I//'\`
    inc="\$inc:\$dir"
    ;;
  esac
  shift
done
set X \$files
shift
trap "$rm -f /tmp/mkdep\$\$; exit 1" 1 2 3 15
for srcfile
do
  case "\$srcfile" in
  *.c) c='.c';;
  *.y) c='.y';;
  *.l)

```

```

c='!';;
esac
filebase=`basename \${srcfile} \${c}`
echo \${filebase}_o: \${srcfile}
$grep '^#[ ]*include' \${srcfile} /dev/null | \
$sed -n -e 's/#[ ]*include[ ]*// \\
-e '<(\.*)>/ d' \\
-e 's:[^"]*"([^\"]*)"./: \1/' \\
-e "s\\.c:/$_o:/p" > /tmp/mkdep\${}$
?X: Deal with directories specified via -I requests to locate files
IFS=' '
while read file dep; do
for dir in \${inc}; do
if $test -f "\${dir}/${dep}"; then
dep="\${dir}/${dep}"
break
fi
done
echo "\${file}: \${dep}" | $sed -e 's: \./: ,'
done </tmp/mkdep\${}$
IFS=' '
$rm -f /tmp/mkdep\${}$
done
exit 0
EOS
mkdep=${toplev}/mkdep
chmod +x $mkdep
$unicefix $mkdep
if $mkdep dep.c >dep.out 2>/dev/null &&
$contains "dep$_o:.*dep\.h" dep.out >/dev/null 2>&1
then
cat << EOM

```

I can use a script with grep instead, but it will make some incorrect dependencies, since it doesn't understand about conditional compilation. Moreover, some dependencies may be missing, because scanning won't be a recursive process.

If you have a program which generates makefile dependencies, you may want to use it. If not, you can use the script and edit the Makefile by hand if you need to.

```

EOM
else
mkdep=
cat << EOM

```

I can't seem to generate makefile dependencies at all! Perhaps you have a program that does? If you don't, you might look at the mkdep script to

see if you can create one which works.

EOM

```
fi
fi
esac
echo " "
dflt="$mkdep"
fn=f~/
rp="Name of program to make makefile dependencies?"
./getfile
mkdep="$ans"
$rm -f dep.c dep.h dep$_o dep.out
```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/mkdep.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_mprotect: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mprotect:

?S: This variable conditionally defines HAS\_MPROTECT if mprotect() is

?S: available to modify the access protection of a memory mapped file.

?S:.

?C:HAS\_MPROTECT:

?C: This symbol, if defined, indicates that the mprotect system call is

?C: available to modify the access protection of a memory mapped file.

?C:.

?H:#\$d\_mprotect HAS\_MPROTECT /\*\*/

?H:.

?LINT:set d\_mprotect

: see if mprotect exists

set mprotect d\_mprotect

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_mprotect.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_round: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_round:

?S: This variable conditionally defines the HAS\_ROUND symbol, which

?S: indicates to the C program that the round() routine is available.

?S:.

?C:HAS\_ROUND:

?C: This symbol, if defined, indicates that the round routine is

?C: available to round to nearest integer, away from zero.

?C:.

?H:#\$d\_round HAS\_ROUND /\*\*/

?H:.

?LINT:set d\_round

: see if round exists

set round d\_round

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_round.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: errnolist.U,v 3.0.1.2 1997/02/28 15:48:01 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: errnolist.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:48:01 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS: patch61: likewise for .o replaced by \$\_o

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:10:54 ram

?RCS: patch16: created

?RCS:

?MAKE:errnolist errnolist\_SH errnolist\_a errnolist\_c errnolist\_o: cat \

Compile +d\_sysernlist\_a\_o

?MAKE: -pick add \$@ %<

```

?S:errnolist:
?S: This variable holds the base name of a file containing the
?S: definition
of the sys_errnolist array, if the C library
?S: doesn't provide it already. Otherwise, its value is empty.
?S: The following lines should be included in your Makefile.SH:
?S:
?S: case "$serrnolist" in
?S: ") ;;
?S: *)
?S: $spitshell >>Makefile <<!GROK!THIS!
?S: $serrnolist_c: $serrnolist_SH $serrnolist_a
?S: sh ./$serrnolist_SH
?S:
?S: !GROK!THIS!
?S: ;;
?S: esac
?S:
?S: You may define the 'errnolist' variable in your Myinit.U if you
?S: wish to override its default value "errnolist".
?S:.
?S:errnolist_SH:
?S: This is the name of a file which will generate errnolistc.
?S:.
?S:errnolist_a:
?S: This is the name of the awk script called by errnolist_SH.
?S:.
?S:errnolist_c:
?S: This is the name of a generated C file which provides the
?S: definition of the sys_errnolist array.
?S:.
?S:errnolist_o:
?S: This is the name of the object file which provides the
?S: definition of the sys_errnolist array, if the C library
?S: doesn't provide it already. Otherwise, its value is
empty.
?S:.
?INIT:errnolist=errnolist
: check for sys_errnolist
@if d_sysernlst || HAS_SYS_ERRNOLIST
case "$d_sysernlst" in
"$define")
errnolist="
errnolist_SH="
errnolist_a="
errnolist_c="
errnolist_o="
;;

```

```

*)
echo " "
echo "I'll make sure your Makefile provides sys_errnolist in $errnolist.c"
  errnolist_SH=$errnolist.SH
  errnolist_a=$errnolist$_a
  errnolist_c=$errnolist.c
  errnolist_o=$errnolist$_o
;;
esac
@else
echo " "
$cat <<EOM
Checking to see if your C library provides us with sys_errnolist[...]
EOM
$cat >errnolist.c <<'EOCP'
extern char *sys_errnolist[];
int main() {
  char *p0 = sys_errnolist[0];
  char *p1 = sys_errnolist[1];

  return (p0 == p1); /* Make sure they're not optimized away */
}
EOCP
set errnolist
if eval $compile; then
  echo "It does."
  errnolist="
  errnolist_SH="
  errnolist_a="
  errnolist_c="
  errnolist_o="
else
echo "I'll make sure your Makefile provides sys_errnolist in $errnolist.c"
  errnolist_SH=$errnolist.SH
  errnolist_a=$errnolist$_a
  errnolist_c=$errnolist.c
  errnolist_o=$errnolist$_o
fi
@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/errnolist.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: shm\_for.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: shm\_for.U,v \$  
?RCS: Revision 3.0.1.1 1994/10/29 16:28:37 ram  
?RCS: patch36: call ./Cpplib explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:46 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:shm\_for shm\_att shm\_lim: Cpplib Myread ipc uname  
?MAKE: -pick add \$@ %<  
?S:shm\_for:  
?S: This variable tells us the type of machine we're expecting the  
?S: shared memory code to run on. The value is available to C  
programs  
?S: in the C\_SHM\_FOR manifest.  
?S:.  
?S:shm\_att:  
?S: This variable tells us where a shared memory segment should be  
?S: attached. Good values are HIGH, LOW, and ZERO.  
?S:.  
?S:shm\_lim:  
?S: This variable tells us if shared memory attached HIGH should  
?S: have an upper limit.  
?S:.  
?X: -----  
?X: It's a potential lose to define anything beginning with SHM...  
?X: At least we can think that S\_ stands for "String version of ..." -- HMS  
?X: -----  
?C:S\_SHM\_FOR ~ %<:  
?C: This symbol identifies what we chose for the target system's  
?C: default shared memory configuration parameters.  
?C:.  
?C:S\_SHM\_ATT ~ %<:  
?C: This symbol holds the default "place" to attach shared memory.  
?C: Values are "HIGH", "ZERO", and "LOW".  
?C:.  
?C:S\_SHM\_LIM ~ %<:  
?C: This symbol holds the default upper bound address limit if shared  
?C: memory is attached HIGH. If zero, there is no upper limit.  
?C:.  
?H:?%<:#ifdef



```

SERVE_SHM
?H:?%<:#define S_SHM_FOR "$shm_for"
?H:?%<:#define S_SHM_ATT "$shm_att"
?H:?%<:#define S_SHM_LIM "$shm_lim"
?H:?%<:#endif
?H:.
?W:%<:S_SHM_FOR S_SHM_ATT S_SHM_LIM
: see how to attach shared memory
echo " "
echo "Deciding how to attach shared memory..." >&4

```

```

case "$ipc" in
shm)
shm_for='Default case'
shm_att='HIGH'
shm_lim='0x0'
if ./Cppsym tower32 tower32_600; then
echo "NCR Towers are usually normal..."
: echo "Oh, an NCR Tower."
: This works for the 600
shm_for='NCR Tower 32'
shm_att='LOW'
else
case "$uname" in
*/uname)
case "`uname -m`" in
ACS??68*)
echo "Oh, an Altos 3068."
shm_for='Altos 3068:'
shm_lim='0x800000'
;;
esac
;;
*)
echo "Looks normal to me..."
;;
esac
fi

```

```

dflt="$shm_for"
rp='Description of shared memory configuration?'
./myread
shm_for="$ans"

```

```

dflt="$shm_att"
rp='Where should shared memory be attached?'
./myread
shm_att="$ans"

```

```

case "$shm_att" in
HIGH)
dflt="$shm_lim"
rp='What is
the upper address limit for shared memory?'
./myread
shm_lim="$ans"
;;
*)
shm_lim="
;;
esac
;;

*)
echo "but you aren't using shared memory so I won't bother." >&4
shm_for='NOT CONFIGURED'
shm_att='NONE'
shm_lim='-1'
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/shm_for.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_semget.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_semget.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:05 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_semget: Inlibc
?MAKE: -pick add $@ %<
?S:d_semget:
?S: This variable conditionally defines the HAS_SEMGET symbol, which
?S: indicates to the C program that the semget() routine is available.
?S:

```

?C:HAS\_SEMGET:

?C: This symbol, if defined, indicates that the semget() routine is

?C: available to get a set of semaphores.

?C:.

?H:#\$d\_semget

HAS\_SEMGET /\*\*/

?H:.

?LINT:set d\_semget

: see if semget exists

set semget d\_semget

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_semget.U

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?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: ssize\_t.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 16:24:21 ram

?RCS: patch61: integrated perl5 concerns for mis-configured sfio

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:30:28 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS: patch36: added 'ldflags' to the test compile line (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:33:06 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:ssizetype: Myread Typedef

ssize\_t cat rm \

+cc +optimize +cflags +ldflags +libs \_o

?MAKE: -pick add \$@ %<

?S:ssizetype:

?S: This variable defines ssize\_t to be something like ssize\_t,

?S: long or int. It is used by functions that return a count

?S: of bytes or an error condition. It must be a signed type.

?S: We will pick a type such that sizeof(SSize\_t) == sizeof(Size\_t).

?S:.

?C:SSize\_t:

?C: This symbol holds the type used by functions that return

?C: a count of bytes or an error condition. It must be a signed type.

?C: It is usually ssize\_t, but may be long or int, etc.

?C: It may be necessary to include <sys/types.h> or <unistd.h>

?C: to get any typedef'ed information.

?C: We will pick a type such that sizeof(SSize\_t) == sizeof(Size\_t).

?C:.

?H:#define SSize\_t \$ssize\_t /\* signed count of bytes \*/

?H:.

?F:!ssize.out !ssize

: see what type is used for signed size\_t

set ssize\_t ssize\_t int stdio.h sys/types.h

eval \$typedef

dflt="\$ssize\_t"

?X: Now check out whether sizeof(SSize\_t) == sizeof(Size\_t)

\$cat

> ssize.c <<EOM

#include <stdio.h>

#include <sys/types.h>

#define Size\_t \$sizetype

#define SSize\_t \$dflt

int main()

{

if (sizeof(Size\_t) == sizeof(SSize\_t))

printf("\$dflt\n");

else if (sizeof(Size\_t) == sizeof(int))

printf("int\n");

else

printf("long\n");

fflush(stdout);

exit(0);

}

EOM

echo " "

?X: If \$libs contains -lsfio, and sfio is mis-configured, then it

?X: sometimes (apparently) runs and exits with a 0 status, but with no

?X: output!. Thus we check with test -s whether we actually got any

?X: output. I think it has to do with sfio's use of \_exit vs. exit,

?X: but I don't know for sure. --Andy Dougherty 1/27/97.

if \$cc \$optimize \$ccflags \$ldflags -o ssize ssize.c \$libs >/dev/null 2>&1 &&

./ssize > ssize.out 2>/dev/null && test -s ssize.out ; then

ssize\_t=`\$cat ssize.out`

echo "I'll be using \$ssize\_t for functions returning a byte count." >&4

else

\$cat >&4 <<EOM

Help! I can't compile and run the ssize\_t test program: please enlighten me!

(This

is probably a misconfiguration in your system or libraries, and you really ought to fix it. Still, I'll try anyway.)

I need a type that is the same size as \$sizetype, but is guaranteed to be signed. Common values are ssize\_t, int and long.

EOM

```
rp="What signed type is the same size as $sizetype?"
. ./myread
ssizetype="$ans"
fi
$rm -f ssize ssize$_o ssize.*
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/ssizetype.U
```

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?RCS:

?RCS: \$Log: stdchar.U,v \$

?RCS: Revision 3.0 1993/08/18 12:09:52 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:stdchar: contains Findhdr cppstdin cppminus rm

?MAKE: -pick add \$@ %<

?S:stdchar:

?S: This variable conditionally defines STDCHAR to be the type of char

?S: used in stdio.h. It has the values "unsigned char" or "char".

?S:.

?C:STDCHAR:

?C: This symbol is defined to be the type of char used in stdio.h.

?C: It has the values "unsigned char" or "char".

?C:.

?H:#define STDCHAR \$stdchar /\*\*/

?H:.

?F:!stdioh

:

see what type of char stdio uses.

```
echo " "  
?X: untangle the #include nest  
echo '#include <stdio.h>' | $cppstdin $cppminus > stdioh  
if $contains 'unsigned.*char.*_ptr;' stdioh >/dev/null 2>&1 ; then  
echo "Your stdio uses unsigned chars." >&4  
stdchar="unsigned char"  
else  
echo "Your stdio uses signed chars." >&4  
stdchar="char"  
fi  
$rm -f stdioh
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/stdchar.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpwuid\_r.U,v 0RCS:

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getpwuid\_r getpwuid\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_pwd extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getpwuid\_r:

?S: This variable conditionally defines the HAS\_GETPWUID\_R symbol,

?S: which indicates to the C program that the getpwuid\_r()

?S: routine is available.

?S:.

?S:getpwuid\_r\_proto:

?S: This variable encodes the prototype of getpwuid\_r.

?S: It is zero if d\_getpwuid\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getpwuid\_r

?S: is defined.

?S:.

?C:HAS\_GETPWUID\_R:

?C: This symbol, if defined, indicates that the getpwuid\_r routine

?C: is available to

getpwuid re-entrantly.

?C:.

?C:GETPWUID\_R\_PROTO:

?C: This symbol encodes the prototype of getpwuid\_r.

?C: It is zero if d\_getpwuid\_r is undef, and one of the

```

?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getpwuid_r
?C: is defined.
?C:.
?H:#$d_getpwuid_r HAS_GETPWUID_R /**/
?H:#define GETPWUID_R_PROTO $getpwuid_r_proto /**/
?H:.
?T:try hdrs d_getpwuid_r_proto
: see if getpwuid_r exists
set getpwuid_r d_getpwuid_r
eval $inlibc
case "$d_getpwuid_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_pwd pwd.h"
case "$d_getpwuid_r_proto:$usetthreads" in
":define") d_getpwuid_r_proto=define
set d_getpwuid_r_proto getpwuid_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getpwuid_r_proto" in
define)
case "$getpwuid_r_proto" in
"|0) try='int getpwuid_r(uid_t, struct passwd*, char*, size_t, struct passwd**);'
./protochk "$extern_C $try" $hdrs && getpwuid_r_proto=I_TSBWR ;;
esac
case "$getpwuid_r_proto" in
"|0) try='int getpwuid_r(uid_t, struct passwd*, char*, int,
struct passwd**);'
./protochk "$extern_C $try" $hdrs && getpwuid_r_proto=I_TSBIR ;;
esac
case "$getpwuid_r_proto" in
"|0) try='int getpwuid_r(uid_t, struct passwd*, char*, int);'
./protochk "$extern_C $try" $hdrs && getpwuid_r_proto=I_TSBI ;;
esac
case "$getpwuid_r_proto" in
"|0) try='struct passwd* getpwuid_r(uid_t, struct passwd*, char*, int);'
./protochk "$extern_C $try" $hdrs && getpwuid_r_proto=S_TSBI ;;
esac
case "$getpwuid_r_proto" in
"|0) d_getpwuid_r=undef
getpwuid_r_proto=0
echo "Disabling getpwuid_r, cannot determine prototype." >&4 ;;
* ) case "$getpwuid_r_proto" in
REENTRANT_PROTO*) ;;
*) getpwuid_r_proto="REENTRANT_PROTO_$getpwuid_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac

```

```

;;
*) case "$susetthreads" in
define) echo "getpwuid_r has no prototype, not using it." >&4 ;;
esac
d_getpwuid_r=undef
getpwuid_r_proto=0
;;
esac
;;
*) getpwuid_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_getpwuid_r.U

```

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?RCS:

?RCS: \$Log: d\_sem.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:03 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_sem: test d\_semctl d\_semget d\_semop Setvar Findhdr osname

?MAKE: -pick add \$@ %<

?S:d\_sem:

?S: This variable conditionally defines the HAS\_SEM symbol, which

?S: indicates that the entire sem\*(2) library is present.

?S:.

?C:HAS\_SEM:

?C: This symbol, if defined, indicates that the entire sem\*(2) library is

?C: supported.

?C:.

?H:#\$d\_sem HAS\_SEM /\*\*/

?H:.

?T:h\_sem

?LINT:set d\_sem

:



```

see how much of the 'sem*(2)' library is present.
h_sem=true
echo " "
case "$d_semctl$d_semget$d_semop" in
*$undef"*) h_sem=false;;
esac
case "$osname" in
freebsd)
  case "`ipcs 2>&1`" in
  "SVID messages"*"not configured"*)
echo "Your $osname does not have the sem*(2) configured." >&4
  h_sem=false
val="$undef"
set semctl d_semctl
eval $setvar
set semget d_semget
eval $setvar
set semop d_semop
eval $setvar
;;
esac
;;
esac
: we could also check for sys/ipc.h ...
if $h_sem && $test `./findhdr sys/sem.h`; then
echo "You have the full sem*(2) library." >&4
val="$define"
else
echo "You don't have the full sem*(2) library." >&4
val="$undef"
fi
set d_sem
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_sem.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_string.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
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```

```
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```

```
?RCS: of the source tree for dist 4.0.
```

```

?RCS:
?RCS: $Log: i_string.U,v $
?RCS: Revision 3.0.1.2 1993/10/16 13:50:12 ram
?RCS: patch12: special units Loc and Guess were missing from dependencies
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:07:26 ram
?RCS: patch10: removed "(Actually, this looks more like...)" messages (WAD)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:28 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: See if we should include <string.h> or <strings.h>
?X:
?MAKE:i_string strings:
test Setvar Findhdr Warn
?MAKE: -pick add $@ %<
?S:i_string:
?S: This variable conditionally defines the I_STRING symbol, which
?S: indicates that <string.h> should be included rather than <strings.h>.
?S:.
?S:strings:
?S: This variable holds the full path of the string header that will be
?S: used. Typically /usr/include/string.h or /usr/include/strings.h.
?S:.
?C:I_STRING:
?C: This symbol, if defined, indicates to the C program that it should
?C: include <string.h> (USG systems) instead of <strings.h> (BSD systems).
?C:.
?H:#$i_string I_STRING /**/
?H:.
?LINT:set i_string
: see which of string.h or strings.h is needed
echo " "
strings=`./findhdr string.h`
if $test "$strings" && $test -r "$strings"; then
echo "Using <string.h> instead of <strings.h>." >&4
val="$define"
else
val="$undef"
strings=`./findhdr strings.h`
if $test "$strings" && $test -r "$strings"; then
echo "Using <strings.h> instead of <string.h>." >&4
else
./warn "No string header found -- You'll surely
have problems."
fi
fi

```

```
set i_string
eval $setvar
case "$i_string" in
"$undef") strings=`./findhdr strings.h`;;
*) strings=`./findhdr string.h`;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_string.U
```

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_flexfnam.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:04 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_flexfnam: cat rm test Setvar

?MAKE: -pick add \$@ %<

?S:d\_flexfnam:

?S: This variable conditionally defines the FLEXFILENAMES symbol, which

?S: indicates that the system supports filenames longer than 14 characters.

?S:.

?C:FLEXFILENAMES:

?C: This symbol, if defined, indicates that the system supports filenames

?C: longer than 14 characters.

?C:.

?H:#\$d\_flexfnam FLEXFILENAMES /\*\*/

?H:.

?T:first

second

?LINT:set d\_flexfnam

: see if we can have long filenames

echo " "

?X:

?X: We have to test in both /tmp and . because of NFS (remote server may allow

?X: long filenames while the local filesystem cannot support them). If at least

?X: one of those file systems cannot support long filenames, then we assume the

?X: whole system can't.

```
?X:
rmlist="$rmlist /tmp/cf$$"
$test -d /tmp/cf$$ || mkdir /tmp/cf$$
first=123456789abcdef
second=/tmp/cf$$/$first
$rm -f $first $second
if (echo hi >$first) 2>/dev/null; then
if $test -f 123456789abcde; then
echo 'You cannot have filenames longer than 14 characters. Sigh.' >&4
val="$undef"
else
if (echo hi >$second) 2>/dev/null; then
if $test -f /tmp/cf$$/123456789abcde; then
$cat <<'EOM'
```

That's peculiar... You can have filenames longer than 14 characters, but only on some of the filesystems. Maybe you are using NFS. Anyway, to avoid problems I shall consider your system cannot support long filenames at all.

```
EOM
val="$undef"
else
echo
'You can have filenames longer than 14 characters.' >&4
val="$define"
fi
else
$cat <<'EOM'
```

How confusing! Some of your filesystems are sane enough to allow filenames longer than 14 characters but some others like /tmp can't even think about them. So, for now on, I shall assume your kernel does not allow them at all.

```
EOM
val="$undef"
fi
fi
else
$cat <<'EOM'
```

You can't have filenames longer than 14 chars. You can't even think about them!

```
EOM
val="$undef"
fi
set d_flexfnam
eval $setvar
$rm -rf /tmp/cf$$ 123456789abcde*
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_flexfnam.U
```

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?RCS: \$Id: libperl.U,v \$

?RCS:

?RCS: Copyright (c) 1996-1998, Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:libperl useshrplib shrpenv ldlibpthname: \  
 Myread Oldconfig archlibexp awk cat libc \  
 \_a osname osvers so patchlevel subversion usedl ld \  
 ccdlflags installarchlib userelocatableinc

?MAKE: -pick wipe \$@ %<

?S:libperl:

?S: The perl executable is obtained by linking perlmain.c with

?S: libperl, any static extensions (usually just DynaLoader),

?S: and any other libraries needed on this system. libperl

?S: is usually libperl.a, but can also be libperl.so.xxx if

?S: the user wishes to build a perl executable with a shared

?S: library.

?S:.

?S:useshrplib:

?S: This variable is set to 'true' if the user wishes

?S: to build a shared libperl, and 'false' otherwise.

?S:.

?S:shrpenv:

?S: If

the user builds a shared libperl.so, then we need to tell the

?S: 'perl' executable where it will be able to find the installed libperl.so.

?S: One way to do this on some systems is to set the environment variable

?S: LD\_RUN\_PATH to the directory that will be the final location of the

?S: shared libperl.so. The makefile can use this with something like

?S: \$shrpenv \$(CC) -o perl perlmain.o \$libperl \$libs

?S: Typical values are

?S: shrpenv="env LD\_RUN\_PATH=\$archlibexp/CORE"

?S: or

?S: shrpenv="

?S: See the main perl Makefile.SH for actual working usage.

?S:

?S: Alternatively, we might be able to use a command line option such

?S: as -R \$archlibexp/CORE (Solaris) or -Wl,-rpath

?S: \$archlibexp/CORE (Linux).

?S:.

?S:ldlibpthname:

?S: This variable holds the name of the shared library

?S: search path, often LD\_LIBRARY\_PATH. To get an empty

?S: string, the hints file must set this to 'none'.

?S:.

?T:shrpdir majonly majmin also xxx tmp\_shrpenv

```

?X: metalint gets confused and thinks we're
    actually setting LDOPTS
?X: and LD_RUN_PATH.
?LINT:extern LDOPTS
?LINT:change LDOPTS
?LINT:extern LD_RUN_PATH
?LINT:change LD_RUN_PATH
?LINT:change ccdlflags
?LINT:extern maintloc maintname
?Y:top
: Do we want a shared libperl?
also="
case "$usedl" in
$undef)
    # No dynamic loading being used, so don't bother even to prompt.
    useshrplib='false'
    ;;
*) case "$useshrplib" in
    ") case "$osname" in
        svr4*|nonstopux|dgux|dynixptx|esix|powerux|haiku|cygwin*)
            dflt=y
            also='Building a shared libperl is required for dynamic loading to work on your system.'
            ;;
        *) dflt=n
            ;;
    esac
    ;;
$define|true|[[Yy]*)
    dflt=y
    ;;
*) dflt=n
    ;;
esac
$cat << EOM

```

The perl executable is normally obtained by linking perlmain.c with libperl\${\_a}, any static extensions (usually just DynaLoader), and any other libraries needed on this system (such as -lm, etc.). Since your system supports dynamic loading, it is probably possible to build a shared libperl.\$so. If you will have more than one executable linked to libperl.\$so, this will significantly reduce the size of each executable, but it may have a noticeable effect on performance. The default is probably sensible for your system.

\$also

```

EOM
rp="Build a shared libperl.$so (y/n)"

```

```

./myread
case "$ans" in
true|$define[|Yy]*)
  useshrplib='true' ;;
*) useshrplib='false' ;;
esac
;;
esac

case "$useshrplib" in
true)
case "$userelocatableinc" in
true|define)
  echo "Cannot build with both -Duserelocatableinc and -Duseshrplib" >&4
  echo "See INSTALL for an explanation why that won't work." >&4
  exit 4
;;
esac
case "$libperl" in
")
  # Figure out a good name for libperl.so. Since it gets stored in
  # a version-specific architecture-dependent library, the version
  # number isn't really that important, except for making cc/ld happy.
  #
  # A name such as libperl.so.10.1
  majmin="libperl.$so.$patchlevel.$subversion"
  # A name such as libperl.so.100
  majonly=`echo $patchlevel $subversion |
  $awk '{printf
"%d%02d", $1, $2}`
  majonly=libperl.$so.$majonly
  # I'd prefer to keep the os-specific stuff here to a minimum, and
  # rely on figuring it out from the naming of libc.
  case "${osname}${osvers}" in
*linux*|gnu*) # ld won't link with a bare -lperl otherwise.
  dflt=libperl.$so
  ;;
cygwin*) # ld links now against the dll directly
  majmin="cygperl5_${patchlevel}_${subversion}.${so}"
  majonly=`echo $patchlevel $subversion |
  $awk '{printf "%03d%03d", $1, $2}`
  majonly=cygperl5.$majonly.$so
  dflt=$majmin
  ;;
*) # Try to guess based on whether libc has major.minor.
  case "$libc" in
*libc.$so.[0-9]*.[0-9]*) dflt=$majmin ;;
*libc.$so.[0-9]*) dflt=$majonly ;;

```

```

*) dflt=libperl.$so ;;
esac
;;
esac
;;
*) dflt=$libperl
;;
esac
cat << EOM

```

I need to select a good name for the shared libperl. If your system uses library names with major and minor numbers, then you might want something like \$majmin. Alternatively, if your system uses a single version number for shared libraries, then you might want to use \$majonly. Or, your system might be quite happy with a simple libperl.\$so.

Since the shared libperl will get installed into a version-specific architecture-dependent directory, the version number of the shared perl library probably isn't important, so the default should be o.k.

```

EOM
rp='What name do you want to give to the shared libperl?'
. ./myread
libperl=$ans
echo "Ok, I'll use $libperl"
;;
*)
libperl="libperl${_a}"
;;
esac

```

```

# Detect old use of shrpdir via undocumented Configure -Dshrpdir
case "$shrpdir" in
") ;;
*) $cat >&4 <<EOM
WARNING: Use of the shrpdir variable for the installation location of
the shared $libperl is not supported. It was never documented and
will not work in this version. Let me (<$maintloc>)
know of any problems this may cause.

```

```

EOM
case "$shrpdir" in
"$archlibexp/CORE")
$cat >&4 <<EOM
But your current setting of $shrpdir is
the default anyway, so it's harmless.
EOM

```



```

;;
*)
$cat
>&4 <<EOM
Further, your current attempted setting of $shrpdir
conflicts with the value of $archlibexp/CORE
that installperl will use.
EOM
;;
esac
;;
esac

# How will the perl executable find the installed shared $libperl?
# Add $xxx to ccdlflags.
# If we can't figure out a command-line option, use $shrpenv to
# set env LD_RUN_PATH. The main perl makefile uses this.
shrpdir=$archlibexp/CORE
xxx=""
tmp_shrpenv=""
if "$useshrplib"; then
  case "$osname" in
    aix)
      # We'll set it in Makefile.SH...
      ;;
    solaris)
      xxx="-R $shrpdir"
      ;;
    freebsd|minix|mirbsd|netbsd|openbsd|interix|dragonfly|bitrig)
      xxx="-Wl,-R$shrpdir"
      ;;
    bsdos|linux|irix*|dec_osf|gnu*|haiku)
      xxx="-Wl,-rpath,$shrpdir"
      ;;
    hpux*)
      # hpux doesn't like the default, either.
      tmp_shrpenv="env LDOPTS=\'+s +b${shrpdir}\""
      ;;
    cygwin)
      # cygwin needs only ldlibpth
      ;;
  *)
      tmp_shrpenv="env LD_RUN_PATH=$shrpdir"
      ;;
  esac
case "$xxx" in
  ") ;;
*)

```

```
# Only add $xxx if it isn't already in ccdfldflags.
case
" $ccdfldflags " in
*" $xxx "*" ;;
*) ccdfldflags="$ccdfldflags $xxx"
cat <<EOM >&4
```

Adding \$xxx to the flags  
passed to \$ld so that the perl executable will find the  
installed shared \$libperl.

```
EOM
;;
esac
;;
esac
fi
# Fix ccdfldflags in AIX for building external extensions.
# (For building Perl itself bare -bE:perl.exp is needed,
# Makefile.SH takes care of this.)
case "$osname" in
aix) ccdfldflags="$ccdfldflags -bE:$installarchlib/CORE/perl.exp" ;;
esac
# Respect a hint or command-line value.
case "$shrpenv" in
") shrpenv="$tmp_shrpenv" ;;
esac
case "$ldlibpthname" in
") ldlibpthname=LD_LIBRARY_PATH ;;
none) ldlibpthname="" ;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/libperl.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_semctl.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_semctl.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:04 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_semctl: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_semctl:  
?S: This variable conditionally defines the HAS\_SEMCTL symbol, which  
?S: indicates to the C program that the semctl() routine is available.  
?S:.  
?C:HAS\_SEMCTL:  
?C: This symbol, if defined, indicates that the semctl() routine is  
?C: available to perform semaphore control operations.  
?C:.  
?H:#\$d\_semctl  
HAS\_SEMCTL /\*\*/  
?H:.  
?LINT:set d\_semctl  
: see if semctl exists  
set semctl d\_semctl  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_semctl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Head.U 6 2006-08-25 22:21:46Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Head.U,v \$  
?RCS: Revision 3.0.1.9 1997/02/28 15:02:09 ram  
?RCS: patch61: make sure we unset CDPATH for shells that support this  
?RCS: patch61: improved Korn shell detection and handling  
?RCS:  
?RCS: Revision 3.0.1.8 1995/07/25 13:40:02 ram  
?RCS: patch56: added SVR4-ish /opt directories to path list (ADO)  
?RCS: patch56: OS/2 platforms are using another path separator  
?RCS:  
?RCS: Revision 3.0.1.7 1995/03/21 08:46:15 ram  
?RCS: patch52: definition of

```

paths wrongly added spurious '.' chars
?RCS:
?RCS: Revision 3.0.1.6 1994/10/29 15:54:19 ram
?RCS: patch36: make sure ENV is unset before calling /bin/ksh
?RCS:
?RCS: Revision 3.0.1.5 1994/08/29 16:03:44 ram
?RCS: patch32: now sets PATH only using existing directories
?RCS:
?RCS: Revision 3.0.1.4 1994/06/20 06:54:28 ram
?RCS: patch30: now computes its invocation name into 'me'
?RCS: patch30: symbol me is made visible to all units read-only
?RCS:
?RCS: Revision 3.0.1.3 1993/12/15 08:15:07 ram
?RCS: patch15: added /sbin:/usr/sbin:/usr/libexec in PATH for BSD/386
?RCS:
?RCS: Revision 3.0.1.2 1993/11/10 17:32:35 ram
?RCS: patch14: ensure PATH is reset to '.' before testing for alias
?RCS:
?RCS: Revision 3.0.1.1 1993/08/27 14:38:07 ram
?RCS: patch7: not all 'test' programs support the -x option
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:58 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This is the very first unit in the Configure script. It is mostly just
?X:
things to keep people from getting into a tizzy right off the bat.
?X:
?MAKE:Head:
?MAKE: -pick wipe $@ %<
?V:PATH p_ _exe me newsh
?T:argv p paths OS2_SHELL DJGPP
?T:inksh needksh avoidksh newsh changesh reason
?F:!*
?LINT:extern ENV CDPATH SHELL MACHTYPE _exe is_os2
?LINT:change ENV CDPATH is_os2
?LINT:nocomment
#!/bin/sh
#
# If these # comments don't work, trim them. Don't worry about any other
# shell scripts, Configure will trim # comments from them for you.
#
# (If you are trying to port this package to a machine without sh,
# I would suggest you have a look at the prototypical config_h.SH file
# and edit it to reflect your system. Some packages may include samples
# of config.h for certain machines, so you might look for one of those.)
#

```

```
?X:
?X: NOTE THAT A CONFIGURE SCRIPT IS IN THE PUBLIC DOMAIN (whether or not
?X: the software which uses it is in the public domain).
?X:
# Yes, you may rip this off to use in other distribution packages. This
# script belongs to the public
# domain and cannot be copyrighted.
#
?X:
?X: WE ASK YOU NOT TO REMOVE OR ALTER THE FOLLOWING PARAGRAPH, PLEASE:
?X:
# Note: this Configure script was generated automatically by the tool
# called "metaconfig". Rather than working with this copy of Configure,
# you should use metaconfig. Perl uses a modified version of this
# tool, and this, together with the metaconfig units, are available
# in the git repository:
# $ git clone https://github.com/Perl/metaconfig metaconfig
# The original dist package (including metaconfig) is available on github:
# $ git clone https://github.com/rmanfredi/dist.git dist-git
#
?X: OK, I'll not alter, but I'll add to it then ...
# Though this script was generated by metaconfig from metaunits, it is
# OK to send patches against Configure itself (but not to commit them
# to bleed). It's up to
# the Configure maintainers to backport the patch to the metaunits if it
# is accepted. Exceptions to this rule, and more information, is in
# Porting/pumpkin.pod.
?X:
?X:
NOTA BENE:
?X: If you develop you own version of metaconfig based on this work,
?X: you have to add some comments telling that the script was generated
?X: by your version, not mine: It credits your work.
?X:

# Generated using [metaconfig <VERSION> PL<PATCHLEVEL>]
# with additional metaconfig patches from https://github.com/Perl/metaconfig

cat >c1$$ <<EOF
ARGGGHHHH!!!!

SCO csh still thinks true is false. Write to SCO today and tell them that next
year Configure ought to "rm /bin/csh" unless they fix their blasted shell. :-)

(Actually, Configure ought to just patch csh in place. Hmm. Hmmmmm. All
we'd have to do is go in and swap the && and || tokens, wherever they are.)

[End of diatribe. We now return you to your regularly scheduled programming...]
```

EOF

```
cat >c2$$ <<EOF
```

OOPS! You naughty creature! You didn't run Configure with sh!

I will attempt to remedy the situation by running sh for you...

EOF

```
true || cat c1$$ c2$$
```

```
true || exec sh $0 $argv:q
```

```
(exit $?0) || cat
```

```
c2$$
```

```
(exit $?0) || exec sh $0 $argv:q
```

```
rm -f c1$$ c2$$
```

```
if test -f /dev/cputype -a -f /dev/drivers -a -f /dev/osversion; then
```

```
cat <<EOF
```

```
***
```

```
*** I'm sorry but this system looks like Plan 9 and Plan 9 doesn't do
```

```
*** Configure that well. (Plan 9 is close to UNIX but not close enough.)
```

```
*** Please read the README.plan9 for further instructions.
```

```
*** Cannot continue, aborting.
```

```
***
```

```
EOF
```

```
exit 1
```

```
fi
```

```
if test -f /sys/utilities/MultiView ; then
```

```
# AmigaOS, test -c for /dev/null is not useful
```

```
:
```

```
elif test ! -c /dev/null ; then
```

```
cat <<EOF
```

```
***
```

```
*** I'm sorry, but /dev/null appears to be a file rather than a device.
```

```
*** Please consult your operating system's notes for making a device
```

```
*** in /dev.
```

```
*** Cannot continue, aborting.
```

```
***
```

```
EOF
```

```
exit 1
```

```
fi
```

```
: compute my invocation name
```

```
me=$0
```

```
case "$0" in
```

```
*/*)
```

```
me=`echo $0 | sed -e 's!.*\^(.*)!\1!' 2>/dev/null`
```

```
test "$me" || me=$0
```

```
;;
esac
```

?X:

?X: To be able to run under OS/2, we must detect that early enough to use

?X: the proper path separator, stored in \$p\_.

It is : on UNIX and ; on

?X: DOS-ish systems such as OS/2.

?X:

: Proper separator for the PATH environment variable

p\_=:

: On OS/2 this directory should exist if this is not floppy only system ":-]"

if test -d c:/ || ( uname -a | grep -i 'os\(\|\)2' 2>&1 ) 2>&1 >/dev/null ; then

if test -n "\$OS2\_SHELL"; then

p\_=\;

PATH=`cmd /c "echo %PATH%" | tr '\\\' /`

?X: That's a bug in ksh5.22

OS2\_SHELL=`cmd /c "echo %OS2\_SHELL%" | tr '\\\' / | tr '[A-Z]' '[a-z]`

is\_os2=yes

elif test -n "\$DJGPP"; then

case "X\${MACHTYPE:-nonesuchmach}" in

\*cygwin|\*msys) ;;

\*) p\_=\; ;;

esac

fi

fi

?X:

?X: There are two schools of thoughts here. Some people correctly argue that

?X: the user has a better chance than we do of setting a reasonable PATH and

?X: others argue that Configure is the best place there is to set up a suitable

?X: PATH. Well, here we try to compromise by keeping the user's PATH and

?X: appending some directories which are known to work on some machine or the

?X: other.

The rationale behind this being that a novice user might not have a

?X: proper environment variable set, and some directories like /etc (where

?X: chown is located on some BSD systems) may be missing--RAM.

?X:

?X: SVR4 adds an /opt directory for optional packages. Some sites use

?X: various permutations on /opt as opposed to /usr or /usr/local.-- ADO

?X:

?X: We only add directories that are not already in the PATH of the

?X: user and the directories must exist also.

?X:

?X: 20040627, Merijn, HP-UX's ANSI compiler is in /opt/ansic/bin if present

?X: and should be before /usr/ccs/bin, where the braindead bundled compiler

?X: can be found. The /usr/ccs/bin compiler cannot be used to build perl.

?X:

```

: Proper PATH setting
paths='/bin /usr/bin /usr/local/bin /usr/ucb /usr/local /usr/sbin'
paths="$paths /opt/bin /opt/local/bin /opt/local /opt/sbin"
paths="$paths /usr/5bin /etc /usr/gnu/bin /usr/new /usr/new/bin /usr/sbin"
paths="$paths /opt/gnu/bin /opt/new /opt/new/bin /opt/sbin"
paths="$paths
/sys5.3/bin /sys5.3/usr/bin /bsd4.3/bin /bsd4.3/usr/ucb"
paths="$paths /bsd4.3/usr/bin /usr/bsd /bsd43/bin /opt/ansic/bin /usr/ccs/bin"
paths="$paths /etc /usr/lib /usr/ucblib /lib /usr/ccs/lib"
paths="$paths /sbin /usr/sbin /usr/libexec"
paths="$paths /system/gnu_library/bin"

```

```

for p in $paths
do
case "$p_${PATH}$p_" in
*$p_*$p_*) ;;
*) test -d $p && PATH=${PATH}$p_*$p_ ;;
esac
done

```

```

PATH=.$p_${PATH}
export PATH

```

: shall we be using ksh?

```

inksh=""
needksh=""
avoidksh=""
newsh=/bin/ksh
changesh=""
?X: Use (alias -x) and not (alias) since zsh and bash recognize the alias
?X: builtin but not the -x option which is typically ksh...
?X: We need to set up PATH before calling the "alias" built-in since some
?X: systems like HP-UX have a binary called /bin/alias.
if (PATH=.; alias -x) >/dev/null 2>&1; then
    inksh=true
fi
?X: On HP-UX, large Configure scripts may exercise a bug in /bin/sh, use ksh
if test -f /hp-ux -a -f /bin/ksh; then
    needksh='to avoid sh bug in "here document" expansion'
fi
?X:
On AIX4, /bin/sh is really ksh and it causes problems, use sh
if test -d /usr/lpp -a -f /usr/bin/bsh -a -f /usr/bin/uname; then
if test X`/usr/bin/uname -v` = X4; then
    avoidksh="to avoid AIX 4's /bin/sh"
    newsh=/usr/bin/bsh
fi
fi

```



```

?X: On Digital UNIX, /bin/sh may start up buggy /bin/ksh, use sh
if test -f /osf_boot -a -f /usr/sbin/setld; then
if test X`/usr/bin/uname -s` = XOSF1; then
    avoidksh="to avoid Digital UNIX' ksh"
    newsh=/bin/sh
?X: if BIN_SH is set to 'xpg4', sh will start up ksh
    unset BIN_SH
fi
fi
?X: If we are not in ksh and need it, then feed us back to it
case "$sinksh/$needksh" in
/[a-z]*)
?X: Clear ENV to avoid any ~/.kshrc that could alias cd or whatever...
?X: Don't use "unset ENV", that is not portable enough
    ENV=""
    changesh=true
    reason="$needksh"
;;
esac
?X: If we are in ksh and must avoid it, then feed us back to a new shell
case "$sinksh/$avoidksh" in
true/[a-z]*)
    changesh=true
    reason="$avoidksh"
;;
esac
?X: Warn them if they use ksh on
other systems, which are those where
?X: we don't need ksh nor want to avoid it explicitly, yet are using it.
case "$sinksh/$needksh-$avoidksh-" in
true/--)
    cat <<EOM
(I see you are using the Korn shell. Some ksh's blow up on $me,
mainly on older exotic systems. If yours does, try the Bourne shell instead.)
EOM
;;
esac
case "$changesh" in
true)
    export newsh
    echo "(Feeding myself to $newsh $reason.)"
?X: Make sure they didn't say sh <Configure by checking whether $0 ends
?X: with Configure or not. If they did say sh <././Configure, then too
?X: bad for them anyway, since we lost that path indication...
?X: Otherwise, execing $0 ensures we keep the full remote source dir
?X: indication for src.U.
    case "$0" in
Configure|*/Configure) exec $newsh $0 "$@";;

```

```
*) exec $newsh Configure "$@";;
esac
;;
esac
?X: 2004.06.09 rac
?X: having $newsh persist as ksh here is bad news if ksh doesn't really
?X: exist. this causes us to toss away a perfectly good working test in
?X: bash in favor
of more exotic external options. see bug 42665.
test -x "${newsh}" || unset newsh
```

```
?X: Unset CDPATH to avoid surprises when using cd under some shells
?X: Can't unset it because that's not portable to very old shells.
?X: Can't set it to " because then bash 2.02 won't do "cd UU" --AD 6/98.
?X: Don't want to set it to '.' because then ksh prints out the
?X: name of the directory every time you cd to it. --AD 6/98
?X: In order to inflict the least harm, change it only if it's set.
: if needed, set CDPATH to a harmless value that is not chatty
: avoid bash 2.02 problems with empty CDPATH.
case "$CDPATH" in
") ;;
*) case "$SHELL" in
*bash*) CDPATH='.' ;;
*) CDPATH="" ;;
esac
;;
esac
```

```
: Configure runs within the UU subdirectory
test -d UU || mkdir UU
?X: Use ./* to avoid any confirmation prompts from enhanced shells -- WED
cd UU && rm -f ./*
```

Found in path(s):

```
*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Head.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

```
?RCS: $Log: cf_email.U,v $
?RCS: Revision 3.0.1.1 1994/01/24 14:05:06 ram
?RCS: patch16: created
?RCS:
?RCS:
?MAKE:cf_email: cat cf_by test myhostname mydomain Oldconfig Myread
?MAKE: -pick add $@ %<
?S:cf_email:
?S: Electronic mail address of the person who ran Configure. This can be
?S: used by units that require the user's e-mail, like MailList.U.
?S:.
?T:cont maildomain
?LINT:extern MAILDOMAIN
: determine the e-mail address of the user who is running us
$cat <<EOM
```

I need to get your e-mail address  
in Internet format if possible, i.e.  
something like user@host.domain. Please answer accurately since I have  
no easy means to double check it. The default value provided below  
is most probably close to reality but may not be valid from outside  
your organization...

```
EOM
cont=x
while test "$cont"; do
case "$MAILDOMAIN" in
")
if $test -s /etc/mailname; then
maildomain=`$cat /etc/mailname`
else
maildomain="$myhostname$mydomain"
fi
;;
*) maildomain="$MAILDOMAIN";;
esac
case "$cf_email" in
") dflt="$cf_by@$maildomain";;
*) dflt="$cf_email";;
esac
rp='What is your e-mail address?'
. ./myread
cf_email="$ans"
case "$cf_email" in
*@*.**) cont="";;
*)
rp='Address does not look like an Internet one. Use it anyway?'
case "$fastread" in
```

```

yes) dflt=y ;;
*) dflt=n ;;
esac
. ./myread
case "$ans" in
y*) cont=" " ;;
*) echo " " ;;
esac
;;
esac
done

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/cf_email.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Prefixup.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Prefixup.U,v $
?RCS: Revision 3.0.1.1 1995/01/30 14:30:40 ram
?RCS: patch49: created
?RCS:
?X:
?X: Used as: "set dflt; eval $prefixup" to set $dflt to be $prefix/dir
?X: instead of $prefixexp/dir, in case portability was involved somehow
?X: and $prefix uses ~name expansion.
?X:
?MAKE:Prefixup: prefix prefixexp
?MAKE: -pick add $@ %<
?LINT:define prefixup
?S:prefixup:
?S: This shell variable is used internally by Configure to reset
?S: the leading
installation prefix correctly when $prefix uses
?S: ~name expansion.
?S: set dflt
?S: eval $prefixup
?S: That will set $dflt to $prefix/dir if it was $prefixexp/dir and
?S: $prefix differs from $prefixexp.

```

```
?S:
?V:prefixup
: set the prefixup variable, to restore leading tilde escape
prefixup='case "$prefixexp" in
"$prefix") ;;
*) eval "$1=\`echo \$$1 | sed \`s,^$prefixexp,$prefix,\`";;
esac'
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Prefixup.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: h_fcntl.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: h_fcntl.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:08:12 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:h_fcntl: Nothing
```

```
?MAKE: -pick add $@ %<
```

```
?S:h_fcntl:
```

```
?S: This is variable gets set in various places to tell i_fcntl that
```

```
?S: <fcntl.h> should be included.
```

```
?S:
```

```
: Initialize h_fcntl
```

```
h_fcntl=false
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/h_fcntl.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: libpth.U,v \$  
?RCS: Revision 3.0.1.6 1997/02/28 16:08:49 ram  
?RCS: patch61: new loclibpth variable  
?RCS:  
?RCS: Revision 3.0.1.5 1995/01/11 15:31:30 ram  
?RCS: patch45: call ./mips instead of just mips (WED)  
?RCS:  
?RCS: Revision 3.0.1.4 1994/08/29 16:29:15 ram  
?RCS: patch32: added /lib/pa1.1 for HP-UX specially tuned PA-RISC libs (ADO)  
?RCS: patch32: fixed information message, making it clearer (ADO)  
?RCS:  
?RCS: Revision 3.0.1.3 1994/06/20 07:03:54 ram  
?RCS: patch30: added /usr/shlib to  
glibpth for shared-only libraries  
?RCS:  
?RCS: Revision 3.0.1.2 1994/05/13 15:26:57 ram  
?RCS: patch27: fixed a typo (libpth -> glibpth)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 15:07:53 ram  
?RCS: patch23: now asks for library directories to be searched (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:02 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit initializes the path for C library lookup.  
?X:  
?MAKE:libpth glibpth xlibpth plibpth loclibpth: \  
usrinc incpath test cat Myread Oldconfig  
?MAKE: -pick add \$@ %<  
?S:libpth:  
?S: This variable holds the general path (space-separated) used to find  
?S: libraries. It is intended to be used by other units.  
?S:.  
?S:glibpth:  
?S: This variable holds the general path (space-separated) used to  
?S: find libraries. It may contain directories that do not exist on  
?S: this platform, libpth is the cleaned-up version.  
?S:.  
?S:xlibpth:  
?S: This variable holds extra path (space-separated) used to find  
?S: libraries on this platform,  
?S: for example CPU-specific libraries  
?S: (on multi-CPU platforms) may be listed here.  
?S:.

```

?S:loclibpth:
?S: This variable holds the paths (space-separated) used to find local
?S: libraries. It is prepended to libpth, and is intended to be easily
?S: set from the command line.
?S:.
?S:plibpth:
?S: Holds the private path used by Configure to find out the libraries.
?S: Its value is prepend to libpth. This variable takes care of special
?S: machines, like the mips. Usually, it should be empty.
?S:.
?T: xxx dlist
?LINT:use usrinc
?INIT:: change the next line if compiling for Xenix/286 on Xenix/386
?INIT:xlibpth='/usr/lib/386 /lib/386'
?INIT:: Possible local library directories to search.
?INIT:loclibpth="/usr/local/lib /opt/local/lib /usr/gnu/lib"
?INIT:loclibpth="$loclibpth /opt/gnu/lib /usr/GNU/lib /opt/GNU/lib"
?INIT:
?INIT:: general looking path for locating libraries
?INIT:glibpth="/lib /usr/lib $xlibpth"
?INIT:glibpth="$glibpth /usr/ccs/lib /usr/ucblib /usr/local/lib"
?X: /shlib
is for Digital Unix 4.0
?X: /usr/shlib is for OSF/1 systems.
?INIT:test -f /usr/shlib/libc.so && glibpth="/usr/shlib $glibpth"
?INIT:test -f /shlib/libc.so && glibpth="/shlib $glibpth"
?INIT:
?INIT:: Private path used by Configure to find libraries. Its value
?INIT:: is prepended to libpth. This variable takes care of special
?INIT:: machines, like the mips. Usually, it should be empty.
?INIT:plibpth="
?INIT:
: Set private lib path
case "$plibpth" in
") if ./mips; then
?X: on mips, we DO NOT want /lib, and we want $incpath/usr/lib
plibpth="$incpath/usr/lib /usr/local/lib /usr/ccs/lib"
fi;;
esac
case "$libpth" in
') dlist="";;
") dlist="$loclibpth $plibpth $glibpth";;
*) dlist="$libpth";;
esac

: Now check and see which directories actually exist, avoiding duplicates
libpth="
for xxx in $dlist

```

```

do
  if $test -d $xxx; then
  case "$libpth" in
  *"$xxx"*) ;;
  *) libpth="$libpth $xxx";;
  esac
  fi
done
$cat <<'EOM'

```

Some systems have incompatible or broken versions of libraries. Among the directories listed in the question below, please remove any you know not to be holding relevant libraries, and add any that are needed. Say "none" for none.

```

EOM
case "$libpth" in
") dflt='none';;
*)
?X: strip leading space
set X $libpth
shift
dflt=${1+"$@"}
;;
esac
rp="Directories to use for library searches?"
./myread
case "$ans" in
none) libpth='';;
*) libpth="$ans";;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/libpth.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_endprotoent_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_endprotoent_r endprotoent_r_proto: Inlibc Protochk Hasproto \
i_systypes usethreads i_netdb extern_C

```



```

?MAKE: -pick add $@ %<
?S:d_endprotoent_r:
?S: This variable conditionally defines the HAS_ENDPROTOENT_R symbol,
?S: which indicates to the C program that the endprotoent_r()
?S: routine is available.
?S:.
?S:endprotoent_r_proto:
?S: This variable encodes the prototype of endprotoent_r.
?S: It is zero if d_endprotoent_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_endprotoent_r
?S: is defined.
?S:.
?C:HAS_ENDPROTOENT_R:
?C: This symbol, if defined, indicates that the endprotoent_r
routine
?C: is available to endprotoent re-entrantly.
?C:.
?C:ENDPROTOENT_R_PROTO:
?C: This symbol encodes the prototype of endprotoent_r.
?C: It is zero if d_endprotoent_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_endprotoent_r
?C: is defined.
?C:.
?H:#$d_endprotoent_r HAS_ENDPROTOENT_R /**/
?H:#define ENDPROTOENT_R_PROTO $endprotoent_r_proto /**/
?H:.
?T:try hdrs d_endprotoent_r_proto
: see if endprotoent_r exists
set endprotoent_r d_endprotoent_r
eval $inlibc
case "$d_endprotoent_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_endprotoent_r_proto:$susetthreads" in
":define") d_endprotoent_r_proto=define
set d_endprotoent_r_proto endprotoent_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_endprotoent_r_proto" in
define)
case "$endprotoent_r_proto" in
"|0) try='int endprotoent_r(struct protoent_data*);'
./protochk "$extern_C $try" $hdrs && endprotoent_r_proto=I_D ;;
esac
case "$endprotoent_r_proto"
in
"|0) try='void endprotoent_r(struct protoent_data*);'

```

```

./protochk "$extern_C $try" $hdrs && endprotoent_r_proto=V_D ;;
esac
case "$endprotoent_r_proto" in
"|0) d_endprotoent_r=undef
endprotoent_r_proto=0
echo "Disabling endprotoent_r, cannot determine prototype." >&4 ;;
*) case "$endprotoent_r_proto" in
REENTRANT_PROTO*) ;;
*) endprotoent_r_proto="REENTRANT_PROTO_$endprotoent_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susetheads" in
define) echo "endprotoent_r has no prototype, not using it." >&4 ;;
esac
d_endprotoent_r=undef
endprotoent_r_proto=0
;;
esac
;;
*) endprotoent_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_endprotoent\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998, Jarkko Hietaniemi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:selectminbits: Compile cat rm\_try Oldconfig d\_select \

i\_time i\_systime i\_systimek i\_sysselect selecttype d\_socket \

byteorder Myread Setvar run i\_stdlib ptrsize

?MAKE: -pick add \$@ %<

?S:selectminbits:

?S: This variable holds the minimum number of bits operated by select.

?S: That is, if you do select(n, ...), how many bits at least will be

?S: cleared in the masks if some activity is detected. Usually this

?S: is either n or 32\*ceil(n/32), especially many little-endians do  
 ?S: the latter. This is only useful if  
 you have select(), naturally.  
 ?S:.  
 ?C:SELECT\_MIN\_BITS:  
 ?C: This symbol holds the minimum number of bits operated by select.  
 ?C: That is, if you do select(n, ...), how many bits at least will be  
 ?C: cleared in the masks if some activity is detected. Usually this  
 ?C: is either n or 32\*ceil(n/32), especially many little-endians do  
 ?C: the latter. This is only useful if you have select(), naturally.  
 ?C:.  
 ?H:#define SELECT\_MIN\_BITS \$selectminbits /\*\*/  
 ?H:.  
 ?T:bits  
 ?T:safebits  
 ?F:!try  
 : check for the select 'width'  
 case "\$selectminbits" in  
 ") safebits=`expr \$ptrsize \\* 8`  
 case "\$d\_select" in  
 \$define)  
 \$cat <<EOM

Checking to see on how many bits at a time your select() operates...

```
EOM
$cat >try.c <<EOCP
#include <sys/types.h>
#i_time I_TIME
#i_systime I_SYS_TIME
#i_systimek I_SYS_TIME_KERNEL
#ifdef I_TIME
# include <time.h>
#endif
#ifdef I_SYS_TIME
# ifdef I_SYS_TIME_KERNEL
# define KERNEL
# endif
# include <sys/time.h>
# ifdef I_SYS_TIME_KERNEL
# undef KERNEL
# endif
#endif
#i_sysselect
I_SYS_SELECT
#ifdef I_SYS_SELECT
#include <sys/select.h>
#endif
#$d_socket HAS_SOCKET
```

```

#ifdef HAS_SOCKET
# include <sys/socket.h> /* Might include <sys/bsdtypes.h> */
#endif
#include <stdio.h>
#ifdef _stdlib
#include <stdlib.h>
#endif
$selecttype b;
#define S sizeof(*(b))
#define MINBITS 64
#define NBYTES (S * 8 > MINBITS ? S : MINBITS/8)
#define NBITS (NBYTES * 8)
int main() {
    char *s = (char *)malloc(NBYTES);
    struct timeval t;
    int i;
    FILE* fp;
    int fd;

    if (!s)
exit(1);
    fclose(stdin);
    fp = fopen("try.c", "r");
    if (fp == 0)
        exit(2);
    fd = fileno(fp);
    if (fd < 0)
        exit(3);
    b = ($selecttype)s;
    for (i = 0; i < NBITS; i++)
FD_SET(i, b);
    t.tv_sec = 0;
    t.tv_usec = 0;
    select(fd + 1, b, 0, 0, &t);
    for (i = NBITS - 1; i > fd && FD_ISSET(i, b); i--);
    free(s);
    printf("%d\n", i + 1);
    return 0;
}
EOCP
set try
if eval $compile_ok; then
    selectminbits=`$run
./try 2>/dev/null`
    case "$selectminbits" in
        *) cat >&4 <<EOM

```

Cannot figure out on how many bits at a time your select() operates.

I'll play safe and guess it is \$safebits bits.

EOM

```
selectminbits=$safebits
bits="$safebits bits"
;;
1) bits="1 bit" ;;
*) bits="$selectminbits bits" ;;
esac
echo "Your select() operates on $bits at a time." >&4
else
rp='What is the minimum number of bits your select() operates on?'
case "$byteorder" in
12345678) dflt=64 ;;
1234) dflt=32 ;;
*) dflt=1 ;;
esac
. ./myread
val=$ans
selectminbits="$val"
fi
$rm_try
;;
*) : no select, so pick a harmless default
selectminbits=$safebits
;;
esac
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/selectminbits.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_mmap.U,v \$

?RCS: Revision 3.0.1.1 1993/12/15 08:19:12 ram

?RCS: patch15: created

?RCS:

?MAKE:d\_mmap: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_mmap:  
?S: This variable conditionally defines HAS\_MMAP if mmap() is  
?S: available to map a file into memory.  
?S:.  
?C:HAS\_MMAP:  
?C: This symbol, if defined, indicates that the mmap system call is  
?C: available to map a file into memory.  
?C:.  
?H:#\$d\_mmap HAS\_MMAP /\*\*/  
?H:.  
?LINT:set d\_mmap  
: see if mmap exists  
set mmap d\_mmap  
eval \$inlibc

Found in path(s):

\*

/opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_mmap.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_flock.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_flock.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:05 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_flock: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_flock:

?S: This variable conditionally defines HAS\_FLOCK if flock() is

?S: available to do file locking.

?S:.

?C:HAS\_FLOCK (FLOCK):

?C: This symbol, if defined, indicates that the flock routine is

?C: available to do file locking.

?C:.

?H:#\$d\_flock HAS\_FLOCK /\*\*/

```
?H:
?LINT:set d_flock
: see
if flock exists
set flock d_flock
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_flock.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 2003 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:d_faststdio: Setvar \
```

```
d_stdstdio d_stdio_ptr_lval d_stdio_cnt_lval d_stdio_ptr_lval_sets_cnt
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_faststdio:
```

```
?S: This variable conditionally defines the HAS_FAST_STDIO symbol,
```

```
?S: which indicates to the C program that the "fast stdio" is available
```

```
?S: to manipulate the stdio buffers directly.
```

```
?S:.
```

```
?C:HAS_FAST_STDIO:
```

```
?C: This symbol, if defined, indicates that the "fast stdio"
```

```
?C: is available to manipulate the stdio buffers directly.
```

```
?C:.
```

```
?H:#$d_faststdio HAS_FAST_STDIO /**/
```

```
?H:.
```

```
?LINT:set d_faststdio
```

```
: see if fast_stdio exists
```

```
val="$undef"
```

```
case "$d_stdstdio:$d_stdio_ptr_lval" in
```

```
"$define:$define")
```

```
case "$d_stdio_cnt_lval$d_stdio_ptr_lval_sets_cnt" in
```

```
*$define*)
```

```
echo "You
```

```
seem to have 'fast stdio' to directly manipulate the stdio buffers." >&4
```

```
val="$define"
```

```
::
```

```
esac
```

```
::
```

```
esac
```

```
set d_faststdio
```

eval \$setvar

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_faststdio.U

No license file was found, but licenses were detected in source scan.

### Perl5 Metaconfig Units

Copyright (c) 1996-1998, Andy Dougherty

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These units are the ones used to build Configure and config\_h.SH in the Perl5 distribution.

metaconfig will first look in its standard locations (specified when you installed dist). It will then recurse through the 'U' subdirectory and find any additional "private" units. Private units override standard ones supplied with metaconfig.

Files in this directory:

#### README

This file.

#### Glossary.patch

The standard dist units contain some strings that make pod2man complain. This patch silences those warnings. As new units are added and Configure is regenerated, this patch may need more and more 'fuzz' to be applied. It should be freshly regenerated every once in a while. See also mkgloss.pl

#### In-all.pl

Re-generate the all/ folder

#### mkglossary

A script

to regenerate Porting/Glossary. You have to manually edit the top of the script to point the location of your metaconfig units. It is called automatically by 'mksample'. See also mkgloss.pl

#### mkgloss.pl

A perl script that calls U/mkglossary from the perl source tree, sorts the list of symbols, and applies the patch mentioned in Glossary.patch. When called on its own, redirect the output to a temporary file, and compare that file to Porting/Glossary before applying.



mksample

A script to regenerate Porting/config.sh and Porting/config.H.

It also calls mkglossary, if necessary.

Subdirectories:

The units and other related files have been broken up into the following directories.

a\_dvisory/

These are units that have to go first in the generated config\_h.SH.

A word of explanation: Configure and config\_h.SH are generated from 'Units' (the \*.U files). Files indicate dependencies (using make(1)), and Configure is built to follow those dependencies.

However, config\_h.SH

is simply built by putting all the units in alphabetical order and extracting the relevant lines. (This could be fixed, I suppose, but it wasn't trivial the one time I looked.)

The a\_dvisory/ directory, then, is a place to put units that need to be early in config\_h.SH. (Most units are self-contained and ought to be able to go anywhere. However, some things, like byteorder, need to have the #defines from multiarch available.)

acl/

This is an old patch to begin to detect and use ACL (access control list) file protection schemes.

all/

A folder that conveniently holds symbolic links to all the modules that are used to build the current Configure and config\_h.SH.

compline/

These are similar to the standard units, but I have modified them to have a more uniform compile command line, usually using the new Compile.U unit. (The ccflags.U unit is perl-specific since it mentions -DDEBUGGING and -DPOSIX\_SOURCE, but that's the only place it is perl-specific.)

dist\_patches/

These are patches to dist that must be applied before it is built and installed. I have submitted these for inclusion in the regular dist distribution. They have already been applied to the ../dist-3.0at70b directory.

ebcdic/

These are units that had to be specially modified to work under either EBCDIC or ASCII.

#### installdirs/

These are units to handle perl's installation directories and related issues.

#### modified/

These are modified versions of the standard units. Also included in this directory are new units that are clearly derived from existing units. I have submitted these for inclusion in the regular dist distribution.

#### nullified/

These are null units that replace units in the standard distribution. Typically they are there because some part of the perl source accidentally uses a symbol that metaconfig thinks means we want the corresponding unit.

#### perl/

These are specific to perl. Some are heavily derived from original dist units, and are marked as such. Others are original.

#### perl\_patches/

These are patches to the perl source. This directory should ordinarily be empty, but there may have been drift between the standard version of perl and the one associated with these units.

#### protos/

These are units modified to use the new Hasproto.U or Protochk.U units to check for prototypes.

#### threads/

These are specific to threading perl.

#### typedefs/

These are standard units modified to use the modified Typedef.U unit to check for typedefs. (The modified Typdef.U includes a function to avoid unnecessary prompts if the typedef being searched for exists.)

Where appropriate, I submitted these units for inclusion into the regular dist distribution. However, since dist is no longer actively maintained, and the alternative is for \*me\* to actively maintain it, the units just sit here.

## Copyright Information:

Unless otherwise indicated, the files contained in this distribution are:

Copyright (c) 1996-1998, Andy Dougherty

The following licensing terms apply to all files contained in this distribution:

You may distribute the files contained in this distribution under the terms of either

- a) the "Artistic License" which comes with Perl, or
- b) the "Artistic License" which comes with dist, or
- c) the GNU General Public License as published by the Free Software Foundation; either version 1, or (at your option) any later version (see the file "Copying" that comes with the Perl distribution).

Which one to use is your choice.

The units in the "modified" directory have been derived from units associated with the metaconfig program of Raphael Manfredi's "dist" distribution. These units list Raphael Manfredi as the Copyright holder. dist is distributed under a modified version of the Perl Artistic License.

Clause 7 of this modified license as contained in dist-3.0-pl60 provides:

7. You may reuse parts of this Package in your own programs, provided that you explicitly state where you got them from, in the source code (and, left to your courtesy, in the documentation), duplicating all the associated copyright notices and disclaimers. Besides your changes, if any, must be clearly marked as such. Parts reused that way will no longer fall under this license if, and only if, the name of your program(s) have no immediate connection with the name of the Package itself or its associated programs. You may then apply whatever restrictions you wish on the reused parts or choose to place them in the Public Domain--this will apply only within the context of your package.

In accordance with this clause, the versions of these units contained here are made available under the same terms as the rest of the units.

If you have any questions about the use of these units or about

the differences  
between these units and the standard versions, please  
feel free to ask.

Andy Dougherty [doughera@lafayette.edu](mailto:doughera@lafayette.edu)  
Dept. of Physics  
Lafayette College  
Easton, PA 18042-1782

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/README

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_closedir.U,v 3.0.1.3 1997/02/28 15:31:26 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: Original Author: Andy Dougherty <[doughera@lafcol.lafayette.edu](mailto:doughera@lafcol.lafayette.edu)>

?RCS:

?RCS: \$Log: d\_closedir.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:31:26 ram

?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.2 1994/10/29 16:11:18 ram

?RCS: patch36: added 'ldflags' to the test compile line (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:07:21 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_closedir d\_void\_closedir: Inlibc i\_dirent i\_sysdir i\_sysndir

\

i\_systypes Compile Setvar rm\_try run

?MAKE: -pick add \$@ %<

?S:d\_closedir:

?S: This variable conditionally defines HAS\_CLOSEDIR if closedir() is

?S: available.

?S:.

?C:HAS\_CLOSEDIR:

?C: This symbol, if defined, indicates that the closedir() routine is

?C: available.

?C:.

```

?H:#$d_closedir HAS_CLOSEDIR /**/
?H:.
?S:d_void_closedir:
?S: This variable conditionally defines VOID_CLOSEDIR if closedir()
?S: does not return a value.
?S:.
?C:VOID_CLOSEDIR:
?C: This symbol, if defined, indicates that the closedir() routine
?C: does not return a value.
?C:.
?H:#$d_void_closedir VOID_CLOSEDIR /**/
?H:.
?F:!try
?LINT:set d_closedir d_void_closedir
: see if closedir exists
set closedir d_closedir
eval $inlibc

@if VOID_CLOSEDIR || d_void_closedir
?X: The following contortions are designed so we can call closedir()
?X: and check whether it returns a value. The contortions are designed
?X: to portably pick up the correct directory header, for those
?X: systems that support various mutually incompatible
directory functions.
?X: This is from perl5's perl.h
case "$d_closedir" in
"$define")
echo " "
echo "Checking whether closedir() returns a status..." >&4
cat > try.c <<EOM
#$i_dirent I_DIRENT /**/
#$i_sysdir I_SYS_DIR /**/
#$i_sysndir I_SYS_NDIR /**/
#$i_systypes I_SYS_TYPES /**/

#if defined(I_SYS_TYPES)
#include <sys/types.h>
#endif
#if defined(I_DIRENT)
#include <dirent.h>
#else
#ifdef I_SYS_NDIR
#include <sys/ndir.h>
#else
#ifdef I_SYS_DIR
#include <sys/dir.h>
#endif
#endif
#endif

```

```

#endif
int main() { return closedir(opendir(".")); }
EOM
set try
if eval $compile_ok; then
if $run ./try > /dev/null 2>&1 ; then
echo "Yes, it does."
val="$undef"
else
echo "No, it doesn't."
val="$define"
fi
else
echo "(I can't seem to compile the test program--assuming it doesn't)"
val="$define"
fi
;;
*)
val="$undef";
;;
esac
set d_void_closedir
eval $setvar
$rm_try
@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_closedir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_thread\_atfork: Inlibc cat Compile usethreads Setvar

?MAKE: -pick add \$@ %<

?S:d\_thread\_atfork:

?S: This variable conditionally defines the HAS\_PTHREAD\_ATFORK symbol,

?S: which indicates to the C program that the pthread\_atfork()

?S: routine is available.

?S:.

?C:HAS\_PTHREAD\_ATFORK:

?C: This symbol, if defined, indicates that the pthread\_atfork routine

?C: is available to setup fork handlers.

```

?C:.
?H:#$d_pthread_atfork HAS_PTHREAD_ATFORK /**/
?H:.
?LINT:set d_pthread_atfork
: see whether the pthread_atfork exists
$cat >try.c <<EOP
#include <pthread.h>
#include <stdio.h>
int main() {
#ifdef PTHREAD_ATFORK
    pthread_atfork(NULL,NULL,NULL);
#endif
}
EOP

: see if pthread_atfork exists
set
try -DPTHREAD_ATFORK
if eval $compile; then
    val="$define"
else
    val="$undef"
fi
case "$setthreads" in
$define)
    case "$val" in
$define) echo 'pthread_atfork found.' >&4    ;;
*)      echo 'pthread_atfork NOT found.' >&4  ;;
    esac
esac
set d_pthread_atfork
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_pthread_atfork.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_usendir.U 1 2006-08-24 12:32:52Z rmanfredi $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

```

?RCS:

```

```

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```

```

?RCS: as specified in the README file that comes with the distribution.

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```

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```

```

?RCS: of the source tree for dist 4.0.

```

```

?RCS:

```

```

?RCS: $Log: d_usendir.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:47:34 ram
?RCS: patch61: replaced .a with $_a all over the place
?RCS: patch61: likewise for .o replaced by $_o
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:52 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_usendir i_ndir ndirlib: test Setvar Findhdr d_readdir _a
?MAKE: -pick add $@ %<
?S:d_usendir:
?S: This variable conditionally defines the EMULATE_NDIR symbol, which
?S: indicates
to the C program that it should compile the ndir.c code
?S: provided with the package.
?S:.
?S:i_ndir (d_libndir):
?S: This variable conditionally defines the I_NDIR symbol, which
?S: indicates to the C program that it should include the system's
?S: version of ndir.h, rather than the one with this package.
?S:.
?S:ndirlib:
?S: The name of the library to include at linking stage to resolve ndir
?S: symbols. It is up to the makefile to use this value.
?S:.
?C:EMULATE_NDIR (USENDIR):
?C: This symbol, if defined, indicates that the program should compile
?C: the ndir.c code provided with the package.
?C:.
?C:I_NDIR (LIBNDIR):
?C: This symbol, if defined, indicates that the program should include the
?C: system's version of ndir.h, rather than the one with this package.
?C:.
?H:#$d_usendir EMULATE_NDIR /**/
?H:#$i_ndir I_NDIR /**/
?H:.
?T:val2
?LINT: set d_usendir i_ndir
: see if there are directory access routines out there
echo " "
if $test `./findhdr ndir.h` && \
( $test -r /usr/lib/libndir$_a
|| $test -r /usr/local/lib/libndir$_a ); then
echo "Ndir library found." >&4
if $test -r /usr/lib/libndir$_a; then
ndirlib='-lndir'
else
ndirlib="/usr/local/lib/libndir$_a"

```



```

fi
val2="$define"
val="$undef"
else
ndirlib="
val2="$undef"
case "$d_readdir" in
"$define")
echo "No ndir library found, but you have readdir() so we'll use that." >&4
val="$undef";
;;
*)
echo "No ndir library found." >&4
val="$define"
;;
esac
fi
set d_usendir
eval $setvar
val="$val2"
set i_ndir
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_usendir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_sgnchr.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:44:25 ram

?RCS: patch61: added a ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.1 1995/07/25 14:00:24 ram

?RCS: patch56: made cc and ccflags optional dependencies

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:16 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

```

?MAKE:d_sgndchr: cat rm +cc +ccflags Setvar
?MAKE: -pick add $@ %<
?S:d_sgndchr:
?S: This variable conditionally defines the SIGNEDCHAR symbol, which
?S: indicates to the C program
    that signed characters are available.
?S:.
?C:SIGNEDCHAR:
?C: This symbol, if defined, indicates that characters are a signed type.
?C: If not defined, things declared as signed characters (and that make
?C: use of negative values) should probably be declared as shorts instead.
?C:.
?H:#$d_sgndchr SIGNEDCHAR /**/
?H:.
?F:!try
?LINT:set d_sgndchr
: check for signed chars
echo " "
echo "Checking to see if your C compiler can do signed chars..." >&4
$cat >try.c <<'EOCP'
int main()
{
    char c = 0;

    c--;
    exit(c >= 0);
}
EOCP
$cc $ccflags -o try try.c
if ./try; then
    val="$define"
    echo "It certainly can."
else
    val="$undef"
    echo "It can't. I'll have to make some things type short."
fi
set d_sgndchr
eval $setvar
$rm -f try*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_sgndchr.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Copyright (c) 2001 Jarkko Hietaniemi  
?RCS:  
?MAKE:run to from targetarch usecrosscompile: src awk cat grep test rm \  
echo sed mkdir cp touch chmod  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?S:usecrosscompile:  
?S: This variable conditionally defines the USE\_CROSS\_COMPILE symbol,  
?S: and indicates that our package has been cross-compiled.  
?S:.  
?S:run:  
?S: This variable contains the command used by Configure  
?S: to copy and execute a cross-compiled executable in the  
?S: target host. Useful and available only during  
the build.  
?S: Empty string " if not cross-compiling.  
?S:.  
?S:from:  
?S: This variable contains the command used by Configure  
?S: to copy files from the target host. Useful and available  
?S: only during the build.  
?S: The string '.' if not cross-compiling.  
?S:.  
?S:to:  
?S: This variable contains the command used by Configure  
?S: to copy to from the target host. Useful and available  
?S: only during the build.  
?S: The string '.' if not cross-compiling.  
?S:.  
?S:targetarch:  
?S: If cross-compiling, this variable contains the target architecture.  
?S: If not, this will be empty.  
?S:.  
?C:USE\_CROSS\_COMPILE:  
?C: This symbol, if defined, indicates that the package is being  
?C: cross-compiled.  
?C:.  
?C:CROSS\_TARGET\_ARCH:  
?C: This symbol, if defined, indicates the target architecture  
?C: the package has been cross-compiled to.  
?C: Undefined if not a cross-compile.

```

?C:.
?H:?usecrosscompile:#ifndef USE_CROSS_COMPILE
?H:?usecrosscompile:#$usecrosscompile USE_CROSS_COMPILE /**/
?H:?usecrosscompile:#define
  CROSS_TARGET_ARCH "$targetarch" /**/
?H:?usecrosscompile:#endif
?H:.
?T:croak pwd exe f q i j cwd
?LINT:extern usecrosscompile
?LINT:extern cc
?LINT:extern usrinc
?LINT:change usrinc
?LINT:change ar
?LINT:change nm
?LINT:change ranlib
?LINT:extern targethost
?LINT:extern targetdir
?LINT:change targetdir
?LINT:extern targetuser
?LINT:change targetuser
?LINT:extern targetrun
?LINT:extern targetfrom
?LINT:extern targetto
?LINT:extern targetmkdir
?LINT:change targetrun
?LINT:change targetfrom
?LINT:change targetto
?LINT:change targetmkdir
?LINT:extern incpth
?LINT:extern libpth
?LINT:change incpth
?LINT:change libpth
?LINT:extern locincpth
?LINT:extern loclibpth
?LINT:change locincpth
?LINT:change loclibpth
?LINT:extern TMPDIR
: setup for possible cross-compilation
run="
to=:
from=:
usecrosscompile='undef'
targetarch="
case "$usecrosscompile" in
$define|true|[yY]*)
@if { test -d ../Cross }
?X:
?X: Cross-compilation is enabled when there is a 'Cross' directory found

```

?X: at the root  
of the package. This directory must contain the following  
?X: entries for defining the cross-compilation process:  
?X:  
?X: FIXME FIXME  
?X: WE MUST DISTINGUISH BETWEEN LOCAL cross-compiling AND REMOTE ONE  
?X: ACTUALLY, REMOTE COMPILATION SHOULD BE CONFIGURED INTERACTIVELY  
?X: IT WILL COPY ALL THE FILES FROM THE MANIFEST DOWN TO THE REMOTE DIR...  
?X: (and copy things like 'mkdep', etc...)

```
?X:
$echo "Cross-compiling..."
croak=""
case "$cc" in
*-*-gcc)
```

?X: A cross-compiling gcc, probably.  
targetarch=`\$echo \$cc|\$sed 's/-gcc\$//`  
ar=\$targetarch-ar

```
?X: leave out ld, choosing it is more complex
nm=$targetarch-nm
ranlib=$targetarch-ranlib
$echo 'extern int foo;' > try.c
set X ` $cc -v -E try.c 2>&1 | \
$awk '/^#include </,/^End of search /| $grep '/include`
shift
```

```
if $test $# -gt 0; then
incpth="$incpth $*"
incpth="" $echo $incpth|$sed 's/^ //'
echo "Guessing incpth '$incpth'." >&4
for i in $*; do
j="" $echo $i|$sed 's,/include$,/lib,'"
if
$test -d $j; then
libpth="$libpth $j"
fi
done
libpth="" $echo $libpth|$sed 's/^ //'
echo "Guessing libpth '$libpth'." >&4
fi
$rm -f try.c
;;
```

```
esac
case "$targetarch" in
") echo "Targetarch not defined." >&4; croak=y ;;
*) echo "Using targetarch $targetarch." >&4 ;;
esac
case "$incpth" in
") echo "Incpth not defined." >&4; croak=y ;;
*) echo "Using incpth '$incpth'." >&4 ;;
```

```

esac
case "$libpth" in
") echo "Libpth not defined." >&4; croak=y ;;
*) echo "Using libpth '$libpth'." >&4 ;;
esac
case "$usrinc" in
")
for i in $incpth; do
if $test -f $i/errno.h -a -f $i/stdio.h -a -f $i/time.h; then
usrinc=$i
echo "Guessing usrinc $usrinc." >&4
break
fi
done
case "$usrinc" in
") echo "Usrinc not defined." >&4; croak=y ;;
esac
;;
*) echo "Using usrinc $usrinc." >&4 ;;
esac
case "$targethost" in
") echo "Targethost not defined." >&4; croak=y ;;
*) echo "Using targethost $targethost."
>&4
esac
locincpth=' '
loclibpth=' '
case "$croak" in
y) echo "Cannot continue, aborting." >&4; exit 1 ;;
esac
case "$src" in
/*) run=$src/Cross/run
targetmkdir=$src/Cross/mkdir
to=$src/Cross/to
from=$src/Cross/from
;;
*) pwd=`$test -f ../Configure & cd ..; pwd`
run=$pwd/Cross/run
targetmkdir=$pwd/Cross/mkdir
to=$pwd/Cross/to
from=$pwd/Cross/from
;;
esac
case "$targetrun" in
") targetrun=ssh ;;
esac
case "$targetto" in
") targetto=scp ;;

```

```

esac
case "$targetfrom" in
") targetfrom=scp ;;
esac
run=$run-$targetrun
to=$to-$targetto
from=$from-$targetfrom
case "$targetdir" in
")
targetdir="{TMPDIR:-/tmp}"
echo "Guessing targetdir $targetdir." >&4
;;
esac
case "$targetuser" in
")
targetuser=root
echo "Guessing targetuser $targetuser." >&4
;;
esac
case "$targetfrom" in
scp) q=-q ;;
*) q="" ;;
esac
case "$targetrun" in
ssh|rsh)
$cat >$run <<EOF
#!/bin/sh
case "$1" in
-cwd)
shift
cwd=$1
shift
;;
esac
case "\$cwd" in
") cwd=$targetdir ;;
esac
exe=$1
shift
if $test ! -f \$exe.xok; then
$to \$exe
$touch \$exe.xok
fi
$targetrun -l $targetuser $targethost "cd \$cwd && ./$exe \$@"
EOF
;;
*) echo "Unknown targetrun '$targetrun'" >&4
exit 1

```

```

;;
esac
case "$targetmkdir" in
*/Cross/mkdir)
    $cat >$targetmkdir <<EOF
#!/bin/sh
$targetrun -l $targetuser $targethost "mkdir -p \${@"
EOF
    $chmod a+rx $targetmkdir
;;
*) echo "Unknown targetmkdir '$targetmkdir'" >&4
    exit 1
;;
esac
case "$targetto" in
scp|rcp)
    $cat >$to <<EOF
#!/bin/sh
for f in \${@"
do
case "\${f}" in
/*)
    $targetmkdir \dirname \${f}\
    $targetto $q \${f} $targetuser@$targethost:\${f} || exit 1
;;
*)
    $targetmkdir $targetdir/\dirname \${f}\
    $targetto $q \${f} $targetuser@$targethost:$targetdir/\${f} || exit 1
;;
esac
done
exit 0
EOF
;;
cp) $cat >$to <<EOF
#!/bin/sh
for f in \${@"
do
case "\${f}" in
/*)
    $mkdir -p $targetdir/\dirname
\${f}\
    $cp \${f} $targetdir/\${f} || exit 1
;;
*)
    $targetmkdir $targetdir/\dirname \${f}\
    $cp \${f} $targetdir/\${f} || exit 1
;;

```



```

esac
done
exit 0
EOF
;;
*) echo "Unknown targetto '$targetto'" >&4
  exit 1
;;
esac
case "$targetfrom" in
scp|rcp)
  $cat >$from <<EOF
#!/bin/sh
for f in @$
do
  $rm -f $f
  $targetfrom $q $targetuser@$targethost:$targetdir/$f . || exit 1
done
exit 0
EOF
;;
cp) $cat >$from <<EOF
#!/bin/sh
for f in @$
do
  $rm -f $f
  cp $targetdir/$f . || exit 1
done
exit 0
EOF
;;
*) echo "Unknown targetfrom '$targetfrom'" >&4
  exit 1
;;
esac
if $test ! -f $run; then
  echo "Target 'run' script '$run' not found." >&4
else
  $chmod a+rx $run
fi
if $test ! -f $to; then
  echo "Target 'to' script '$to' not found." >&4
else
  $chmod a+rx $to
fi
if $test ! -f $from; then
  echo "Target 'from' script '$from' not found." >&4
else

```

```

    $chmod a+rx $from
fi
if $test ! -f $run -o ! -f $to -o !
-f $from; then
    exit 1
fi
$cat >&4 <<EOF
Using '$run' for remote execution,
and '$from' and '$to'
for remote file transfer.
EOF
@else
echo "Cross-compilation is not supported for this package." >&4
exit 1
@end
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Cross.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_flexfnam.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_flexfnam.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:04 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_flexfnam: cat rm test Setvar

?MAKE: -pick add \$@ %<

?S:d\_flexfnam:

?S: This variable conditionally defines the FLEXFILENAMES symbol, which

?S: indicates that the system supports filenames longer than 14 characters.

?S:.

?C:FLEXFILENAMES:

?C: This symbol, if defined, indicates that the system supports filenames

?C: longer than 14

characters.

?C:.

```

?H:#$d_flexfnam FLEXFILENAMES /**/
?H:.
?T:first
?LINT:set d_flexfnam
: see if we can have long filenames
echo " "
?X:
?X: We have to test in both /tmp and . because of NFS (remote server may allow
?X: long filenames while the local filesystem cannot support them). If at least
?X: one of those file systems cannot support long filenames, then we assume the
?X: whole system can't.
?X:
first=123456789abcdef
$rm -f $first
if (echo hi >$first) 2>/dev/null; then
if $test -f 123456789abcde; then
echo 'You cannot have filenames longer than 14 characters. Sigh.'>&4
val="$undef"
else
echo 'You can have filenames longer than 14 characters.'>&4
val="$define"
fi
else
$cat <<'EOM'
You can't have filenames longer than 14 chars.
You can't even think about them!
EOM
val="$undef"
fi
set d_flexfnam
eval $setvar
$rm -rf 123456789abcde*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_flexfnam.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Rcs.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:

```

?RCS: \$Log: Rcs.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:05:15 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This is a unit that helps people who write SH scripts and keep them under  
?X: RCS, but don't think to protect the \$Log and other \$Id keywords from  
?X: variable substitution (or people like me who do not like to).  
?X:  
?MAKE:Author Date Header Id Locker Log RCSfile Revision Source State: Oldconfig  
?MAKE: -pick weed \$@ %<  
?LINT:describe Author  
Date Header Id Locker Log RCSfile Revision Source State  
: preserve RCS keywords in files with variable substitution, grrr  
?Author:Author='\$Author'  
?Date:Date='\$Date'  
?Header:Header='\$Header'  
?Id:Id='\$Id'  
?\$Locker'  
?Log:Log='\$Log'  
?RCSfile:RCSfile='\$RCSfile'  
?Revision:Revision='\$Revision'  
?Source:Source='\$Source'  
?State:State='\$State'

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Rcs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_ctermid.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_ctermid.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:05:54 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_ctermid: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_ctermid:  
?S: This variable conditionally defines CTERMID if ctermid() is

?S: available to generate filename for terminal.

?S:.

?C:HAS\_CTERMID (CTERMID):

?C: This symbol, if defined, indicates that the ctermid routine is

?C: available to generate filename for terminal.

?C:.

?H:#\$d\_ctermid

HAS\_CTERMID /\*\*/

?H:.

?LINT:set d\_ctermid

: see if ctermid exists

set ctermid d\_ctermid

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_ctermid.U

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2016 Tony Cook

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:dtraceobject dtracexnolib: usedtrace dtrace cc cflags optimize \

Compile cat rm\_try

?MAKE: -pick add \$@ %<

?S:dtraceobject:

?S: Whether we need to build an object file with the dtrace tool.

?S:.

?S:dtracexnolib:

?S: Whether dtrace accepts -xnolib. If available we call dtrace -h

?S: and dtrace -G with -xnolib to allow dtrace to run in a jail on

?S: FreeBSD.

?S:.

?F: !perldtrace.h

?T:xnolib

: Probe whether dtrace builds an object, as newer Illumos requires an input

: object file that uses at least one of the probes defined in the .d file

case "\$usedtrace" in

\$define)

case "\$dtracexnolib" in

\$define|true|[yY]\*)

dtracexnolib=\$define

\$dtrace -h -xnolib -s ../perldtrace.d -o perldtrace.h

::

'|')

```

    if $dtrace -h -xnolib -s ../perldtrace.d -o perldtrace.h 2>&1 ; then
dtracexnolib=$define
echo "Your dtrace accepts -xnolib"
elif $dtrace -h -s ../perldtrace.d -o perldtrace.h 2>&1 ; then
dtracexnolib=$undef
echo "Your dtrace doesn't accept -xnolib"
else
    echo "Your dtrace doesn't work at all, try building without dtrace support" >&4
    exit 1
fi
;;
*)
dtracexnolib=$undef
$dtrace -h -s ../perldtrace.d -o perldtrace.h
;;
esac
case $dtracexnolib in
$define) xnolib=-xnolib ;;
*) xnolib= ;;
esac

case "$dtraceobject" in
$define|true|[yY]*)
dtraceobject=$define
;;
'|"')
$cat >try.c <<EOM
#include "perldtrace.h"
int main(void) {
    PERL_LOADED_FILE("dummy");
    return 0;
}
EOM
dtraceobject=$undef
if $cc -c -o try.o $optimize $ccflags try.c \
    && $dtrace -G $xnolib -s ../perldtrace.d try.o >/dev/null 2>&1 ; then

dtraceobject=$define
echo "Your dtrace builds an object file"
fi
;;
*) dtraceobject=$undef ;;
esac
$rm_try perldtrace.o perldtrace.h
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/U/perl/dtraceobject.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: longsize.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: longsize.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 16:09:35 ram

?RCS: patch61: code moved to intsize.U

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:24:31 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:07 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: 'longsize' is now defined within intsize.U

?X:

?LINT: empty

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/longsize.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: n.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: n.U,v \$

?RCS: Revision 3.0 1993/08/18 12:09:19 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:n c: contains

```

?MAKE: -pick add $@ %<
?S:n:
?S: This variable contains the -n flag if that is what causes the echo
?S: command to suppress newline. Otherwise it is null. Correct usage is
?S:  $echo $n "prompt for a question: $c".
?S:.
?S:c:
?S: This variable contains the \c string if that is what causes the echo
?S: command to suppress newline.
    Otherwise it is null. Correct usage is
?S:  $echo $n "prompt for a question: $c".
?S:.
: first determine how to suppress newline on echo command
echo " "
echo "Checking echo to see how to suppress newlines..."
(echo "hi there\c" ; echo " ") >.echotmp
if $contains c .echotmp >/dev/null 2>&1 ; then
    echo "...using -n."
    n='-n'
    c=""
else
    cat <<'EOM'
...using \c
EOM
    n=""
    c='\c'
fi
echo $n "The star should be here-->$c"
echo '*'
rm -f .echotmp

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/n.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Unix.U,v 3.0.1.1 1997/02/28 15:20:06 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: Unix.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:20:06 ram

```



?RCS: patch61: created

?RCS:

?X:

?X: The purpose of this unit is to define things that are common across all  
 ?X: known UNIX platforms. If Configure is ported/used on a non-UNIX  
 ?X: environment, then some of the following variables can be redefined in hint  
 ?X: files.

?X:

?MAKE:Unix \_exe \_a \_o exe\_ext lib\_ext obj\_ext path\_sep \  
 firstmakefile archobjs rm\_try: Oldconfig rm

?MAKE: -pick add \$@ %<

?S: \_exe:

?S: This  
 variable defines the extension used for executable files.

?S: DJGPP, Cygwin and OS/2 use '.exe'. Stratus VOS uses '.pm'.

?S: On operating systems which do not require a specific extension  
 ?S: for executable files, this variable is empty.

?S:.

?S: \_a:

?S: This variable defines the extension used for ordinary library files.  
 ?S: For unix, it is '.a'. The '.' is included. Other possible  
 ?S: values include '.lib'.

?S:.

?S: \_o:

?S: This variable defines the extension used for object files.  
 ?S: For unix, it is '.o'. The '.' is included. Other possible  
 ?S: values include '.obj'.

?S:.

?S: firstmakefile:

?S: This variable defines the first file searched by make. On unix,  
 ?S: it is makefile (then Makefile). On case-insensitive systems,  
 ?S: it might be something else. This is only used to deal with  
 ?S: convoluted make depend tricks.

?S:.

?S: archobjs:

?S: This variable defines any additional objects that must be linked  
 ?S: in with the program on this architecture. On unix, it is usually  
 ?S: empty.  
 It is typically used to include emulations of unix calls  
 ?S: or other facilities. For perl on OS/2, for example, this would  
 ?S: include os2/os2.obj.

?S:.

?X: Metaconfig's Obsolete symbol stuff is too over-eager. In the  
 ?X: perl sources, it picks up things like "P" and "FLOCK" that are  
 ?X: not used in the way Metaconfig thinks they are. Thus I can't  
 ?X: just declare these obsolete and then run metaconfig -o.  
 ?X: Instead, I'll just handle them here.  
 ?X: Sadly, history has conspired to give us a web of definitions;

?X: this could have been much simpler.

?S:lib\_ext:

?S: This is an old synonym for \_a.

?S:.

?S:exe\_ext:

?S: This is an old synonym for \_exe.

?S:.

?S:obj\_ext:

?S: This is an old synonym for \_o.

?S:.

?S:path\_sep:

?S: This is an old synonym for p\_ in Head.U, the character

?S: used to separate elements in the command shell search PATH.

?S:.

?S:rm\_try:

?S: This is a cleanup variable for try test programs.

?S: Internal Configure use only.

?S:.

?LINT: change p\_

?INIT::

Trailing extension. Override this in a hint file, if needed.

?INIT:: Extra object files, if any, needed on this platform.

?INIT:archobjs="

: Define several unixisms.

: Hints files or command line option can be used to override them.

: The convoluted testing is in case hints files set either the old

: or the new name.

```

case "$_exe" in
") case "$exe_ext" in
") ;;
*) _exe="$exe_ext" ;;
esac
;;
esac
case "$_a" in
") case "$lib_ext" in
") _a='.a';;
*) _a="$lib_ext" ;;
esac
;;
esac
case "$_o" in
") case "$obj_ext" in
") _o='.o';;
*) _o="$obj_ext";;
esac
;;
esac

```

```

case "$p_" in
") case "$path_sep" in
") p_=':':;
*) p_="$path_sep";;
esac
;;
esac
exe_ext=$_exe
lib_ext=$_a
obj_ext=$_o
path_sep=$p_

```

```
rm_try="$rm -f try try$_exe a.out .out try.[cho] try.$_o core core.try* try.core*"
```

```

@if firstmakefile
: Which makefile gets called first. This is used by make depend.
case "$firstmakefile" in
") firstmakefile='makefile';;
esac

```

```
@end
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Unix.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: html3dir.U,v $
?RCS:
?RCS: Copyright (c) 1999 Andy Dougherty
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: html3dir.U,v $
?RCS:
?MAKE:html3dir html3direxp installhtml3dir: cat sed Loc Myread \
package test Getfile Setprefixvar Prefixit Prefixup html1dir
?MAKE: -pick add $@ %<
?Y:TOP
?D:html3dir="
?S:html3dir:
?S: This variable contains the name of the directory in which html
?S: source pages are to be put. This directory is for pages
?S: that describe libraries or modules. It is intended to

```

```

?S: correspond roughly to section 3 of the Unix manuals.
?S:.
?D:html3direxp="
?S:html3direxp:
?S: This variable
    is the same as the html3dir variable, but is filename
?S: expanded at configuration time, for convenient use in makefiles.
?S:.
?D:installhtml3dir="
?S:installhtml3dir:
?S: This variable is really the same as html3direxp, unless you are
?S: using a different installprefix. For extra portability, you
?S: should only use this variable within your makefiles.
?S:.
?LINT:change prefixvar
?LINT:set html3direxp
?LINT:set installhtml3dir
: determine where html pages for libraries and modules go
set html3dir html3dir none
eval $prefixit
$cat <<EOM

```

If you wish to install html files for modules associated with \$package, indicate the appropriate directory here. To skip installing html files, answer "none".

EOM

: There is no obvious default. If they have specified html1dir, then  
: try to key off that, possibly changing ../html1 into ../html3.

```
case "$html3dir" in
```

```
) html3dir=`echo "$html1dir" | $sed 's/1$/3$/'` ;;
```

```
*) dflt=$html3dir ;;
```

```
esac
```

```
fn=dn+~
```

```
rp="Directory for the $package module
```

```
html pages?"
```

```
./getfile
```

```
prefixvar=html3dir
```

```
./setprefixvar
```

```
: Use ' ' for none so value is preserved next time through Configure
```

```
$test X"$html3dir" = "X" && html3dir=' '
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/html3dir.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_strncmp.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_strcasecmp.U,v \$  
?RCS: Revision 3.0.1.2 1994/05/06 14:54:34 ram  
?RCS: patch23: fixed a typo (WED)  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 16:04:39 ram  
?RCS: patch10: created (WAD)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:06:24 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_strcasecmp: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strcasecmp:  
?S: This variable conditionally defines the HAS\_STRCASECMP symbol, which  
?S: indicates to the C program  
that the strcasecmp() routine is available  
?S: for case-insensitive string compares.  
?S:.  
?C:HAS\_STRCASECMP:  
?C: This symbol, if defined, indicates that the strcasecmp() routine is  
?C: available for case-insensitive string compares.  
?C:.  
?H:#\$d\_strcasecmp HAS\_STRCASECMP /\*\*/  
?H:.  
?LINT:set d\_strcasecmp  
: see if strcasecmp exists  
set strcasecmp d\_strcasecmp  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_strcasecmp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2003 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.

?RCS:  
?MAKE:d\_ilogbl: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_ilogbl:  
?S: This variable conditionally defines the HAS\_ILOGBL symbol, which  
?S: indicates to the C program that the ilogbl() routine is available  
?S: for extracting the exponent of long double x as a signed integer.  
?S: If scalbnl is also present we can emulate frexpl.  
?S:.  
?C:HAS\_ILOGBL:  
?C: This symbol, if defined, indicates that the ilogbl routine is  
?C: available. If scalbnl is also present we can emulate frexpl.  
?C:.  
?H:#\$d\_ilogbl HAS\_ILOGBL /\*\*/  
?H:.  
?LINT:set d\_ilogbl  
: see if ilogbl exists  
set ilogbl d\_ilogbl  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_ilogbl.U

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?RCS: \$Id\$  
?RCS:  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: cpp\_stuff.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:30:48 ram  
?RCS: patch61: added cute quoting trick for wild stringify support  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:08:24 ram  
?RCS: patch36: now uses cppstdin instead of plain cpp for consistency (ADO)  
?RCS: patch36: remove temporary files when done  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:36 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:cpp\_stuff cpp\_quote: cat contains cppstdin cppflags cppminus rm Warn \  
package

?MAKE: -pick  
 add \$@ %<  
 ?S:cpp\_stuff:  
 ?S: This variable contains an identification of the catenation mechanism  
 ?S: used by the C preprocessor.  
 ?S:.  
 ?S:cpp\_quote:  
 ?S: This variable is set to either "" or " depending on whether the  
 ?S: pre-processor pre-dates ANSI or not. It is used in the production of  
 ?S: the SQuoTe() and EQuoTe() macros, and was introduced to overcome a bug  
 ?S: in gcc 3.x whereby the pre-processor complained loudly about the  
 ?S: unterminated strings.  
 ?S:.  
 ?C:CAT2:  
 ?C: This macro catenates 2 tokens together.  
 ?C:.  
 ?C:CAT3:  
 ?C: This macro catenates 3 tokens together.  
 ?C:.  
 ?C:CAT4:  
 ?C: This macro catenates 4 tokens together.  
 ?C:.  
 ?C:CAT5:  
 ?C: This macro catenates 5 tokens together.  
 ?C:.  
 ?C:STRINGIFY:  
 ?C: This macro surrounds its token with double quotes.  
 ?C:.  
 ?C:SCAT2:  
 ?C: This macro catenates 2 tokens together and stringifies the result.  
 ?C:.  
 ?C:SCAT3:  
 ?C: This macro catenates 3 tokens together and stringifies the result.  
 ?C:.  
 ?C:SCAT4:  
 ?C: This macro catenates 4 tokens  
 together and stringifies the result.  
 ?C:.  
 ?C:SCAT5:  
 ?C: This macro catenates 5 tokens together and stringifies the result.  
 ?C:.  
 ?H:%<:#if \$cpp\_stuff == 1  
 ?H:?CAT2:#define CAT2(a,b)a/\*\*/b  
 ?H:?CAT3:#define CAT3(a,b,c)a/\*\*/b/\*\*/c  
 ?H:?CAT4:#define CAT4(a,b,c,d)a/\*\*/b/\*\*/c/\*\*/d  
 ?H:?CAT5:#define CAT5(a,b,c,d,e)a/\*\*/b/\*\*/c/\*\*/d/\*\*/e  
 ?H:?STRINGIFY:#define STRINGIFY(a)"a"  
 ?H:%<:#define SQuoTe(a){cpp\_quote}a

```

?H:%<:#define EQuoTe(a)a${cpp_quote}
?H:?SCAT2:#define SCAT2(a,b)EQuoTe(SQuoTe(a)b)
?H:?SCAT3:#define SCAT3(a,b,c)EQuoTe(SQuoTe(a)b/**/c)
?H:?SCAT4:#define SCAT4(a,b,c,d)EQuoTe(SQuoTe(a)b/**/c/**/d)
?H:?SCAT5:#define SCAT5(a,b,c,d,e)EQuoTe(SQuoTe(a)b/**/c/**/d/**/e)
?H:%<:#endif
?H:%<:#if $cpp_stuff == 42
?X: The additional level of indirection enables these macros to be
?X: used as arguments to other macros. See K&R 2nd ed., page 231.
?H:%<:#define CaTiFy(a,b) a ## b
?H:%<:#define CAT2(a,b) CaTiFy(a,b)
?H:?CAT3:#define CAT3(a,b,c) CAT2(CaTiFy(a,b),c)
?H:?CAT4:#define CAT4(a,b,c,d)
CAT2(CaTiFy(a,b), CaTiFy(c,d))
?H:?CAT5:#define CAT5(a,b,c,d,e) CAT2(CAT2(CaTiFy(a,b), CaTiFy(c,d)), e)
?H:%<:#define StGiFy(a)# a
?H:?STRINGIFY:#define STRINGIFY(a)StGiFy(a)
?H:?SCAT2:#define SCAT2(a,b)StGiFy(a) StGiFy(b)
?H:?SCAT3:#define SCAT3(a,b,c)StGiFy(a) StGiFy(b) StGiFy(c)
?H:?SCAT4:#define SCAT4(a,b,c,d)StGiFy(a) StGiFy(b) StGiFy(c) StGiFy(d)
?H:?SCAT5:#define SCAT5(a,b,c,d,e)StGiFy(a) StGiFy(b) StGiFy(c) StGiFy(d) StGiFy(e)
?H:%<:#endif
?H:%<:#if $cpp_stuff != 1 && $cpp_stuff != 42
?H:%<:#include "Bleth: How does this C preprocessor catenate tokens?"
?H:%<:#endif
?H:.
?W:%<:CAT2 CAT3 CAT4 CAT5 STRINGIFY SCAT2 SCAT3 SCAT4 SCAT5
?F:!cpp_stuff.c
?LINT:known StGiFy EQuoTe SQuoTe CaTiFy
: how do we catenate cpp tokens here?
echo " "
echo "Checking to see how your cpp does stuff like catenate tokens..." >&4
cpp_quote="
$cat >cpp_stuff.c <<'EOCP'
#define RCAT(a,b)a/**/b
#define ACAT(a,b)a ## b
RCAT(Rei,ser)
ACAT(Cir,cus)
EOCP
$cppstdin $cppflags $cppminus <cpp_stuff.c >cpp_stuff.out
2>&1
if $contains 'Circus' cpp_stuff.out >/dev/null 2>&1; then
echo "Oh! Smells like ANSI's been here."
echo "We can catify or stringify, separately or together!"
cpp_stuff=42
elif $contains 'Reiser' cpp_stuff.out >/dev/null 2>&1; then
echo "Ah, yes! The good old days!"
cpp_stuff=1

```



```

$cat >cpp_stuff.c <<'EOCP'
#define SQuoTe(a)"a
#define EQuoTe(a)a"
#define CAT2(a,b)EQuoTe(SQuoTe(a)b)
CAT2(Vic,tory)
EOCP
$cppstdin $cppflags $cppminus <cpp_stuff.c >cpp_stuff.out 2>&1
if $contains ""Victory"" cpp_stuff.out >/dev/null 2>&1; then
echo "I'll resort to a cute trick to also be able to stringify."
cpp_quote=""
else
$cat <<EOM

```

However, in the good old days we don't know how to stringify and catify at the same time...

```

@if SCAT2 || SCAT3 || SCAT4 || SCAT5
You might have to edit the values of the SCAT[2-5] macros in config.h...
@else
Hopefully, $package does not need this feature.
@end
EOM
fi
else
./warn <<EOM

```

I can't seem to be able to catenate tokens with your cpp.

```

@if
CAT2 || CAT3 || CAT4 || CAT5 || SCAT2 || SCAT3 || SCAT4 || SCAT5
You're going to have to edit the values of the following
macros in config.h:

```

```

@if CAT2 || CAT3 || CAT4 || CAT5
CAT[2-5]
@end
@if SCAT2 || SCAT3 || SCAT4 || SCAT5
SCAT[2-5]
@end

```

in order to let me compile.

```

@end
EOM
cpp_stuff="/* Help! How do we handle cpp_stuff? *//*/"
fi
$rm -f cpp_stuff.*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/cpp_stuff.U

```

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```

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?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_isinf: Inlibc cat Compile rm_try Setvar
?MAKE: -pick add $@ %<
?S:d_isinf:
?S: This variable conditionally defines the HAS_ISINF symbol, which
?S: indicates to the C program that the isinf() routine is available.
?S:.
?C:HAS_ISINF:
?C: This symbol, if defined, indicates that the isinf routine is
?C: available to check whether a double is an infinity.
?C:.
?H:#$d_isinf HAS_ISINF /**/
?H:.
?LINT:set d_isinf
: check for isinf
echo "Checking to see if you have isinf..." >&4
$cat >try.c <<EOCP
#include <math.h>
int main() { return isinf(0.0); }
EOCP
set try
if eval $compile; then
val="$define"
echo "You have isinf."
else
val="$undef"
echo "You do not have isinf."
fi
$rm_try
set d_isinf
eval $setvar

Found
in path(s):
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/perl/d_isinf.U
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?RCS: $Id: libyacc.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:

```

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: libyacc.U,v \$  
?RCS: Revision 3.0.1.4 1997/02/28 16:09:19 ram  
?RCS: patch61: replaced .a with \$\_a all over the place  
?RCS:  
?RCS: Revision 3.0.1.3 1994/05/13 15:27:12 ram  
?RCS: patch27: added yacc case (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/05/06 15:09:01 ram  
?RCS: patch23: now uses full library path instead of -l notation  
?RCS:  
?RCS: Revision 3.0.1.1 1994/01/24 14:13:49 ram  
?RCS: patch16: un-obsolete this unit for smooth yacc compilations  
?RCS:  
?RCS:  
Revision 3.0 1993/08/18 12:09:04 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:libyacc: Loc yacc libpth \_a  
?MAKE: -pick add \$@ %<  
?S:libyacc:  
?S: This variable contains the argument to pass to the loader in order  
?S: to get the yacc library routines. If there is no yacc or yacc  
?S: library, it is null.  
?S:.  
?T:xxx  
: see if we should include -ly  
echo " "  
case "\$yacc" in  
\*byacc\*)  
echo "You are using byacc, so I won't look for a yacc library." >&4  
libyacc="  
;;  
\*yacc)  
xxx=`./loc liby\$\_a x \$libpth`  
case "\$xxx" in  
x)  
echo "No yacc library found." >&4  
libyacc="  
;;  
\*)  
echo "yacc library found in \$xxx." >&4  
libyacc="\$xxx"

```

;;
esac
;;
*bison*)
echo "You are using bison, so I won't look for a yacc library." >&4
libyacc="
;;
*)
echo "You don't seem to have yacc, so I won't look for the yacc library." >&4
libyacc="
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/libyacc.U
```

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?RCS:

?MAKE:d\_getcwd: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getcwd:

?S: This variable conditionally defines the HAS\_GETCWD symbol, which

?S: indicates to the C program that the getcwd() routine is available

?S: to get the current working directory.

?S:.

?C:HAS\_GETCWD :

?C: This symbol, if defined, indicates that the getcwd routine is

?C: available to get the current working directory.

?C:.

?H:#\$d\_getcwd HAS\_GETCWD /\*\*/

?H:.

?LINT:set d\_getcwd

: see if getcwd exists

set getcwd d\_getcwd

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_getcwd.U
```

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```

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?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_nl_langinfo_1 d_thread_safe_nl_langinfo_1: Compile cat rm_try Oldconfig \
i_pthread i_stdlib i_langinfo i_locale \
usethreads run
?MAKE: -pick add $@ %<
?S:d_nl_langinfo_1:
?S: This variable contains the eventual value of the
?S: HAS_NL_LANGINFO_L symbol, which indicates if the
?S: nl_langinfo_l() function exists.
?S:.
?S:d_thread_safe_nl_langinfo_1:
?S: This variable contains the eventual value of the
?S: HAS_THREAD_SAFE_NL_LANGINFO_L symbol, which indicates if the
?S: nl_langinfo_l() function exists and is thread-safe.
?S:.
?C:HAS_NL_LANGINFO_L:
?C: This symbol, when defined, indicates presence of the nl_langinfo_l()
?C: function
?C:.
?C:HAS_THREAD_SAFE_NL_LANGINFO_L:
?C: This symbol, when defined,
indicates presence of the nl_langinfo_l()
?C: function, and that it is thread-safe.
?C:.
?H:#$d_nl_langinfo_1 HAS_NL_LANGINFO_L /**/
?H:#$d_thread_safe_nl_langinfo_1 HAS_THREAD_SAFE_NL_LANGINFO_L /**/
?H:.
?F:!try
: check for nl_langinfo_l item
$cat <<EOM

```

Checking to see if you have nl\_langinfo\_l(), and that it is thread-safe

EOM

?X: Despite claiming that nl\_langinfo\_l() is thread-safe, the POSIX 2008

?X: standard allows for a non-safe implementation:

?X:

?X: "nl\_langinfo\_l() uses an internal per-thread buffer, and nl\_langinfo()

?X: uses (in all threads) the same buffer that nl\_langinfo\_l() uses in the

?X: initial thread. There can be interactions, but only when

?X: nl\_langinfo\_l() is called in the initial thread"

?X:

?X: This program calls nl\_langinfo\_l(), then creates a thread, calling plain

?X: nl\_langinfo() from within it, then sees if the buffer in the original

?X: thread was changed.

```
$cat >try.c <<EOCP
```

```
#$i_stdlib I_STDLIB
```

```
#ifdef I_STDLIB
```

```
# include <stdlib.h>
```

```
#endif
```

```
#include
```

```
<string.h>
```

```
#$i_langinfo I_LANGINFO
```

```
#ifdef I_LANGINFO
```

```
# include <langinfo.h>
```

```
#endif
```

```
#$i_pthread I_PTHREAD
```

```
#ifdef I_PTHREAD
```

```
# include <pthread.h>
```

```
#endif
```

```
#$i_locale I_LOCALE
```

```
#ifdef I_LOCALE
```

```
# include <locale.h>
```

```
#endif
```

```
void *
```

```
thread_start(void * arg)
```

```
{
```

```
    nl_langinfo(RADIXCHAR);
```

```
}
```

```
int main() {
```

```
    char * main_buffer;
```

```
    char save_main_buffer[1000];
```

```
    pthread_t subthread;
```

```
    pthread_attr_t attr;
```

```
    main_buffer = nl_langinfo_l(CODESET, newlocale(LC_ALL_MASK, "C", 0));
```

```
    /* If too large for our generous allowance, just assume we don't have
```

```
    * it. */
```

```
    if (strlen(main_buffer) >= sizeof(save_main_buffer)) {
```

```
        exit(1);
```

```
    }
```

```
    strcpy(save_main_buffer, main_buffer);
```

```
    if (pthread_attr_init(&attr) != 0) {
```

```
        exit(1);
```

```
    }
```

```

if (pthread_create(&subthread, &attr, thread_start, NULL) != 0) {
    exit(1);
}

if (pthread_join(subthread, NULL) != 0) {
    exit(1);
}

exit(!(strcmp(main_buffer, save_main_buffer) == 0));
}
EOCP
case
"$susetthreads" in
define)
    set try
    if eval $compile; then
        echo "Your system has nl_langinfo_l()..." >&4
        d_nl_langinfo_l="$define"
        echo "$d_nl_langinfo_l" >&4
        if $run ./try; then
            echo "and it is thread-safe (just as I'd hoped)." >&4
            d_thread_safe_nl_langinfo_l="$define"
            echo "$d_thread_safe_nl_langinfo_l" >&4
        else
            echo "but it isn't thread-safe." >&4
        fi
    else
        echo "your system does not have nl_langinfo_l()" >&4
    fi
    ;;
*) echo "Since threads aren't selected, we won't bother looking for nl_langinfo_l()" >&4
esac
if test X"$d_nl_langinfo_l" = X; then
    d_nl_langinfo_l="$undef"
fi
if test X"$d_thread_safe_nl_langinfo_l" = X; then
    d_thread_safe_nl_langinfo_l="$undef"
fi
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_nl_langinfo_l.U
```

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?RCS: \$Id: d\_mkdir.U 1 2006-08-24 12:32:52Z rmanfredi \$

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_mkdir.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:37 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_mkdir: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_mkdir:  
?S: This variable conditionally defines the HAS\_MKDIR symbol, which  
?S: indicates to the C program that the mkdir() routine is available  
?S: to create directories..  
?S:.  
?C:HAS\_MKDIR (MKDIR):  
?C: This symbol, if defined, indicates that the mkdir routine is available  
?C: to create directories.  
Otherwise you should fork off a new process to  
?C: exec /bin/mkdir.  
?C:.  
?H:#\$d\_mkdir HAS\_MKDIR /\*\*/  
?H:.  
?LINT:set d\_mkdir  
: see if mkdir exists  
set mkdir d\_mkdir  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_mkdir.U

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Copyright (c) 1998 Andy Dougherty  
?RCS:



?RCS: Original author Jarkko Hietaniemi <jhi@iki.fi>

?RCS: Merged into dist by Andy Dougherty July 13, 1998

?RCS:

?MAKE:trnl: Nothing

?MAKE: -pick add \$@ %<

?S:trnl:

?S: This variable contains the value to be passed to the tr(1)

?S: command to transliterate a newline. Typical values are

?S: '\012' and '\n'. This is needed for EBCDIC systems where

?S: newline is not necessarily '\012'.

?S:.

?T: DJGPP

: Find the appropriate value for a newline for tr

?X: We can't

use \$tr since that would cause a circular dependency via Myread

?X: dos djgpp uses '\015\012', but reportedly is happy with '\012' in the

?X: tr command. I don't know why it passes the '\n' test but later

?X: refuses to work correctly with it. --AD 6/14/98

if test -n "\$DJGPP"; then

trnl='\012'

fi

if test X"\$trnl" = X; then

case "`echo foo | tr '\n' x 2>/dev/null`" in

foox) trnl='\n' ;;

esac

fi

if test X"\$trnl" = X; then

case "`echo foo | tr '\012' x 2>/dev/null`" in

foox) trnl='\012' ;;

esac

fi

if test X"\$trnl" = X; then

case "`echo foo | tr '\r\n' xy 2>/dev/null`" in

fooxy) trnl='\n\r' ;;

esac

fi

if test X"\$trnl" = X; then

cat <<EOM >&2

\$me: Fatal Error: cannot figure out how to translate newlines with 'tr'.

EOM

exit 1

fi

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/trnl.U

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?RCS:

?MAKE:d\_ilogb: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_ilogb:

?S: This variable conditionally defines the HAS\_ILOGB symbol, which

?S: indicates to the C program that the ilogb() routine is available

?S: for extracting the exponent of double x as a signed integer.

?S:.

?C:HAS\_ILOGB:

?C: This symbol, if defined, indicates that the ilogb routine is

?C: available to get integer exponent of a floating-point value.

?C:.

?H:#\$d\_ilogb HAS\_ILOGB /\*\*/

?H:.

?LINT:set d\_ilogb

: see if ilogb exists

set ilogb d\_ilogb

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_ilogb.U

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_sresuproto: Hasproto i\_unistd

?MAKE: -pick add \$@ %<

?S:d\_sresuproto:

?S: This variable conditionally defines the HAS\_SETRESUID\_PROTO symbol,

?S: which indicates to the C program that the system provides

?S: a prototype for the setresuid() function. Otherwise, it is

?S: up to the program to supply one.

?S:.

?C:HAS\_SETRESUID\_PROTO:

?C: This symbol, if defined, indicates that the system provides

?C: a prototype for the setresuid() function. Otherwise, it is up

?C: to the program to supply one. Good guesses are

?C: extern

```
int setresuid(uid_t ruid, uid_t euid, uid_t suid);
```

?C:.

```
?H:#$d_sresuproto HAS_SETRESUID_PROTO /**/
```

?H:.

```
?LINT:set d_sresuproto
```

```
: see if prototype for setresuid is available
```

```
echo " "
```

```
set d_sresuproto setresuid $i_unistd unistd.h
```

```
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_sresuproto.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Chk_whoami.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: as specified in the README file that comes with the distribution.
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?RCS: You may reuse parts of this distribution only within the terms of
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```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: Chk_whoami.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:04:46 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?X:
```

```
?X: This unit makes sure we don't try to include whoami.h if uname() exists.
```

```
?X:
```

```
?MAKE:Chk_whoami: d_uname i_whoami
```

```
?MAKE: -pick add $@ %<
```

```
?LINT:change i_whoami
```

```
: weed out incompatibilities
```

```
case "$d_uname" in
```

```
"$define") i_whoami="$undef" ;;
```

```
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Chk_whoami.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: i\_db.U,v \$  
?RCS: Revision 3.0.1.3 1995/07/25 14:10:22 ram  
?RCS: patch56: conditionally use const in test programs (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1995/05/12 12:14:42 ram  
?RCS: patch54: extended for more intimate DB probing (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/08/29 16:21:50 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:i\_db db\_hashtype db\_prefixtype: Inhdr +cc +ccflags rm\_try contains cat \  
d\_const  
?MAKE: -pick  
add \$@ %<  
?S:i\_db:  
?S: This variable conditionally defines the I\_DB symbol, and indicates  
?S: whether a C program may include Berkeley's DB include file <db.h>.  
?S:.  
?S:db\_hashtype:  
?S: This variable contains the type of the hash structure element  
?S: in the <db.h> header file. In older versions of DB, it was  
?S: int, while in newer ones it is u\_int32\_t.  
?S:.  
?S:db\_prefixtype:  
?S: This variable contains the type of the prefix structure element  
?S: in the <db.h> header file. In older versions of DB, it was  
?S: int, while in newer ones it is size\_t.  
?S:.  
?C:I\_DB:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include Berkeley's DB include file <db.h>.  
?C:.  
?C:DB\_Prefix\_t:  
?C: This symbol contains the type of the prefix structure element  
?C: in the <db.h> header file. In older versions of DB, it was  
?C: int, while in newer ones it is u\_int32\_t.

```

?C:.
?C:DB_Hash_t:
?C: This symbol contains the type of the prefix structure element
?C: in the <db.h> header
file. In older versions of DB, it was
?C: int, while in newer ones it is size_t.
?C:.
?H:#$i_db I_DB /**/
?H:#define DB_Hash_t $db_hashtype /**/
?H:#define DB_Prefix_t $db_prefixtype /**/
?H:.
?LINT:set i_db
: see if this is a db.h system
set db.h i_db
eval $inhdr

@if DB_Hash_t
case "$i_db" in
define)
: Check the return type needed for hash
echo " "
echo "Checking return type needed for hash for Berkeley DB ..." >&4
$cat >try.c <<EOCP
#$d_const HASCONST
#ifdef HASCONST
#define const
#endif
#include <sys/types.h>
#include <db.h>
u_int32_t hash_cb (ptr, size)
const void *ptr;
size_t size;
{
}
HASHINFO info;
int main()
{
info.hash = hash_cb;
}
EOCP
if $cc $ccflags -c try.c >try.out 2>&1 ; then
if $contains warning try.out >>/dev/null 2>&1 ; then
db_hashtype='int'
else
db_hashtype='u_int32_t'
fi
else
echo "I can't seem to compile the test program." >&4

```

```

db_hashtype=int
fi
$rm_try
echo "Your version of Berkeley DB uses $db_hashtype for hash."
;;
*) db_hashtype=int
;;
esac

@end
@if
DB_Prefix_t
case "$i_db" in
define)
: Check the return type needed for prefix
echo " "
echo "Checking return type needed for prefix for Berkeley DB ..." >&4
cat >try.c <<EOCP
#$d_const HASCONST
#ifndef HASCONST
#define const
#endif
#include <sys/types.h>
#include <db.h>
size_t prefix_cb (key1, key2)
const DBT *key1;
const DBT *key2;
{
}
BTREEINFO info;
int main()
{
info.prefix = prefix_cb;
}
EOCP
if $cc $ccflags -c try.c >try.out 2>&1 ; then
if $contains warning try.out >>/dev/null 2>&1 ; then
db_prefixtype='int'
else
db_prefixtype='size_t'
fi
else
echo "I can't seem to compile the test program." >&4
db_prefixtype='int'
fi
$rm_try
echo "Your version of Berkeley DB uses $db_prefixtype for prefix."
;;

```

```
*) db_prefixtype='int'
```

```
::
```

```
esac
```

```
@end
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_db.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:d_fsync: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_fsync:
```

```
?S: This variable conditionally defines the HAS_FSYNC symbol, which
```

```
?S: indicates to the C program that the fsync() routine is available.
```

```
?S:.
```

```
?C:HAS_FSYNC:
```

```
?C: This symbol, if defined, indicates that the fsync routine is
```

```
?C: available to write a file's modified data and attributes to
```

```
?C: permanent storage.
```

```
?C:.
```

```
?H:#$d_fsync HAS_FSYNC /**/
```

```
?H:.
```

```
?LINT:set d_fsync
```

```
: see if fsync exists
```

```
set fsync d_fsync
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_fsync.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_getpwent.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1998 Andy Dougherty
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?RCS: $Log: d_getpwent.U,v $
?RCS:
?MAKE:d_getpwent: Inlibc
?MAKE: -pick add $@ %<
?S:d_getpwent:
?S: This variable conditionally defines the HAS_GETPWENT symbol, which
?S: indicates to the C program that the getpwent() routine is available
?S: for sequential access of the passwd database.
?S:.
?C:HAS_GETPWENT:
?C: This symbol, if defined, indicates that the getpwent routine is
?C: available for sequential access of the passwd database.
?C: If this is not available, the older getpw() function may be available.
?C:.
?H:#$d_getpwent HAS_GETPWENT /**/
?H:.
?LINT:set d_getpwent
: see if getpwent exists
set getpwent d_getpwent
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_getpwent.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:d_remainder: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_remainder:
```

```
?S: This variable conditionally defines the HAS_REMAINDER symbol, which
```

```
?S: indicates to the C program that the remainder() routine is available.
```

```
?S:.
```

```
?C:HAS_REMAINDER:
```

```
?C: This symbol, if defined, indicates that the remainder routine is
```

```
?C: available to return the floating-point remainder.
```

```
?C:.
```

```
?H:#$d_remainder HAS_REMAINDER /**/
```

```
?H:.
```

```
?LINT:set d_remainder
```

```
: see if remainder exists
```

```
set remainder d_remainder
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
```



5.38.0/U/perl/d\_remainder.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

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?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?MAKE:usesocks: Myread Oldconfig Setvar spackage package

?MAKE: -pick add \$@ %<

?Y:TOP

?S:usesocks:

?S: This variable conditionally defines the USE\_SOCKS symbol,

?S: and indicates that Perl should be built to use SOCKS.

?S:.

?C:USE\_SOCKS:

?C: This symbol, if defined, indicates that Perl should

?C: be built to use socks.

?C:.

?H:?%<:#\$usesocks USE\_SOCKS /\*\*/

?H:.

?D:usesocks="

?LINT:set usesocks

: check for requested SOCKS support

case "\$usesocks" in

\$define|true|[yY]\*) dflt='y';

\*)

dflt='n';

esac

cat <<EOM

\$spackage can be built to use the SOCKS proxy protocol library.

If this doesn't make any sense to you, just accept the default '\$dflt'.

EOM

rp="Build \$package for SOCKS?"

./myread

case "\$ans" in

y|Y) val="\$define" ;;

\*) val="\$undef" ;;

esac

set usesocks

eval \$setvar

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/usesocks.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: sitelib.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1996-1998, Andy Dougherty

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: sitelib.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?RCS: Revision 3.0.1.1 1997/02/28 16:21:35 ram

?RCS: patch61: created

?RCS:

?MAKE:sitelib sitelibexp installsitelib sitelib\_stem: cat Getfile Oldconfig \

Setprefixvar Prefixit package version sed installstyle siteprefix

?MAKE: -pick add \$@ %<

?Y:TOP

?D:sitelib="

?S:sitelib:

?S: This variable contains the

eventual value of the SITELIB symbol,

?S: which is the name of the private library for this package. It may

?S: have a ~ on the front. It is up to the makefile to eventually create

?S: this directory while performing installation (with ~ substitution).

?S: The standard distribution will put nothing in this directory.

?S: After perl has been installed, users may install their own local

?S: architecture-independent modules in this directory with

?S: MakeMaker Makefile.PL

?S: or equivalent. See INSTALL for details.

?S:.

?D:sitelibexp="

?S:sitelibexp:

?S: This variable is the ~name expanded version of sitelib, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?D:installsitelib="

?S:installsitelib:  
 ?S: This variable is really the same as sitelibexp but may differ on  
 ?S: those systems using AFS. For extra portability, only this variable  
 ?S: should be used in makefiles.  
 ?S:.  
 ?S:sitelib\_stem:  
 ?S: This variable is \$sitelibexp with any trailing version-specific component  
 ?S: removed.  
 The elements in inc\_version\_list (inc\_version\_list.U) can  
 ?S: be tacked onto this variable to generate a list of directories to search.  
 ?S:.  
 ?C:SITELIB:  
 ?C: This symbol contains the name of the private library for this package.  
 ?C: The library is private in the sense that it needn't be in anyone's  
 ?C: execution path, but it should be accessible by the world. The program  
 ?C: should be prepared to do ~ expansion.  
 ?C: The standard distribution will put nothing in this directory.  
 ?C: After perl has been installed, users may install their own local  
 ?C: architecture-independent modules in this directory with  
 ?C: MakeMaker Makefile.PL  
 ?C: or equivalent. See INSTALL for details.  
 ?C:.  
 ?C:SITELIB\_EXP:  
 ?C: This symbol contains the ~name expanded version of SITELIB, to be used  
 ?C: in programs that are not prepared to deal with ~ expansion at run-time.  
 ?C:.  
 ?C:SITELIB\_STEM:  
 ?C: This define is SITELIB\_EXP with any trailing version-specific component  
 ?C: removed. The elements in  
 inc\_version\_list (inc\_version\_list.U) can  
 ?C: be tacked onto this variable to generate a list of directories to search.  
 ?C:.  
 ?H:#define SITELIB "\$sitelib" /\*\*/  
 ?H:#define SITELIB\_EXP "\$sitelibexp" /\*\*/  
 ?H:#define SITELIB\_STEM "\$sitelib\_stem" /\*\*/  
 ?H:.  
 ?T:prog  
 ?LINT:change prefixvar  
 ?LINT:set installsitelib  
 ?LINT:set sitelib  
 ?LINT:set sitelibexp  
 : determine where site specific libraries go.  
 : Usual default is /usr/local/lib/perl5/site\_perl/\$version  
 : The default "style" setting is made in installstyle.U  
 : XXX No longer works with Prefixit stuff.  
 ?X: remove any trailing -3.0 or other version identification  
 prog=`echo \$package | \$sed 's/[-]\*[0-9.]\*\$//'  
 case "\$sitelib" in

```

") case "$installstyle" in
*lib/perl5*) dflt=$siteprefix/lib/$package/site_$(prog)$version ;;
*) dflt=$siteprefix/lib/site_$(prog)$version ;;
esac
;;
*) dflt="$sitelib"
;;
esac
$cat <<EOM

```

The installation process will create a directory for site-specific extensions and modules. Most users find it convenient to place all site-specific files in this directory rather than in the main distribution directory.

```

EOM
fn=d~+
rp='Pathname for the site-specific library files?'
./getfile
prefixvar=sitelib
./setprefixvar
sitelib_stem=`echo "$sitelibexp" | sed "s,/$version$,,"`

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/sitelib.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1999, Jarkko Hietaniemi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:d_nanosleep: Inlibc
?MAKE: -pick add $@ %<
?S:d_nanosleep:
?S: This variable conditionally defines HAS_NANOSLEEP
?S: if nanosleep() is available to sleep with 1E-9 sec accuracy.
?S:
?C:HAS_NANOSLEEP:
?C: This symbol, if defined, indicates that the nanosleep
?C: system call is available to sleep with 1E-9 sec accuracy.

```

```
?C:.
?H:#$d_nanosleep HAS_NANOSLEEP /**/
?H:.
?LINT:set d_nanosleep
: see if nanosleep exists
set nanosleep d_nanosleep
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_nanosleep.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_getnetprotos.U,v $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:d_getnetprotos : Hasproto i_netdb
?MAKE: -pick add $@ %<
?S:d_getnetprotos:
?S: This variable conditionally defines the HAS_GETNET_PROTOS symbol,
?S: which indicates to the C program that <netdb.h> supplies
?S: prototypes for the various getnet*() functions.
?S: See also netdbtype.U for probing for various netdb types.
?S:.
?C:HAS_GETNET_PROTOS:
?C: This symbol, if defined, indicates that <netdb.h> includes
?C: prototypes for getnetent(), getnetbyname(), and
?C: getnetbyaddr(). Otherwise,
?C: it is up to the program to guess
?C: them. See netdbtype.U for probing for various Netdb_xxx_t types.
?C:.
?H:#$d_getnetprotos HAS_GETNET_PROTOS /**/
?H:.
?LINT:set d_getnetprotos
: see if prototypes for various getnetxxx netdb.h functions are available
echo " "
set d_getnetprotos getnetent $i_netdb netdb.h
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
```

5.38.0/U/protos/d\_getnetprotos.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: usecbacktrace.U,v \$

?RCS:

?RCS: Copyright (c) 2014 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: usecbacktrace.U,v \$

?RCS:

?MAKE:usecbacktrace: Myread Oldconfig Setvar Getfile d\_backtrace

?MAKE: -pick add \$@ %<

?Y:TOP

?S:usecbacktrace:

?S: This variable indicates whether we are compiling with backtrace

?S: support.

?S:.

?C:USE\_C\_BACKTRACE:

?C: This symbol, if defined, indicates that Perl should

?C: be built with support for backtrace.

?C:.

?H:#\$usecbacktrace USE\_C\_BACKTRACE /\*\*/

?H:.

: Check if C backtrace is actually supported.

case "\$usecbacktrace" in

"" ) usecbacktrace=\$undef ;;

[yY]\*|true|\$define)

case "\$d\_backtrace" in

[yY]\*|true|\$define)

;;

\*)

echo "This system does not support backtrace" >&4

usecbacktrace=\$undef

;;

esac

;;

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/U/perl/usecbacktrace.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_wait3.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
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?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_wait3.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:01 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_wait3: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_wait3:  
?S: This variable conditionally defines the HAS\_WAIT3 symbol, which  
?S: indicates to the C program that the wait3() subroutine exists.  
?S:.  
?C:HAS\_WAIT3:  
?C: This symbol, if defined, indicates that the wait3() subroutine  
?C: exists.  
?C:.  
?H:#\$d\_wait3 HAS\_WAIT3 /\*\*/  
?H:.  
?LINT:set d\_wait3  
:  
see if 'wait3()' exists  
set wait3 d\_wait3  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_wait3.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_safebcpy.U,v \$  
?RCS: Revision 3.0.1.4 1997/02/28 15:40:58 ram  
?RCS: patch61: improved overlapping copy check

```

?RCS: patch61: comfort them if they have memmove
?RCS: patch61: added ?F: metalint hint
?RCS:
?RCS: Revision 3.0.1.3 1995/07/25 13:58:40 ram
?RCS: patch56: re-arranged compile line to include ldflags before objects
?RCS:
?RCS: Revision 3.0.1.2 1995/01/11 15:29:23 ram
?RCS: patch45: added 'ldflags' to the test compile line (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 14:49:03
    ram
?RCS: patch23: ensure string is not optimized in read-only memory (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:58 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_safebcpy: cat d_bcopy +cc +optimize +ccflags +ldflags +libs rm \
    d_memmove i_memory i_stdlib i_string i_unistd Oldconfig Setvar
?MAKE: -pick add $@ %<
?S:d_safebcpy:
?S: This variable conditionally defines the HAS_SAFE_BCOPY symbol if
?S: the bcopy() routine can do overlapping copies.
?S:
?C:HAS_SAFE_BCOPY (SAFE_BCOPY):
?C: This symbol, if defined, indicates that the bcopy routine is available
?C: to copy potentially overlapping memory blocks. Otherwise you should
?C: probably use memmove() or memcpy(). If neither is defined, roll your
?C: own version.
?C:
?H:#$d_safebcpy HAS_SAFE_BCOPY /**/
?H:
?F:!safebcpy
?LINT: set d_safebcpy
: can bcopy handle overlapping blocks?
?X: assume the worst
val="$undef"
case "$d_bcopy" in
"$define")
    echo " "
    echo "Checking to see if your bcopy() can do overlapping
copies..." >&4
    $cat >foo.c <<EOCP
#i_memory I_MEMORY
#i_stdlib I_STDLIB
#i_string I_STRING
#i_unistd I_UNISTD
EOCP
    $cat >>foo.c <<'EOCP'

```



```

#include <stdio.h>
#ifdef I_MEMORY
# include <memory.h>
#endif
#ifdef I_STDLIB
# include <stdlib.h>
#endif
#ifdef I_STRING
# include <string.h>
#else
# include <strings.h>
#endif
#ifdef I_UNISTD
# include <unistd.h> /* Needed for NetBSD */
#endif
int main()
{
char buf[128], abc[128];
char *b;
int len;
int off;
int align;

?X: Copy "abcde..." string to char abc[] so that gcc doesn't
?X: try to store the string in read-only memory.
bcopy("abcdefghijklmnopqrstuvwxy0123456789", abc, 36);

for (align = 7; align >= 0; align--) {
for (len = 36; len; len--) {
b = buf+align;
bcopy(abc, b, len);
for (off = 1; off <= len; off++) {
bcopy(b, b+off, len);
bcopy(b+off, b, len);
if (bcmp(b, abc, len))
exit(1);
}
}
}
exit(0);
}
EOCP
if $cc $optimize $ccflags $ldflags \
-o safebcopy foo.c $libs >/dev/null 2>&1; then
if ./safebcopy
2>/dev/null; then
echo "Yes, it can."
val="$define"

```

```

else
  echo "It can't, sorry."
  case "$d_memmove" in
    "$define") echo "But that's Ok since you have memmove()." ;;
  esac
fi
else
  echo "(I can't compile the test program, so we'll assume not...)"
  case "$d_memmove" in
    "$define") echo "But that's Ok since you have memmove()." ;;
  esac
fi
;;
esac
$rm -f foo.* safebcpy core
set d_safebcpy
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_safebcpy.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_umask.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_umask.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:14:50 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_umask: Inlibc
?MAKE: -pick add $@ %<
?S:d_umask:
?S: This variable conditionally defines the HAS_UMASK symbol, which
?S: indicates to the C program that the umask() routine is available.
?S: to set and get the value of the file creation mask.
?S:.
?C:HAS_UMASK :
?C: This

```

symbol, if defined, indicates that the umask routine is  
?C: available to set and get the value of the file creation mask.  
?C:.  
?H:#\$d\_umask HAS\_UMASK /\*\*/  
?H:.  
?LINT:set d\_umask  
: see if umask exists  
set umask d\_umask  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_umask.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_lockf.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_lockf.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:09:36 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_lockf: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_lockf:  
?S: This variable conditionally defines HAS\_LOCKF if lockf() is  
?S: available to do file locking.  
?S:.  
?C:HAS\_LOCKF (LOCKF):  
?C: This symbol, if defined, indicates that the lockf routine is  
?C: available to do file locking.  
?C:.  
?H:#\$d\_lockf  
HAS\_LOCKF /\*\*/  
?H:.  
?LINT:set d\_lockf  
: see if lockf exists  
set lockf d\_lockf  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_lockf.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: sbrksmart.U,v 3.0.1.2 1995/01/11 15:35:41 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: sbrksmart.U,v $
?RCS: Revision 3.0.1.2 1995/01/11 15:35:41 ram
?RCS: patch45: now sets sbrksmart to undef explicitly when lacking sbrk()
?RCS: patch45: forgot a cast when using return value from sbrk()
?RCS:
?RCS: Revision 3.0.1.1 1994/01/24 14:16:45 ram
?RCS: patch16: created
?RCS:
?MAKE:sbrksmart: cat d_sbrk Compile rm
?MAKE: -pick add $@ %<
?S:sbrksmart:
?S: This variable conditionally defines HAS_SMART_SBRK if the sbrk()
?S: routine honors a negative
argument to lower the break value.
?S:.
?C:HAS_SMART_SBRK:
?C: This symbol is defined when the sbrk() system call may be used with
?C: a negative argument to lower the break value, therefore releasing
?C: core to the system. If not, you'd probably be better off using the
?C: mmap() system call.
?C:.
?H:#$sbrksmart HAS_SMART_SBRK /**/
?H:.
?T:dumb
?F:!sbrk
: see if sbrk can release core to the kernel
echo " "
case "$d_sbrk" in
"$define")
echo "Let's see if your sbrk() is smart enough to release core..." >&4
$cat > sbrk.c <<'EOC'
#define INC 256 /* Small enough to be less than a page size */
```

```

int main()
{
char *obrk = (char *) sbrk(0);
char *nbrk;

nbrk = (char *) sbrk(INC);
if (nbrk == (char *) -1)
    exit(1); /* Not enough memory */
if (nbrk != obrk)
    exit(2); /* Unreliable sbrk() */
nbrk = (char *) sbrk(-INC);
if (nbrk == (char *) -1)
    exit(3); /* May have understood negative arg as huge positive */
if (obrk != (char *) sbrk(0))
    exit(4); /* Not smart, definitely */

exit(0); /*
Ok */
}
EOC
sbrksmart="$undef"
dumb='-- assuming dumb sbrk().'
set sbrk
if eval $compile_ok; then
./sbrk >/dev/null 2>&1
case $? in
0) sbrksmart="$define"
    echo "Yes, it can be used with negative values." ;;
1) echo "Sorry, not enough memory $dumb" ;;
2) echo "No it's not, and besides it seems to be buggy..." ;;
3) echo "No, it fails with negative values." ;;
4) echo "Nope, your sbrk() is too dumb." ;;
*) echo "Err... Unexpected result $dumb" ;;
esac
else
    echo "(Could not compile test program $dumb)"
fi
;;
*)
    echo "Since you don't have sbrk(), let's forget about the smart test!"
    sbrksmart="$undef"
    ;;
esac
$rm -f sbrk sbrk.* core

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/U/compline/sbrksmart.U

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?RCS: \$Id: d\_getprotoprotos.U,v \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_getprotoprotos : Hasproto i\_netdb

?MAKE: -pick add \$@ %<

?S:d\_getprotoprotos:

?S: This variable conditionally defines the HAS\_GETPROTO\_PROTOS symbol,

?S: which indicates to the C program that <netdb.h> supplies

?S: prototypes for the various getproto\*() functions.

?S: See also netdbtype.U for probing for various netdb types.

?S:.

?C:HAS\_GETPROTO\_PROTOS:

?C: This symbol, if defined, indicates that <netdb.h> includes

?C: prototypes for getprotoent(), getprotobyname(), and

?C: getprotobyaddr().

Otherwise, it is up to the program to guess

?C: them. See netdbtype.U for probing for various Netdb\_xxx\_t types.

?C:.

?H:#\$d\_getprotoprotos HAS\_GETPROTO\_PROTOS /\*\*/

?H:.

?LINT:set d\_getprotoprotos

: see if prototypes for various getprotoxxx netdb.h functions are available

echo " "

set d\_getprotoprotos getprotoent \$i\_netdb netdb.h

eval \$hasproto

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/U/protos/d\_getprotoprotos.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_time.U,v 3.0.1.2 1995/07/25 14:07:43 ram Exp \$

?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_time.U,v $
?RCS: Revision 3.0.1.2 1995/07/25 14:07:43 ram
?RCS: patch56: typo fix, sytem -> system
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 16:16:38 ram
?RCS: patch36: now uses new Typedef unit to compute type information (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:45 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X: Maybe <sys/types.h> should be included?
?X:INC: i_systypes
?MAKE:d_time timetype: Csym Setvar Findhdr Myread Typedef
?MAKE: -pick
add $@ %<
?S:d_time:
?S: This variable conditionally defines the HAS_TIME symbol, which indicates
?S: that the time() routine exists. The time() routine is normally
?S: provided on UNIX systems.
?S:.
?S:timetype:
?S: This variable holds the type returned by time(). It can be long,
?S: or time_t on BSD sites (in which case <sys/types.h> should be
?S: included). Anyway, the type Time_t should be used.
?S:.
?C:HAS_TIME (TIMER):
?C: This symbol, if defined, indicates that the time() routine exists.
?C:.
?C:Time_t (TIMETYPE):
?C: This symbol holds the type returned by time(). It can be long,
?C: or time_t on BSD sites (in which case <sys/types.h> should be
?C: included).
?C:.
?H:#$d_time HAS_TIME /**/
?H:#define Time_t $timetype /* Time type */
?H:.
?LINT:set d_time
: see if time exists
echo " "
?X: MPE/iX needs this protection of hint values.
?X: See d_sterror.U for more explanation.
if test "$d_time" = X -o X"$timetype" = X; then
    if set time val -f d_time; eval $csym; $val;
then
    echo 'time() found.' >&4

```

```

val="$define"
rp="What is the type returned by time() on this system?"
set time_t timetype long stdio.h sys/types.h
eval $typedef_ask
else
echo 'time() not found, hope that will do.' >&4
val="$undef"
timetype='int';
fi
set d_time
eval $setvar
fi

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/d_time.U
```

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```

?RCS: $Id: sysman.U,v 3.0.1.2 1994/06/20 07:08:43 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: sysman.U,v $
?RCS: Revision 3.0.1.2 1994/06/20 07:08:43 ram
?RCS: patch30: now explicitly states that /usr/man/man1 is the default
?RCS: patch30: added /usr/local/man/man1 to the search list
?RCS:
?RCS: Revision 3.0.1.1 1993/09/13 16:13:50 ram
?RCS: patch10: added support for /local/man/man1 (WAD)
?RCS: patch10: added temporary syspath variable to cut down on line length
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:55 ram
?RCS: Baseline for dist 3.0 netwide
release.
?RCS:
?MAKE:sysman: test Loc Oldconfig
?MAKE: -pick add $@ %<
?S:sysman:
?S: This variable holds the place where the manual is located on this
?S: system. It is not the place where the user wants to put his manual
?S: pages. Rather it is the place where Configure may look to find manual
?S: for unix commands (section 1 of the manual usually). See mansrc.

```



```

?S:.
?T:syspath
: determine where manual pages are on this system
echo " "
case "$sysman" in
")
syspath=/usr/share/man/man1 /usr/man/man1'
syspath="$syspath /usr/man/mann /usr/man/man1 /usr/man/local/man1"
syspath="$syspath /usr/man/u_man/man1"
syspath="$syspath /usr/catman/u_man/man1 /usr/man/l_man/man1"
syspath="$syspath /usr/local/man/u_man/man1 /usr/local/man/l_man/man1"
syspath="$syspath /usr/man/man.L /local/man/man1 /usr/local/man/man1"
sysman=`./loc . /usr/man/man1 $syspath`
;;
esac
if $test -d "$sysman"; then
echo "System manual is in $sysman." >&4
else
echo "Could not find manual pages in source form."
>&4
fi

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/sysman.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_libutil.U,v \$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_libutil: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_libutil:

?S: This variable conditionally defines the I\_LIBUTIL symbol, and indicates

?S: whether a C program should include <libutil.h>.

?S:.

?C:I\_LIBUTIL:

?C: This symbol, if defined, indicates that <libutil.h> exists and

?C: should be included.

?C:.

?H:#\$i\_libutil I\_LIBUTIL /\*\*/

?H:.

?LINT:set i\_libutil

: see if this is a libutil.h system

```
set libutil.h i_libutil
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i_libutil.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: libc.U,v \$

?RCS: Revision 3.0.1.10 1997/02/28 15:56:48 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS: patch61: added support for HPUX-10 nm output

?RCS:

?RCS: Revision 3.0.1.9 1995/07/25 14:11:56 ram

?RCS: patch56: now knows about OS/2 platforms

?RCS:

?RCS: Revision 3.0.1.8 1995/05/12 12:20:47 ram

?RCS: patch54: made sure only most recent version of shared lib is picked

?RCS: patch54: final "nm -p" check now uses xscan and xrun like everybody

?RCS: patch54: can now grok

linux nm output with lead \_\_IO (ADO)

?RCS: patch54: added support for linux ELF output, using 'W' for alias (ADO)

?RCS:

?RCS: Revision 3.0.1.7 1994/10/29 16:23:40 ram

?RCS: patch36: now looks for shared libraries before anything else (ADO)

?RCS: patch36: added new nm output format (ADO)

?RCS:

?RCS: Revision 3.0.1.6 1994/08/29 16:28:10 ram

?RCS: patch32: added I-type symbols for nm output parsing on Linux

?RCS:

?RCS: Revision 3.0.1.5 1994/06/20 07:03:24 ram

?RCS: patch30: checks are now presented by succession of if/elif

?RCS: patch30: uniformized checks for shared objects with new so symbol

?RCS:

?RCS: Revision 3.0.1.4 1994/05/06 15:06:33 ram

?RCS: patch23: added shared library knowledge (ADO and WED)

?RCS:

?RCS: Revision 3.0.1.3 1994/01/24 14:12:17 ram

```

?RCS: patch16: can now export nm_extract as an internal-use only variable
?RCS:
?RCS: Revision 3.0.1.2 1993/09/13 16:09:03 ram
?RCS: patch10: added special handling for Apollo systems (WAD)
?RCS:
?RCS: Revision 3.0.1.1
1993/08/27 14:40:03 ram
?RCS: patch7: added entry for /usr/shlib/libc.so (OSF/1 machines)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:57 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:libc libnames +nm_extract: echo n c rm test grep Getfile Myread \
Oldconfig Loc sed libs incpath libpth ar runnm nm nm_opt nm_so_opt \
contains xlibpth so osname trnl tr sort uniq _o _a
?MAKE: -pick add $@ %<
?S:libc:
?S: This variable contains the location of the C library.
?S:.
?S:libnames:
?S: The constructed list of library names. Normally empty, but hint files
?S: may set this for later perusal by Configure.
?S:.
?S:nm_extract:
?S: This variable holds the name of the extraction command used to process
?S: the output of nm and yield the list of defined symbols. It is used
?S: internally by Configure.
?S:.
?T:thislib try libnames xxx xscan xrun thisname com tans file
?F:!libnames !libc.tmp !tmp.imp
?LINT:change nm_opt runnm
?INIT:libnames=""
: Figure out where the libc is located
case
"$runnm" in
true)
?X: indentation is wrong on purpose--RAM
: get list of predefined functions in a handy place
echo " "
case "$libc" in
") libc=unknown
case "$libs" in
*-lc_s*) libc=`./loc libc_s$_a $libc $libpth`
esac
;;
esac
case "$libs" in
") ;;

```

```

*) for thislib in $libs; do
case "$thislib" in
-|c|-|c_s)
: Handle C library specially below.
;;
-|*)
thislib=`echo $thislib | $sed -e 's/^-|//'^
if try=`./loc lib$thislib.$so.*' X $libpth`; $test -f "$try"; then
:
elif try=`./loc lib$thislib.$so X $libpth`; $test -f "$try"; then
:
elif try=`./loc lib$thislib$_a X $libpth`; $test -f "$try"; then
:
elif try=`./loc $thislib$_a X $libpth`; $test -f "$try"; then
:
elif try=`./loc lib$thislib X $libpth`; $test -f "$try"; then
:
elif try=`./loc $thislib X $libpth`; $test -f "$try"; then
:
elif try=`./loc $lib$thislib$_a X $xlibpth`; $test -f "$try"; then
:
else
try=""
fi
libnames="$libnames $try"
;;
*) libnames="$libnames $thislib"
;;
esac
done
;;
esac
?X:
?X: Some systems (e.g. DG/UX) use "environmental" links, which make the test
?X: -f fail. Ditto for symbolic links. So in order to reliably check the
?X: existence of a file, we use test -r. It will still fail with DG/UX links
?X: though, but at least it will detect symbolic links. At some strategic
?X: points, we make use of (test -h), using a sub-shell in case builtin test
?X: does not implement the -h check for symbolic links. This makes it
?X: possible to preset libc in a hint file for instance and have it show up
?X: as-is in the question.
?X:
xxx=normal
case "$libc" in
unknown)
?X:
?X: The sed below transforms .so.9 .so.12 into something like .so.0009 .so.0012,
?X: then sorts on it to allow keeping .so.12 instead of .so.9 as the latest

```

?X: up-to-date library. The initial filename (before sed munging, saved in hold  
?X: space via 'h') is appended via 'G' before sorting, then the leading munged  
?X: part is removed after sorting. Nice efficient work  
from Tye McQueen.

?X: The initial blurfl is here to prevent the trailing pipe from producing an

?X: empty string, causing Configure to output all its set variables!

?X:

```
set /lib/libc.$so
for xxx in $libpth; do
  $test -r $1 || set $xxx/libc.$so
  : The messy sed command sorts on library version numbers.
  $test -r $1 || \
  set `echo blurfl; echo $xxx/libc.$so.[0-9]* | \
  tr ' ' $trnl | egrep -v \.[A-Za-z]*$' | $sed -e '
  h
  s/[0-9][0-9]*/0000&/g
  s/0*\([0-9][0-9][0-9][0-9]\)\^1/g
  G
  s/\n/ / | \
  $sort | $sed -e 's/^\.* //'^
eval set \$$#
done
$test -r $1 || set /usr/ccs/lib/libc.$so
$test -r $1 || set /lib/libsys_s$_a
;;
*)
```

?X: ensure the test below for the (shared) C library will fail

```
set blurfl
;;
esac
if $test -r "$1"; then
  echo "Your (shared) C library seems to be in $1."
  libc="$1"
  elif $test -r /lib/libc && $test -r /lib/clib; then
?X:
?X: Apollo has its C library in /lib/clib AND /lib/libc
?X: not to mention its math library in /lib/syslib...
?X:
echo
"Your C library seems to be in both /lib/clib and /lib/libc."
xxx=apollo
libc='/lib/clib /lib/libc'
if $test -r /lib/syslib; then
  echo "(Your math library is in /lib/syslib.)"
?X: Put syslib in libc -- not quite right, but won't hurt
  libc="$libc /lib/syslib"
fi
elif $test -r "$libc" || (test -h "$libc") >/dev/null 2>&1; then
```

```

echo "Your C library seems to be in $libc, as you said before."
?X: For mips, and...
elif $test -r $incpath/usr/lib/libc$_a; then
  libc=$incpath/usr/lib/libc$_a;
  echo "Your C library seems to be in $libc. That's fine."
elif $test -r /lib/libc$_a; then
  libc=/lib/libc$_a;
  echo "Your C library seems to be in $libc. You're normal."
else
  if tans=`./loc libc$_a blurfl/dyick $libpth`; $test -r "$stans"; then
    :
  elif tans=`./loc libc blurfl/dyick $libpth`; $test -r "$stans"; then
    libnames="$libnames "`./loc clib blurfl/dyick $libpth`
  elif tans=`./loc clib blurfl/dyick $libpth`; $test -r "$stans"; then
    :
  elif tans=`./loc Slibc$_a blurfl/dyick
  $xlibpth`; $test -r "$stans"; then
    :
  elif tans=`./loc Mlibc$_a blurfl/dyick $xlibpth`; $test -r "$stans"; then
    :
  else
    tans=`./loc Llibc$_a blurfl/dyick $xlibpth`
  fi
  if $test -r "$stans"; then
    echo "Your C library seems to be in $stans, of all places."
    libc=$stans
  else
    libc='blurfl'
  fi
fi
if $test $xxx = apollo -o -r "$libc" || (test -h "$libc") >/dev/null 2>&1; then
  dflt="$libc"
cat <<EOM

```

If the guess above is wrong (which it might be if you're using a strange compiler, or your machine supports multiple models), you can override it here.

```

EOM
else
  dflt=""
echo $libpth | $tr ' ' $trnl | $sort | $uniq > libpath
cat >&4 <<EOM

```

I can't seem to find your C library. I've looked in the following places:

```

EOM
$sed 's/^/' libpath
cat <<EOM

```

None of these seems to contain your C library. I need to get its name...

EOM

fi

fn=f

rp="Where is your C library?"

./getfile

libc="\$ans"

echo " "

echo \$libc \$libnames | \$tr ' ' \$trnl | \$sort | \$uniq > libnames

set X `cat libnames`

shift

xxx=files

case

\$# in 1) xxx=file; esac

echo "Extracting names from the following \$xxx for later perusal:" >&4

echo " "

\$sed 's/^/ /' libnames >&4

echo " "

\$echo \$n "This may take a while...\$c" >&4

?X:

?X: Linux may need the special Dynamic option to nm for shared libraries.

?X: In general, this is stored in the nm\_so\_opt variable.

?X: Unfortunately, that option may be fatal on non-shared libraries.

?X:

for file in \$\*; do

case \$file in

\*\$so\*) \$nm \$nm\_so\_opt \$nm\_opt \$file 2>/dev/null;;

\*) \$nm \$nm\_opt \$file 2>/dev/null;;

esac

done >libc.tmp

\$echo \$n ".\$c"

?X:

?X: To accelerate processing, we look at the correct 'sed' command

?X: by using a small subset of libc.tmp, i.e. fprintf function.

?X: When we know which sed command to use, do the name extraction

?X:

\$grep fprintf libc.tmp > libc.ptf

?X:

?X: In order to enhance readability and save some space, we define

?X: some variables that will be "eval"ed.

?X:

xscan='eval "<libc.ptf \$com >libc.list"; \$echo \$n ".\$c" >&4'

xrun='eval

```

"<libc.tmp $com >libc.list"; echo "done." >&4'
?X: BSD-like output, I and W types added for Linux
?X: Some versions of Linux include a leading __IO in the symbol name.
?X: HPUX10 reportedly has trailing spaces, though I'm surprised it has
?X: BSD-like output. (AD).
xxx=[ADTSIW]
if com="$sed -n -e 's/___IO//' -e 's/^. * $xxx *[_.]*/p' -e 's/^. * $xxx */p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
?X: SYSV-like output
elif com="$sed -n -e 's/^__ */' -e 's/^\([a-zA-Z_0-9$]*\).*xtern.*\1/p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e '/|UNDEF/d' -e '/FUNC..GL/s/^. *|__ */p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/^. * D __ */p' -e 's/^. * D //p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/^_/' -e 's/^\([a-zA-Z_0-9$]*\).*xtern.*text.*\1/p'";\
eval
$xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/^. *|FUNC |GLOB . */p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$grep '|' | $sed -n -e '/|COMMON/d' -e '/|DATA/d' \
-e '/file/d' -e 's/^\([ ^ ]*\).*\1/p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/^. *|FUNC |GLOB . */p' -e 's/^. *|FUNC |WEAK . */p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
?X: mips nm output (sysV)
elif com="$sed -n -e 's/^__/' -e '/|Undef/d' -e '/|Proc/s/ . */p'";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
eval $xrun
elif com="$sed -n -e 's/^. *|Proc . *|Text *| */p'";\
eval $xscan;\

```



```

$contains '^fprintf$' libc.list >/dev/null 2>&1; then
    eval $xrun
elif com="$sed -n -e '/Def. Text/s/.* \([^ ]*\)\$/1/p';\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null
2>&1; then
    eval $xrun
?X: OS/2 nm output
elif com="$sed -n -e 's/^-0-9a-f ]*_\(.*)=.*\1/p';\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
    eval $xrun
elif com="$sed -n -e 's/.*\.text n\ \ \ \./p';\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
    eval $xrun
?X: AIX nm output
elif com="sed -n -e 's/^\_.*//' -e 's/[ \ ]*D[ \ ]*[0-9]*.*//p';\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
    eval $xrun
else
$nm -p $* 2>/dev/null >libc.tmp
$grep fprintf libc.tmp > libc.ptf
if com="$sed -n -e 's/^\_.* [ADTSIW] *_[_]*//p' -e 's/^\_.* [ADTSIW] //p';\
eval $xscan; $contains '^fprintf$' libc.list >/dev/null 2>&1
then
    nm_opt='-p'
    eval $xrun
else
    echo " "
    echo "$nm didn't seem to work right. Trying $ar instead..." >&4
    com="
if $ar t $libc > libc.tmp && \
    $contains '^fprintf$' libc.tmp >/dev/null 2>&1
then
    for thisname in $libnames $libc; do
        $ar t $thisname >>libc.tmp
    done
    $sed
-e "s/\$_o\$//" < libc.tmp > libc.list
    echo "Ok." >&4
    elif test "X$osname" = "Xos2" && $ar tv $libc > libc.tmp; then
?X: Repeat libc to extract forwarders to DLL entries too
    for thisname in $libnames $libc; do
        $ar tv $thisname >>libc.tmp
?X: Revision 50 of EMX has bug in ar: it will not extract forwarders
?X: to DLL entries. Use emximp which will extract exactly them.

```

```

emximp -o tmp.imp $thisname \
  2>/dev/null && \
  $sed -e 's/^\([_a-zA-Z0-9]*\) .*$/1/p' \
  < tmp.imp >>libc.tmp
$rm -f tmp.imp
done
$sed -e "s/\\$_o$//" -e 's/^\|+/' < libc.tmp > libc.list
echo "Ok." >&4
else
echo "$ar didn't seem to work right." >&4
echo "Maybe this is a Cray...trying bld instead..." >&4
if
  bld t $libc | \
  $sed -e 's/.*\|/' -e "s/\\$_o:.*\|/" > libc.list &&
  $test -s libc.list
then
  for thisname in $libnames; do
    bld t $libnames | \
    $sed -e 's/.*\|/' -e "s/\\$_o:.*\|/" >>libc.list
    $ar t $thisname >>libc.tmp
  done
  echo
  "Ok." >&4
  else
    echo "That didn't work either." >&4
    echo "No problem, I'll be compiling test programs then..." >&4
    runnm=false
  fi
fi
fi
fi
nm_extract="$com"
if $test -f /lib/syscalls.exp; then
  echo " "
  echo "Also extracting names from /lib/syscalls.exp for good ole AIX..." >&4
  $sed -n 's/^\([^\ ]*\)[ \]*syscall[0-9]*[ \]*$/1/p' \
  /lib/syscalls.exp >>libc.list
fi
?X: remember, indentation is wrong on purpose--RAM
;;
esac
$rm -f libnames libpath

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/libc.U

No license file was found, but licenses were detected in source scan.

```
/*
 * $Id: getopt.C,v 3.0.1.1 1994/01/24 13:58:40 ram Exp ram $
 *
 * Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
 *
 * You may redistribute only under the terms of the Artistic Licence,
 * as specified in the README file that comes with the distribution.
 * You may reuse parts of this distribution only within the terms of
 * that same Artistic Licence; a copy of which may be found at the root
 * of the source tree for dist 4.0.
 *
 * Original Author: unknown, got this off net.sources
 *
 * $Log: getopt.C,v $
 * Revision 3.0.1.1 1994/01/24 13:58:40 ram
 * patch16: created
 *
 */
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/lib/C/fake/getopt.C
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000, Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:gccversion gccosandvers gccansipedantic: cat cpp rm +cc \

Myread Guess Options Oldconfig Loc osname osvers run

?MAKE: -pick add \$@ %<

?S:gccversion:

?S: If GNU cc (gcc) is used, this variable holds '1' or '2' to

?S: indicate whether the compiler is version 1 or 2. This is used in

?S: setting some of the default cflags. It is set to " if not gcc.

?S:.

?S:gccosandvers:

?S: If GNU cc (gcc) is used, this variable holds the operating system

?S: and version used to compile gcc. It is set to " if not gcc,

?S: or if

nothing useful can be parsed as the os version.

?S:.

```

?S:gccansipedantic:
?S: If GNU cc (gcc) is used, this variable will enable (if set) the
?S: -ansi and -pedantic ccflags for building core files (through
?S: cflags script). (See Porting/pumpkin.pod for full description).
?S:.
?D:gccversion="
?D:gccansipedantic="
?T:c99_for
?T:flag
?T:gccshortvers
?T:incdir
?T:warn
?F:!try
?LINT:change cpp
?LINT:extern ccflags
?LINT:extern ldflags
?LINT:extern locincpth
?LINT:extern ccname
?LINT:change ccname
?LINT:change locincpth
?LINT:change ccflags
?LINT:set gccansipedantic
?X: Check if they have gcc in any guise.
: Check if we are using GNU gcc and what its version is
echo " "
echo "Checking for GNU cc in disguise and/or its version number..." >&4
$cat >try.c <<EOM
#include <stdio.h>
int main() {
#if defined(__GNUC__) && !defined(__INTEL_COMPILER)
#ifdef __VERSION__
    printf("%s\n", __VERSION__);
#else
    printf("%s\n", "1");
#endif
#endif
    return(0);
}
EOM
if $cc -o try $ccflags $ldflags try.c; then
    gccversion=`$run
./try`
case "$gccversion" in
    *) echo "You are not using GNU cc." ;;
    *) echo "You are using GNU cc $gccversion."
        ccname=gcc
        ;;
    esac

```

```

else
echo " "
echo "*** WHOA THERE!!! ***" >&4
echo " Your C compiler \"\$cc\" doesn't seem to be working!" >&4
?X: using -K will prevent aborting--maybe they're cross compiling?
case "$knowitall" in
")
echo " You'd better start hunting for one and let me know about it." >&4
exit 1
;;
esac
fi
$rm -f try try.*
case "$gccversion" in
1.*) cpp=`./loc gcc-cpp $cpp $pth` ;;
esac
case "$gccversion" in
") gccosandvers=" ;;
*) gccshortvers=`echo "$gccversion"|sed 's/ .*//'^
gccosandvers=`$cc -v 2>&1|grep '/specs$'|sed "s!.*[^-]*-[^-]*-([^-]*)/$gccshortvers/specs!|1!"^
gccshortvers="
case "$gccosandvers" in
$osname) gccosandvers=" ;; # linux gccs seem to have no linux osvers, grr
$osname$osvers) ;; # looking good
$osname*) cat <<EOM >&4

```

\*\*\* WHOA THERE!!! \*\*\*

Your gcc has not been  
compiled for the exact release of  
your operating system (\$gccosandvers versus \$osname\$osvers).

In general it is a good idea to keep gcc synchronized with  
the operating system because otherwise serious problems  
may ensue when trying to compile software, like Perl.

I'm trying to be optimistic here, though, and will continue.  
If later during the configuration and build icky compilation  
problems appear (headerfile conflicts being the most common  
manifestation), I suggest reinstalling the gcc to match  
your operating system release.

```

EOM
;;
*) gccosandvers=" ;; # failed to parse, better be silent
esac
;;
esac

```

```

case "$ccname" in
") ccname="$cc" ;;
esac

# gcc 3.* complain about adding -Idirectories that they already know about,
# so we will take those off from locincpth.
case "$gccversion" in
3.*)
    echo "int main(){ }">try.c
    for incdir in $locincpth; do
        warn=`$cc $ccflags -I$incdir -c try.c 2>&1 | \
        grep '^c[cp]p*[01]:
warning: changing search order ^
        if test "X$warn" != X; then
            locincpth=`echo " $locincpth " | sed "s! $incdir !!"`
        fi
    done
    $rm -f try try.*
esac

# gcc 4.9 by default does some optimizations that break perl.
# see ticket 121505.
#
# The -fwrapv disables those optimizations (and probably others,) so
# for gcc 4.9 (and later, since the optimizations probably won't go
# away), add -fwrapv unless the user requests -fno-wrapv, which
# disables -fwrapv, or if the user requests -fsanitize=undefined,
# which turns the overflows -fwrapv ignores into runtime errors.
case "$gccversion" in
4.[3-9].*[4.[1-9][0-9]*[5-9].*[1-9][0-9]*)
    case "$ccflags" in
    *-fno-wrapv*|*-fsanitize=undefined*|*-fwrapv*) ;;
    *) ccflags="$ccflags -fwrapv" ;;
    esac
esac

# Really old versions of gcc default to C89 and will error for this code.
# See if the compiler (gcc or otherwise) needs a flag to compile C99 code
# Initialisations in for loops seem to be the particular problem
#
# (Does this syntax conflict with something else that was valid C89?)
# We also add a declaration after a statement to detect whether the compiler
# (or the user supplied -Accflags) consider such declarations to be errors.
# This causes 'Configure with -Accflags="-Werror=declaration-after-statement"'
# to fail hard and early.
#
# Annoyingly -std=c99 will cause gcc to tell glibc not to define prototypes for
# syscall, drand48 etc when including <unistd.h>, which messes up our build.

```

```

# I guess we *could* loop round trying -std=c99 first with checks both for the
# prototype found and the code compiling (because -std=gnu99 might do other
# things we don't want, particularly on non-GCC compilers) but
# 1) We would need to check for the prototype first (without any flags)
# 2) We would still end up with most Linux systems either being -std=gnu99
# or "" (no flag), and so both common options would not rigorously check our
# portability to other platforms.
# So it doesn't seem worth the
  complexity and chance of different failure.

```

```

$cat >try.c <<'EOCP'
int main(int argc, char **argv) {
    argc = argc + 1;
    /* This is deliberately a declaration after a statement. */
    unsigned long long count = 0;
    for (char **p = argv; *p; ++p) {
        ++count;
    }
    return count == 1 ? 0 : argc;
}
EOCP
c99_for=no
for flag in ''-std=gnu99'-std=c99'; do
    if $cc -o try $flag $ccflags $ldflags try.c 2>/dev/null && ./try; then
        c99_for="$flag"
        break;
    fi
done
case "$c99_for" in
no) echo "Your C compiler doesn't need any special flags to compile C99 code"
    ;;
no) echo >&4 "Your C compiler doesn't seem to be able to compile C99 code"
    rp='Do you really want to continue?'
    dflt='n'
    ./myread
    case "$ans" in
[yY]) echo >&4 "Okay, continuing." ;;
*) exit 1 ;;
esac
;;
*) echo "Your C compiler needs $c99_for to compile C99 code"
    ccflags="$c99_for $ccflags"
    ;;
esac
$rm -f try try.*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/gccvers.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_sigblock.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_sigblock.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:21 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_sigblock: Inlibc
?MAKE: -pick add $@ %<
?S:d_sigblock:
?S: This variable conditionally defines HAS_SIGBLOCK if sigblock() is
?S: available to block signal reception.
?S:.
?C:HAS_SIGBLOCK:
?C: This symbol, if defined, indicates that the sigblock routine is
?C: available to block signal reception.
?C:.
?H:#$d_sigblock HAS_SIGBLOCK /**/
?H:.
?LINT:set
d_sigblock
: see if sigblock exists
set sigblock d_sigblock
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_sigblock.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: perlpath.U,v 3.0.1.2 1995/09/25 09:17:04 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: This file is included with or a derivative work of a file included
?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.
?RCS: In accordance with clause 7 of dist's modified Artistic License:
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
```



```

?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: perlpath.U,v $
?RCS:
?RCS: Special perl5 unit -- we haven't installed perl yet.
?RCS:
?RCS: Revision 3.0.1.2 1995/09/25 09:17:04 ram
?RCS: patch59: unit is now forced to the top of Configure, if possible
?RCS:
?RCS: Revision 3.0.1.1 1995/01/11 15:33:53 ram
?RCS: patch45: can now use Loc variables since path stripping is deferred
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:32 ram
?RCS: Baseline for dist
3.0 netwide release.
?RCS:
?X:
?X: The purpose of this unit is to locate perl good enough to construct a #!
?X:
?MAKE:perlpath: cat Getfile Loc Myread Oldconfig initialinstalllocation \
startperl versiononly
?MAKE: -pick add $@ %<
?Y:TOP
?S:perlpath:
?S: This variable contains the eventual value of the PERLPATH symbol,
?S: which contains the name of the perl interpreter to be used in
?S: shell scripts and in the "eval 'exec'" idiom. This variable is
?S: not necessarily the pathname of the file containing the perl
?S: interpreter; you must append the executable extension (_exe) if
?S: it is not already present. Note that Perl code that runs during
?S: the Perl build process cannot reference this variable, as Perl
?S: may not have been installed, or even if installed, may be a
?S: different version of Perl.
?S:.
?C:PERLPATH:
?C: This symbol contains the name of the perl interpreter to be
?C: used in shell scripts and in the "eval 'exec'" idiom.
?C:.
?H:#define PERLPATH "$perlpath" /**/
?H:.
:
figure best path for perl in scripts
case "$perlpath" in
")
case "$versiononly" in
"$define") perlpath="$initialinstalllocation/perl$version";;
*) perlpath="$initialinstalllocation/perl";;
esac

```

```
case "$startperl" in
*!*) ;;
*)
$cat <<EOH
```

I will use the "eval 'exec'" idiom to start Perl on your system.  
I can use the full path of your Perl binary for this purpose, but  
doing so may cause problems if you want to share those scripts and  
Perl is not always in a standard place (\$initialinstalllocation/perl).

```
EOH
dflt="$initialinstalllocation/perl"
rp="What path shall I use in \"eval 'exec'\"?"
./myread
perlpath="$ans"
;;
esac
;;
esac
case "$startperl" in
*!*) ;;
*) echo "I'll use $perlpath in \"eval 'exec'\"";;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/perlpath.U
```

No license file was found, but licenses were detected in source scan.

?RCS:

?RCS: Copyright (c) 2012 Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

```
?MAKE:ilp d_ilp32 d_ilp64 d_lp64 d_can64: Assert Myread Setvar \
cat rm +cc +ccflags echo n c intsize longsize ptrsize
```

```
?MAKE: -pick add $@ %<
```

?S:ilp:

?S: This variable contains the largest amount of bits that the CPU supports,

?S: from the compiler's point of view. Typically 32 or 64.

?S:.

?S:d\_ilp32:

?S: This variable conditionally defines the CPU\_IS\_ILP32.

?S:.

?S:d\_ilp64:  
?S: This variable conditionally defines the CPU\_IS\_ILP64.  
?S:.  
?S:d\_lp64:  
?S: This variable conditionally defines the CPU\_IS\_LP64.  
?S:.  
?S:d\_can64:  
?S: This variable  
conditionally defines CAN\_HANDLE\_64BITS.  
?S:.  
?C:CPU\_ILP\_MAXBITS:  
?C: This symbol contains the largest amount of bits that the CPU natively  
?C: supports from the compiler's point of view. Typically 32 or 64.  
?C:.  
?C:CPU\_IS\_ILP32:  
?C: When defined, this indicates that the integer, long and pointer variables  
?C: hold 32-bit values.  
?C:.  
?C:CPU\_IS\_ILP64:  
?C: When defined, this indicates that the integer, long and pointer variables  
?C: hold 64-bit values.  
?C:.  
?C:CPU\_IS\_LP64:  
?C: When defined, this indicates that the long and pointer variables hold  
?C: 64-bit values but integers are smaller (probably only 32-bit wide).  
?C:.  
?C:CAN\_HANDLE\_64BITS:  
?C: When defined, this indicates that the compiler can handle 64-bit values  
?C: despite the CPU having only 32-bit registers. These are available using  
?C: the "long long" C type. It is only defined for ILP32 machines, since  
?C: 64-bit support is naturally available on ILP64 and LP64 machines.  
?C:.  
?H:#define CPU\_ILP\_MAXBITS \$ilp  
?H:#\$d\_ilp32  
CPU\_IS\_ILP32 /\*\*/  
?H:#\$d\_ilp64 CPU\_IS\_ILP64 /\*\*/  
?H:#\$d\_lp64 CPU\_IS\_LP64 /\*\*/  
?H:#\$d\_can64 CAN\_HANDLE\_64BITS /\*\*/  
?H:.  
?LINT: set d\_ilp32 d\_ilp64 d\_lp64 d\_can64  
: check for architecture type  
echo " "  
\$echo \$n "Computing CPU architecture type...\$c" >&4  
ilp=`expr \$longsize \\* 8`  
case "\$ptrsize" in  
8)  
val=\$undef; set d\_ilp32; eval \$setvar  
case "\$intsize" in

```

8)
echo " ILP64." >&4
val=$define; set d_ilp64; eval $setvar
val=$undef; set d_lp64; eval $setvar
;;
*)
echo " LP64." >&4
val=$define; set d_lp64; eval $setvar
val=$undef; set d_ilp64; eval $setvar
;;
esac
;;
*)
echo " ILP${ilp}." >&4
case "$ilp" in
32) val=$define;;
*) val=$undef;;
esac
set d_ilp32; eval $setvar
val=$undef; set d_ilp64; eval $setvar
val=$undef; set d_lp64; eval $setvar
;;
esac

@if CAN_HANDLE_64BITS || d_can64
: see whether compiler supports 64-bit emulation
val=$undef
case "$ilp" in
64) val=$define;;
*)
$cat >try.c <<EOCP
#include "static_assert.h"
long long foo;
int main()
{
    STATIC_ASSERT(8
    == sizeof(foo));
    return 0;
}
EOCP
if $cc -c $ccflags try.c >/dev/null 2>&1; then
    echo " "
    echo "Your compiler also supports 64-bit emulation." >&4
    val=$define
fi
$rm -f try.*
;;
esac

```

```
set d_can64
eval $setvar
```

@end

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/ilp.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: pidtype.U,v 3.0.1.1 1994/08/29 16:31:27 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: pidtype.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:31:27 ram

?RCS: patch32: now uses new Typedef unit to compute type information

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:33 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:pidtype: Myread Typedef

?MAKE: -pick add \$@ %<

?S:pidtype:

?S: This variable defines PIDTYPE to be something like pid\_t, int,

?S: ushort, or whatever type is used to declare process ids in the kernel.

?S:.

?C:Pid\_t (PIDTYPE):

?C: This

symbol holds the type used to declare process ids in the kernel.

?C: It can be int, uint, pid\_t, etc... It may be necessary to include

?C: <sys/types.h> to get any typedef'ed information.

?C:.

?H:#define Pid\_t \$pidtype /\* PID type \*/

?H:.

?LINT: set pidtype

: see what type pids are declared as in the kernel

rp="What is the type of process ids on this system?"

set pid\_t pidtype int stdio.h sys/types.h

eval \$typedef\_ask

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/pidtype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setpwent.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_setpwent.U,v \$

?RCS:

?MAKE:d\_setpwent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setpwent:

?S: This variable conditionally defines the HAS\_SETPWENT symbol, which

?S: indicates to the C program that the setpwent() routine is available

?S: for initializing sequential access to the passwd database.

?S:.

?C:HAS\_SETPWENT:

?C: This symbol, if defined, indicates that the setpwent routine is

?C: available for initializing sequential access of the passwd database.

?C:.

?H:#\$d\_setpwent HAS\_SETPWENT /\*\*/

?H:.

?LINT:set d\_setpwent

: see if setpwent exists

set setpwent d\_setpwent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_setpwent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_mntent.U,v \$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_mntent: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_mntent:

?S: This variable conditionally defines the I\_MNTENT symbol, and indicates

?S: whether a C program should include <mntent.h>.

?S:  
?C:I\_MNTENT:  
?C: This symbol, if defined, indicates that <mntent.h> exists and  
?C: should be included.

?C:.  
?H:#\$i\_mntent I\_MNTENT /\*\*/

?H:.  
?LINT:set i\_mntent  
: see if this is a mntent.h system  
set mntent.h i\_mntent  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_mntent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_getspnam: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getspnam:

?S: This variable conditionally defines HAS\_GETSPNAM if getspnam() is

?S: available to retrieve SysV shadow password entries by name.

?S:.

?C:HAS\_GETSPNAM:

?C: This symbol, if defined, indicates that the getspnam system call is

?C: available to retrieve SysV shadow password entries by name.

?C:.

?H:#\$d\_getspnam HAS\_GETSPNAM /\*\*/

?H:.

?LINT:set d\_getspnam  
: see if getspnam exists  
set getspnam d\_getspnam  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_getspnam.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: newslib.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: newslib.U,v $
?RCS: Revision 3.0 1993/08/18 12:09:23 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:newslib newslibexp: test inews Oldconfig Getfile
?MAKE: -pick add $@ %<
?S:newslib:
?S: This variable contains the eventual value of the NEWSLIB symbol,
?S: which holds the name of the directory serving as the news library.
?S: It may have a ~ on the front. See newslibexp for expanded version.
?S:.
?S:newslibexp:
?S: This variable contains
the ~ expanded name of the news library
?S: directory. See newslib.
?S:.
?C:NEWSLIB:
?C: This symbol contains the name of the directory serving as the news
?C: library. The program must be prepared to do ~ expansion on it.
?C:.
?C:NEWSLIB_EXP:
?C: This symbol is the ~ expanded version of NEWSLIB, for programs that
?C: do not wish to deal with it at run-time.
?C:.
?H:#define NEWSLIB "$newslib" /**/
?H:#define NEWSLIB_EXP "$newslibexp" /**/
?H:.
?LINT:change inews
: figure out news library
case "$newslib" in
")
dflt=/usr/lib/news
;;
*) dflt=$newslib ;;
esac
echo " "
```



```

fn=d~
rp="Where is your news library?"
./getfile
newslib="$ans"
newslibexp="$ansexp"
if $test -f $newslibexp/inews; then
echo "Aha! Inews is really in $newslibexp! Maybe this is 2.10.2..." >&4
case "$inews" in
inews)
: null
;;
*) echo "(Make sure $inews isn't an old version.)";;
esac
inews=$newslibexp/inews
fi

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/newslib.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: newsspool.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: newsspool.U,v \$

?RCS: Revision 3.0 1993/08/18 12:09:24 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:newsspool newsspoolexp: Getfile Oldconfig

?MAKE: -pick add \$@ %<

?S:newsspool:

?S: This variable contains the eventual value of the NEWSSPOOL symbol,

?S: which is the directory name where news articles are spooled. It

?S: may have a ~ on the front of it.

?S:.

?S:newsspoolexp:

?S: This is the same as the newsspool variable, but is

filename expanded

?S: at configuration time, for programs not wanting to deal with it at

?S: run-time.

?S:.

?C:NEWSSPOOL:

?C: This symbol contains the directory name where news articles are

?C: spooled. The program must be prepared to do ~ expansion on it.

?C:.

?C:NEWSSPOOL\_EXP:

?C: This is the same as NEWSSPOOL, but is filename expanded at

?C: configuration time, for use in programs not willing to do so

?C: at run-time.

?C:.

```
?H:#define NEWSSPOOL "$newsspool" /**/
```

```
?H:#define NEWSSPOOL_EXP "$newspoolexp" /**/
```

?H:.

```
: locate news spool directory
```

```
case "$newsspool" in
```

```
)
```

```
  dflt=/usr/spool/news
```

```
;;
```

```
*) dflt="$newsspool";;
```

```
esac
```

```
echo " "
```

```
fn=d~
```

```
rp='Where are news spooled?'
```

```
./getfile
```

```
newsspool="$ans"
```

```
newspoolexp="$ansexp"
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/newsspool.U
```

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2014-2014, Karl Williamson & H.Merijn Brand

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_wcsxfrm: Compile cat rm\_try run Oldconfig Setvar

?MAKE: -pick add \$@ %<

?S:d\_wcsxfrm:

?S: This variable conditionally defines the HAS\_WCSXFRM symbol if the

?S: wcsxfrm() routine is available and can be used to compare wide

?S: character strings.

?S:.

?C:HAS\_WCSXFRM:

?C: This symbol, if defined, indicates that the wcsxfrm routine is

```

?C: available to transform a wide character string for wcsxfrm().
?C:.
?H:#$d_wcsxfrm HAS_WCSXFRM /**/
?H:.
?F:!try
?LINT: set d_wcsxfrm
: look for wcsxfrm
echo " "
$cat >try.c <<'EOCP'
#include
<errno.h>
#include <wchar.h>
int main ()
{
    wchar_t dst[4], *src = L" ";
    errno = 0;
    return (wcsxfrm (dst, src, 1) ? errno ? errno : 0 : 1);
}
EOCP
set try
?X: if $cc $ccflags $ldflags -o try try.c $libs >/dev/null 2>&1 ; then
val="$undef"
if eval $compile; then
    `run ./try`
    case "$?" in
0) echo "A working wcsxfrm() found." >&4
    val="$define" ;;
*) echo "wcsxfrm() found, but it doesn't work" >&4
    ;;
esac
else
    echo "wcsxfrm() NOT found." >&4
fi
set d_wcsxfrm
eval $setvar
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_wcsxfrm.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: libdbm.U 1 2006-08-24 12:32:52Z rmanfredi $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

```

?RCS:

```

```

?RCS: You may redistribute only under the terms of the Artistic Licence,

```

```

?RCS: as specified in the README file that comes with the distribution.

```

?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: libdbm.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:56:57 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:58 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:libdbm: test Loc libpth \_a

?MAKE: -pick add \$@ %<

?S:libdbm:

?S: This variable contains the argument to pass to the loader in order

?S: to get the dbm library routines. If there is no dbm or ndbm

?S: library, it is null.

?S:.

?T:xxx

:

see if we should include -ldbm

echo " "

if \$test -r /usr/lib/libndbm\$\_a || \$test -r /usr/local/lib/libndbm\$\_a ; then

echo "-lndbm found." >&4

libdbm='-lndbm'

elif \$test -r /usr/lib/libdbm\$\_a || \$test -r /usr/local/lib/libdbm\$\_a ; then

echo "-ldbm found." >&4

libdbm='-ldbm'

else

xxx=`./loc libdbm\$\_a x \$libpth`

case "\$xxx" in

x)

echo "No dbm library found." >&4

libdbm=""

::

\*)

echo "DBM library found in \$xxx." >&4

libdbm="\$xxx"

::

esac

fi

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/libdbm.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_math.U 1 2006-08-24 12:32:52Z rmanfredi \$

```

?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: i_math.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:21:59 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:i_math: Inhdr
?MAKE: -pick add $@ %<
?X: Are there really systems that *DON'T* have math.h?
?S:i_math:
?S: This variable conditionally defines the I_MATH symbol, and indicates
?S: whether a C program may include <math.h>.
?S:.
?C:I_MATH:
?C: This symbol, if defined, indicates
to the C program that it should
?C: include <math.h>.
?C:.
?H:#$i_math I_MATH /**/
?H:.
?LINT:set i_math
: see if this is a math.h system
set math.h i_math
eval $inhdr

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_math.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Instruct.U,v 3.0.1.3 1997/02/28 15:02:55 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.

```

```

?RCS:
?RCS: $Log: Instruct.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 15:02:55 ram
?RCS: patch61: logname / whoami sequence rewritten to use case
?RCS:
?RCS: Revision 3.0.1.2 1995/02/15 14:11:34 ram
?RCS: patch51: author name now appears at the end of the paragraph (WED)
?RCS:
?RCS: Revision 3.0.1.1 1995/01/11 15:12:05 ram
?RCS: patch45: now documents the & escape to turn -d on at the read prompt
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:04 ram
?RCS: Baseline for
dist 3.0 netwide release.
?RCS:
?X:
?X: This unit spew out the directions that we want everyone to read. I try to
?X: keep the first "pagefull" much less than a page since they don't know it
?X: isn't going to go shooting off the top of the screen, and we don't want
?X: to panic them yet.
?X:
?MAKE:Instruct: Myread Configdir Devel contains
?MAKE: -pick wipe $@ %<
?T:user needman firsttime
: general instructions
needman=true
firsttime=true
user=`(logname) 2>/dev/null`
case "$user" in
") user=`whoami 2>&1`;;
esac
if $contains "^$user$" ../config/instruct >/dev/null 2>&1; then
firsttime=false
echo " "
rp='Would you like to see the instructions?'
dflt=n
. ./myread
case "$ans" in
[yY]*) ;;
*) needman=false;;
esac
fi
if $needman; then
cat <<EOH

```

This installation shell script will examine your system and ask you questions to determine how the <PACKAGENAME> package should be installed. If you get stuck on a question, you may use a ! shell escape to start a subshell or

execute a command. Many of the questions will have default answers in square brackets; typing carriage return will give you the default.

On some of the questions which ask for file or directory names you are allowed to use the ~name construct to specify the login directory belonging to "name", even if you don't have a shell which knows about that. Questions where this is allowed will be marked "(~name ok)".

```
EOH
rp="
dflt='Type carriage return to continue'
. ./myread
cat <<'EOH'
```

The prompter used in this script allows you to use shell variables and backticks in your answers. You may use \$1, \$2, etc... to refer to the words in the default answer, as if the default line was a set of arguments given to a script shell. This means you may also use \$\* to repeat the whole default line, so you do not have to re-type everything to add something to the default.

Every time there is a substitution, you will have to confirm. If there is an error (e.g. an unmatched backtick), the default answer will remain unchanged and you will be prompted again.

If you are in a hurry, you may run 'Configure -d'. This will bypass nearly all the questions and use the computed defaults (or the previous answers if there was already a config.sh file). Type 'Configure -h' for a list of options. You may also start interactively and then answer '& -d' at any prompt to turn on the non-interactive behaviour for the remainder of the execution.

```
EOH
. ./myread
cat <<EOH
```

Much effort has been expended to ensure that this shell script will run on any Unix system. If despite that it blows up on yours, your best bet is to edit Configure and run it again. If you can't run Configure for some reason, you'll have to generate a config.sh file by hand. Whatever problems you have, let me (<MAINTLOC>) know how I blew it.

This installation script affects things in two ways:

- 1) it may do direct variable substitutions on some of the files included in this kit.
- 2) it builds a config.h file for inclusion in

C programs. You may edit  
any of these files as the need arises after running this script.

If you make a mistake on a question, there is no easy way to back up to it currently. The easiest thing to do is to edit config.sh and rerun all the SH files. Configure will offer to let you do this before it runs the SH files.

EOH

?X: In case they played with the prompter...

```
dflt='Type carriage return to continue'
```

```
./myread
```

```
case "$firsttime" in
```

```
true) echo $user >>./config/instruct;;
```

```
esac
```

```
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Instruct.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_shm.U,v 3.0 1993/08/18 12:07:17 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_shm.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:17 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_shm: test d\_shmctl d\_shmget d\_shmat d\_shmdt Setvar Findhdr osname

?MAKE: -pick add \$@ %<

?S:d\_shm:

?S: This variable conditionally defines the HAS\_SHM symbol, which

?S: indicates that the entire shm\*(2) library is present.

?S:.

?C:HAS\_SHM:

?C: This symbol, if defined, indicates that the entire shm\*(2) library is

?C: supported.

?C:.

?H:#\$d\_shm HAS\_SHM /\*\*/

?H:.

?T:h\_shm



```

?LINT:set
d_shm
: see how much of the 'shm*(2)' library is present.
h_shm=true
echo " "
case "$d_shmctl$d_shmget$d_shmat$d_shmdt" in
*"$undef"*) h_shm=false;;
esac
case "$osname" in
freebsd)
  case "`ipcs 2>&1`" in
  "SVID shared memory"*"not configured"*)
echo "Your $osname does not have the shm*(2) configured." >&4
  h_shm=false
val="$undef"
set shmctl d_shmctl
eval $setvar
set shmget d_shmget
eval $setvar
set shmat d_shmat
eval $setvar
set shmdt d_shmdt
eval $setvar
;;
esac
;;
esac
: we could also check for sys/ipc.h ...
if $h_shm && $test `./findhdr sys/shm.h`; then
echo "You have the full shm*(2) library." >&4
val="$define"
else
echo "You don't have the full shm*(2) library." >&4
val="$undef"
fi
set d_shm
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_shm.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_mkdtemp: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mkdtemp:

?S: This variable conditionally defines the HAS\_MKDTEMP symbol, which

?S: indicates to the C program that the mkdtemp() routine is available

?S: to exclusively create a uniquely named temporary directory.

?S:.

?C:HAS\_MKDTEMP :

?C: This symbol, if defined, indicates that the mkdtemp routine is

?C: available to exclusively create a uniquely named temporary directory.

?C:.

?H:#\$d\_mkdtemp HAS\_MKDTEMP /\*\*/

?H:.

?LINT:set d\_mkdtemp

: see if mkdtemp exists

set mkdtemp d\_mkdtemp

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_mkdtemp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysfile.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_sysfile.U,v \$

?RCS: Revision 3.0.1.2 1995/07/25 14:11:36 ram

?RCS: patch56: removed <> characters from comment, per metalint suggestion

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:01:23 ram

?RCS: patch6: added default for i\_sysfile

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:31 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_sysfile: h\_sysfile Inhdr Setvar

?MAKE: -pick add \$@ %<

?S:i\_sysfile:

```

?S: This variable conditionally defines
the I_SYS_FILE symbol, and indicates
?S: whether a C program should include <sys/file.h> to get R_OK and friends.
?S:.
?C:I_SYS_FILE (I_SYSFILE):
?C: This symbol, if defined, indicates to the C program that it should
?C: include <sys/file.h> to get definition of R_OK and friends.
?C:.
?H:#$i_sysfile I_SYS_FILE /**/
?H:.
?T:val
?D:i_sysfile="
?LINT:change h_sysfile
?LINT:set i_sysfile
: see if this is a sys/file.h system
val="
set sys/file.h val
eval $inhdr

: do we need to include sys/file.h ?
case "$val" in
"$define")
echo " "
if $h_sysfile; then
val="$define"
echo "We'll be including <sys/file.h>." >&4
else
val="$undef"
echo "We won't be including <sys/file.h>." >&4
fi
;;
*)
h_sysfile=false
;;
esac
set i_sysfile
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_sysfile.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: prefshell.U 1 2006-08-24 12:32:52Z rmanfredi $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

```

?RCS:

```

```

?RCS: You may redistribute only under the terms of the Artistic Licence,

```

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: prefshell.U,v \$

?RCS: Revision 3.0.1.2 1994/10/29 16:28:13 ram

?RCS: patch36: added SHELL temporary since metalint now sees \${SHELL}

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 16:11:47 ram

?RCS: patch10: non-portable var substitution was used (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:34 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:prefshell: cat package Getfile Oldconfig ksh csh bash

?MAKE: -pick add \$@ %<

?S:prefshell:

?S: This

variable contains the eventual value of the PREFSHELL symbol,

?S: which contains the full name of the preferred user shell on this

?S: system. Usual values are /bin/csh, /bin/ksh, /bin/sh.

?S:.

?C:PREFSHELL:

?C: This symbol contains the full name of the preferred user shell on this

?C: system. Usual values are /bin/csh, /bin/ksh, /bin/sh.

?C:.

?H:#define PREFSHELL "\$prefshell" /\*\*/

?H:.

?T:SHELL

: find out which shell people like to use most

case "\$prefshell" in

)

case "\$ksh \$bash \$csh" in

\*/ksh\*) dflt="\$ksh" ;;

\*/bash\*) dflt="\$bash" ;;

\*/csh\*) dflt="\$csh" ;;

\*) dflt='/bin/sh' ;;

esac

;;

\*) dflt="\$prefshell";;

esac

?X: Some shells (Ultrix) do not understand \${SHELL:-/bin/sh}, sigh!

\$cat <<EOM

Give the full path name of the shell most people like to use on your system.

This will be used by \$package whenever the user wants to get a shell escape (for instance) and is not necessarily the same as the shell you are

currently using ( $\${SHELL-}/bin/sh$ ).

EOM

fn=f/~

rp='Preferred

shell to be used?'

./getfile

prefshell=\$ans

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/prefshell.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_memcpy.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

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?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_memcpy.U,v \$

?RCS: Revision 3.0.1.1 1993/09/13 16:02:58 ram

?RCS: patch10: removed text recommending bcopy over memcpy (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:34 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_memcpy: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_memcpy:

?S: This variable conditionally defines the HAS\_MEMCPY symbol, which

?S: indicates to the C program that the memcpy() routine is available

?S: to copy blocks of

memory.

?S:.

?C:HAS\_MEMCPY (MEMCPY):

?C: This symbol, if defined, indicates that the memcpy routine is available

?C: to copy blocks of memory.

?C:.

?H:#\$d\_memcpy HAS\_MEMCPY /\*\*/

?H:.

?LINT:set d\_memcpy

: see if memcpy exists

set memcpy d\_memcpy

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_memcpy.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_munmap.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_munmap.U,v \$

?RCS: Revision 3.0.1.1 1993/12/15 08:19:22 ram

?RCS: patch15: created

?RCS:

?MAKE:d\_munmap: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_munmap:

?S: This variable conditionally defines HAS\_MUNMAP if munmap() is

?S: available to unmap a region mapped by mmap().

?S:.

?C:HAS\_MUNMAP:

?C: This symbol, if defined, indicates that the munmap system call is

?C: available to unmap a region, usually mapped by mmap().

?C:.

?H:#\$d\_munmap HAS\_MUNMAP /\*\*/

?H:.

?LINT:set

d\_munmap

: see if munmap exists

set munmap d\_munmap

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_munmap.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: groupstyp.e.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: groupstype.U,v \$  
?RCS: Revision 3.0.1.2 1994/10/29 16:18:08 ram  
?RCS: patch36: no longer uses Setvar to set 'groupstype' (ADO)  
?RCS: patch36: typo fix in the word 'argument' (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/06/20 07:00:18 ram  
?RCS: patch30: created by ADO  
?RCS:  
?MAKE:groupstype: gidtype d\_getgrps Myread Oldconfig Findhdr cat d\_setgrps  
?MAKE: -pick add \$@ %<  
?INIT:groupstype="  
?S:groupstype:  
?S: This  
variable defines Groups\_t to be something like gid\_t, int,  
?S: ushort, or whatever type is used for the second argument to  
?S: getgroups() and setgroups(). Usually, this is the same as  
?S: gidtype (gid\_t), but sometimes it isn't.  
?S:.  
?C:Groups\_t (GROUPSTYPE):  
?C: This symbol holds the type used for the second argument to  
?C: getgroups() and setgroups(). Usually, this is the same as  
?C: gidtype (gid\_t) , but sometimes it isn't.  
?C: It can be int, ushort, gid\_t, etc...  
?C: It may be necessary to include <sys/types.h> to get any  
?C: typedef'ed information. This is only required if you have  
?C: getgroups() or setgroups()..  
?C:.  
?H:%<:#if defined(HAS\_GETGROUPS) || defined(HAS\_SETGROUPS)  
?H:%<:#define Groups\_t \$groupstype /\* Type for 2nd arg to [sg]etgroups() \*/  
?H:%<:#endif  
?H:.  
?W:%<:getgroups HAS\_GETGROUPS setgroups HAS\_SETGROUPS  
: Find type of 2nd arg to 'getgroups()' and 'setgroups()'  
echo " "  
case "\$d\_getgrps\$d\_setgrps" in  
\*define\*)  
case  
"\$groupstype" in  
") dflt="\$gidtype" ;;  
\*) dflt="\$groupstype" ;;

esac

\$cat <<EOM

What type of pointer is the second argument to getgroups() and setgroups()?

Usually this is the same as group ids, \$gidtype, but not always.

EOM

rp='What type pointer is the second argument to getgroups() and setgroups()?'

. ./myread

groupstype="\$ans"

::

\*) groupstype="\$gidtype";;

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/groupstype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setrgid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_setrgid.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:14 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_setrgid: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_setrgid:

?S: This variable conditionally defines the HAS\_SETRGID symbol, which

?S: indicates to the C program that the setrgid() routine is available

?S: to change the real gid of the current program.

?S:.

?C:HAS\_SETRGID (SETRGID):

?C: This symbol, if defined, indicates that the setrgid  
routine is available

?C: to change the real gid of the current program.

?C:.

?H:#\$d\_setrgid HAS\_SETRGID /\*\*/

?H:.

?LINT:set d\_setrgid

: see if setrgid exists



```
set setrgid d_setrgid
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_setrgid.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: privlib.U,v 3.1 1999/07/08 18:32:29 doughera Exp doughera $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: This file is included with or a derivative work of a file included
```

```
?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.
```

```
?RCS: In accordance with clause 7 of dist's modified Artistic License:
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?RCS: $Log: privlib.U,v $
```

```
?RCS: Revision 3.1 1999/07/08 18:32:29 doughera
```

```
?RCS: Updated for perl5.005_5x
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.4 1995/09/25 09:17:09 ram
```

```
?RCS: patch59: unit is now forced to the top of Configure, if possible
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.3 1995/01/30 14:44:23 ram
```

```
?RCS: patch49: can now handle installation prefix changes (from WED)
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1994/08/29 16:31:52 ram
```

```
?RCS:
```

```
patch32: now uses installation prefix
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1993/09/13 16:12:34 ram
```

```
?RCS: patch10: added support for /local/lib (WED)
```

```
?RCS: patch10: prompt phrasing made more explicit (WED)
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:09:35 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:privlib privlibexp installprivlib: package cat Getfile Oldconfig \
```

```
Setprefixvar Prefixit version installstyle binexp
```

```
?MAKE: -pick add $@ %<
```

```
?Y:TOP
```

```
?D:privlib="
```

```
?S:privlib:
```

```
?S: This variable contains the eventual value of the PRIVLIB symbol,
```

```
?S: which is the name of the private library for this package. It may
```

?S: have a ~ on the front. It is up to the makefile to eventually create  
 ?S: this directory while performing installation (with ~ substitution).  
 ?S:.  
 ?D:privlibexp="  
 ?S:privlibexp:  
 ?S: This variable is the ~name expanded version of privlib, so that you  
 ?S: may use it directly in Makefiles or shell scripts.  
 ?S:.  
 ?D:installprivlib="  
 ?S:installprivlib:  
 ?S: This variable  
 is really the same as privlibexp but may differ on  
 ?S: those systems using AFS. For extra portability, only this variable  
 ?S: should be used in makefiles.  
 ?S:.  
 ?C:PRIVLIB:  
 ?C: This symbol contains the name of the private library for this package.  
 ?C: The library is private in the sense that it needn't be in anyone's  
 ?C: execution path, but it should be accessible by the world. The program  
 ?C: should be prepared to do ~ expansion.  
 ?C:.  
 ?C:PRIVLIB\_EXP:  
 ?C: This symbol contains the ~name expanded version of PRIVLIB, to be used  
 ?C: in programs that are not prepared to deal with ~ expansion at run-time.  
 ?C:.  
 ?H:#define PRIVLIB "\$privlib" /\*\*/  
 ?H:#define PRIVLIB\_EXP "\$privlibexp" /\*\*/  
 ?H:.  
 ?LINT:change prefixvar  
 ?LINT:set installprivlib  
 ?LINT:set privlib  
 ?LINT:set privlibexp  
 : determine where private library files go  
 : Usual default is /usr/local/lib/perl5/\$version.  
 : Also allow things like /opt/perl/lib/\$version, since  
 : /opt/perl/lib/perl5... would be redundant.  
 : The default "style"  
 setting is made in installstyle.U  
 case "\$installstyle" in  
 \*lib/perl5\*) set dflt privlib lib/\$package/\$version ;;  
 \*) set dflt privlib lib/\$version ;;  
 esac  
 eval \$prefixit  
 \$cat <<EOM

There are some auxiliary files for \$package that need to be put into a  
 private library directory that is accessible by everyone.

EOM  
?X: Force dependency on bin.U  
fn=\$binexp  
fn=d~+  
rp='Pathname where the private library files will reside'  
./getfile  
prefixvar=privlib  
./setprefixvar

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/privlib.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_atoll: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_atoll:

?S: This variable conditionally defines the HAS\_ATOLL symbol, which

?S: indicates to the C program that the atoll() routine is available.

?S:.

?C:HAS\_ATOLL:

?C: This symbol, if defined, indicates that the atoll routine is

?C: available to convert strings into long longs.

?C:.

?H:#\$d\_atoll HAS\_ATOLL /\*\*/

?H:.

?LINT:set d\_atoll

: see if atoll exists

set atoll d\_atoll

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/atoll.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fpclass: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fpclass:

?S: This variable conditionally defines the HAS\_FPCLASS symbol, which

?S: indicates to the C program that the fpclass() routine is available.

?S:.

?C:HAS\_FPCLASS:

?C: This symbol, if defined, indicates that the fpclass routine is

?C: available to classify doubles. Available for example in Solaris/SVR4.

?C: The returned values are defined in <ieeefp.h> and are:

?C:

?C: FP\_SNAN signaling NaN

?C: FP\_QNAN quiet NaN

?C: FP\_NINF negative infinity

?C: FP\_PINF positive infinity

?C: FP\_NDENORM negative denormalized non-zero

?C: FP\_PDENORM positive denormalized non-zero

?C: FP\_NZERO negative zero

?C: FP\_PZERO positive zero

?C: FP\_NNORM negative normalized

non-zero

?C: FP\_PNORM positive normalized non-zero

?C:.

?H:#\$d\_fpclass HAS\_FPCLASS /\*\*/

?H:.

?LINT:set d\_fpclass

: see if fpclass exists

set fpclass d\_fpclass

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_fpclass.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_whoami.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_whoami.U,v \$

?RCS: Revision 3.0.1.1 1993/08/25 14:02:21 ram  
?RCS: patch6: added default for i\_whoami  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:08:50 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:i\_whoami: Inhdr  
?MAKE: -pick add \$@ %<  
?S:i\_whoami (d\_whoami):  
?S: This variable conditionally defines the I\_WHOAMI symbol, which  
?S: indicates to the C program that it should include <whoami.h>.  
?S:.  
?C:I\_WHOAMI (WHOAMI):  
?C: This symbol,  
if defined, indicates that the program may include  
?C: <whoami.h>.  
?C:.  
?H:#\$i\_whoami I\_WHOAMI /\*\*/  
?H:.  
?D:i\_whoami="  
?LINT:set i\_whoami  
: see if there is a whoami.h file  
set whoami.h i\_whoami  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_whoami.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
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?RCS:  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: doublesize.U,v \$  
?RCS: Revision 3.0.1.1 1994/10/29 16:17:06 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:08:06 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:doublesize: cat rm\_try Myread +cc +ccflags

```

?MAKE: -pick add $@ %<
?S:doublesize:
?S: This variable contains the value of the DOUBLESIZE symbol, which
?S: indicates to the C program how many bytes there are in a double.
?S:.
?C:DOUBLESIZE:
?C: This symbol contains the
size of a double, so that the C preprocessor
?C: can make decisions based on it.
?C:.
?H:#define DOUBLESIZE $doublesize /**/
?H:.
?F:!try
: check for length of double
echo " "
case "$doublesize" in
")
echo "Checking to see how big your double precision numbers are..." >&4
$cat >try.c <<'EOCP'
#include <stdio.h>
int main()
{
printf("%d\n", sizeof(double));
}
EOCP
if $cc $ccflags -o try try.c >/dev/null 2>&1 ; then
dflt=`./try`
else
dflt='8'
echo "(I can't seem to compile the test program. Guessing...)"
fi
;;
*)
dflt="$doublesize"
;;
esac
rp="What is the size of a double precision number (in bytes)?"
./myread
doublesize="$ans"
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/doublesize.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

```

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?RCS:
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?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_strlcpy: Inlibc Hasproto d_gnulibc
?MAKE: -pick add $@ %<
?S:d_strlcpy:
?S: This variable conditionally defines the HAS_STRLCPY symbol, which
?S: indicates to the C program that the strlcpy () routine is available.
?S:.
?C:HAS_STRLCPY:
?C: This symbol, if defined, indicates that the strlcpy () routine is
?C: available to do string copying.
?C:.
?H:#$d_strlcpy HAS_STRLCPY /**/
?H:.
?T:d_strlcpy_proto xx1 xx2 xx3 xx4
?LINT:set d_strlcpy
: see if strlcpy exists
: We need both a prototype in string.h and the symbol in libc.
echo " "
d_strlcpy_proto="
xx1="#$d_gnulibc HAS_GNULIBC"
xx2='#if defined(HAS_GNULIBC) && !defined(_GNU_SOURCE)'
xx3='# define _GNU_SOURCE'
xx4='#endif'
set d_strlcpy_proto strlcpy
literal "$xx1" literal "$xx2" literal "$xx3" literal "$xx4" define string.h
eval $hasproto
case "$d_strlcpy_proto" in
  define) # see if strlcpy exists
set strlcpy d_strlcpy
eval $inlibc
;;
  *) val=$undef
set d_strlcpy
eval $setvar
;;
esac

Found in path(s):
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/perl/d_strlcpy.U
No license file was found, but licenses were detected in source scan.

?RCS: $Id: i_sysstatfs.U,v $
?RCS:

```

?RCS: Copyright (c) 1999 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:i\_sysstatfs: Inhdr Hasfield  
?MAKE: -pick add \$@ %<  
?S:i\_sysstatfs:  
?S: This variable conditionally defines the I\_SYSSTATFS symbol,  
?S: and indicates whether a C program should include <sys/statfs.h>.  
?S:.  
?C:I\_SYS\_STATFS:  
?C: This symbol, if defined, indicates that <sys/statfs.h> exists.  
?C:.  
?H:#\$i\_sysstatfs I\_SYS\_STATFS /\*\*/  
?H:.  
?LINT:set i\_sysstatfs  
: see if this is a sys/statfs.h system  
set sys/statfs.h i\_sysstatfs  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_sysstatfs.U

No license file was found, but licenses were detected in source scan.

?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.

?RCS:  
?MAKE:i\_fenv: Inhdr  
?MAKE: -pick add \$@ %<  
?S:i\_fenv:  
?S: This variable conditionally defines the I\_FENV symbol, which  
?S: indicates to the C program that <fenv.h> exists and should  
?S: be included.  
?S:.  
?C:I\_FENV:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <fenv.h> to get the floating point environment definitions.  
?C:.  
?H:#\$i\_fenv I\_FENV /\*\*/  
?H:.  
?LINT:set i\_fenv  
: see if this is a fenv.h system  
set fenv.h i\_fenv  
eval \$inhdr

Found in path(s):



\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_fenv.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_frexp! Inlibc

?MAKE: -pick add \$@ %<

?S:d\_frexp!

?S: This variable conditionally defines the HAS\_FREXP symbol, which

?S: indicates to the C program that the frexp() routine is available.

?S:.

?C:HAS\_FREXP!

?C: This symbol, if defined, indicates that the frexp routine is

?C: available to break a long double floating-point number into

?C: a normalized fraction and an integral power of 2.

?C:.

?H:#\$d\_frexp HAS\_FREXP /\*\*/

?H:.

?LINT:set d\_frexp

: see if frexp exists

set frexp d\_frexp

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_frexp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strstr.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_strstr.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:37 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_strstr: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strstr:  
?S: This variable conditionally defines HAS\_STRSTR if strstr() is  
?S: available to find substrings.  
?S:.  
?C:HAS\_STRSTR (STRSTR):  
?C: This symbol, if defined, indicates that the strstr routine is  
?C: available to find substrings.  
?C:.  
?H:#\$d\_strstr HAS\_STRSTR /\*\*/  
?H:.  
?LINT:set d\_strstr  
:  
see if strstr exists  
set strstr d\_strstr  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_strstr.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_wcstombs.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_wcstombs.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:08:03 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_wcstombs: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_wcstombs:  
?S: This variable conditionally defines the HAS\_WCSTOMBS symbol, which  
?S: indicates to the C program that the wcstombs() routine is available  
?S: to convert wide character strings to multibyte strings.  
?S:.  
?C:HAS\_WCSTOMBS:  
?C: This symbol, if defined, indicates that the wcstombs  
routine is  
?C: available to convert wide character strings to multibyte strings.

?C:.

?H:#\$d\_wcstombs HAS\_WCSTOMBS /\*\*/

?H:.

?LINT:set d\_wcstombs

: see if wcstombs exists

set wcstombs d\_wcstombs

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_wcstombs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_pwd.U,v \$

?RCS: Revision 3.0.1.2 1995/07/25 14:10:57 ram

?RCS: patch56: use setvar so hint file values can override our guesses (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 15:03:27 ram

?RCS: patch23: had forgotten cppminus in cppstd in test (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:25 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit checks whether there is a pwd system or not

?X:

?MAKE:i\_pwd d\_pwquota d\_pwage d\_pwchange d\_pwclass d\_pwexpire d\_pwcomment:

\

contains rm cppstd in cppflags cppminus Inhdr Findhdr Setvar

?MAKE: -pick add \$@ %<

?S:i\_pwd:

?S: This variable conditionally defines I\_PWD, which indicates

?S: to the C program that it should include <pwd.h>.

?S:.

?S:d\_pwquota:

?S: This variable conditionally defines PWQUOTA, which indicates

?S: that struct passwd contains pw\_quota.

?S:.

?S:d\_pwage:

?S: This variable conditionally defines PWAGE, which indicates

?S: that struct passwd contains pw\_age.

?S:.

?S:d\_pwchange:

?S: This variable conditionally defines PWCHANGE, which indicates

?S: that struct passwd contains pw\_change.

?S:.

?S:d\_pwclass:

?S: This variable conditionally defines PWCLASS, which indicates

?S: that struct passwd contains pw\_class.

?S:.

?S:d\_pwexpire:

?S: This variable conditionally defines PWEXPIRE, which indicates

?S: that struct passwd contains pw\_expire.

?S:.

?S:d\_pwcomment:

?S: This variable conditionally defines PWCOMMENT, which indicates

?S: that struct passwd contains pw\_comment.

?S:.

?C:I\_PWD:

?C: This symbol,

if defined, indicates to the C program that it should

?C: include <pwd.h>.

?C:.

?C:PWQUOTA:

?C: This symbol, if defined, indicates to the C program that struct passwd

?C: contains pw\_quota.

?C:.

?C:PWAGE:

?C: This symbol, if defined, indicates to the C program that struct passwd

?C: contains pw\_age.

?C:.

?C:PWCHANGE:

?C: This symbol, if defined, indicates to the C program that struct passwd

?C: contains pw\_change.

?C:.

?C:PWCLASS:

?C: This symbol, if defined, indicates to the C program that struct passwd

?C: contains pw\_class.

?C:.

?C:PWEXPIRE:

?C: This symbol, if defined, indicates to the C program that struct passwd

?C: contains pw\_expire.

?C:.

?C:PWCOMMENT:

?C: This symbol, if defined, indicates to the C program that struct passwd

?C: contains pw\_comment.

```

?C:.
?H:#$i_pwd I_PWD /**/
?H:#$d_pwquota PWQUOTA /**/
?H:#$d_pwage PWAGE /**/
?H:#$d_pwchange PWCHANGE /**/
?H:#$d_pwclass PWCLASS /**/
?H:#$d_pwexpire PWEXPIRE /**/
?H:#$d_pwcomment PWCOMMENT /**/
?H:.
?LINT: set i_pwd d_pwquota
d_pwage d_pwchange d_pwclass d_pwexpire d_pwcomment
?T:xxx
: see if this is a pwd.h system
set pwd.h i_pwd
eval $inhdr

case "$i_pwd" in
$define)
xxx=`./findhdr pwd.h`
Scppstdin Scppflags Scppminus < $xxx >$$h

if $contains 'pw_quota' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwquota
eval $setvar

if $contains 'pw_age' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwage
eval $setvar

if $contains 'pw_change' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwchange
eval $setvar

if $contains 'pw_class' $$h >/dev/null 2>&1; then
val="$define"
else

```

```

val="$undef"
fi
set d_pwclass
eval $setvar

if $contains 'pw_expire' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwexpire
eval $setvar

if $contains 'pw_comment' $$h >/dev/null 2>&1; then
val="$define"
else
val="$undef"
fi
set d_pwcomment
eval $setvar

$rm -f $$h
;;
*)
val="$undef";
set
d_pwquota; eval $setvar
set d_pwage; eval $setvar
set d_pwchange; eval $setvar
set d_pwclass; eval $setvar
set d_pwexpire; eval $setvar
set d_pwcomment; eval $setvar
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_pwd.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getgrps.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_getgrps.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:08 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_getgrps: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_getgrps:  
?S: This variable conditionally defines the HAS\_GETGROUPS symbol, which  
?S: indicates to the C program that the getgroups() routine is available  
?S: to get the list of process groups.  
?S:.  
?C:HAS\_GETGROUPS (GETGROUPS):  
?C: This symbol, if defined, indicates that the getgroups()  
routine is  
?C: available to get the list of process groups. If unavailable, multiple  
?C: groups are probably not supported.  
?C:.  
?H:#\$d\_getgrps HAS\_GETGROUPS /\*\*/  
?H:.  
?LINT:set d\_getgrps  
: see if getgroups exists  
set getgroups d\_getgrps  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_getgrps.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_ftrncate.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_ftrncate.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:07 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_ftrncate: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_ftrncate (d\_ftrncate):

?S: This variable conditionally defines the HAS\_FTRUNCATE symbol, which

?S: indicates to the C program that the ftruncate() subroutine exists.

?S:.

?C:HAS\_FTRUNCATE:

?C: This symbol, if defined, indicates that the ftruncate() subroutine

?C: exists.

?C:.

?H:#\$d\_ftrncate

HAS\_FTRUNCATE /\*\*/

?H:.

?LINT:set d\_ftrncate

: see if ftruncate exists

set ftruncate d\_ftrncate

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_ftrncate.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_voidsig.U,v 3.0.1.3 1995/05/12 12:12:46 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_voidsig.U,v \$

?RCS: Revision 3.0.1.3 1995/05/12 12:12:46 ram

?RCS: patch54: made cppflags dependency optional

?RCS:

?RCS: Revision 3.0.1.2 1994/08/29 16:20:35 ram

?RCS: patch32: now sets signal\_t only once d\_voidsig is known (WED)

?RCS:

?RCS: Revision 3.0.1.1 1994/06/20 06:59:54 ram

?RCS: patch30: now properly sets signal\_t when re-using previous value

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:56 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_voidsig

signal\_t: rm contains cppstdin cppminus +cppflags test Myread \

Oldconfig Setvar Findhdr

?MAKE: -pick add \$@ %<

?S:d\_voidsig:



?S: This variable conditionally defines VOIDSIG if this system  
 ?S: declares "void (\*signal(...))()" in signal.h. The old way was to  
 ?S: declare it as "int (\*signal(...))()".  
 ?S:.  
 ?S:signal\_t:  
 ?S: This variable holds the type of the signal handler (void or int).  
 ?S:.  
 ?C:VOIDSIG:  
 ?C: This symbol is defined if this system declares "void (\*signal(...))()" in  
 ?C: signal.h. The old way was to declare it as "int (\*signal(...))()". It  
 ?C: is up to the package author to declare things correctly based on the  
 ?C: symbol.  
 ?C:.  
 ?C:Signal\_t (SIGNAL\_T):  
 ?C: This symbol's value is either "void" or "int", corresponding to the  
 ?C: appropriate return type of a signal handler. Thus, you can declare  
 ?C: a signal handler using "Signal\_t (\*handler())", and define the  
 ?C: handler using "Signal\_t handler(sig)".  
 ?C:.  
 ?H:#\$d\_voidsig VOIDSIG /\*\*/  
 ?H:#define  
 Signal\_t \$signal\_t /\* Signal handler's return type \*/  
 ?H:.  
 ?T:xxx  
 ?LINT:set d\_voidsig  
 : see if signal is declared as pointer to function returning int or void  
 echo " "  
 xxx=`./findhdr signal.h`  
 \$test "\$xxx" && \$cppstdin \$cppminus \$cppflags < \$xxx >\$.tmp 2>/dev/null  
 if \$contains 'int.\*\\*[ ]\*signal' \$.tmp >/dev/null 2>&1 ; then  
 echo "You have int (\*signal())() instead of void." >&4  
 val="\$undef"  
 elif \$contains 'void.\*\\*[ ]\*signal' \$.tmp >/dev/null 2>&1 ; then  
 echo "You have void (\*signal())() ." >&4  
 val="\$define"  
 elif \$contains 'extern[ ]\*[(\[\*]signal' \$.tmp >/dev/null 2>&1 ; then  
 echo "You have int (\*signal())() instead of void." >&4  
 val="\$undef"  
 ?X: This next test is kind of sloppy, but it catches Linux  
 ?X: which has a  
 ?X: typedef void (\*\_\_sig\_handler\_t) (int) ;  
 ?X: A better fix would be to compile a C program with the proper  
 ?X: prototype, but since nearly everyone uses void, we'll just go with  
 ?X: this.  
 elif \$contains 'void.\*\\*.\*sig' \$.tmp >/dev/null 2>&1 ; then  
 echo "You  
 have void (\*signal())() ." >&4  
 val="\$define"

```

else
case "$d_voidsig" in
")
echo "I can't determine whether signal handler returns void or int..." >&4
dflt=void
rp="What type does your signal handler return?"
./myread
case "$ans" in
v*) val="$define";;
*) val="$undef";;
esac;;
"$define")
echo "As you already told me, signal handler returns void." >&4
val="$define"
;;
*) echo "As you already told me, signal handler returns int." >&4
val="$undef"
;;
esac
fi
set d_voidsig
eval $setvar
case "$d_voidsig" in
"$define") signal_t="void";;
*) signal_t="int";;
esac
$rm -f $$tmp

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_voidsig.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_open3.U,v 3.0.1.2 1997/02/28 15:37:12 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_open3.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 15:37:12 ram
?RCS: patch61: added ?F: metalint hint
?RCS:
?RCS: Revision 3.0.1.1 1995/07/25 13:58:26 ram

```

```

?RCS: patch56: added knowledge of the O_NONBLOCK symbol
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:44 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_open3: Compile test cat h_fcntl h_sysfile rm_try Setvar Findhdr run i_stdlib
?MAKE: -pick add $@ %<
?X: It would be easy to separate the
    h_O_stuff from this.
?X: Is there a reason to do so? -- HMS
?S:d_open3:
?S: This variable conditionally defines the HAS_OPEN3 manifest constant,
?S: which indicates to the C program that the 3 argument version of
?S: the open(2) function is available.
?S:.
?C:HAS_OPEN3 (OPEN3):
?C: This manifest constant lets the C program know that the three
?C: argument form of open(2) is available.
?C:.
?H:#$d_open3 HAS_OPEN3 /**/
?H:.
?W:%<:O_RDONLY O_WRONLY O_RDWR O_NDELAY O_APPEND O_SYNC O_CREAT O_TRUNC
?W:%<:O_EXCL O_NONBLOCK
?F:!try
?LINT:set d_open3
?LINT:change h_fcntl h_sysfile
: Locate the flags for 'open()'
echo " "
$cat >try.c <<EOCP
#include <sys/types.h>
#ifdef I_FCNTL
#include <fcntl.h>
#endif
#ifdef I_SYS_FILE
#include <sys/file.h>
#endif
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main() {
    if(O_RDONLY);
#ifdef O_TRUNC
    exit(0);
#else
    exit(1);
#endif
}

```

```

EOCP
: check sys/file.h first to get FREAD on Sun
if $test `./findhdr sys/file.h` && \
  set try -DI_SYS_FILE
&& eval $compile; then
  h_sysfile=true;
  echo "<sys/file.h> defines the O_* constants..." >&4
  if $run ./try; then
    echo "and you have the 3 argument form of open()." >&4
    val="$define"
  else
    echo "but not the 3 argument form of open(). Oh, well." >&4
    val="$undef"
  fi
elif $test `./findhdr fcntl.h` && \
  set try -DI_FCNTL && eval $compile; then
  h_fcntl=true;
  echo "<fcntl.h> defines the O_* constants..." >&4
  if $run ./try; then
    echo "and you have the 3 argument form of open()." >&4
    val="$define"
  else
    echo "but not the 3 argument form of open(). Oh, well." >&4
    val="$undef"
  fi
else
  val="$undef"
  echo "I can't find the O_* constant definitions! You got problems." >&4
fi
set d_open3
eval $setvar
$rm_try

```

Found in path(s):

```

*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_open3.U

```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fmax: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fmax:

?S: This variable conditionally defines the HAS\_FMAX symbol, which

?S: indicates to the C program that the fmax() routine is available.

?S:.

?C:HAS\_FMAX:

?C: This symbol, if defined, indicates that the fmax routine is

?C: available to do the maximum function.

?C:.

?H:#\$d\_fmax HAS\_FMAX /\*\*/

?H:.

?LINT:set d\_fmax

: see if fmax exists

set fmax d\_fmax

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_fmax.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: mallocsrc.U,v 3.0.1.2 1997/02/28 16:10:26 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: mallocsrc.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 16:10:26 ram

?RCS: patch61: added support for Free\_t, the type of free()

?RCS: patch61: replaced .o with \$\_o all over the place

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 15:10:46 ram

?RCS: patch23: added support for MYMALLOC, mainly for perl5 (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:12 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:mallocsrc mallocobj usemallocwrap usemymalloc

malloctype d\_mymalloc \

freetype: Myread Oldconfig package Guess Setvar Findhdr \

sed libs \_o ptrsize useithreads

?MAKE: -pick add \$@ %<

?X: Put near top so that other tests don't erroneously include

?X: -lmalloc. --AD 22 June 1998

?Y:TOP

?S:usemymalloc:

?S: This variable contains y if the malloc that comes with this package

?S: is desired over the system's version of malloc. People often include

?S: special versions of malloc for efficiency, but such versions are often

?S: less portable. See also mallocsrc and mallocobj.

?S: If this is 'y', then -lmalloc is removed from \$libs.

?S:.

?S:usemallocwrap:

?S: This variable contains y if we are wrapping malloc to prevent

?S: integer overflow during size calculations.

?S:.

?S:mallocsrc:

?S: This variable contains the name of the malloc.c that comes with

?S: the package, if that malloc.c is preferred over the system malloc.

?S: Otherwise the value is null. This variable is intended for generating

?S: Makefiles.

?S:.

?S:d\_mymalloc:

?S: This

variable conditionally defines MYMALLOC in case other parts

?S: of the source want to take special action if MYMALLOC is used.

?S: This may include different sorts of profiling or error detection.

?S:.

?S:mallocobj:

?S: This variable contains the name of the malloc.o that this package

?S: generates, if that malloc.o is preferred over the system malloc.

?S: Otherwise the value is null. This variable is intended for generating

?S: Makefiles. See mallocsrc.

?S:.

?S:freetype:

?S: This variable contains the return type of free(). It is usually

?S: void, but occasionally int.

?S:.

?S:malloctype:

?S: This variable contains the kind of ptr returned by malloc and realloc.

?S:.

?C:Free\_t:

?C: This variable contains the return type of free(). It is usually

?C: void, but occasionally int.

?C:.

?C:Malloc\_t (MALLOC\_PTRTYPE):

?C: This symbol is the type of pointer returned by malloc and realloc.

?C:.

?H:#define Malloc\_t \$malloctype /\*\*/

?H:#define Free\_t \$freetype /\*\*/

?H:.

?C:PERL\_MALLOC\_WRAP:

?C: This

symbol, if defined, indicates that we'd like malloc wrap checks.

?C:.

?H:\$usemallocwrap PERL\_MALLOC\_WRAP /\*\*/

?H:.

?C:MYMALLOC:

?C: This symbol, if defined, indicates that we're using our own malloc.

?C:.

?H:#\$d\_mymalloc MYMALLOC /\*\*/

?H:.

?LINT:extern usedevel

?LINT:change libs

?X: Cannot test for mallocsrc; it is the unit's name and there is a bug in

?X: the interpreter which defines all the names, even though they are not used.

@if mallocobj

: determine whether to use malloc wrapping

echo " "

case "\$usemallocwrap" in

[yY]\*|true|\$define) dflt='y' ;;

[nN]\*|false|\$undef) dflt='n' ;;

\*) case "\$usedevel" in

[yY]\*|true|\$define) dflt='y' ;;

\*) dflt='n' ;;

esac

::

esac

rp="Do you wish to wrap malloc calls to protect against potential overflows?"

./myread

usemallocwrap="\$ans"

case "\$ans" in

y\*|true)

usemallocwrap="\$define" ;;

\*)

usemallocwrap="\$undef" ;;

esac

: determine which malloc to compile in

echo " "

case "\$usemymalloc" in

[yY]\*|true|\$define) dflt='y' ;;

[nN]\*|false|\$undef) dflt='n'

::

\*) case "\$ptrsize" in

4) dflt='y' ;;

\*) dflt='n' ;;

esac

if test "\$useithreads" = "\$define"; then dflt='n'; fi

::

esac

rp="Do you wish to attempt to use the malloc that comes with \$package?"

./myread

usemymalloc="\$ans"

case "\$ans" in

```

y*|true)
usemymalloc='y'
malloclsrc='malloc.c'
malloclobj="malloc$_o"
d_mymalloc="$define"
?X: Maybe libs.U should be dependent on malloclsrc.U, but then
?X: most packages that use dist probably don't supply their own
?X: malloc, so this is probably an o.k. compromise
case "$libs" in
*-lmalloc*)
: Remove malloc from list of libraries to use
echo "Removing unneeded -lmalloc from library list" >&4
set `echo X $libs | $sed -e 's/-lmalloc / /' -e 's/-lmalloc$//'^
shift
libs="$*"
echo "libs = $libs" >&4
;;
esac
;;
*)
usemymalloc='n'
malloclsrc=""
malloclobj=""
d_mymalloc="$undef"
;;
esac

@end
@if MALLOCPTRTYPE || Malloc_t || Free_t
: compute the return types of malloc and free
echo " "
@if MALLOCPTRTYPE
|| Malloc_t
case "$mallocltype" in
")
mallocltype='void *'
;;
esac
echo "Your system wants malloc to return '$mallocltype', it would seem." >&4
@end

@if Free_t
case "$freeltype" in
")
freeltype='void'
;;
esac
echo "Your system uses $freeltype free(), it would seem." >&4

```



@end

@end

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/mallocalsrc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1996, Andy Dougherty

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: man3dir.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:10:34 ram

?RCS: patch61: created

?RCS:

?X:

?X: This was originally specific to perl5. Since perl5 has man pages that

?X: go in both man1/ and man3/ directories, we need both man1dir

?X: and man3dir. This unit is basically dist's mansrc.U with

?X: man3 used instead of man everywhere.

?X: I then added various tests because perl5 has \*lots\* of man3

?X: pages with long file names. -- ADO

?X:

?MAKE:man3dir

man3direxp man3ext installman3dir: afs cat nroff Loc Oldconfig \

sed man1dir spackage package Getfile prefix Prefixit Prefixup \

d\_flexfnam privlib Myread

?MAKE: -pick add \$@ %<

?Y:TOP

?S:man3dir:

?S: This variable contains the name of the directory in which manual

?S: source pages are to be put. It is the responsibility of the

?S: Makefile.SH to get the value of this into the proper command.

?S: You must be prepared to do the ~name expansion yourself.

?S:.

?S:man3direxp:

?S: This variable is the same as the man3dir variable, but is filename

?S: expanded at configuration time, for convenient use in makefiles.

?S:.

?S:installman3dir:

?S: This variable is really the same as man3direxp, unless you are using  
?S: AFS in which case it points to the read/write location whereas  
?S: man3direxp only points to the read-only access location. For extra  
?S: portability, you should only use this variable within your makefiles.

?S:.

?S:man3ext:

?S: This variable contains the extension that the manual  
page should

?S: have: one of 'n', 'l', or '3'. The Makefile must supply the 'l'.

?S: See man3dir.

?S:.

: determine where library module manual pages go

set man3dir man3dir none

eval \$prefixit

\$cat <<EOM

\$spackage has manual pages for many of the library modules.

EOM

case "\$nroff" in

nroff)

\$cat <<'EOM'

However, you don't have nroff, so they're probably useless to you.

EOM

case "\$man3dir" in

") man3dir="none";;

esac;;

esac

case "\$d\_flexfnam" in

undef)

\$cat <<'EOM'

However, your system can't handle the long file names like File::Basename.3.

EOM

case "\$man3dir" in

") man3dir="none";;

esac;;

esac

echo "If you don't want the manual sources installed, answer 'none'."

?X: We dont use /usr/local/man/man3 because some man programs will

?X: only show the /usr/local/man/man3 contents, and not the system ones,

?X: thus man less will show the perl module less.pm, but not the system

?X: less command. We might also conflict with TCL man pages.

?X: However, something like /opt/perl/man/man3

is fine.

case "\$man3dir" in

") case "\$prefix" in

```

*$package*) dflt=`echo $man1dir |
  $sed -e 's/man1/man3/g' -e 's/man\.1/man\.3/g'` ;;
*) dflt="$privlib/man/man3" ;;
esac
;;
') dflt=none;;
*) dflt="$man3dir" ;;
esac
echo " "

```

```

fn=dn+~
rp="Where do the $package library man pages (source) go?"
./getfile
if test "X$man3direxp" != "X$ansexp"; then
  installman3dir="
fi

```

```

man3dir="$ans"
man3direxp="$ansexp"
case "$man3dir" in
  ") man3dir=' '
  installman3dir="";;
esac
if $afs; then
  $cat <<EOM

```

Since you are running AFS, I need to distinguish the directory in which manual pages reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```

EOM
case "$installman3dir" in
  ") dflt=`echo $man3direxp | sed 's#^/afs/#/afs/#'` ;;
  *) dflt="$installman3dir";;
esac
fn=de~
rp='Where will man pages be installed?'
./getfile
installman3dir="$ans"
else
  installman3dir="$man3direxp"
fi

```

: What suffix  
to use on installed man pages

```

case "$man3dir" in
  ')

```

```

man3ext='0'
;;
*)
rp="What suffix should be used for the $package library man pages?"
case "$man3ext" in
") case "$man3dir" in
*3) dflt=3 ;;
*3p) dflt=3p ;;
*3pm) dflt=3pm ;;
*1) dflt=1;;
*n) dflt=n;;
*o) dflt=o;;
*p) dflt=p;;
*C) dflt=C;;
*L) dflt=L;;
*L3) dflt=L3;;
*) dflt=3;;
esac
;;
*) dflt="$man3ext";;
esac
./myread
man3ext="$ans"
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/man3dir.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysvfs.U,v \$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_sysvfs: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_sysvfs:

?S: This variable conditionally defines the I\_SYSVFS symbol,

?S: and indicates whether a C program should include <sys/vfs.h>.

?S:.

?C:I\_SYS\_VFS:

?C: This symbol, if defined, indicates that <sys/vfs.h> exists and

?C: should be included.

?C:.

?H:#\$i\_sysvfs I\_SYS\_VFS /\*\*/

?H:.

?LINT:set i\_sysvfs

: see if this is a sys/vfs.h system

set sys/vfs.h i\_sysvfs

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_sysvfs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_asctime\_r.U,v ORCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

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?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_asctime\_r asctime\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_time i\_systime extern\_C

?MAKE: -pick add \$@ %<

?S:d\_asctime\_r:

?S: This variable conditionally defines the HAS\_ASCTIME\_R symbol,

?S: which indicates to the C program that the asctime\_r()

?S: routine is available.

?S:.

?S:asctime\_r\_proto:

?S: This variable encodes the prototype of asctime\_r.

?S: It is zero if d\_asctime\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_asctime\_r

?S: is defined.

?S:.

?C:HAS\_ASCTIME\_R:

?C: This symbol, if defined, indicates that the asctime\_r routine

?C: is available to asctime

re-entrantly.

?C:.

?C:ASCTIME\_R\_PROTO:

?C: This symbol encodes the prototype of asctime\_r.

?C: It is zero if d\_asctime\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_asctime\_r

?C: is defined.

?C:.

?H:#\$d\_asctime\_r HAS\_ASCTIME\_R /\*\*/

?H:#define ASCTIME\_R\_PROTO \$asctime\_r\_proto /\*\*/

?H:.

```

?T:try hdrs d_asctime_r_proto
: see if asctime_r exists
set asctime_r d_asctime_r
eval $inlibc
case "$d_asctime_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_time time.h $i_systime sys/time.h"
case "$d_asctime_r_proto:$usethreads" in
":define") d_asctime_r_proto=define
set d_asctime_r_proto asctime_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_asctime_r_proto" in
define)
case "$asctime_r_proto" in
"|0) try='char* asctime_r(const struct tm*, char*);'
./protochk "$extern_C $try" $hdrs && asctime_r_proto=B_SB ;;
esac
case "$asctime_r_proto" in
"|0) try='char* asctime_r(const struct tm*, char*, int);'
./protochk "$extern_C $try" $hdrs
&& asctime_r_proto=B_SBI ;;
esac
case "$asctime_r_proto" in
"|0) try='int asctime_r(const struct tm*, char*);'
./protochk "$extern_C $try" $hdrs && asctime_r_proto=I_SB ;;
esac
case "$asctime_r_proto" in
"|0) try='int asctime_r(const struct tm*, char*, int);'
./protochk "$extern_C $try" $hdrs && asctime_r_proto=I_SBI ;;
esac
case "$asctime_r_proto" in
"|0) d_asctime_r=undef
asctime_r_proto=0
echo "Disabling asctime_r, cannot determine prototype." >&4 ;;
* ) case "$asctime_r_proto" in
REENTRANT_PROTO*) ;;
*) asctime_r_proto="REENTRANT_PROTO_$asctime_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "asctime_r has no prototype, not using it." >&4 ;;
esac
d_asctime_r=undef
asctime_r_proto=0

```

```
;;
esac
;;
*) asctime_r_proto=0
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_asctime_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sunmath.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:i_sunmath: Inhdr Hasfield
```

```
?MAKE: -pick add @$@ %<
```

```
?S:i_sunmath:
```

```
?S: This variable conditionally defines the I_SUNMATH symbol, and indicates
```

```
?S: whether a C program should include <sunmath.h>.
```

```
?S:.
```

```
?C:I_SUNMATH:
```

```
?C: This symbol, if defined, indicates that <sunmath.h> exists and
```

```
?C: should be included.
```

```
?C:.
```

```
?H:#$i_sunmath I_SUNMATH /**/
```

```
?H:.
```

```
?LINT:set i_sunmath
```

```
: see if this is a sunmath.h system
```

```
set sunmath.h i_sunmath
```

```
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i_sunmath.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_getnbyad.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1998 Andy Dougherty
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

?MAKE:d\_getnbyaddr: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_getnbyaddr:  
?S: This variable conditionally defines the HAS\_GETNETBYADDR symbol, which  
?S: indicates to the C program that the getnetbyaddr() routine is available  
?S: to look up networks by their IP addresses.  
?S:.  
?C:HAS\_GETNETBYADDR:  
?C: This symbol, if defined, indicates that the getnetbyaddr() routine is  
?C: available to look up networks by their IP addresses.  
?C:.  
?H:#\$d\_getnbyaddr HAS\_GETNETBYADDR /\*\*/  
?H:.  
?LINT:set d\_getnbyaddr  
: see if getnetbyaddr exists  
set getnetbyaddr d\_getnbyaddr  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_getnbyad.U

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_remquo: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_remquo:

?S: This variable conditionally defines the HAS\_REMQUO symbol, which

?S: indicates to the C program that the remquo() routine is available.

?S:.

?C:HAS\_REMQUO:

?C: This symbol, if defined, indicates that the remquo routine is

?C: available to return the remainder and part of quotient.

?C:.

?H:#\$d\_remquo HAS\_REMQUO /\*\*/  
?H:.

?LINT:set d\_remquo

: see if remquo exists

set remquo d\_remquo

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_remquo.U

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_lgamma: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lgamma:

?S: This variable conditionally defines the HAS\_LGAMMA symbol, which

?S: indicates to the C program that the lgamma() routine is available

?S: for the log gamma function. See also d\_tgamma and d\_lgamma\_r.

?S:.

?C:HAS\_LGAMMA:

?C: This symbol, if defined, indicates that the lgamma routine is

?C: available to do the log gamma function. See also HAS\_TGAMMA and

?C: HAS\_LGAMMA\_R.

?C:.

?H:#\$d\_lgamma HAS\_LGAMMA /\*\*/

?H:.

?LINT:set d\_lgamma

: see if lgamma exists

set lgamma d\_lgamma

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_lgamma.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_access.U,v 3.0 1993/08/18 12:05:42 ram Exp \$

?RCS:

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?RCS:

?RCS: \$Log: d\_access.U,v \$

?RCS: Revision 3.0 1993/08/18 12:05:42 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_access: test +cc cat +cppflags h\_fcntl h\_sysfile i\_stdlib rm Inlibc Findhdr

?MAKE: -pick add \$@ %<

?S:d\_access:

?S: This variable conditionally defines HAS\_ACCESS if the access() system

?S: call is available to check for access permissions using real IDs.

?S:.

?C:HAS\_ACCESS:

?C: This manifest constant lets the C program know that the access()

?C: system

call is available to check for accessibility using real UID/GID.

?C: (always present on UNIX.)

?C:.

?H:#\$d\_access HAS\_ACCESS /\*\*/

?H:.

?W:%<:R\_OK W\_OK X\_OK F\_OK

?LINT:set d\_access

?LINT:change h\_fcntl h\_sysfile

: access call always available on UNIX

set access d\_access

eval \$inlibc

: locate the flags for 'access()'

case "\$d\_access" in

"\$define")

echo " "

\$cat >access.c <<EOCP

#include <sys/types.h>

#ifdef I\_FCNTL

#include <fcntl.h>

#endif

#ifdef I\_SYS\_FILE

#include <sys/file.h>

#endif

#ifdef I\_UNISTD

#include <unistd.h>

#endif

#\$i\_stdlib I\_STDLIB

#ifdef I\_STDLIB

#include <stdlib.h>

#endif

int main() {

exit(R\_OK);

}

EOCP

: check sys/file.h first, no particular reason here

if \$test `./findhdr sys/file.h` && \

\$cc -o access \$cppflags -DI\_SYS\_FILE access.c >/dev/null 2>&1 ; then

h\_sysfile=true;

echo "<sys/file.h> defines the \*\_OK access constants." >&4

elif \$test `./findhdr fcntl.h` && \

\$cc -o access \$cppflags -DI\_FCNTL access.c >/dev/null 2>&1 ; then

h\_fcntl=true;

echo

"<fcntl.h> defines the \*\_OK access constants." >&4

@if I\_UNISTD

```

elif $test `./findhdr unistd.h` && \
  $cc -o access $cppflags -DI_UNISTD access.c >/dev/null 2>&1 ; then
  echo "<unistd.h> defines the *_OK access constants." >&4
@end
else
  echo "I can't find the four *_OK access constants--I'll use mine." >&4
fi
;;
esac
$rm -f access*

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_access.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Oldsym.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Oldsym.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:06:58 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:13 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit follows the creation of the config.sh file. It adds some

?X: special symbols: defines from patchlevel.h file if any and PERL\_CONFIG\_SH,

?X: which is set to true. Then, we try to keep all the new symbols that

?X: may come from a hint

file or a previous config.sh file.

?X:

?MAKE:Oldsym: Config\_sh cat test hint src sed sort uniq perl\_patchlevel

?MAKE: -pick add \$@ %<

?T:PERL\_CONFIG\_SH PERL\_PATCHLEVEL sym tmp

?F:!UU

: add special variables

```
$test -f $src/patchlevel.h && \
```

```
awk '/^#define[ ]+PERL_/ {printf "%s=%s\n",$2,$3}' $src/patchlevel.h >>config.sh
```

```
echo "PERL_PATCHLEVEL='$perl_patchlevel'" >>config.sh
```

```
echo "PERL_CONFIG_SH=true" >>config.sh
```

```
: propagate old symbols
```

```
if $test -f UU/config.sh; then
```

```
?X: Make sure each symbol is unique in oldconfig.sh
```

```
<UU/config.sh $sort | $uniq >UU/oldconfig.sh
```

```
?X:
```

```
?X: All the symbols that appear twice come only from config.sh (hence the
```

```
?X: two config.sh in the command line). These symbols will be removed by
```

```
?X: the uniq -u command. The oldsyms file thus contains all the symbols
```

```
?X: that did not appear in the produced config.sh (Larry Wall).
```

```
?X:
```

```
?X: Do not touch the -u flag of uniq. This means you too, Jarkko.
```

```
?X:
```

```
$sed -n 's/^\([a-zA-Z_0-9]*\)=.*1/p' \
```

```
config.sh config.sh UU/oldconfig.sh
```

```
|\
```

```
$sort | $uniq -u >UU/oldsyms
```

```
set X ` $cat UU/oldsyms `
```

```
shift
```

```
case $# in
```

```
0) ;;
```

```
*)
```

```
$cat <<EOM
```

```
Hmm...You had some extra variables I don't know about...I'll try to keep 'em...
```

```
EOM
```

```
echo ": Variables propagated from previous config.sh file." >>config.sh
```

```
for sym in ` $cat UU/oldsyms `; do
```

```
echo " Propagating $hint variable ""$sym..."
```

```
eval `tmp=""${sym}""`
```

```
echo "$tmp" |\
```

```
sed -e "s/^\\"/g" -e "s/^\$sym=/'" -e "s/'/" >>config.sh
```

```
done
```

```
::
```

```
esac
```

```
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Oldsym.U
```

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```
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```

```
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```

```
?RCS:
```

```
?MAKE:d_log2: Inlibc
```

```
?MAKE:-pick add $@ %<
```

```
?S:d_log2:
```

?S: This variable conditionally defines the HAS\_LOG2 symbol, which  
?S: indicates to the C program that the log2() routine is available  
?S: to compute log base two.  
?S:.  
?C:HAS\_LOG2:  
?C: This symbol, if defined, indicates that the log2 routine is  
?C: available to do the log2 function.  
?C:.  
?H:#\$d\_log2 HAS\_LOG2 /\*\*/  
?H:.  
?LINT:set d\_log2  
: see if log2 exists  
set log2 d\_log2  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_log2.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: uidtype.U,v 3.0.1.3 1994/08/29 16:33:25 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
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?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: uidtype.U,v \$  
?RCS: Revision 3.0.1.3 1994/08/29 16:33:25 ram  
?RCS: patch32: now uses new Typedef unit to compute type information  
?RCS:  
?RCS: Revision 3.0.1.2 1994/06/20 07:09:36 ram  
?RCS: patch30: comment for uidtype referred to the obsoleted symbol  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/13 15:28:27 ram  
?RCS: patch27: made conformant to its gidtype.U companion  
?RCS: patch27: question now explicitly mentions getuid()  
?RCS:  
?RCS: Revision 3.0 1993/08/18  
12:09:56 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:uidtype: Myread Typedef Findhdr  
?MAKE: -pick add \$@ %<  
?S:uidtype:

?S: This variable defines Uid\_t to be something like uid\_t, int,  
?S: ushort, or whatever type is used to declare user ids in the kernel.  
?S:.  
?C:Uid\_t (UIDTYPE):  
?C: This symbol holds the type used to declare user ids in the kernel.  
?C: It can be int, ushort, uid\_t, etc... It may be necessary to include  
?C: <sys/types.h> to get any typedef'ed information.  
?C:.

?H:#define Uid\_t \$uidtype /\* UID type \*/

?H:.

?T:xxx

: see what type uids are declared as in the kernel

echo " "

echo "Looking for the type for user ids returned by getuid()."

set uid\_t uidtype xxx stdio.h sys/types.h

eval \$typedef

case "\$uidtype" in

xxx)

xxx=`./findhdr sys/user.h`

set `grep '\_ruuid;' "\$xxx" 2>/dev/null` unsigned short

case \$1 in

unsigned) dflt="\$1 \$2" ;;

\*) dflt="\$1" ;;

esac

::

\*) dflt="\$uidtype";;

esac

case "\$uidtype" in

uid\_t) echo "uid\_t found." ;;

\*) rp="What

is the type for user ids returned by getuid()?"

. ./myread

uidtype="\$ans"

::

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/uidtype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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```

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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: perlpath.U,v $
?RCS: Revision 3.0.1.2 1995/09/25 09:17:04 ram
?RCS: patch59: unit is now forced to the top of Configure, if possible
?RCS:
?RCS: Revision 3.0.1.1 1995/01/11 15:33:53 ram
?RCS: patch45: can now use Loc variables since path stripping is deferred
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:32 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: The purpose of this unit is to locate perl good enough to construct a #!
?X:
?MAKE:perlpath: Getfile Oldconfig Loc perl
?MAKE: -pick
add $@ %<
?Y:TOP
?S:perlpath:
?S: This variable contains the eventual value of the PERLPATH symbol,
?S: which contains the absolute location of the perl interpreter.
?S:.
?C:PERLPATH:
?C: This symbol contains the absolute location of the perl interpreter.
?C:.
?H:#define PERLPATH "$perlpath" /**/
?H:.
: determine perl absolute location
case "$perlpath" in
")
if test -f /usr/bin/perl; then
dflt=/usr/bin/perl
else
case "$perl" in
*/*) dflt="$perl";;
*) dflt=/usr/bin/perl;;
esac
fi
;;
*) dflt="$perlpath"
;;
esac
echo " "
fn=f~/
rp="Where is perl located on your system?"
../getfile

```

perlpath="\$ans"

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/perlpath.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: man3dir.U,v 3.1 1999/07/08 20:52:19 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1996-1999, Andy Dougherty

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: man3dir.U,v \$

?RCS: Revision 3.1 1999/07/08 20:52:19 doughera

?RCS: Updated for perl5.005\_5x

?RCS:

?RCS: Revision 3.0.1.1 1997/02/28 16:10:34 ram

?RCS: patch61: created

?RCS:

?X: This was originally specific to perl5. Since perl5 has man pages that

?X: go in both man1/ and man3/ directories, we need both man1dir

?X: and man3dir. This unit is basically dist's mansrc.U with

?X: man3 used instead

of man everywhere.

?X: I then added various tests because perl5 has \*lots\* of man3

?X: pages with long file names. -- ADO

?X:

?MAKE:man3dir man3direxp man3ext installman3dir: cat nroff Loc Oldconfig \

sed man1dir package package Getfile Setprefixvar Prefixit Prefixup \

d\_flexfnam privlib Myread test

?MAKE: -pick add \$@ %<

?Y:TOP

?D:man3dir="

?S:man3dir:

?S: This variable contains the name of the directory in which manual

?S: source pages are to be put. It is the responsibility of the

?S: Makefile.SH to get the value of this into the proper command.

?S: You must be prepared to do the ~name expansion yourself.

?S:.

?D:man3direxp="

?S:man3direxp:

?S: This variable is the same as the man3dir variable, but is filename



?S: expanded at configuration time, for convenient use in makefiles.  
 ?S:.  
 ?D:installman3dir="  
 ?S:installman3dir:  
 ?S: This variable is really the same as man3direxp, unless you are using  
 ?S: AFS in which case it points to the read/write location whereas  
 ?S: man3direxp only  
 points to the read-only access location. For extra  
 ?S: portability, you should only use this variable within your makefiles.  
 ?S:.  
 ?S:man3ext:  
 ?S: This variable contains the extension that the manual page should  
 ?S: have: one of 'n', 'l', or '3'. The Makefile must supply the '!'.  
 ?S: See man3dir.  
 ?S:.  
 ?T:prog tdfmt  
 ?LINT:change prefixvar  
 ?LINT:set man3direxp  
 : determine where library module manual pages go  
 set man3dir man3dir none  
 eval \$prefixit  
 \$cat <<EOM

\$spackage has manual pages for many of the library modules.  
 EOM

```
case "$nroff" in
nroff)
$cat <<'EOM'
```

However, you don't have nroff, so they're probably useless to you.  
 EOM

```
case "$man3dir" in
") man3dir="none";;
esac;;
esac
```

```
case "$d_flexfnam" in
undef)
$cat <<'EOM'
```

However, your system can't handle the long file names like File::Basename.3.  
 EOM

```
case "$man3dir" in
") man3dir="none";;
esac;;
esac
```

echo "If you don't want the manual sources installed, answer 'none'."

?X: In 5.005\_57 and earlier, I had the following notes:

?X:

We do not use /usr/local/man/man3 because some man programs will  
?X: only show the /usr/local/man/man3 contents, and not the system ones,  
?X: thus man less will show the perl module less.pm, but not the system  
?X: less command. We might also conflict with Tcl man pages.  
?X: However, something like /opt/perl/man/man3 is fine.

?X:

?X: However, opinion seems to be shifting such that 'man POSIX' ought  
?X: to just work. -- Andy Dougherty July 8, 1999

?X:

```
?X: remove any trailing -3.0 or other version indication from $package
prog=`echo $package | $sed 's/-*[0-9.]*$//`
case "$man3dir" in
") dflt=`echo "$man1dir" | $sed -e 's/man1/man3/g' -e 's/man\./man\./g`
if $test -d "$privlib/man/man3"; then
cat <<EOM >&4
```

WARNING: Previous versions of perl installed man3 pages into  
\$privlib/man/man3. This version will suggest a  
new default of \$dflt.

EOM

```
tdflt=$dflt
dflt='n'
rp='Do you wish to preserve the old behavior?(y/n)'
./myread
case "$ans" in
y*) dflt="$privlib/man/man3"
;;
*) dflt=$tdflt ;;
esac
fi
;;
*) dflt="$man3dir" ;;
esac
case "$dflt" in
') dflt=none ;;
esac
echo " "
fn=dn+~
rp="Where do the $package library man pages (source) go?"
./getfile
prefixvar=man3dir
./setprefixvar

case "$man3dir" in
") man3dir=' '
installman3dir="";;
esac
```

```

: What suffix to use on installed man pages
case "$man3dir" in
' ')
man3ext='0'
;;
*)
rp="What suffix should be used for the $package library man pages?"
case "$man3ext" in
") case "$man3dir" in
*3) dflt=3 ;;
*3p) dflt=3p ;;
*3pm) dflt=3pm ;;
*1) dflt=1;;
*n) dflt=n;;
*o) dflt=o;;
*p) dflt=p;;
*C) dflt=C;;
*L) dflt=L;;
*L3) dflt=L3;;
*) dflt=3;;
esac
;;
*) dflt="$man3ext";;
esac
. ./myread
man3ext="$ans"
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/man3dir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:uselargefiles \

ccflags\_uselargefiles \

ldflags\_uselargefiles \

libswanted\_uselargefiles: \

Myread Oldconfig Setvar test lseeksize fpossize \

fpostype Compile echo n c cat lseektype rm\_try run \

```

use64bitint use64bitall i_stdlib
?MAKE: -pick add $@ %<
?Y:TOP
?S:uselargefiles:
?S: This variable conditionally defines the USE_LARGE_FILES symbol,
?S: and indicates that large file interfaces should be used when
?S: available.
?S:.
?S:ccflags_uselargefiles:
?S: This variable contains the compiler flags needed by large file builds
?S: and added to ccflags by hints files.
?S:.
?S:ldflags_uselargefiles:
?S: This variable contains the loader flags needed by large file builds
?S: and added to ldflags by
?S: hints files.
?S:.
?S:libswanted_uselargefiles:
?S: This variable contains the libraries needed by large file builds
?S: and added to ldflags by hints files. It is a space separated list
?S: of the library names without the "lib" prefix or any suffix, just
?S: like libswanted..
?S:.
?C:USE_LARGE_FILES:
?C: This symbol, if defined, indicates that large file support
?C: should be used when available.
?C:.
?H:?%<:#ifndef USE_LARGE_FILES
?H:?%<:#$uselargefiles USE_LARGE_FILES /**/
?H:?%<:#endif
?H:.
?INIT:ccflags_uselargefiles="
?INIT:ldflags_uselargefiles="
?INIT:libswanted_uselargefiles="
?T:yyy zzz
?F:!uselargefiles.cbu !try
?LINT:change lseeksize
?LINT:change fpossize
?LINT:extern uselfs
?LINT:use use64bitint
?LINT:use use64bitall
: Check for large file support
# Backward compatibility (uselfs is deprecated).
case "$uselfs" in
"$define"|true|[yY]*)
cat <<EOM >&4

```

\*\*\* Configure -Duselfs is deprecated, using -Duselargefiles instead.

```
EOM
uselargefiles="$define"
;;
esac
```

```
case "$lseeksize:$fpossize"
in
8:8) cat <<EOM
```

You can have files larger than 2 gigabytes.

```
EOM
val="$define" ;;
*) case "$uselargefiles" in
"$undef"|false|[nN]*) dflt='n' ;;
*) dflt='y' ;;
esac
cat <<EOM
```

Perl can be built to understand large files (files larger than 2 gigabytes) on some systems. To do so, Configure can be run with `-Duselargefiles`.

If this doesn't make any sense to you, just accept the default `'$dflt'`.

```
EOM
rp="Try to understand large files, if available?"
./myread
case "$ans" in
y|Y) val="$define" ;;
*) val="$undef" ;;
esac
;;
esac
set uselargefiles
eval $setvar
: Look for a hint-file generated 'call-back-unit'. If the
: user has specified that a large files perl is to be built,
: we may need to set or change some other defaults.
if $test -f uselargefiles.cbu; then
echo "Your platform has some specific hints regarding large file builds, using them..."
./uselargefiles.cbu
fi
case "$uselargefiles" in
"$define")
if $test -f uselargefiles.cbu;
then
echo " "
echo "Rechecking to see how big your file offsets are..." >&4
$cat >try.c <<EOCP
#include <sys/types.h>
```

```

#include <stdio.h>
int main()
{
    printf("%d\n", (int)sizeof($lseektype));
    return(0);
}
EOCP
set try
if eval $compile_ok; then
    lseeksize=`$run ./try`
    $echo "Your file offsets are now $lseeksize bytes long."
else
    dflt="$lseeksize"
    echo " "
    echo "(I can't seem to compile the test program. Guessing...)"
    rp="What is the size of your file offsets (in bytes)?"
    ./myread
    lseeksize="$ans"
fi
case "$fpostype" in
*_t) zzz="$fpostype" ;;
*) zzz="fpos_t" ;;
esac
$echo $n "Rechecking the size of $zzz...$c" >&4
$cat > try.c <<EOCP
#include <sys/types.h>
#include <stdio.h>
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main() {
    printf("%d\n", (int)sizeof($fpostype));
    return(0);
}
EOCP
set try
if eval $compile_ok; then
    yyy=`$run ./try`
    dflt="$lseeksize"
    case "$yyy" in
    ") echo
    " "
    echo "(I can't execute the test program--guessing $fpossize.)" >&4
    ;;
    *) fpossize=$yyy
    echo "$fpossize bytes." >&4
    ;;

```

```

esac
else
dflt="$fpossize"
echo " "
echo "(I can't compile the test program. Guessing...)" >&4
rp="What is the size of your file positions (in bytes)?"
./myread
fpossize="$ans"
fi
$rm_try
fi
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/uselfs.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getprotobyname\_r.U,v 0RCS:

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?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getprotobyname\_r getprotobyname\_r\_proto: Inlibc Protochk Hasproto \  
i\_systypes usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getprotobyname\_r:

?S: This variable conditionally defines the HAS\_GETPROTOBYNAME\_R symbol,

?S: which indicates to the C program that the getprotobyname\_r()

?S: routine is available.

?S:.

?S:getprotobyname\_r\_proto:

?S: This variable encodes the prototype of getprotobyname\_r.

?S: It is zero if d\_getprotobyname\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getprotobyname\_r

?S: is defined.

?S:.

?C:HAS\_GETPROTOBYNAME\_R:

?C: This symbol, if defined, indicates that the getprotobyname\_r routine

?C: is available to getprotobyname re-entrantly.

?C:.

?C:GETPROTOBYNAME\_R\_PROTO:

?C: This symbol encodes the prototype of getprotobyname\_r.

```

?C: It is zero if d_getprotobyname_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getprotobyname_r
?C: is defined.
?C:.
?H:#$d_getprotobyname_r HAS_GETPROTOBYNAME_R /**/
?H:#define GETPROTOBYNAME_R_PROTO $getprotobyname_r_proto /**/
?H:.
?T:try hdrs d_getprotobyname_r_proto
: see if getprotobyname_r exists
set getprotobyname_r d_getprotobyname_r
eval $inlibc
case "$d_getprotobyname_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_getprotobyname_r_proto:$usethreads" in
":define") d_getprotobyname_r_proto=define
set d_getprotobyname_r_proto getprotobyname_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getprotobyname_r_proto" in
define)
case "$getprotobyname_r_proto" in
"|0) try='int getprotobyname_r(const char*, struct
protoent*, char*, size_t, struct protoent**);'
./protochk "$extern_C $try" $hdrs && getprotobyname_r_proto=I_CSBWR ;;
esac
case "$getprotobyname_r_proto" in
"|0) try='struct protoent* getprotobyname_r(const char*, struct protoent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getprotobyname_r_proto=S_CSBI ;;
esac
case "$getprotobyname_r_proto" in
"|0) try='int getprotobyname_r(const char*, struct protoent*, struct protoent_data*);'
./protochk "$extern_C $try" $hdrs && getprotobyname_r_proto=I_CSD ;;
esac
case "$getprotobyname_r_proto" in
"|0) d_getprotobyname_r=undef
getprotobyname_r_proto=0
echo "Disabling getprotobyname_r, cannot determine prototype." >&4 ;;
*) case "$getprotobyname_r_proto" in
REENTRANT_PROTO*) ;;
*) getprotobyname_r_proto="REENTRANT_PROTO_$getprotobyname_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "getprotobyname_r has no prototype, not using it." >&4 ;;

```



```
esac
d_getprotobyname_r=undef
getprotobyname_r_proto=0
;;
esac
;;
*) getprotobyname_r_proto=0
;;
esac
```

Found

in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_getprotobyname_r.U
```

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?RCS: \$Id: Extract.U,v 3.0.1.2 1997/02/28 14:58:52 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: Extract.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 14:58:52 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 15:51:46 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:52 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a shell script which can be doted in order to extract

?X: .SH files with variable substitutions.

?X:

?X: When running

Configure from a remote directory (\$src is not '.'),

?X: then the files will be created in that directory, so beware!

?X:

?MAKE:Extract: src

?MAKE: -pick add \$@ %<

?F:./extract

?T:PERL\_CONFIG\_SH dir file name create mkdir\_p

: script used to extract .SH files with variable substitutions

```
cat >extract <<'EOS'
PERL_CONFIG_SH=true
echo "Doing variable substitutions on .SH files..."
if test -f MANIFEST; then
  set x `awk '{print $1}' < MANIFEST | grep '\.SH$`
else
  echo "(Looking for .SH files under the source directory.)"
  set x `(cd "$src"; find . -name "*.SH" -print)`
fi
shift
case $# in
0) set x `(cd "$src"; echo *.SH)`; shift;;
esac
if test ! -f "$src/$1"; then
  shift
fi
?X: script to emulate mkdir -p
mkdir_p='
name=$1;
create="";
while test $name; do
  if test ! -d "$name"; then
    create="$name $create";
    name=`echo $name | sed -e "s|^[^]*$||"`;
    name=`echo $name | sed -e "s|(.*).*/.*|1|"`;
  else
    name="";
  fi;
done;
for file in $create; do
  mkdir $file;
done
'
for file in $*;
do
  case "$src" in
  ".")
  case "$file" in
  */*)
  dir=`expr X$file : 'X\(.*)/'`
  file=`expr X$file : 'X.*\^(.*)'`
  (cd "$dir" && ./$file)
  ;;
  *)
  ./$file
  ;;
esac
```

```

;;
*)
?X:
?X: When running Configure remotely ($src is not '.'), we cannot source
?X: the files directly, since that would wrongly cause the extraction
?X: where the source lie instead of withing the current directory. Therefore,
?X: we need to 'sh <file' then, which is okay since they will source the
?X: existing config.sh file. It's not possible to use:
?X: ../src/Configure -S -O -Dsomething
?X: unfortunately since no new config.sh with the -Dsomething override
?X: will be created before running the .SH files. A minor buglet.
?X:
?X: Note that we must create the directory hierarchy ourselves if it does
?X: not exist already, and that is done through a shell emulation of the
?X: 'mkdir -p' command. We don't want to use the $installdir metaconfig
?X: symbol here since that would require too much to
be configured for
?X: this simple extraction task that may happen quickly with 'Configure -S'.
?X: -- RAM, 18/03/96
?X:
case "$file" in
*/*)
dir=`expr X$file : 'X\(.*)/'`
file=`expr X$file : 'X.*\(.*)'`
(set x $dir; shift; eval $mkdir_p)
sh <"$src/$dir/$file"
;;
*)
sh <"$src/$file"
;;
esac
;;
esac
done
if test -f "$src/config_h.SH"; then
if test ! -f config.h; then
: oops, they left it out of MANIFEST, probably, so do it anyway.
. "$src/config_h.SH"
fi
fi
EOS

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Extract.U

```

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?RCS: \$Id\$

?RCS:  
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?RCS:  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_keepsig.U,v \$  
?RCS: Revision 3.0.1.4 1995/07/25 13:57:56 ram  
?RCS: patch56: made cc and ccflags optional dependencies  
?RCS:  
?RCS: Revision 3.0.1.3 1995/01/11 15:26:25 ram  
?RCS: patch45: protected "sh -c" within backquotes for Linux and SGI  
?RCS:  
?RCS: Revision 3.0.1.2 1994/10/29 16:13:59 ram  
?RCS: patch36: call ./bsd explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0.1.1 1993/10/16 13:48:47 ram  
?RCS: patch12: comment for SIGNALS\_KEPT was the other way round  
?RCS:  
?RCS:  
Revision 3.0 1993/08/18 12:06:26 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_keepsig: cat Compile rm Guess contains echo n c Setvar run  
?MAKE: -pick add \$@ %<  
?S:d\_keepsig:  
?S: This variable contains the eventual value of the SIGNALS\_KEPT symbol,  
?S: which indicates to the C program if signal handlers need not reinstated  
?S: after receipt of a signal.  
?S:.  
?C:SIGNALS\_KEPT (PERSISTENT\_SIGNAL):  
?C: This symbol is defined if signal handlers needn't be reinstated after  
?C: receipt of a signal.  
?C:.  
?H:#\$d\_keepsig SIGNALS\_KEPT /\*\*/  
?H:.  
?F:!try !try.out  
?LINT:set d\_keepsig  
: see if signals are kept  
val="\$undef";  
echo " "  
echo "Checking to see if signal handlers stick around..." >&4  
\$cat >try.c <<'EOCP'  
foo() { }

```
int main()
{
    signal(2, foo);
    kill(getpid(), 2);
    kill(getpid(), 2);
    printf("abc\n");
}
```

EOCP

set try

if eval \$compile\_ok; then

?X: On AIX a single ./try will not work (with ksh)

?X: Backquotes required on Linux and SGI (prevents "ambiguous output redirect")

?X:

(reported by Xavier LeVourch <xavierl@eiffel.com>)

```
`sh -c $run ./try >try.out 2>/dev/null`
```

```
if $contains abc try.out >/dev/null 2>&1; then
```

```
    echo "Yes, they do."
```

```
    val="$define";
```

```
else
```

```
    echo "No, they don't."
```

```
fi
```

```
else
```

```
$echo $n "(I can't seem to compile the test program. Assuming $c"
```

```
if ./bsd; then
```

```
    echo "they do.)"
```

```
    val="$define"
```

```
else
```

```
    echo "they don't.)"
```

```
fi
```

```
fi
```

```
set d_keepsig
```

```
eval $setvar
```

```
$rm -f try*
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_keepsig.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_symlink.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:  
?RCS: \$Log: d\_symlink.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:41 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_symlink: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_symlink:  
?S: This variable conditionally defines the HAS\_SYMLINK symbol, which  
?S: indicates to the C program that the symlink() routine is available  
?S: to create symbolic links.  
?S:.  
?C:HAS\_SYMLINK (SYMLINK):  
?C: This symbol, if defined, indicates that the symlink routine is available  
?C: to  
create symbolic links.  
?C:.  
?H:#\$d\_symlink HAS\_SYMLINK /\*\*/  
?H:.  
?LINT:set d\_symlink  
: see if symlink exists  
set symlink d\_symlink  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_symlink.U

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_nearbyint: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_nearbyint:

?S: This variable conditionally defines HAS\_NEARBYINT if nearbyint()

?S: is available to return the integral value closest to (according to

?S: the current rounding mode) to x.

?S:.

?C:HAS\_NEARBYINT:

?C: This symbol, if defined, indicates that the nearbyint routine is

?C: available to return the integral value closest to (according to

?C: the current rounding mode) to x.

?C:.

?H:#\$d\_nearbyint HAS\_NEARBYINT /\*\*/  
?H:.

?LINT:set d\_nearbyint

: see if nearbyint exists

```
set nearbyint d_nearbyint
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_nearbyint.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Signal.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:20:01 ram

?RCS: patch61: created

?RCS:

?X:

?X: This unit produces three files:

?X:

?X: 1- A signal.c file, which, when compiled and run, produces an output like:

?X:

?X: HUP 1

?X: INT 2

?X: QUIT 3

?X: etc...

?X:

?X: 2- A signal.awk script to parse the output of signal.c, fill

?X: in gaps (up to NSIG) and move duplicates to the end.

?X:

?X: 3- A signal\_cmd script to compile signal.c and run it

?X: through `sort -n -k 2 | uniq | awk -f signal.awk`.

?X:

(we try also `sort -n +1` since some old hosts don't grok `sort -k`)

?X: (This is called `signal_cmd` to avoid OS/2 confusion with

?X: `signal.cmd` vs. `signal`.)

?X: The `signal_cmd` script also falls back on checking signals one at a

?X: time in case the `signal.c` program fails. On at least one version of

?X: Linux 2.1.x, the header file `#define'd SIGRTMAX` to a symbol that

?X: is not defined by the compiler/linker. :-(. Further, on that same

?X: version of Linux, the user had a defective C-shell that gave an

?X: incorrect list for `kill -l`, so the fall-back didn't work.

?X:

```

?X: This unit is then used by sig_name.U.
?X:
?MAKE:Signal: test tr rm awk cat grep startsh eunicefix sed sort uniq \
Findhdr cppstdin +cppflags cppminus Compile trnl run
?MAKE: -pick add $@ %<
?X:all files declared as "public" since they're used from other units
?F:signal.c signal_cmd signal.lst signal signal.awk
?T: xx xxx xxxfiles
?LINT:use rm run
: Trace out the files included by signal.h, then look for SIGxxx
names.
?X: Remove SIGARRAYSIZE used by HPUX.
?X: Remove SIGSTKSIZE used by Linux.
?X: Remove SIGSTKSZ used by Posix.
?X: Remove SIGTYP void lines used by OS2.
?X: Some cpps, like os390, dont give the file name anywhere
if [ "$fieldn" = X ]; then
: Just make some guesses. We check them later.
xxx='/usr/include/signal.h /usr/include/sys/signal.h'
else
xxx=`echo '#include <signal.h>' |
$cpstdin $cppminus $cppflags 2>/dev/null |
$grep '^[ ]*#.*include' |
$awk '{print \\$fieldn}' | $sed 's!!g' | \
$sed 's!\\\\\\\\\\\\\\\\!g' | $sort | $uniq`
fi
?X: Check this list of files to be sure we have parsed the cpp output ok.
?X: This will also avoid potentially non-existent files, such
?X: as ../foo/bar.h
xxxfiles=""
?X: Add /dev/null in case the $xxx list is empty.
for xx in $xxx /dev/null ; do
$test -f "$xx" && xxxfiles="$xxxfiles $xx"
done
?X: If we have found no files, at least try signal.h
case "$xxxfiles" in
") xxxfiles=`./findhdr signal.h` ;;
esac
xxx=`awk '
$1 ~ /^#define$/ &&
$2 ~ /^SIG[A-Z0-9]*$/ && $2 !~ /SIGARRAYSIZE/ && $2 !~ /SIGSTKSIZE/ && $2 !~ /SIGSTKSZ/ && $3 !~
/void/ {
print substr($2, 4, 20)
}
$1 == "#" && $2 ~ /^define$/ && $3 ~ /^SIG[A-Z0-9]*$/ && $3 !~ /SIGARRAYSIZE/ && $4 !~ /void/ {
print substr($3, 4, 20)
}' $xxxfiles`
: Append some common names just in case the awk scan failed.

```



```
xxx="$xxx ABRT ALRM BUS CANCEL CHLD CLD CONT DIL EMT FPE"  
xxx="$xxx FREEZE HUP ILL INT IO IOT KILL LOST LWP PHONE"  
xxx="$xxx PIPE POLL PROF PWR QUIT RTMAX RTMIN SEGV STKFLT STOP"  
xxx="$xxx SYS TERM THAW TRAP TSTP TTIN TTOU URG USR1 USR2"  
xxx="$xxx USR3 USR4 VTALRM WAITING WINCH WIND WINDOW XCPU XFSZ"
```

: generate a few handy files for later

```
$cat > signal.c <<'EOCP'  
#include <sys/types.h>  
#include <signal.h>  
#include <stdio.h>  
int main() {  
  
/* Strange style to avoid deeply-nested #if/#else/#endif */  
#ifndef NSIG  
# ifdef _NSIG  
#  define NSIG (_NSIG)  
# endif  
#endif  
  
#ifndef NSIG  
# ifdef SIGMAX  
#  define NSIG (SIGMAX+1)  
# endif  
#endif  
  
#ifndef NSIG  
# ifdef SIG_MAX  
#  
#  define NSIG (SIG_MAX+1)  
# endif  
#endif  
  
#ifndef NSIG  
# ifdef MAXSIG  
#  define NSIG (MAXSIG+1)  
# endif  
#endif  
  
#ifndef NSIG  
# ifdef MAX_SIG  
#  define NSIG (MAX_SIG+1)  
# endif  
#endif  
  
#ifndef NSIG  
# ifdef SIGARRAYSIZE  
#  define NSIG (SIGARRAYSIZE+1) /* Not sure of the +1 */
```

```

# endif
#endif

#ifndef NSIG
# ifdef _sys_nsig
#  define NSIG (_sys_nsig) /* Solaris 2.5 */
# endif
#endif

/* Default to some arbitrary number that's big enough to get most
   of the common signals.
*/
#ifndef NSIG
# define NSIG 50
#endif

printf("NSIG %d\n", NSIG);

#ifndef JUST_NSIG

EOCP

echo $xxx | $tr ' ' $trnl | $sort | $uniq | $awk '
{
printf "#ifdef SIG"; printf $1; printf "\n"
printf "printf(\""; printf $1; printf " %%d\\n\",SIG";
printf $1; printf ");\n"
printf "#endif\n"
}
END {
printf "#endif /* JUST_NSIG *^\n";
printf "exit(0);\n}\n";
}
' >>signal.c
$cat >signal.awk <<'EOP'
BEGIN { ndups = 0 }
$1 ~ /^NSIG$/ { nsig = $2 }
($1 !~ /^NSIG$/) && (NF == 2) {
    if ($2 >
maxsig) { maxsig = $2 }
    if (sig_name[$2]) {
dup_name[ndups] = $1
dup_num[ndups] = $2
ndups++
    }
    else {
sig_name[$2] = $1
sig_num[$2] = $2

```

```

    }
}
END {
    if (nsig == 0) {
        nsig = maxsig + 1
    }
    printf("NSIG %d\n", nsig);
    for (n = 1; n < nsig; n++) {
if (sig_name[n]) {
        printf("%s %d\n", sig_name[n], sig_num[n])
    }
    else {
        printf("NUM%d %d\n", n, n)
    }
    }
    for (n = 0; n < ndups; n++) {
printf("%s %d\n", dup_name[n], dup_num[n])
    }
}

```

EOP

```
$cat >signal_cmd <<EOS
```

```
$startsh
```

```
if $test -s signal.lst; then
```

```
    echo "Using your existing signal.lst file"
```

```
    exit 0
```

```
fi
```

```
xxx="$xxx"
```

```
EOS
```

?X: Avoid variable interpolation problems, especially with

?X: xxx, which contains newlines.

```
$cat >>signal_cmd <<'EOS'
```

```
set signal
```

```
if eval $compile_ok; then
```

```
    $run ./signal$_exe | ($sort -n -k 2 2>/dev/null || $sort -n +1) |\
```

```
    $uniq | $awk -f signal.awk >signal.lst
```

```
else
```

```
    echo "(I can't seem be able to compile the whole test program)" >&4
```

```
    echo "(I'll try it in little
```

```
pieces.)" >&4
```

```
    set signal -DJUST_NSIG
```

```
    if eval $compile_ok; then
```

```
        $run ./signal$_exe > signal.nsg
```

```
        $cat signal.nsg
```

```
    else
```

```
        echo "I can't seem to figure out how many signals you have." >&4
```

```
        echo "Guessing 50." >&4
```

```
        echo 'NSIG 50' > signal.nsg
```

```

fi
: Now look at all the signal names, one at a time.
for xx in `echo $xxx | $tr ' ' $trnl | $sort | $uniq`; do
  $cat > signal.c <<EOCP
#include <sys/types.h>
#include <signal.h>
#include <stdio.h>
int main() {
printf("$xx %d\n", SIG${xx});
return 0;
}
EOCP
set signal
if eval $compile; then
echo "SIG${xx} found."
$run ./signal$_exe >> signal.ls1
else
echo "SIG${xx} NOT found."
fi
done
if $test -s signal.ls1; then
$cat signal.nsg signal.ls1 |
$sort -n | $uniq | $awk -f signal.awk >signal.lst
fi

fi
if $test -s signal.lst; then
:
else
echo "(AAK! I can't compile the test programs -- Guessing)" >&4
echo 'kill -l' >signal
set X `csh -f <signal`
$rm -f signal
shift
case $# in
0) set HUP INT QUIT ILL TRAP ABRT
EMT FPE KILL BUS SEGV SYS PIPE ALRM TERM;;
esac
echo $@ | $tr ' ' $trnl | \
  $awk '{ printf "%s %d\n", $1, ++s; }
  END { printf "NSIG %d\n", ++s }' >signal.lst
fi
$rm -f signal.c signal$_exe signal$_o signal.nsg signal.ls1
EOS
chmod a+x signal_cmd
$eunicefix signal_cmd

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Signal.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_htonl.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_htonl.U,v \$

?RCS: Revision 3.0.1.2 1994/08/29 16:09:25 ram

?RCS: patch32: now properly handles htonl() and friends when macros (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 14:45:00 ram

?RCS: patch23: now also check for htonl() macro (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:22 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_htonl: Inlibc Setvar i\_niin i\_sysin i\_arpanet cat rm contains \  
cppstdin cppflags cppminus

?MAKE: -pick

add \$@ %<

?S:d\_htonl:

?S: This variable conditionally defines HAS\_HTONL if htonl() and its

?S: friends are available to do network order byte swapping.

?S:.

?C:HAS\_HTONL (HTONL):

?C: This symbol, if defined, indicates that the htonl() routine (and

?C: friends htons() ntohl() ntohs()) are available to do network

?C: order byte swapping.

?C:.

?C:HAS\_HTONS (HTONS):

?C: This symbol, if defined, indicates that the htons() routine (and

?C: friends htonl() ntohl() ntohs()) are available to do network

?C: order byte swapping.

?C:.

?C:HAS\_NTOHL (NTOHL):

?C: This symbol, if defined, indicates that the ntohl() routine (and

?C: friends htonl() htons() ntohs()) are available to do network

?C: order byte swapping.

?C:.

?C:HAS\_NTOHS (NTOHS):

```

?C: This symbol, if defined, indicates that the ntohs() routine (and
?C: friends htonl() htons() ntohl()) are available to do network
?C: order byte swapping.
?C:.
?H:#$d_htonl HAS_HTONL /**/
?H:#$d_htonl HAS_HTONS /**/
?H:#$d_htonl HAS_NTOHL /**/
?H:#$d_htonl
HAS_NTOHS /**/
?H:.
?F:!htonl.c
?LINT:set d_htonl
: see if htonl --and friends-- exists
val="
set htonl val
eval $inlibc

: Maybe they are macros.
case "$val" in
$undef)
$cat >htonl.c <<EOM
#include <stdio.h>
#include <sys/types.h>
#$i_niin I_NETINET_IN
#$i_sysin I_SYS_IN
#$i_arpainet I_ARPA_INET
#ifdef I_NETINET_IN
#include <netinet/in.h>
#endif
#ifdef I_SYS_IN
#include <sys/in.h>
#endif
#ifdef I_ARPA_INET
#include <arpa/inet.h>
#endif
#ifdef htonl
printf("Defined as a macro.");
#endif
EOM
$cppstdin $cppflags $cppminus < htonl.c >htonl.E 2>/dev/null
if $contains 'Defined as a macro' htonl.E >/dev/null 2>&1; then
val="$define"
echo "But it seems to be defined as a macro." >&4
fi
$rm -f htonl.?
;;
esac
set d_htonl

```

eval \$setvar

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_htonl.U

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?RCS:

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?RCS:

?RCS: \$Log: abortsig.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:02:19 ram

?RCS: patch36: call ./usg explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:20 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:abortsig: Myread Oldconfig Guess cat +cc ccflags rm

?MAKE: -pick add \$@ %<

?S:abortsig:

?S: This variable holds the name of the signal used by the abort() call.

?S:.

?C:ABORTSIG:

?C: This symbol holds the signal number (symbol) used by the abort() call. To

?C: actually

define the signal symbol, <signal.h> should be included.

?C:.

?H:#define ABORTSIG \$abortsig /\*\*/

?H:.

?T:signal

: which signal is sent by abort ?

echo " "

case "\$abortsig" in

")

echo "Checking to see which signal is sent to the process by abort()..." >&4

echo "abort" > abort.sh

chmod +x abort.sh

?X: SIGABRT should replace SIGIOT on USG machines in a near future (1991).

for signal in SIGIOT SIGILL SIGABRT; do

case "\$abortsig" in

") \$cat >abort.c <<EOP

```

/* FIXME: Missing #include <stdlib.h>*/
#include <signal.h>
caught() { exit(0); } /* FIXME: Use _exit() or _Exit() in signal handler */
int main()
{
#ifdef $signal
    signal($signal, caught);
#endif
    if (-1 == abort())
        exit(1);
    exit(1);
}
EOP

```

?X: We have to use the abort.sh script otherwise sh behaves strangely on AIX.

```

if $cc $cflags -o abort abort.c >/dev/null 2>&1; then
    (./abort.sh) >/dev/null 2>&1
    case $? in
        0) abortsig="$signal";;
        esac
    fi
    ;;
    esac
done
;;
esac
case "$abortsig" in
    ") echo
    "(I wasn't able to compute the signal name--guessing)"
    if ./usg; then
        dflt="SIGIOT"
    else
        dflt="SIGILL"
    fi;;
    *) dflt="$abortsig"
    ;;
    esac
rp="Which signal does abort() send to the process (signal name)?"
./myread
abortsig="$ans"
$rm -f core abort.sh abort abort.c

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/abortsig.U

```

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?RCS: \$Id: i\_gdbm.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:



```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_gdbm.U,v $
?RCS: Revision 3.0.1.1 1995/05/12 12:16:39 ram
?RCS: patch54: made more robust by checking both header and lib (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:19 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_gdbm: Inhdr Inlibc Setvar
?MAKE: -pick add $@ %<
?S:i_gdbm (d_gdbm):
?S: This variable conditionally defines the I_GDBM symbol, which
?S: indicates to the C program that <gdbm.h> exists and should
?S: be included.
?S:.
?C:I_GDBM
(HAS_GDBM):
?C: This symbol, if defined, indicates that <gdbm.h> exists and should
?C: be included.
?C:.
?H:#$i_gdbm I_GDBM /**/
?H:.
?T:t_gdbm d_gdbm_open
?LINT:set i_gdbm
: see if gdbm.h is available
?X: t_gdbm is a tentative check. We might just have the .h, not the lib -- ADO
set gdbm.h t_gdbm
eval $inhdr
case "$t_gdbm" in
$define)
: see if gdbm_open exists
set gdbm_open d_gdbm_open
eval $inlibc
case "$d_gdbm_open" in
$undef)
t_gdbm="$undef"
echo "We won't be including <gdbm.h>"
;;
esac
;;
esac

```

```
val="$t_gdbm"  
set i_gdbm  
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_gdbm.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_keypad.U 1 2006-08-24 12:32:52Z rmanfredi $  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: $Log: d_keypad.U,v $  
?RCS: Revision 3.0 1993/08/18 12:05:50 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d_keypad: cat cc termplib Setvar  
?MAKE: -pick add $@ %<  
?S:d_keypad:  
?S: This variable controls the definition of HAS_CURSES_KEYPAD,  
?S: which tells the application that the keypad() curses function  
?S: is available.  
?S:.  
?C:HAS_CURSES_KEYPAD:  
?C: This symbol indicates the availability of the keypad() function  
?C: of the curses library.  
?C:.  
?H:#$d_keypad  
HAS_CURSES_KEYPAD /**/  
?H:.  
?LINT:set d_keypad  
: check for the "keypad()" function in the curses library  
echo " "  
case "$termplib" in  
")  
echo "You don't have a curses library, so I won't waste time looking" >&4  
echo "to see if has the keypad() function." >&4  
*)  
echo "Checking the curses library ($termplib) for the keypad() function..." >&4  
$cat >c_keypad.c <<'EOCP'  
#include <curses.h>
```

```

int main() {
    keypad(stdscr, TRUE);
    exit(0);
}
EOCP
if $cc c_keypad.c >c_keypad.out 2>&1 ; then
    val=$define
    echo "It appears to have the keypad() function."
else
    val=$undef
    echo "Your curses library doesn't appear to have the keypad() function."
fi
esac
set d_keypad
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_keypad.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: scriptdir.U,v \$

?RCS: Revision 3.0.1.3 1995/09/25 09:17:15 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.2 1995/01/30 14:46:13 ram

?RCS: patch49: can now handle installation prefix changes (from WED)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:32:04 ram

?RCS: patch32: now uses installation prefix

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:45 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:scriptdir scriptdirexp installscript:

afs cat test Getfile Loc \

Oldconfig +bin Prefixit prefixexp Prefixup

?MAKE: -pick add \$@ %<

?Y:TOP

?S:scriptdir:

?S: This variable holds the name of the directory in which the user wants

?S: to put publicly scripts for the package in question. It is either

?S: the same directory as for binaries, or a special one that can be

?S: mounted across different architectures, like /usr/share. Programs

?S: must be prepared to deal with ~name expansion.

?S:.

?S:scriptdirexp:

?S: This variable is the same as scriptdir, but is filename expanded

?S: at configuration time, for programs not wanting to bother with it.

?S:.

?S:installscript:

?S: This variable is usually the same as scriptdirexp, unless you are on

?S: a system running AFS, in which case they may differ slightly. You

?S: should always use this variable within your makefiles for portability.

?S:.

?C:SCRIPTDIR:

?C: This symbol holds the name of the directory in which the user wants

?C: to put publicly executable scripts for the

package in question. It

?C: is often a directory that is mounted across diverse architectures.

?C: Programs must be prepared to deal with ~name expansion.

?C:.

?C:SCRIPTDIR\_EXP:

?C: This is the same as SCRIPTDIR, but is filename expanded at

?C: configuration time, for use in programs not prepared to do

?C: ~name substitutions at run-time.

?C:.

?H:#define SCRIPTDIR "\$scriptdir" /\*\*/

?H:#define SCRIPTDIR\_EXP "\$scriptdirexp" /\*\*/

?H:.

: determine where public executable scripts go

set scriptdir scriptdir

eval \$prefixit

case "\$scriptdir" in

\*)

dflt="\$bin"

: guess some guesses

\$test -d /usr/share/scripts && dflt=/usr/share/scripts

\$test -d /usr/share/bin && dflt=/usr/share/bin

\$test -d /usr/local/script && dflt=/usr/local/script

\$test -d \$prefixexp/script && dflt=\$prefixexp/script

set dflt

eval \$prefixup

::

\*) dflt="\$scriptdir"

::

```
esac
$cat <<EOM
```

Some installations have a separate directory just for executable scripts so that they can mount it across multiple architectures but keep the scripts in one spot. You might, for example, have a subdirectory of /usr/share for this. Or you might just lump your scripts in with all your other executables.

```
EOM
fn=d~
rp='Where do you keep publicly executable scripts?'
./getfile
if $test "X$sansexp" != "X$scriptdirexp"; then
installscript="
fi
scriptdir="$sans"
scriptdirexp="$sansexp"
if $afs; then
$cat <<EOM
```

Since you are running AFS, I need to distinguish the directory in which scripts reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```
EOM
case "$installscript" in
") dflt=`echo $scriptdirexp | sed 's#^/afs/#/afs/#`";
*) dflt="$installscript";
esac
fn=de~
rp='Where will public scripts be installed?'
./getfile
installscript="$sans"
else
installscript="$scriptdirexp"
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/scriptdir.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_systable.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

?RCS: as specified in the README file that comes with the distribution.  
 ?RCS: You may reuse parts of this distribution only within the terms of  
 ?RCS: that same Artistic Licence; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: \$Log: i\_systable.U,v \$  
 ?RCS: Revision 3.0.1.1 1993/10/16 13:50:20 ram  
 ?RCS: patch12: created  
 ?RCS:  
 ?RCS:  
 ?MAKE:i\_systable: Inhdr  
 ?MAKE: -pick add \$@ %<  
 ?S:i\_systable:  
 ?S: This variable conditionally defines the I\_SYS\_TABLE symbol, and  
 ?S: indicates whether a C program should include <sys/table.h>.  
 ?S:.  
 ?C:I\_SYS\_TABLE:  
 ?C: This symbol, if defined, indicates to the C program that it should  
 ?C: include <sys/table.h> for the OSF/1 table() system call.  
 ?C:.  
 ?H:#\$i\_systable  
 I\_SYS\_TABLE /\*\*/  
 ?H:.  
 ?LINT:set i\_systable  
 : see if this is an OSF sys/table system  
 set sys/table.h i\_systable  
 eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_systable.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
 ?RCS:  
 ?RCS: Copyright (c) 1996, Andy Dougherty  
 ?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
 ?RCS:  
 ?RCS: You may redistribute only under the terms of the Artistic License,  
 ?RCS: as specified in the README file that comes with the distribution.  
 ?RCS: You may reuse parts of this distribution only within the terms of  
 ?RCS: that same Artistic License; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 4.0.  
 ?RCS:  
 ?RCS: You may distribute under the terms of either the GNU General Public  
 ?RCS: License or the Artistic License, as specified in the README file.  
 ?RCS:  
 ?RCS: \$Log: d\_sigsetjmp.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:44:33 ram

?RCS: patch61: created

?RCS:

?MAKE:d\_sigsetjmp: Setvar cat +cc +ccflags +ldflags libs rm

?MAKE: -pick add \$@ %<

?S:d\_sigsetjmp:

?S: This variable conditionally defines the HAS\_SIGSETJMP symbol,

?S: which indicates that the sigsetjmp() routine

is available to

?S: call setjmp() and optionally save the process's signal mask.

?S:.

?C:HAS\_SIGSETJMP:

?C: This variable indicates to the C program that the sigsetjmp()

?C: routine is available to save the calling process's registers

?C: and stack environment for later use by siglongjmp(), and

?C: to optionally save the process's signal mask. See

?C: Sigjmp\_buf, Sigsetjmp, and Siglongjmp.

?C:.

?C:Sigjmp\_buf:

?C: This is the buffer type to be used with Sigsetjmp and Siglongjmp.

?C:.

?C:Sigsetjmp:

?C: This macro is used in the same way as sigsetjmp(), but will invoke

?C: traditional setjmp() if sigsetjmp isn't available.

?C: See HAS\_SIGSETJMP.

?C:.

?C:Siglongjmp:

?C: This macro is used in the same way as siglongjmp(), but will invoke

?C: traditional longjmp() if siglongjmp isn't available.

?C: See HAS\_SIGSETJMP.

?C:.

?H:%<:#\$d\_sigsetjmp HAS\_SIGSETJMP /\*\*/

?H:%<:#ifdef HAS\_SIGSETJMP

?H:%<:#define Sigjmp\_buf sigjmp\_buf

?H:%<:#define Sigsetjmp(buf,save\_mask) sigsetjmp((buf),(save\_mask))

?H:%<:#define

Siglongjmp(buf,retval) siglongjmp((buf),(retval))

?H:%<:#else

?H:%<:#define Sigjmp\_buf jmp\_buf

?H:%<:#define Sigsetjmp(buf,save\_mask) setjmp((buf))

?H:%<:#define Siglongjmp(buf,retval) longjmp((buf),(retval))

?H:%<:#endif

?H:.

?W:%<:Sigjmp\_buf Sigsetjmp Siglongjmp

?F:!set

?LINT:set d\_sigsetjmp

: see if sigsetjmp exists

?X: We can't check for these symbols with Inlibc because sigsetjmp

?X: is (sometimes? always?) a macro under GCC

```
echo " "  
case "$d_sigsetjmp" in  
")  
  $cat >set.c <<'EOP'  
  #include <setjmp.h>  
  sigjmp_buf env;  
  int set = 1;  
  int main()  
  {  
  if (sigsetjmp(env,1))  
    exit(set);  
  set = 0;  
  siglongjmp(env, 1);  
  exit(1);  
  }  
EOP  
if $cc $ccflags $ldflags -o set set.c $libs > /dev/null 2>&1 ; then  
  if ./set >/dev/null 2>&1; then  
    echo "POSIX sigsetjmp found." >&4  
    val="$define"  
  else  
    $cat >&4 <<EOM
```

Uh-Oh! You have POSIX sigsetjmp and siglongjmp, but they do not work properly!!

I'll ignore them.

```
EOM  
  val="$undef"  
  fi  
  else  
    echo "sigsetjmp not found."  
  >&4  
  val="$undef"  
  fi  
  ;;  
*) val="$d_sigsetjmp"  
  case "$d_sigsetjmp" in  
  $define) echo "POSIX sigsetjmp found." >&4;;  
  $undef) echo "sigsetjmp not found." >&4;;  
  esac  
  ;;  
esac  
set d_sigsetjmp  
eval $setvar  
$rm -f set.c set
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_sigsetjmp.U
```



No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_fpclassl: Inlibc
?MAKE: -pick add $@ %<
?S:d_fpclassl:
?S: This variable conditionally defines the HAS_FPCLASSL symbol, which
?S: indicates to the C program that the fpclassl() routine is available.
?S:.
?C:HAS_FPCLASSL:
?C: This symbol, if defined, indicates that the fpclassl routine is
?C: available to classify long doubles. Available for example in IRIX.
?C: The returned values are defined in <ieeefp.h> and are:
?C:
?C: FP_SNAN signaling NaN
?C: FP_QNAN quiet NaN
?C: FP_NINF negative infinity
?C: FP_PINF positive infinity
?C: FP_NDENORM negative denormalized non-zero
?C: FP_PDENORM positive denormalized non-zero
?C: FP_NZERO negative zero
?C: FP_PZERO positive zero
?C: FP_NNORM negative
normalized non-zero
?C: FP_PNORM positive normalized non-zero
?C:.
?H:#$d_fpclassl HAS_FPCLASSL /**/
?H:.
?LINT:set d_fpclassl
: see if fpclassl exists
set fpclassl d_fpclassl
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_fpclassl.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: siteprefix.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera $
?RCS:
?RCS: Copyright (c) 1999 Andy Dougherty
?RCS:
```

```

?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: siteprefix.U,v $
?RCS: Revision 1.1 1999/07/08 18:32:57 doughera
?RCS: Initial revision
?RCS:
?MAKE:siteprefix siteprefixexp +oldsiteprefix: Getfile Loc Oldconfig cat package prefix
?MAKE: -pick add $@ %<
?S:siteprefix:
?S: This variable holds the full absolute path of the directory below
?S: which the user will install add-on packages.
?S: See INSTALL for usage and examples.
?S:.
?S:siteprefixexp:
?S: This variable holds the full absolute path of the
?S: directory below
?S: which the user will install add-on packages. Derived from siteprefix.
?S:.
?S:oldsiteprefix:
?S: This variable is set non-null if the siteprefix was previously defined
?S: and gets set to a new value. Used internally by Configure only.
?S:.
: Set the siteprefix variables
$cat <<EOM

```

After \$package is installed, you may wish to install various add-on modules and utilities. Typically, these add-ons will be installed under \$prefix with the rest of this package. However, you may wish to install such add-ons elsewhere under a different prefix.

If you do not wish to put everything under a single prefix, that's ok. You will be prompted for the individual locations; this siteprefix is only used to suggest the defaults.

The default should be fine for most people.

EOM

```
fn=d~+
```

```
rp='Installation prefix to use for add-on modules and utilities?'
```

```
: XXX Here might be another good place for an installstyle setting.
```

```
case "$siteprefix" in
```

```
) dflt=$prefix ;;
```

```
*) dflt=$siteprefix
```

```

;;
esac
./getfile
: XXX Prefixit unit does not yet support siteprefix and vendorprefix
oldsiteprefix="
case "$siteprefix" in
") ;;
*) case "$ans" in
"$prefix") ;;
*) oldsiteprefix="$prefix";;
esac
;;
esac
siteprefix="$ans"
siteprefixexp="$ansexp"

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/siteprefix.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_sitecustomize.U,v \$

?RCS:

?RCS: Copyright (c) 2005-2006 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_sitecustomize.U,v \$

?RCS:

?MAKE:usesitecustomize: Oldconfig Setvar

?MAKE: -pick add \$@ %<

?S:usesitecustomize:

?S: This variable is set to true when the user requires a mechanism that

?S: allows the sysadmin to add entries to @INC at runtime. This variable

?S: being set, makes perl run '\$sitelib/sitecustomize.pl' at startup.

?S:.

?C:USE\_SITECUSTOMIZE:

?C: This symbol, if defined, indicates that sitecustomize should

?C: be used.

?C:.

?H:?%<:@if USE\_SITECUSTOMIZE

?H:?%<:#ifndef USE\_SITECUSTOMIZE

?H:?%<:#\$usesitecustomize USE\_SITECUSTOMIZE /\*\*/

?H:?%<:#endif

?H:?%<:@end

?H:.

: Check if site customization support was requested

```

case "$usesitecustomize" in
  $define|true|[[Yy]*)
    usesitecustomize="$define"
  ;;
  *)
    usesitecustomize="$undef"
  ;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_sitecustomize.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Extractall.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: Extractall.U,v $
```

```
?RCS: Revision 3.0.1.1 1997/02/28 15:00:43 ram
```

```
?RCS: patch61: created
```

```
?RCS:
```

```
?X:
```

```
?X: If extraction has been requested, load the configuration file, perform
```

```
?X: the extraction and exit.
```

```
?X:
```

```
?X: This unit was originally a part of Options.U. It had to be removed from
```

```
?X: it to prevent a dependency cycle: Extract -> src -> Options -> Extract
```

```
?X: The Begin.U unit now requires us before beginning to do anything
```

```
?X: interesting, to ensure
```

```
proper semantics. -- RAM, 15/03/96
```

```
?X:
```

```
?MAKE:Extractall: Extract Options
```

```
?MAKE: -pick wipe $@ %<
```

```
: extract files and exit if asked to do so
```

```
case "$extractsh" in
```

```
true)
```

```
?X: Undo the forced silent=true when -S was supplied, by probing realsilent
```

```
?X: which was set iff -s was also given. See Options.U for details.
```

```
case "$realsilent" in
```

```
true) ;;
```

```
*) exec 1>&4;;
```

```

esac
case "$config_sh" in
") config_sh='config.sh';;
esac
echo " "
echo "Fetching answers from $config_sh..."
cd ..
. $config_sh
?X: extract has to be run from the top directory, not within UU.
. UU/optdef.sh
echo " "
?X: extract has to be run from the top directory, not within UU.
. UU/extract
rm -rf UU
echo "Extraction done."
exit 0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Extractall.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_gethbynm.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:08 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_gethbynm: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_gethbynm (d\_gethstby):

?S: This variable conditionally defines the HAS\_GETHOSTBYNAME symbol, which

?S: indicates to the C program that the gethostbyname() routine is available

?S: to lookup host names in some data base or other.

?S:.

?C:HAS\_GETHOSTBYNAME (GETHOSTBYNAME):

?C: This symbol, if defined, indicates that the gethostbyname()

```
routine is
?C: available to lookup host names in some data base or other.
?C:.
?H:#$d_gethbynm HAS_GETHOSTBYNAME /**/
?H:.
?LINT:set d_gethbynm
: see if gethostbyname exists
set gethostbyname d_gethbynm
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_gethbynm.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: fpostype.U,v 3.0.1.2 1994/08/29 16:20:52 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: fpostype.U,v $
?RCS: Revision 3.0.1.2 1994/08/29 16:20:52 ram
?RCS: patch32: now uses new Typedef unit to compute type information
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 06:59:59 ram
?RCS: patch30: created
?RCS:
?MAKE:fpostype: Myread Typedef
?MAKE: -pick add $@ %<
?S:fpostype:
?S: This variable defines Fpos_t to be something like fpos_t, long,
?S: uint, or whatever type is used to declare file positions in libc.
?S:.
?C:Fpos_t:
?C: This symbol holds
the type used to declare file positions in libc.
?C: It can be fpos_t, long, uint, etc... It may be necessary to include
?C: <sys/types.h> to get any typedef'ed information.
?C:.
?H:#define Fpos_t $fpostype /* File position type */
?H:.
?LINT:set fpostype
: see what type file positions are declared as in the library
```

rp="What is the type for file position used by fsetpos()?"

set fpos\_t fpostype long stdio.h sys/types.h

eval \$typedef\_ask

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/fpostype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_bcopy.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_bcopy.U,v \$

?RCS: Revision 3.0.1.2 1993/10/16 13:48:04 ram

?RCS: patch12: added magic support for bcopy()

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 16:01:11 ram

?RCS: patch10: now only defines HAS\_BCOPY, no macro remap on memcpy (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:44 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_bcopy: Inlibc

?MAKE:-pick add \$@ %<

?S:d\_bcopy:

?S: This variable conditionally defines the HAS\_BCOPY  
symbol if

?S: the bcopy() routine is available to copy strings.

?S:.

?C:HAS\_BCOPY:

?C: This symbol is defined if the bcopy() routine is available to

?C: copy blocks of memory.

?C:.

?H:#\$d\_bcopy HAS\_BCOPY /\*\*/

?H:.

?M:bcopy: HAS\_BCOPY

?M:#ifndef HAS\_BCOPY

?M:#ifndef bcopy

?M:#define bcopy(s,d,l) memcpy((d),(s),(l))

?M:#endif

?M:#endif

```
?M:
?LINT:set d_bcopy
: see if bcopy exists
set bcopy d_bcopy
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_bcopy.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 2004 H.Merijn Brand
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:d_strlcat: Inlibc Hasproto d_gnulibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_strlcat:
```

```
?S: This variable conditionally defines the HAS_STRLCAT symbol, which
```

```
?S: indicates to the C program that the strlcat () routine is available.
```

```
?S:.
```

```
?C:HAS_STRLCAT:
```

```
?C: This symbol, if defined, indicates that the strlcat () routine is
```

```
?C: available to do string concatenation.
```

```
?C:.
```

```
?H:#$d_strlcat HAS_STRLCAT /**/
```

```
?H:.
```

```
?T:d_strlcat_proto xx1 xx2 xx3 xx4
```

```
?LINT:set d_strlcat
```

```
: see if strlcat exists
```

```
: We need both a prototype in string.h and the symbol in libc.
```

```
echo " "
```

```
d_strlcat_proto="
```

```
xx1="#$d_gnulibc HAS_GNULIBC"
```

```
xx2='#if defined(HAS_GNULIBC) && !defined(_GNU_SOURCE)'
```

```
xx3='# define _GNU_SOURCE'
```

```
xx4='#endif'
```

```
set d_strlcat_proto
```

```
strlcat literal "$xx1" literal "$xx2" literal "$xx3" literal "$xx4" define string.h
```

```
eval $hasproto
```

```
case "$d_strlcat_proto" in
```

```
define) # see if strlcat exists
```

```
set strlcat d_strlcat
```

```
eval $inlibc
```

```
::
```



```
*) val=$undef
set d_strlcat
eval $setvar
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_strlcat.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: libc.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: libc.U,v $
```

```
?RCS: Revision 3.0.1.10 1997/02/28 15:56:48 ram
```

```
?RCS: patch61: replaced .a with $_a all over the place
```

```
?RCS: patch61: added support for HPUX-10 nm output
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.9 1995/07/25 14:11:56 ram
```

```
?RCS: patch56: now knows about OS/2 platforms
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.8 1995/05/12 12:20:47 ram
```

```
?RCS: patch54: made sure only most recent version of shared lib is picked
```

```
?RCS: patch54: final "nm -p" check now uses xscan and xrun
```

```
like everybody
```

```
?RCS: patch54: can now grok Linux nm output with lead __IO (ADO)
```

```
?RCS: patch54: added support for Linux ELF output, using 'W' for alias (ADO)
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.7 1994/10/29 16:23:40 ram
```

```
?RCS: patch36: now looks for shared libraries before anything else (ADO)
```

```
?RCS: patch36: added new nm output format (ADO)
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.6 1994/08/29 16:28:10 ram
```

```
?RCS: patch32: added I-type symbols for nm output parsing on Linux
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.5 1994/06/20 07:03:24 ram
```

```
?RCS: patch30: checks are now presented by succession of if/elif
```

```
?RCS: patch30: uniformized checks for shared objects with new so symbol
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.4 1994/05/06 15:06:33 ram
```

```

?RCS: patch23: added shared library knowledge (ADO and WED)
?RCS:
?RCS: Revision 3.0.1.3 1994/01/24 14:12:17 ram
?RCS: patch16: can now export nm_extract as an internal-use only variable
?RCS:
?RCS: Revision 3.0.1.2 1993/09/13 16:09:03 ram
?RCS: patch10: added special handling for Apollo
systems (WAD)
?RCS:
?RCS: Revision 3.0.1.1 1993/08/27 14:40:03 ram
?RCS: patch7: added entry for /usr/shlib/libc.so (OSF/1 machines)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:57 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:libc +nm_extract: echo n c rm test grep Getfile Myread Oldconfig Loc \
sed libs incpath libpth ar runnm nm nm_opt nm_so_opt contains xlibpth \
so _a _o osname trnl tr sort uniq sysroot
?MAKE: -pick add $@ %<
?S:libc:
?S: This variable contains the location of the C library.
?S:.
?S:nm_extract:
?S: This variable holds the name of the extraction command used to process
?S: the output of nm and yield the list of defined symbols. It is used
?S: internally by Configure.
?S:.
?T:thislib try libnames xxx xscan xrun thisname com tans file
?F:!libnames !libc.tmp !tmp.imp
?LINT:extern PASE
?LINT:extern libnames
?LINT:change nm_opt
?INIT:libnames="
: Figure out where the libc is located
case "$runnm" in
true)
?X: indentation is wrong on purpose--RAM
:
get list of predefined functions in a handy place
echo " "
case "$libc" in
") libc=unknown
case "$libs" in
*-lc_s*) libc=`./loc libc_s$_a $libc $libpth`
esac
;;
esac
case "$libs" in

```

```

") ;;
*) for thislib in $libs; do
case "$thislib" in
-lc|-lc_s)
: Handle C library specially below.
;;
-l*)
thislib=`echo $thislib | $sed -e 's/^-l//'^
if try=`./loc lib$thislib.$so.*' X $libpth`; $test -f "$try"; then
:
elif try=`./loc lib$thislib.$so X $libpth`; $test -f "$try"; then
:
elif try=`./loc lib$thislib$_a X $libpth`; $test -f "$try"; then
:
elif try=`./loc $thislib$_a X $libpth`; $test -f "$try"; then
:
elif try=`./loc lib$thislib X $libpth`; $test -f "$try"; then
:
elif try=`./loc $thislib X $libpth`; $test -f "$try"; then
:
elif try=`./loc $lib$thislib$_a X $libpth`; $test -f "$try"; then
:
else
try="
fi
libnames="$libnames $try"
;;
*) libnames="$libnames $thislib" ;;
esac
done
;;
esac
?X:
?X: Some systems (e.g. DG/UX) use
"environmental" links, which make the test
?X: -f fail. Ditto for symbolic links. So in order to reliably check the
?X: existence of a file, we use test -r. It will still fail with DG/UX links
?X: though, but at least it will detect symbolic links. At some strategic
?X: points, we make use of (test -h), using a sub-shell in case builtin test
?X: does not implement the -h check for symbolic links. This makes it
?X: possible to preset libc in a hint file for instance and have it show up
?X: as-is in the question.
?X:
xxx=normal
case "$libc" in
unknown)
?X:
?X: The sed below transforms .so.9 .so.12 into something like .so.0009 .so.0012,

```

?X: then sorts on it to allow keeping .so.12 instead of .so.9 as the latest  
?X: up-to-date library. The initial filename (before sed munging, saved in hold  
?X: space via 'h') is appended via 'G' before sorting, then the leading munged  
?X: part is removed after sorting. Nice efficient work from Tye McQueen.

?X: The initial blurfl is here to prevent the trailing  
pipe from producing an

?X: empty string, causing Configure to output all its set variables!

?X:

```
set /lib/libc.$so
for xxx in $libpth; do
  $test -r $1 || set $xxx/libc.$so
  : The messy sed command sorts on library version numbers.
  $test -r $1 || \
  set `echo blurfl; echo $xxx/libc.$so.[0-9]* | \
  tr ' ' $trnl | egrep -v \.[A-Za-z]*$' | $sed -e '
  h
  s/[0-9][0-9]*/0000&/g
  s/0*\([0-9][0-9][0-9][0-9][0-9]\)^1/g
  G
  s^n/^' | \
  $sort | $sed -e 's/^.* //'^
eval set \$$#
done
$test -r $1 || set $sysroot/usr/ccs/lib/libc.$so
$test -r $1 || set $sysroot/lib/libsys_s$a
```

::

\*)

?X: ensure the test below for the (shared) C library will fail

```
set blurfl
```

::

esac

```
if $test -r "$1"; then
```

```
  echo "Your (shared) C library seems to be in $1."
```

```
  libc="$1"
```

```
elif $test -r /lib/libc && $test -r /lib/clib; then
```

?X:

?X: Apollo has its C library in /lib/clib AND /lib/libc

?X: not to mention its math library in /lib/syslib...

?X:

```
echo "Your C library seems to be in both /lib/clib
and /lib/libc."
```

```
xxx=apollo
```

```
libc='/lib/clib /lib/libc'
```

```
if $test -r /lib/syslib; then
```

```
  echo "(Your math library is in /lib/syslib.)"
```

?X: Put syslib in libc -- not quite right, but won't hurt

```
  libc="$libc /lib/syslib"
```

```
fi
```

```

elif $test -r "$libc" || (test -h "$libc") >/dev/null 2>&1; then
    echo "Your C library seems to be in $libc, as you said before."
?X: For mips, and...
elif $test -r $incpath/usr/lib/libc$_a; then
    libc=$incpath/usr/lib/libc$_a;
    echo "Your C library seems to be in $libc. That's fine."
elif $test -r /lib/libc$_a; then
    libc=/lib/libc$_a;
    echo "Your C library seems to be in $libc. You're normal."
else
    if tans=`./loc libc$_a blurfl/dyick $libpth`; $test -r "$stans"; then
        :
    elif tans=`./loc libc blurfl/dyick $libpth`; $test -r "$stans"; then
        libnames="$libnames "`./loc clib blurfl/dyick $libpth`
    elif tans=`./loc clib blurfl/dyick $libpth`; $test -r "$stans"; then
        :
    elif tans=`./loc Slibc$_a blurfl/dyick $xlibpth`; $test -r "$stans"; then
        :
    elif tans=`./loc
Mlibc$_a blurfl/dyick $xlibpth`; $test -r "$stans"; then
        :
    else
        tans=`./loc Llibc$_a blurfl/dyick $xlibpth`
    fi
    if $test -r "$stans"; then
        echo "Your C library seems to be in $stans, of all places."
        libc=$stans
    else
        libc='blurfl'
    fi
fi
if $test $xxx = apollo -o -r "$libc" || (test -h "$libc") >/dev/null 2>&1; then
    dflt="$libc"
cat <<EOM

```

If the guess above is wrong (which it might be if you're using a strange compiler, or your machine supports multiple models), you can override it here.

```

EOM
else
    dflt="
echo $libpth | $tr ' ' $trnl | $sort | $uniq > libpath
cat >&4 <<EOM

```

I can't seem to find your C library. I've looked in the following places:

```

EOM
$sed 's/^/ /' libpath
cat <<EOM

```

None of these seems to contain your C library. I need to get its name...

```
EOM
fi
fn=f
rp='Where is your C library?'
./getfile
libc="$ans"

echo " "
echo $libc $libnames | $tr ' ' $trnl | $sort | $uniq > libnames
set X `cat libnames`
shift
xxx=files
case $# in 1) xxx=file; esac
echo
"Extracting names from the following $xxx for later perusal:" >&4
echo " "
$sed 's/^/ /' libnames >&4
echo " "
$echo $n "This may take a while...$c" >&4

?X:
?X: Linux may need the special Dynamic option to nm for shared libraries.
?X: In general, this is stored in the nm_so_opt variable.
?X: Unfortunately, that option may be fatal on non-shared libraries.
?X:
for file in $*; do
case $file in
*$so*) $nm $nm_so_opt $nm_opt $file 2>/dev/null;;
*) $nm $nm_opt $file 2>/dev/null;;
esac
done >libc.tmp

$echo $n ".$c"
?X:
?X: To accelerate processing, we look at the correct 'sed' command
?X: by using a small subset of libc.tmp, i.e. fprintf function.
?X: When we know which sed command to use, do the name extraction
?X:
$grep fprintf libc.tmp > libc.ptf
?X:
?X: In order to enhance readability and save some space, we define
?X: some variables that will be "eval"ed.
?X:
xscan='eval "<libc.ptf $com >libc.list"; $echo $n ".$c" >&4'
xrun='eval "<libc.tmp $com >libc.list"; echo "done." >&4'
```

?X:

BSD-like output, I and W types added for Linux

?X: Some versions of Linux include a leading \_\_IO in the symbol name.

?X: HP-UX 10 reportedly has trailing spaces, though I'm surprised it has

?X: BSD-like output. (AD).

?X: GNU extension: i is "indirect function"

```
xxx='[ADTSIW]'
```

```
if com="$sed -n -e 's/___IO//' -e 's/^. * $xxx *//p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

?X: SYSV-like output

```
elif com="$sed -n -e 's/___ *//' -e 's/^\([a-zA-Z_0-9]*\).*xtern.*\1/p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

```
elif com="$sed -n -e '/|UNDEF/d' -e '/FUNC..GL/s/^. *|__ *//p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

```
elif com="$sed -n -e 's/^. * D __ *//p' -e 's/^. * D //p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

```
elif com="$sed -n -e 's/___/' -e 's/^\([a-zA-Z_0-9]*\).*xtern.*text.*\1/p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$'
```

```
libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

```
elif com="$sed -n -e 's/^. *|FUNC |GLOB . *//p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

```
elif com="$grep '|' $sed -n -e '/|COMMON/d' -e '/|DATA/d' \
```

```
-e '/ file/d' -e 's/^\([ ^ ]*\).*\1/p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

```
elif com="$sed -n -e 's/^. *|FUNC |GLOB . *//p' -e 's/^. *|FUNC |WEAK . *//p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

?X: mips nm output (sysV)

```
elif com="$sed -n -e 's/___/' -e '/|Undef/d' -e '/|Proc/s/ . *//p';\
```

```
eval $xscan;\
```

```
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
```

```
eval $xrun
```

```
elif com="$sed -n -e 's/^. *|Proc . *|Text *| *//p';\
```

```

eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
    eval $xrun
elif com="$sed -n -e '/Def. Text/s/.*/ \([\^ ]*\)\$/\1/p";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
    eval $xrun
?X: OS/2
nm output
elif com="$sed -n -e 's/^-0-9a-f ]*_\(.*)=.*\1/p";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
    eval $xrun
elif com="$sed -n -e 's/.*\.text n\ \ \ \.//p";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
    eval $xrun
?X: AIX nm output
elif com="sed -n -e 's/^\_.*// -e 's/[ \ ]*D[ \ ]*[0-9]*.*//p";\
eval $xscan;\
$contains '^fprintf$' libc.list >/dev/null 2>&1; then
    eval $xrun
else
$nm -p $* 2>/dev/null >libc.tmp
$grep fprintf libc.tmp > libc.ptf
if com="$sed -n -e 's/.* [ADTSIW] *_[_.]*/p' -e 's/.* [ADTSIW] //p";\
eval $xscan; $contains '^fprintf$' libc.list >/dev/null 2>&1
then
nm_opt='-p'
eval $xrun
else
echo " "
echo "$nm didn't seem to work right. Trying $ar instead..." >&4
com="
if $ar t $libc > libc.tmp && \
$contains '^fprintf$' libc.tmp >/dev/null 2>&1
then
for thisname in $libnames $libc; do
$ar t $thisname >>libc.tmp
done
$sed -e "s/\$_o\$//" < libc.tmp > libc.list
echo
"Ok." >&4
elif test "X$osname" = "Xos2" && $ar tv $libc > libc.tmp; then
?X: Repeat libc to extract forwarders to DLL entries too
for thisname in $libnames $libc; do
$ar tv $thisname >>libc.tmp
?X: Revision 50 of EMX has bug in ar: it will not extract forwarders

```



?X: to DLL entries. Use emximp which will extract exactly them.

```
emximp -o tmp.imp $thisname \  
 2>/dev/null && \  
 $sed -e 's/^([_a-zA-Z0-9]*) .*$/1/p' \  
 < tmp.imp >>libc.tmp  
 $rm -f tmp.imp  
 done  
 $sed -e "s/\$_o\$//" -e 's/^ \+/' < libc.tmp > libc.list  
 echo "Ok." >&4  
 else  
 echo "$ar didn't seem to work right." >&4  
 echo "Maybe this is a Cray...trying bld instead..." >&4  
 if bld t $libc | \  
 $sed -e 's/.*\///' -e "s/\$_o:.*\$//" > libc.list &&  
 $test -s libc.list  
 then  
 for thisname in $libnames; do  
 bld t $libnames | \  
 $sed -e 's/.*\///' -e "s/\$_o:.*\$//" >>libc.list  
 $ar t $thisname >>libc.tmp  
 done  
 echo "Ok." >&4  
 else  
 echo  
 "That didn't work either. Giving up." >&4  
 exit 1  
 fi  
 fi  
 fi  
 fi  
 nm_extract="$com"  
 case "$PASE" in  
 define)  
 echo " "  
 echo "Since you are compiling for PASE, extracting more symbols from libc.a ..." >&4  
 dump -Tv /lib/libc.a | awk '$7 == "/unix" {print $5 " " $8}' | grep "^SV" | awk '{print $2}' >> libc.list  
 ;;  
 *) if $test -f /lib/syscalls.exp; then  
 echo " "  
 echo "Also extracting names from /lib/syscalls.exp for good ole AIX..." >&4  
 $sed -n 's/^([^\ ]*)[ \]*syscall[0-9]*[ \]*$/1/p' \  
 /lib/syscalls.exp >>libc.list  
 fi  
 ;;  
 esac  
 ;;  
 esac  
 $rm -f libnames libpath
```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/libc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Inhdr.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Inhdr.U,v \$

?RCS: Revision 3.0.1.2 1995/05/12 12:01:31 ram

?RCS: patch54: deleted tabs that caused some /bin/sh to core dump (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 15:55:01 ram

?RCS: patch36: call ./whoa explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:01 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit checks whether a set of header files exists or not.

?X: If the first header is not

found, the function tries to locate

?X: the next header, and so on, until one is found or there is no

?X: more header in the list.

?X:

?X: To use it, say:

?X: set header i\_header [ header2 i\_header2 ... ]

?X: eval \$inhdr

?X:

?MAKE:Inhdr: test Findhdr Whoa

?MAKE:-pick add \$@ %<

?LINT:define inhdr

?V:inhdr

?S:inhdr:

?S: This shell variable is used internally by Configure to check

?S: whether a set of headers exist or not. A typical use is:

?S: set header i\_header [ header2 i\_header2 ... ]

?S: eval \$inhdr

?S: That will print a message, saying whether header was found or not

?S: and set i\_header\* accordingly. If the first header is not found,

?S: we try the next one, until the list is empty or one is found.

?S:.

?T:xxx xxf var td xxnf tu yyy instead was cont

: define an alternate in-header-list? function

```
inhdr='echo " "; td=$define; tu=$undef; yyy=$@;
```

```
cont=true; xxf="echo \"<\\$1> found.\" >&4";
```

```
case $# in 2) xxnf="echo \"<\\$1> NOT found.\" >&4";;
```

```
*) xxnf="echo \"<\\$1> NOT found, ...\" >&4";;
```

```
esac;
```

```
case
```

```
$# in 4) instead=instead;; *) instead="at last";; esac;
```

```
while $test "$cont"; do
```

```
xxx=`./findhdr $1`
```

```
var=$2; eval "was=\\$2";
```

```
if $test "$xxx" && $test -r "$xxx";
```

```
then eval $xxf;
```

?X: Next line shifted left 1 tabstop to avoid sh core dump on MachTen 2.1.1.

```
eval "case \"\\$var\" in $undef) ./whoa; esac"; eval "$var=\\$td";
```

```
cont="";
```

```
else eval $xxnf;
```

?X: Likewise, the next line has been shifted left 1 tabstop -- ADO, 08/03/95

```
eval "case \"\\$var\" in $define) ./whoa; esac"; eval "$var=\\$tu"; fi;
```

```
set $yyy; shift; shift; yyy=$@;
```

```
case $# in 0) cont="";;
```

```
2) xxf="echo \"but I found <\\$1> $instead.\" >&4";
```

```
xxnf="echo \"and I did not find <\\$1> either.\" >&4";;
```

```
*) xxf="echo \"but I found <\\$1> instead.\" >&4";
```

```
xxnf="echo \"there is no <\\$1>, ...\" >&4";;
```

```
esac;
```

```
done;
```

?X: Remaining values are set to 'undef'

```
while $test "$yyy";
```

```
do set $yyy; var=$2; eval "was=\\$2";
```

```
eval "case \"\\$var\" in $define) ./whoa; esac"; eval "$var=\\$tu";
```

```
set $yyy; shift; shift; yyy=$@;
```

```
done'
```

Found

in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Inhdr.U
```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_scalbn: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_scalbn:  
?S: This variable conditionally defines the HAS\_SCALBN symbol, which  
?S: indicates to the C program that the scalbn() routine is available.  
?S:.  
?C:HAS\_SCALBN:  
?C: This symbol, if defined, indicates that the scalbn routine is  
?C: available to multiply floating-point number by integral power  
?C: of radix.  
?C:.  
?H:#\$d\_scalbn HAS\_SCALBN /\*\*/  
?H:.  
?LINT:set d\_scalbn  
: see if scalbn exists  
set scalbn d\_scalbn  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_scalbn.U

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?RCS: of the source tree for dist 3.0.  
?RCS:  
?MAKE:d\_c99\_variadic\_macros: Compile Setvar cat rm\_try run  
?MAKE: -pick add \$@ %<  
?S:d\_c99\_variadic\_macros:  
?S: This variable conditionally defines the HAS\_C99\_VARIADIC\_MACROS  
?S: symbol, which indicates to the C program that C99 variadic macros  
?S: are available.  
?S:.  
?C:HAS\_C99\_VARIADIC\_MACROS:  
?C: If defined, the compiler supports C99 variadic macros.  
?C:.  
?H:#\$d\_c99\_variadic\_macros HAS\_C99\_VARIADIC\_MACROS /\*\*/  
?H:.  
?F:!try  
: see if the Compiler supports C99 variadic macros  
echo "Checking for C99 variadic macros." >&4  
\$cat >try.c <<EOCP  
#include  
<stdio.h>  
#include <stdarg.h>

```

#define foo(buffer, format, ...) sprintf(buffer, format, __VA_ARGS__)

int main() {
char buf[20];
foo(buf, "%d %g %.*s", 123, 456.0, (int)3, "789fail");
puts(buf);
return 0;
}
EOCP
set try
if eval $compile && $run ./try 2>&1 >/dev/null; then
  case "`$run ./try`" in
    "123 456 789")
      echo "You have C99 variadic macros." >&4
      d_c99_variadic_macros="$define"
      ;;
    *)
      echo "You don't have functional C99 variadic macros." >&4
      d_c99_variadic_macros="$undef"
      ;;
  esac
else
  echo "I couldn't compile and run the test program, so I assume that you don't have functional C99 variadic macros." >&4
  d_c99_variadic_macros="$undef"
fi
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_c99_variadic.U

```

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: End.U,v \$

?RCS: Revision 3.0 1993/08/18 12:04:51 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

```

?X:
?X: This unit serves as the goal which forces make to choose all the units that
?X: ask questions. The $W on the ?MAKE: line is the list of all symbols wanted.
?X: To force any unit to be included, copy this unit to your private U directory
?X: and add the name of the unit desired to the ?MAKE: dependency line.
?X:
?MAKE:End: $W
?MAKE: -pick add $@ %<
?LINT:use $W
: end of configuration
questions
echo " "
echo "End of configuration questions."

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/End.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS:
?RCS: Copyright (c) 1999, Jarkko Hietaniemi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
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?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:gidsign: Myread Typedef gidtype Compile run
?MAKE: -pick add $@ %<
?S:gidsign:
?S: This variable contains the signedness of a gidtype.
?S: 1 for unsigned, -1 for signed.
?S:.
?C:Gid_t_sign:
?C: This symbol holds the signedness of a Gid_t.
?C: 1 for unsigned, -1 for signed.
?C:.
?H:#define Gid_t_sign $gidsign /* GID sign */
?H:.
?T:yyy zzz
?F:!try
: Check if GID is signed
echo " "
case "$gidtype" in
*_t) zzz="$gidtype" ;;
*) zzz="gid" ;;
esac

```

```

echo "Checking the sign of $zzz..." >&4
cat > try.c <<EOCP
#include <sys/types.h>
#include
<stdio.h>
int main() {
    $gidtype foo = -1;
    if (foo < 0)
        printf("-1\n");
    else
        printf("1\n");
}
EOCP
set try
if eval $compile; then
    yyy=`$run ./try`
    case "$yyy" in
        *) gidsign=1
            echo "(I can't execute the test program--guessing unsigned.)" >&4
            ;;
        *) gidsign=$yyy
            case "$gidsign" in
                1) echo "Your $zzz is unsigned." ;;
                -1) echo "Your $zzz is signed." ;;
            esac
            ;;
        esac
    else
        gidsign=1
        echo "(I can't compile the test program--guessing unsigned.)" >&4
    fi

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/gidsign.U
```

No license file was found, but licenses were detected in source scan.

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_keepsig.U,v \$

?RCS: Revision 3.0.1.4 1995/07/25 13:57:56 ram  
?RCS: patch56: made cc and ccflags optional dependencies  
?RCS:  
?RCS: Revision 3.0.1.3 1995/01/11 15:26:25 ram  
?RCS: patch45: protected "sh -c" within backquotes for Linux and SGI  
?RCS:  
?RCS: Revision 3.0.1.2 1994/10/29 16:13:59 ram  
?RCS: patch36: call ./bsd explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0.1.1 1993/10/16 13:48:47 ram  
?RCS: patch12: comment for SIGNALS\_KEPT was the other way round  
?RCS:  
?RCS:  
Revision 3.0 1993/08/18 12:06:26 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_keepsig: cat Compile rm Guess contains echo n c Setvar run  
?MAKE: -pick add \$@ %<  
?S:d\_keepsig:  
?S: This variable contains the eventual value of the SIGNALS\_KEPT symbol,  
?S: which indicates to the C program if signal handlers need not reinstated  
?S: after receipt of a signal.  
?S:.  
?C:SIGNALS\_KEPT (PERSISTENT\_SIGNAL):  
?C: This symbol is defined if signal handlers needn't be reinstated after  
?C: receipt of a signal.  
?C:.  
?H:#\$d\_keepsig SIGNALS\_KEPT /\*\*/  
?H:.  
?F:!try !try.out  
?LINT:set d\_keepsig  
: see if signals are kept  
val="\$undef";  
echo " "  
echo "Checking to see if signal handlers stick around..." >&4  
\$cat >try.c <<'EOCP'  
foo() {}  
  
int main()  
{  
signal(2, foo);  
kill(getpid(), 2);  
kill(getpid(), 2);  
printf("abc\n");  
}  
EOCP  
set try  
if eval \$compile; then



```

?X: On AIX a single ./try will not work (with ksh)
?X: Backquotes required on Linux and SGI (prevents "ambiguous output redirect")
?X:
(reported by Xavier LeVouch <xavierl@eiffel.com>)
echo `sh -c $run ./try >try.out 2>/dev/null` >/dev/null
if $contains abc try.out >/dev/null 2>&1; then
  echo "Yes, they do."
  val="$define";
else
  echo "No, they don't."
fi
else
$echo $n "(I can't seem to compile the test program. Assuming $c"
if ./bsd; then
  echo "they do.)"
  val="$define"
else
  echo "they don't.)"
fi
fi
set d_keepsig
eval $setvar
$rm -f try*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_keepsig.U

```

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```

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?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_clearenv: Inlibc
?MAKE: -pick add $@ %<
?S:d_clearenv:
?S: This variable conditionally defines the HAS_CLEARENV symbol, which
?S: indicates to the C program that the clearenv () routine is available.
?S:.
?C:HAS_CLEARENV:
?C: This symbol, if defined, indicates that the clearenv () routine is
?C: available for use.
?C:.
?H:#$d_clearenv HAS_CLEARENV /**/
?H:.

```

```
?LINT:set d_clearenv
: see if clearenv exists
set clearenv d_clearenv
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_clearenv.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_strchr.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
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```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_strchr.U,v $
```

```
?RCS: Revision 3.0.1.2 1993/10/16 13:49:20 ram
```

```
?RCS: patch12: added support for HAS_INDEX
```

```
?RCS: patch12: added magic for index() and rindex()
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1993/09/13 16:05:26 ram
```

```
?RCS: patch10: now only defines HAS_STRCHR, no macro remap of index (WAD)
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:07:32 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_strchr d_index: contains strings Setvar Myread Oldconfig
```

```
Csym
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_strchr:
```

```
?S: This variable conditionally defines HAS_STRCHR if strchr() and
```

```
?S: strrchr() are available for string searching.
```

```
?S:.
```

```
?S:d_index:
```

```
?S: This variable conditionally defines HAS_INDEX if index() and
```

```
?S: rindex() are available for string searching.
```

```
?S:.
```

```
?C:HAS_STRCHR:
```

```
?C: This symbol is defined to indicate that the strchr()/strrchr()
```

```
?C: functions are available for string searching. If not, try the
```

```
?C: index()/rindex() pair.
```

```
?C:.
```

```
?C:HAS_INDEX:
```

?C: This symbol is defined to indicate that the index()/rindex()

?C: functions are available for string searching.

?C:.

?H:#\$d\_strchr HAS\_STRCHR /\*\*/

?H:#\$d\_index HAS\_INDEX /\*\*/

?H:.

?M:index: HAS\_INDEX

?M:#ifndef HAS\_INDEX

?M:#ifndef index

?M:#define index strchr

?M:#endif

?M:#endif

?M:.

?M:rindex: HAS\_INDEX

?M:#ifndef HAS\_INDEX

?M:#ifndef rindex

?M:#define rindex strchr

?M:#endif

?M:#endif

?M:.

?T:vali

?LINT:set d\_strchr d\_index

: index or strchr

echo " "

if set index val -f; eval \$csym; \$val; then

if

set strchr val -f d\_strchr; eval \$csym; \$val; then

if \$contains strchr "\$strings" >/dev/null 2>&1 ; then

?X: has index, strchr, and strchr in string header

val="\$define"

vali="\$undef"

echo "strchr() found." >&4

else

?X: has index, strchr, and no strchr in string header

val="\$undef"

vali="\$define"

echo "index() found." >&4

fi

else

?X: has only index, no strchr, string header is a moot point

val="\$undef"

vali="\$define"

echo "index() found." >&4

fi

else

if set strchr val -f d\_strchr; eval \$csym; \$val; then

val="\$define"

vali="\$undef"

```
echo "strchr() found." >&4
else
echo "No index() or strchr() found!" >&4
val="$undef"
vali="$undef"
fi
fi
set d_strchr; eval $setvar
val="$vali"
set d_index; eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_strchr.U
```

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_scannl.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:41:27 ram

?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.1 1995/07/25 13:59:12 ram

?RCS: patch56: made cc and ccflags optional dependencies

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:00 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: Does the scanf routine read "\n" correctly ? This is was not

?X: the case on AIX...

?X:

?MAKE:d\_scannl: cat +cc +ccflags rm Setvar

?MAKE: -pick add \$@ %<

?S:d\_scannl:

?S: This

variable conditionally defines SCAN\_NL, which indicates

?S: whether the C library routines scanf() and friends can deal with

?S: a '\n' in the input correctly. They do most of the time.

?S:.

?C:SCAN\_NL:

?C: This symbol is defined if the C library routines scanf() and friends

?C: can deal with a '\n' in the input correctly, so that you can say

?C: scanf("%d\n"); instead of scanf("%d"); getc(c); to handle the '\n'.

?C:.

?H:#\$d\_scannl SCAN\_NL /\* scanf("%d\n") works \*/

?H:.

?F:!try

?LINT:set d\_scannl

: does scanf handle "\n" correctly ?

echo " "

val="\$define"

?X: I really want to say "\n" instead of '\n', because I am referring

?X: to the string given as argument to scanf().

echo 'Let''''s see if scanf() handles "\\n" correctly...' >&4

\$cat >try.c <<'EOCP'

int main()

{

int i = 0, j = 0;

scanf("%d\n%d", &i, &j);

if (j != 3)

exit(1);

exit(0);

}

EOCP

if \$cc \$ccflags -o try try.c >/dev/null 2>&1; then

if ./try <<'EOD'

2

3

EOD

then

echo "Yes, it does."

else

echo "No, it doesn't."

val="\$undef"

fi

else

echo

"(I can't seem to compile the test program. Assuming it does.)"

fi

set d\_scannl

eval \$setvar

\$rm -f try.\* try

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_scannl.U

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```
?RCS: $Id: d_dup2.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
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?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_dup2.U,v $
?RCS: Revision 3.0 1993/08/18 12:05:56 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_dup2: Inlibc
?MAKE: -pick add $@ %<
?S:d_dup2:
?S: This variable conditionally defines HAS_DUP2 if dup2() is
?S: available to duplicate file descriptors.
?S:.
?C:HAS_DUP2 (DUP2):
?C: This symbol, if defined, indicates that the dup2 routine is
?C: available to duplicate file descriptors.
?C:.
?H:#$d_dup2 HAS_DUP2 /**/
?H:.
?LINT:set d_dup2
:
  see if dup2 exists
  set dup2 d_dup2
  eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_dup2.U
```

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```
?RCS: $Id: Warn_v7EXT.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 4.0.
```

```
?RCS:
?RCS: $Log: Warn_v7EXT.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:01:42 ram
?RCS: patch36: call ./v7 explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:17 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit issues warnings to V7 sites that they are living dangerously.
?X: This unit needs to get mentioned in End.U to get included.
?X:
?MAKE:Warn_v7EXT: package Guess
?MAKE: -pick add $@ %<
: Warnings
if ./v7;
then
cat <<EOM
```

NOTE: the V7 compiler may ignore some #undefs that \$package uses. If so, you may get messages about redefining EXT. Some V7 compilers also have difficulties with #defines near buffer boundaries, so beware. You may have to play with the spacing in some .h files, believe it or not.

```
EOM
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Warn_v7EXT.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
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?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: archlib.U,v $
?RCS: Revision 3.0.1.5 1997/02/28 15:23:38 ram
?RCS: patch61: skip existence checks for archlib
?RCS:
?RCS: Revision 3.0.1.4 1995/09/25 09:15:18 ram
```

?RCS: patch59: unit is now forced to the top of Configure, if possible  
?RCS:  
?RCS: Revision 3.0.1.3 1995/02/15 14:14:14 ram  
?RCS: patch51: architecture name is now computed by a separate unit  
?RCS:  
?RCS: Revision 3.0.1.2 1995/01/30 14:32:22 ram  
?RCS:  
patch49: archname is now systematically recomputed  
?RCS: patch49: can now handle installation prefix changes (from WED)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:02:36 ram  
?RCS: patch36: created by ADO  
?RCS:  
?MAKE:d\_archlib archlib archlibexp installarchlib: archname afs spackage \  
cat Getfile Loc Oldconfig prefixexp privlib test Prefixit Prefixup  
?MAKE: -pick add \$@ %<  
?Y:TOP  
?S:d\_archlib:  
?S: This variable conditionally defines ARCHLIB to hold the pathname  
?S: of architecture-dependent library files for \$package. If  
?S: \$archlib is the same as \$privlib, then this is set to undef.  
?S:.  
?S:archlib:  
?S: This variable holds the name of the directory in which the user wants  
?S: to put architecture-dependent public library files for \$package.  
?S: It is most often a local directory such as /usr/local/lib.  
?S: Programs using this variable must be prepared to deal  
?S: with filename expansion.  
?S:.  
?S:archlibexp:  
?S: This variable is the same as the archlib variable, but is  
?S: filename  
expanded at configuration time, for convenient use.  
?S:.  
?S:installarchlib:  
?S: This variable is really the same as archlibexp but may differ on  
?S: those systems using AFS. For extra portability, only this variable  
?S: should be used in makefiles.  
?S:.  
?C:ARCHLIB:  
?C: This variable, if defined, holds the name of the directory in  
?C: which the user wants to put architecture-dependent public  
?C: library files for \$package. It is most often a local directory  
?C: such as /usr/local/lib. Programs using this variable must be  
?C: prepared to deal with filename expansion. If ARCHLIB is the  
?C: same as PRIVLIB, it is not defined, since presumably the  
?C: program already searches PRIVLIB.  
?C:.



?C:ARCHLIB\_EXP:

?C: This symbol contains the ~name expanded version of ARCHLIB, to be used

?C: in programs that are not prepared to deal with ~ expansion at run-time.

?C:.

?H:#\$d\_archlib ARCHLIB "\$archlib" /\*\*/

?H:#\$d\_archlib ARCHLIB\_EXP "\$archlibexp" /\*\*/

?H:.

: determine where public architecture

dependent libraries go

set archlib archlib

eval \$prefixit

case "\$archlib" in

)

case "\$privlib" in

)

dflt=`./loc . ." \$prefixexp/lib /usr/local/lib /usr/lib /lib`

set dflt

eval \$prefixup

::

\*) dflt="\$privlib/\$archname";;

esac

::

\*) dflt="\$archlib";;

esac

cat <<EOM

\$spackage contains architecture-dependent library files. If you are sharing libraries in a heterogeneous environment, you might store these files in a separate location. Otherwise, you can just include them with the rest of the public library files.

EOM

fn=d+~

rp='Where do you want to put the public architecture-dependent libraries?'

./getfile

archlib="\$ans"

archlibexp="\$ansexp"

if \$afs; then

\$cat <<EOM

Since you are running AFS, I need to distinguish the directory in which private files reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

EOM

case "\$installarchlib" in

) dflt=`echo \$archlibexp | sed 's#^/afs/#/afs/.#`";;

```

*)
dflt="$installarchlib";;
esac
fn=de~
rp='Where will architecture-dependent library files be installed?'
./getfile
installarchlib="$ans"
else
installarchlib="$sarchlibexp"
fi
if $test X"$sarchlib" = X"$privlib"; then
d_archlib="$undef"
else
d_archlib="$define"
fi

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/archlib.U

```

No license file was found, but licenses were detected in source scan.

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, 2012 Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?MAKE:byteorder: cat Myread Oldconfig Loc +cc +ccflags rm\_try

?MAKE: -pick add \$@ %<

?S:byteorder:

?S: This variable holds the byte order. In the following, larger digits

?S: indicate more significance. The variable byteorder is either 4321

?S: on a big-endian machine, or 1234 on a little-endian, or 87654321

?S: on a Cray ... or 3412 with weird order !

?S:.

?C:BYTEORDER:

?C: This symbol hold the hexadecimal constant defined in byteorder,

?C: i.e. 0x1234 or 0x4321, etc...

?C:.

?H:#define BYTEORDER 0x\$byteorder /\*

large digits for MSB \*/

?H:.

?T:xxx\_prompt

?F:!try

: check for ordering of bytes in a long

```
case "$byteorder" in
")
$cat <<'EOM'
```

In the following, larger digits indicate more significance. A big-endian machine like a Pyramid or a Motorola 680?0 chip will come out to 4321. A little-endian machine like a Vax or an Intel 80?86 chip would be 1234. Other machines may have weird orders like 3412. A Cray will report 87654321. If the test program works the default is probably right.

I'm now running the test program...

EOM

```
$cat >try.c <<'EOCP'
#include <stdio.h>
int main()
{
int i;
union {
unsigned long l;
char c[sizeof(long)];
} u;

if (sizeof(long) > 4)
u.l = (0x08070605L << 32) | 0x04030201L;
else
u.l = 0x04030201L;
for (i = 0; i < sizeof(long); i++)
printf("%c", u.c[i]+'0');
printf("\n");
exit(0);
}
```

EOCP

```
xxx_prompt=y
if $cc $ccflags -o try try.c >/dev/null 2>&1 && ./try >/dev/null; then
dflt=`./try`
case "$dflt" in
[1-4][1-4][1-4][1-4]|12345678|87654321)
echo
"(The test program ran ok.)"
echo "byteorder=$dflt"
xxx_prompt=n
;;
????|????????) echo "(The test program ran ok.)" ;;
*) echo "(The test program didn't run right for some reason.)" ;;
esac
else
dflt='4321'
cat <<'EOM'
```

(I can't seem to compile the test program. Guessing big-endian...)

```

EOM
fi
case "$xxx_prompt" in
y)
rp="What is the order of bytes in a long?"
. ./myread
byteorder="$ans"
;;
*) byteorder=$dfmt
;;
esac
;;
esac
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/byteorder.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_gethid.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_gethid.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:10 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_gethid: Inlibc
?MAKE: -pick add $@ %<
?S:d_gethid:
?S: This variable conditionally defines HAS_GETHOSTID if gethostid() is
?S: available to get the host id.
?S:.
?C:HAS_GETHOSTID (GETHOSTID):
?C: This symbol, if defined, indicates that the gethostid system call is
?C: available to get the host id.
?C:.
?H:#$d_gethid HAS_GETHOSTID /**/
?H:.
?LINT:set

```

```
d_gethid
: see if gethid exists
set gethostid d_gethid
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_gethid.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_crypt.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

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```
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```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_crypt.U,v $
```

```
?RCS: Revision 3.0.1.1 1997/02/28 15:31:47 ram
```

```
?RCS: patch61: replaced .a with $_a all over the place
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:05:52 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_crypt cryptlib: Loc test xlibpth libpth Csym Setvar _a Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_crypt:
```

```
?S: This variable conditionally defines the CRYPT symbol, which
```

```
?S: indicates to the C program that the crypt() routine is available
```

```
?S: to
```

```
encrypt passwords and the like.
```

```
?S:.
```

```
?S:cryptlib:
```

```
?S: This variable holds -lcrypt or the path to a libcrypt.a archive if
```

```
?S: the crypt() function is not defined in the standard C library. It is
```

```
?S: up to the Makefile to use this.
```

```
?S:.
```

```
?C:HAS_CRYPT (CRYPT):
```

```
?C: This symbol, if defined, indicates that the crypt routine is available
```

```
?C: to encrypt passwords and the like.
```

```
?C:.
```

```
?H:#$d_crypt HAS_CRYPT /**/
```

```
?H:.
```

```
?LINT:set d_crypt
```

```
?T:val
```

```

: see if crypt exists
echo " "
set crypt d_crypt
eval $inlibc
case "$d_crypt" in
$define) cryptlib=" ;;
*) if set crypt val -f d_crypt; eval $sym; $val; then
echo 'crypt() found.' >&4
val="$define"
cryptlib="
else
cryptlib=`./loc Slibcrypt$_a "" $xlibpth`
if $test -z "$cryptlib"; then
cryptlib=`./loc Mlibcrypt$_a "" $xlibpth`
else
cryptlib=-lcrypt
fi
if $test -z "$cryptlib"; then
cryptlib=`./loc Llibcrypt$_a "" $xlibpth`
else
cryptlib=-lcrypt
fi
if $test -z "$cryptlib"; then
cryptlib=`./loc libcrypt$_a ""
$libpth`
else
cryptlib=-lcrypt
fi
if $test -z "$cryptlib"; then
echo 'crypt() NOT found.' >&4
val="$undef"
else
val="$define"
fi
fi
set d_crypt
eval $setvar
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_crypt.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: sig\_name.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: sig\_name.U,v \$  
?RCS: Revision 3.0.1.5 1997/02/28 16:21:25 ram  
?RCS: patch61: brand new algorithm for sig\_name and (new!) sig\_num  
?RCS:  
?RCS: Revision 3.0.1.4 1995/07/25 14:14:54 ram  
?RCS: patch56: added <asm/signal.h> lookup for Linux  
?RCS:  
?RCS: Revision 3.0.1.3 1995/05/12 12:24:11 ram  
?RCS: patch54: now looks for <linux/signal.h> too (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/06/20 07:06:57 ram  
?RCS: patch30: final echo was missing to close  
awk-printed string  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 15:17:55 ram  
?RCS: patch23: signal list now formatted to avoid scroll-ups (ADO)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:47 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:sig\_name sig\_name\_init sig\_num sig\_num\_init sig\_count sig\_size: \  
awk Signal Oldconfig rm  
?MAKE: -pick add \$@ %<  
?S:sig\_name:  
?S: This variable holds the signal names, space separated. The leading  
?S: SIG in signal name is removed. A ZERO is prepended to the list.  
?S: This is currently not used, sig\_name\_init is used instead.  
?S:.  
?S:sig\_name\_init:  
?S: This variable holds the signal names, enclosed in double quotes and  
?S: separated by commas, suitable for use in the SIG\_NAME definition  
?S: below. A "ZERO" is prepended to the list, and the list is  
?S: terminated with a plain 0. The leading SIG in signal names  
?S: is removed. See sig\_num.  
?S:.  
?S:sig\_num:  
?S: This variable holds the signal numbers, space separated. A ZERO is  
?S: prepended  
to the list (corresponding to the fake SIGZERO).  
?S: Those numbers correspond to the value of the signal listed  
?S: in the same place within the sig\_name list.

?S: This is currently not used, sig\_num\_init is used instead.

?S:.

?S:sig\_num\_init:

?S: This variable holds the signal numbers, enclosed in double quotes and

?S: separated by commas, suitable for use in the SIG\_NUM definition

?S: below. A "ZERO" is prepended to the list, and the list is

?S: terminated with a plain 0.

?S:.

?S:sig\_count (sig\_name.U):

?S: This variable holds a number larger than the largest valid

?S: signal number. This is usually the same as the NSIG macro.

?S:.

?S:sig\_size:

?S: This variable contains the number of elements of the sig\_name

?S: and sig\_num arrays.

?S:.

?C:SIG\_NAME:

?C: This symbol contains a list of signal names in order of

?C: signal number. This is intended

?C: to be used as a static array initialization, like this:

?C: char \*sig\_name[] = { SIG\_NAME };

?C: The signals in the list are separated

?C: with commas, and each signal

?C: is surrounded by double quotes. There is no leading SIG in the signal

?C: name, i.e. SIGQUIT is known as "QUIT".

?C: Gaps in the signal numbers (up to NSIG) are filled in with NUMnn,

?C: etc., where nn is the actual signal number (e.g. NUM37).

?C: The signal number for sig\_name[i] is stored in sig\_num[i].

?C: The last element is 0 to terminate the list with a NULL. This

?C: corresponds to the 0 at the end of the sig\_name\_init list.

?C: Note that this variable is initialized from the sig\_name\_init,

?C: not from sig\_name (which is unused).

?C:.

?C:SIG\_NUM:

?C: This symbol contains a list of signal numbers, in the same order as the

?C: SIG\_NAME list. It is suitable for static array initialization, as in:

?C: int sig\_num[] = { SIG\_NUM };

?C: The signals in the list are separated with commas, and the indices

?C: within that list and the SIG\_NAME list match, so it's easy to compute

?C: the signal name from a number or vice versa at the price of a small

?C: dynamic

?C: linear lookup.

?C: Duplicates are allowed, but are moved to the end of the list.

?C: The signal number corresponding to sig\_name[i] is sig\_number[i].

?C: if (i < NSIG) then sig\_number[i] == i.

?C: The last element is 0, corresponding to the 0 at the end of

?C: the sig\_name\_init list.

?C: Note that this variable is initialized from the sig\_num\_init,



?C: not from sig\_num (which is unused).

?C:.

?C:SIG\_COUNT:

?C: This variable contains a number larger than the largest

?C: signal number. This is usually the same as the NSIG macro.

?C:.

?C:SIG\_SIZE:

?C: This variable contains the number of elements of the SIG\_NAME

?C: and SIG\_NUM arrays, excluding the final NULL entry.

?C:.

```
?H:#define SIG_NAME $sig_name_init /**/
?H:#define SIG_NUM $sig_num_init /**/
?H:#define SIG_COUNT $sig_count /**/
?H:#define SIG_SIZE $sig_size /**/
?H:
?T:i doinit
?F:!= !signal_cmd
?X: signal.cmd creates a file signal.lst which has two columns:
?X: NAME number, e.g.
?X: HUP 1
?X: The list is
sorted on signal number, with duplicates moved to
?X: the end..
: generate list of signal names
case "$sig_num_init" in
")
echo " "
case "$sig_name_init" in
") doinit=yes ;;
*) case "$sig_num_init" in
"*) doinit=yes ;;
esac ;;
esac
case "$doinit" in
yes)
echo "Generating a list of signal names and numbers..." >&4
./signal_cmd
sig_count=`$awk '/^NSIG/ { printf "%d", $2 }' signal.lst`
sig_name=`$awk 'BEGIN { printf "ZERO " }
!/^NSIG/ { printf "%s ", $1 }' signal.lst`
sig_num=`$awk 'BEGIN { printf "0 " }
!/^NSIG/ { printf "%d ", $2 }' signal.lst`
sig_name_init=`$awk 'BEGIN { printf "\"ZERO\", " }
!/^NSIG/ { printf "\"%s\", ", $1 }
END { printf "0\n" }' signal.lst`
sig_num_init=`$awk 'BEGIN { printf "0, " }
!/^NSIG/ { printf "%d, ", $2 }
END { printf "0\n" }' signal.lst`
```

```

;;
esac
echo "The following $sig_count signals are available:"
echo " "
echo $sig_name | $awk \
'BEGIN { linelen = 0 }
{
for (i = 1; i <= NF; i++) {
name
= "SIG" $i " "
linelen = linelen + length(name)
if (linelen > 70) {
printf "\n"
linelen = length(name)
}
printf "%s", name
}
printf "\n"
}'
sig_size=`echo $sig_name | awk '{print NF}'`
$rm -f signal signal.c signal.awk signal.lst signal_cmd
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/sig\_name.U

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_vfork.U,v 3.0.1.6 1994/08/29 16:18:21 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_vfork.U,v $
?RCS: Revision 3.0.1.6 1994/08/29 16:18:21 ram
?RCS: patch32: set default to 'y' the first time
?RCS:
?RCS: Revision 3.0.1.5 1994/06/20 06:59:14 ram
?RCS: patch30: usevfork was not always properly set
?RCS:
?RCS: Revision 3.0.1.4 1994/05/13 15:20:56 ram
?RCS: patch27: modified to avoid spurious Whoa warnings (ADO)

```

?RCS:  
?RCS: Revision 3.0.1.3 1994/05/06 14:59:09 ram  
?RCS: patch23: now explicitly ask whether vfork() should be used  
(ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1993/10/16 13:49:39 ram  
?RCS: patch12: added magic for vfork()  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 16:06:57 ram  
?RCS: patch10: removed automatic remapping of vfork on fork (WAD)  
?RCS: patch10: added compatibility code for older config.sh (WAD)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:07:55 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_vfork usevfork d\_pseudofork: Inlibc Myread Oldconfig Setvar  
?MAKE: -pick add \$@ %<  
?S:d\_vfork:  
?S: This variable conditionally defines the HAS\_VFORK symbol, which  
?S: indicates the vfork() routine is available.  
?S:.  
?S:usevfork:  
?S: This variable is set to true when the user accepts to use vfork.  
?S: It is set to false when no vfork is available or when the user  
?S: explicitly requests not to use vfork.  
?S:.  
?S:d\_pseudofork:  
?S: This variable conditionally defines the HAS\_PSEUDOFORK symbol,  
?S: which indicates that an emulation of the fork routine is available.  
?S:.  
?C:HAS\_VFORK (VFORK):  
?C: This  
symbol, if defined, indicates that vfork() exists.  
?C:.  
?H:#\$d\_vfork HAS\_VFORK /\*\*/  
?H:.  
?C:HAS\_PSEUDOFORK:  
?C: This symbol, if defined, indicates that an emulation of the  
?C: fork routine is available.  
?C:.  
?H:#\$d\_pseudofork HAS\_PSEUDOFORK /\*\*/  
?H:.  
?M:vfork: HAS\_VFORK  
?M:#ifndef HAS\_VFORK  
?M:#define vfork fork  
?M:#endif  
?M:.  
?T:d\_hvfork

```

: backward compatibility for d_hvfork
if test X$d_hvfork != X; then
  d_vfork="$d_hvfork"
  d_hvfork=""
fi
?X:=====
: see if there is a vfork
val=""
set vfork val
eval $inlibc

d_pseudofork=$undef

```

```

: Ok, but do we want to use it. vfork is reportedly unreliable in
: perl on Solaris 2.x, and probably elsewhere.
case "$val" in
$define)
  echo " "
  case "$usevfork" in
  false) dflt='n';;
  *) dflt='y';;
  esac
  cat <<'EOM'

```

Perl can only use a vfork() that doesn't suffer from strict restrictions on calling functions or modifying global data in the child. For example, glibc-2.1 contains such a vfork() that is unsuitable. If your system provides a proper fork() call, chances are that you do NOT want perl to use vfork().

```

EOM
rp="Do you still want to use vfork()?"
. ./myread
case "$ans" in
y|Y) ;;
*)
  echo "Ok, we won't use vfork()."
  val="$undef"
  ;;
esac
;;
esac
?X:
?X: Only set it when final value is known to avoid spurious Whoa's
?X: Then set usevfork accordingly to the current value, for next run
?X:
set d_vfork

```

```
eval $setvar
case "$d_vfork" in
$define) usevfork='true';;
*) usevfork='false';;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_vfork.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_pthratrj.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_old\_pthread\_create\_joinable old\_pthread\_create\_joinable: \  
cat Compile rm\_try Setvar usethreads i\_pthread

?MAKE: -pick add \$@ %<

?S:d\_old\_pthread\_create\_joinable:

?S: This variable conditionally defines pthread\_create\_joinable.

?S: undef if pthread.h defines PTHREAD\_CREATE\_JOINABLE.

?S:.

?S:old\_pthread\_create\_joinable:

?S: This variable defines the constant to use for creating joinable

?S: (aka undetached) pthreads. Unused if pthread.h defines

?S: PTHREAD\_CREATE\_JOINABLE. If used, possible values are

?S: PTHREAD\_CREATE\_UNDETACHED and \_\_UNDETACHED.

?S:.

?C:OLD\_PTHREAD\_CREATE\_JOINABLE:

?C: This symbol, if defined, indicates how to create pthread

?C: in joinable (aka undetached)

state. NOTE: not defined

?C: if pthread.h already has defined PTHREAD\_CREATE\_JOINABLE

?C: (the new version of the constant).

?C: If defined, known values are PTHREAD\_CREATE\_UNDETACHED

?C: and \_\_UNDETACHED.

?C:.

?H:#\$d\_old\_pthread\_create\_joinable OLD\_PTHREAD\_CREATE\_JOINABLE \$old\_pthread\_create\_joinable /\*\*/

?H:.

: how to create joinable pthreads

if test "X\$usethreads" = "X\$define" -a "X\$i\_pthread" = "X\$define"; then

echo " "

echo "Checking what constant to use for creating joinable pthreads..." >&4

\$cat >try.c <<'EOCP'

#include <pthread.h>

```

int main() {
    int detachstate = JOINABLE;
}
EOCP
set try -DJOINABLE=PTHREAD_CREATE_JOINABLE
if eval $compile; then
    echo "You seem to use PTHREAD_CREATE_JOINABLE." >&4
    val="$undef" # Yes, undef.
    set d_old_pthread_create_joinable
    eval $setvar
    val=""
    set old_pthread_create_joinable
    eval $setvar
else
    set try -DJOINABLE=PTHREAD_CREATE_UNDETACHED
    if eval $compile; then
        echo "You seem to use PTHREAD_CREATE_UNDETACHED." >&4
        val="$define"
        set
        d_old_pthread_create_joinable
        eval $setvar
        val=PTHREAD_CREATE_UNDETACHED
        set old_pthread_create_joinable
        eval $setvar
    else
        set try -DJOINABLE=__UNDETACHED
        if eval $compile; then
            echo "You seem to use __UNDETACHED." >&4
            val="$define"
            set d_old_pthread_create_joinable
            eval $setvar
            val=__UNDETACHED
            set old_pthread_create_joinable
            eval $setvar
        else
            echo "Egads, nothing obvious found. Guessing that you use 0." >&4
            val="$define"
            set d_old_pthread_create_joinable
            eval $setvar
            val=0
            set old_pthread_create_joinable
            eval $setvar
        fi
    fi
fi
$rm_try
else
    d_old_pthread_create_joinable="$undef"

```

```
old_pthread_create_joinable=""
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_pthratrj.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_ftime.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
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?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: d_ftime.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:06 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:d_ftime d_gettimeod: Inlibc Setvar
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_ftime:
```

```
?S: This variable conditionally defines the HAS_FTIME symbol, which indicates
```

```
?S: that the ftime() routine exists. The ftime() routine is basically
```

```
?S: a sub-second accuracy clock.
```

```
?S:.
```

```
?S:d_gettimeod:
```

```
?S: This variable conditionally defines the HAS_GETTIMEOFDAY symbol,
which
```

```
?S: indicates that the gettimeofday() system call exists (to obtain a
```

```
?S: sub-second accuracy clock). You should probably include <sys/resource.h>.
```

```
?S:.
```

```
?C:HAS_FTIME (FTIMER):
```

```
?C: This symbol, if defined, indicates that the ftime() routine exists.
```

```
?C: It is basically a sub-second accuracy clock, but is less accurate
```

```
?C: than gettimeofday(2) anyway. The type "Timeval" should be used to
```

```
?C: refer to "struct timeb".
```

```
?C:.
```

```
?C:HAS_GETTIMEOFDAY (GETTIMEOFDAY):
```

```
?C: This symbol, if defined, indicates that the gettimeofday() system
```

```
?C: call is available for a sub-second accuracy clock. Usually, the file
```

```
?C: <sys/resource.h> needs to be included (see I_SYS_RESOURCE).
```

```
?C: The type "Timeval" should be used to refer to "struct timeval".
```

```
?C:.
```

```
?H:#$d_ftime HAS_FTIME /**/
```

```

?H:#$d_gettimeod HAS_GETTIMEOFDAY /**/
?H:?%<:@if HAS_FTIME
?H:?%<:#ifdef HAS_FTIME
?H:?%<:#define Timeval struct timeb /* Structure used by ftime() */
?H:?%<:#endif
?H:?%<:@end
?H:?%<:@if HAS_GETTIMEOFDAY
?H:?%<:#ifdef HAS_GETTIMEOFDAY
?H:?%<:#define
Timeval struct timeval /* Structure used by gettimeofday() */
?H:?%<:#endif
?H:?%<:@end
?H:
?X:FIXME
?X:?I:?d_ftime:i_systimeb
?X:?I:?d_gettimeod:i_sysresrc
?LINT:set d_gettimeod d_ftime
?LINT:known Timeval
: see if gettimeofday or ftime exists
?X:
?X: Give priority to gettimeofday(2) because timing is more accurate
?X:
set gettimeofday d_gettimeod
eval $inlibc
case "$d_gettimeod" in
"$undef")
set ftime d_ftime
eval $inlibc
;;
*)
val="$undef"; set d_ftime; eval $setvar
;;
esac
case "$d_gettimeod$d_ftime" in
"$undef$undef")
echo " "
echo 'No ftime() nor gettimeofday() -- timing may be less accurate.' >&4
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_ftime.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_speedopt.U 1 2006-08-24 12:32:52Z rmanfredi $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```



```

?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_speedopt.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:15:51 ram
?RCS: patch36: call ./Cpplib explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:27 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_speedopt: Myread Cpplib Oldconfig cat models Setvar
?MAKE: -pick add $@ %<
?S:d_speedopt:
?S: This variable conditionally defines the SPEED_OVER_MEM symbol, which
?S: indicates to the C program that it can
    burn memory in order to save
?S: CPU time.
?S:.
?C:SPEED_OVER_MEM (SPEEDOVERMEM):
?C: This symbol, if defined, indicates that the program can use more
?C: memory in order to reduce CPU time. The symbol doesn't say whether
?C: we are more interested in saving text space or data space.
?C:.
?H:#$d_speedopt SPEED_OVER_MEM /**/
?H:.
?LINT:set d_speedopt
: do we want speed at the expense of memory
$cat <<'EOM'

```

I can try to optimize this package for either speed or memory. If you have limited address space you may wish to optimize for memory. Otherwise you should probably optimize for speed.

```

EOM
case "$d_speedopt" in
") if ./Cpplib $smallmach; then
case "$models" in
*large*|*huge*) dflt=speed;;
*) dflt=memory;;
esac
else
dflt=speed
fi
;;

```

```
*define*) dflt=speed;;
*) dflt=memory;;
esac
rp="What to optimize for?"
./myread
case "$ans" in
mem*) val="$undef";;
*) val="$define";;
esac
set d_speedopt
eval $setvar
```

Found in path(s):

```
*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_speedopt.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_isascii.U,v \$

?RCS: Revision 3.0.1.2 1994/10/29 16:13:39 ram

?RCS: patch36: added 'ldflags' to the test compile line (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:09:32 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_isascii: cc cat ccflags ldflags rm libs Setvar

?MAKE: -pick add \$@ %<

?S:d\_isascii:

?S: This variable conditionally defines the HAS\_ISASCII constant,

?S: which indicates to the C program that isascii()

is available.

?S:.

?C:HAS\_ISASCII:

?C: This manifest constant lets the C program know that isascii

?C: is available.

?C:.

?H:#\$d\_isascii HAS\_ISASCII /\*\*/

```

?H:
?LINT:set d_isascii
?X: Can't use Inlibc because isascii() might be a macro.
: Look for isascii
echo " "
$cat >isascii.c <<'EOCP'
#include <stdio.h>
#include <ctype.h>
int main() {
int c = 'A';
if (isascii(c))
exit(0);
else
exit(1);
}
EOCP
if $cc $ccflags $ldflags -o isascii isascii.c $libs >/dev/null 2>&1 ; then
echo "isascii() found." >&4
val="$define"
else
echo "isascii() NOT found." >&4
val="$undef"
fi
set d_isascii
eval $setvar
$rm -f isascii*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_isascii.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Loc.U,v \$

?RCS: Revision 3.0.1.10 1997/02/28 15:04:16 ram

?RCS: patch61: allow users to specify paths on the command line

?RCS: patch61: will now substitute cp for ln if not supported

?RCS:

?RCS: Revision 3.0.1.9 1995/09/25 09:11:24 ram

?RCS: patch59: commented the purpose of the #un-def directive  
?RCS: patch59: abort Configure run when mandatory command is missing  
?RCS:  
?RCS: Revision 3.0.1.8 1995/07/25 13:40:40 ram  
?RCS: patch56: now knows about OS/2 platforms  
?RCS:  
?RCS: Revision 3.0.1.7  
1995/01/11 15:13:37 ram  
?RCS: patch45: protected "sh -c" within backquotes for Linux and SGI  
?RCS: patch45: added path lookup for the 'comm' program  
?RCS:  
?RCS: Revision 3.0.1.6 1994/10/29 15:56:14 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS: patch36: be careful and guard against wildcard searching (ADO)  
?RCS:  
?RCS: Revision 3.0.1.5 1994/06/20 06:54:55 ram  
?RCS: patch30: now locates find  
?RCS:  
?RCS: Revision 3.0.1.4 1994/05/13 15:18:15 ram  
?RCS: patch27: added byacc to the trylist (ADO)  
?RCS: patch27: lint lines reformatted (ADO)  
?RCS:  
?RCS: Revision 3.0.1.3 1994/01/24 14:01:44 ram  
?RCS: patch16: added metalint hint on changed PATH variable  
?RCS:  
?RCS: Revision 3.0.1.2 1993/12/15 08:16:52 ram  
?RCS: patch15: now set \_test variable when test is built-in  
?RCS: patch15: fixed rare cases where echo is not needed  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 15:47:13 ram  
?RCS: patch10: test program not always in /bin/test (WAD)  
?RCS:  
?RCS: Revision  
3.0 1993/08/18 12:05:05 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit produces a shell script "loc" which can be used to find out  
?X: where in a list of directories something is. It then uses loc to  
?X: determine the location of commonly used programs. It leaves loc sitting  
?X: around for other Configure units to use, but arranges for its demise  
?X: at the end of Configure.  
?X:  
?X: To add a new program to find, add it both to the ?MAKE: line and to either  
?X: the loclist or trylist variable.  
?X:  
?X: I put startsh at the end of the dependency list, in order to avoid the  
?X: loading of the spitshell unit before the instructions.

```

?X:
?MAKE:Loc awk ar bash bison byacc cat chgrp chmod chown \
comm compress cp cpio cpp csh date echo egrep emacs expr find flex \
gmake gzip grep inews ksh less line lint ln lp lpr ls mail mailx \
make mkdir more mv nm nroff perl pg pmake pr rm rmail sed sendmail \
shar sleep smail sort submit tail tar tbl tee test touch tr troff
\
uname uniq uuname vi zcat zip: eunicefix n c startsh Instruct Warn
?MAKE: -pick weed $@ %<
?LINT:describe awk ar bash bison byacc cat chgrp chmod chown \
comm compress cp cpio cpp csh date echo egrep emacs expr find flex \
gmake gzip grep inews ksh less line lint ln lp lpr ls mail mailx \
make mkdir more mv nm nroff perl pg pmake pr rm rmail sed sendmail \
shar sleep smail sort submit tail tar tbl tee test touch tr troff \
uname uniq uuname vi zcat zip
?V::pth loclist trylist
?F:./loc
?T:thisthing thing xxx dir file say DJGPP
?T:_test _grep _cp _gmake _egrep _ln _make dflt
?LINT: change PATH
: find out where common programs are
echo " "
echo "Locating common programs..." >&4
cat <<EOOSC >loc
$startsh
case $# in
0) exit 1;;
esac
thing=${1}
shift
dflt=${1}
shift
for dir in \*; do
case "\$thing" in
.)
if test -d \$dir/\$thing; then
echo \$dir
exit 0
fi
;;
*)
?X: Be careful in case thing includes wildcards that might expand to multiple
?X: files. Choose the last one.
This happens when searching for shared
?X: libraries with version numbers. How to choose which one we want is
?X: probably an insoluble problem, in general.
?X: Some folks leave things like libc.so.orig around w/o read
?X: permission. A -r test would handle that, but since ./loc is

```

?X: also used to find executables (which are installed w/o read

?X: permission on SCO ODT 3.0, we can't include the -r test.

```
for thisthing in \${dir}/${thing}; do
```

```
  : just loop through to pick last item
```

```
done
```

```
if test -f \${thisthing}; then
```

```
  echo \${thisthing}
```

```
  exit 0
```

```
elif test -f \${thisthing}${_exe}; then
```

```
  echo \${thisthing}
```

```
  exit 0
```

```
elif test -f \${dir}/${thing}.exe; then
```

```
  if test -n "$DJGPP"; then
```

```
    echo \${dir}/${thing}.exe
```

```
  else
```

```
    : on Eunice apparently
```

```
    echo \${dir}/${thing}
```

```
  fi
```

```
  exit 0
```

```
fi
```

```
::
```

```
esac
```

```
done
```

```
echo \${dflt}
```

```
exit 1
```

```
EOSC
```

```
chmod +x loc
```

```
$eunicefix loc
```

```
loclist=""
```

```
?awk:awk
```

```
?cat:cat
```

```
?chgrp:chgrp
```

```
?chmod:chmod
```

```
?chown:chown
```

```
?comm:comm
```

```
?cp:cp
```

```
?echo:echo
```

```
?expr:expr
```

```
?find:find
```

```
?grep:grep
```

```
?ls:ls
```

```
?mkdir:mkdir
```

```
?mv:mv
```

```
?rm:rm
```

```
?sed:sed
```

```
?sleep:sleep
```

```
?sort:sort
```

```
?tail:tail
```

?touch:touch  
?tr:tr  
?uniq:uniq  
"  
trylist="  
?Mcc:Mcc  
?ar:ar  
?bash:bash  
?bison:bison  
?byacc:byacc  
?compress:compress  
?cpio:cpio  
?cpp:cpp  
?csh:csh  
?date:date  
?egrep:egrep  
?emacs:emacs  
?flex:flex  
?gmake:gmake  
?gzip:gzip  
?inews:inews  
?ksh:ksh  
?less:less  
?line:line  
?lint:lint  
?ln:ln  
?lp:lp  
?lpr:lpr  
?mail:mail  
?mailx:mailx  
?make:make  
?more:more  
?nm:nm  
?nroff:nroff  
?perl:perl  
?pg:pg  
?pmake:pmake  
?pr:pr  
?rmail:rmail  
?sendmail:sendmail  
?shar:shar  
?smail:smail  
?submit:submit  
?tar:tar  
?tbl:tbl  
?tee:tee  
?test:test  
?troff:troff

```

?uname:uname
?uuname:uuname
?vi:vi
?zcat:zcat
?zip:zip
"
?LINT:set
awk ar bash bison byacc cat chgrp chmod chown \
comm compress cp cpio cpp csh date echo emacs expr find flex \
gmake gzip grep inews ksh less line lint lp lpr ls mail mailx \
mkdir more mv nm nroff perl pg pmake pr rm rmail sed sendmail \
shar sleep smail sort submit tail tar tbl tee touch tr troff \
uname uniq uuname vi zcat zip
pth=`echo $PATH | sed
-e "s/$p_/ /g"`
pth="$pth /lib /usr/lib"
for file in $loclist; do
?X:
?X: Allow them to -Dmake=pmake on the command line for instance...
?X: If the file is not fully qualified, as in -Dmake=pmake, then we
?X: look the for the specified command (pmake here). If they say
?X: -Dmake=/sbin/make for instance, then we make sure the file
?X: exists, or we die...
?X:
eval xxx=\$$file
case "$xxx" in
/*|?:[\\]*)
if test -f "$xxx"; then
: ok
else
./warn "no $xxx -- ignoring your setting for $file."
xxx=`./loc $file $file $pth`
fi
;;
") xxx=`./loc $file $file $pth`;
*) xxx=`./loc $xxx $xxx $pth`;
esac
eval $file=$xxx$_exe
eval $_file=$xxx
case "$xxx" in
/*)
echo $file is in $xxx.
;;
?X: Under OS/2, we have PC-like paths
?:[\\]*)
echo $file is in $xxx.
;;
*)

```



```

echo "I don't know where '$file' is, and my life depends on it." >&4
echo "Go find a public domain implementation or fix your PATH setting!" >&4
exit 1
;;
esac
done
echo " "
echo "Don't worry
if any of the following aren't found..."
say=offhand
for file in $trylist; do
?X: Allow them to -Dmake=pmake on the command line for instance (see above)
eval xxx=\$$file
case "$xxx" in
/*|?:[\\]*)
if test -f "$xxx"; then
: ok
else
./warn "no $xxx -- ignoring your setting for $file."
xxx=`./loc $file $file $pth`
fi
;;
") xxx=`./loc $file $file $pth`;
*) xxx=`./loc $xxx $xxx $pth`;
esac
eval $file=$xxx$_exe
eval $_file=$xxx
case "$xxx" in
/*)
echo $file is in $xxx.
;;
?:[\\]*)
echo $file is in $xxx.
;;
*)
echo "I don't see $file out there, $say."
say=either
;;
esac
done
case "$grep" in
egrep)
echo "Substituting grep for egrep."
egrep=$grep
_egrep=$_grep
;;
esac

```

```

@if ln
case "$ln" in
ln)
echo "Substituting cp for ln."
ln=$cp
_ln=$_cp
;;
esac
@end
@if make || gmake
case "$make" in
make)
case "$gmake" in
gmake)
echo "I can't find make or gmake, and my life depends on it." >&4
echo "Go find a
public domain implementation or fix your PATH setting!" >&4
exit 1
;;
esac
;;
esac
case "$gmake" in
gmake) ;;
*) # We can't have osname yet.
if test -f "/system/gnu_library/bin/ar.pm"; then # Stratus VOS
# Assume that gmake, if found, is definitely GNU make
# and prefer it over the system make.
echo "Substituting gmake for make."
make=$gmake
_make=$_gmake
fi
;;
esac
@end
case "$test" in
test)
echo "Hopefully test is built into your sh."
;;
*)
if `sh -c "PATH= test true" >/dev/null 2>&1`; then
echo "Using the test built into your sh."
?X:
?X: We need to set both test and _test, since Oldconfig.U will use the _test
?X: value to systematically restore computed paths, which may be wrong if
?X: we choose to load an old config.sh generated on another platform.
?X:
test=test

```

```

_test=test
fi
;;
esac
?LINT:change n c
case "$echo" in
echo)
echo "Hopefully echo is built into your sh."
;;
?X: For those rare cases where we don't need $echo...
") ;;
*)
echo " "
echo "Checking
compatibility between $echo and builtin echo (if any)..." >&4
$echo $n "hi there$c" >foo1
echo $n "hi there$c" >foo2
if cmp foo1 foo2 >/dev/null 2>&1; then
echo "They are compatible. In fact, they may be identical."
else
case "$n" in
'-n') n=" c=\"c\"";;
*) n='-n' c="";;
esac
cat <<FOO

```

They are not compatible! You are probably running ksh on a non-USG system. I'll have to use \$echo instead of the builtin, since Bourne shell doesn't have echo built in and we may have to run some Bourne shell scripts. That means I'll have to use '\$n\$c' to suppress newlines now. Life is ridiculous.

```

FOO
$echo $n "The star should be here-->$c"
$echo "*"
fi
$rm -f foo1 foo2
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Loc.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: voidflags.U,v 3.0.1.2 1997/02/28 16:27:58 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

?RCS: as specified in the README file that comes with the distribution.

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: voidflags.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 16:27:58 ram

?RCS: patch61: don't prompt them if the void support is high enough for us

?RCS:

?RCS: Revision 3.0.1.1 1995/01/11 15:37:44 ram

?RCS: patch45: cosmetic change to avoid spurious blank lines when using -s

?RCS:

?RCS: Revision 3.0 1993/08/18 12:10:01 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:voidflags defvoidused: cat rm\_try compiler\_warning +cc +ccflags package \  
 Oldconfig  
 Myread i\_stdlib

?MAKE: -pick add \$@ %<

?S:voidflags:

?S: This variable contains the eventual value of the VOIDFLAGS symbol,  
 ?S: which indicates how much support of the void type is given by this  
 ?S: compiler. See VOIDFLAGS for more info.

?S:.

?S:defvoidused:

?S: This variable contains the default value of the VOIDUSED symbol (15).

?S:.

?X: Exceptionally, we have to explicitly alias the symbol name for  
 ?X: config\_h.SH, otherwise the comment would not appear.

?C:VOIDFLAGS ~ %<:

?C: This symbol indicates how much support of the void type is given by this  
 ?C: compiler. What various bits mean:

?C:

?C: 1 = supports declaration of void

?C: 2 = supports arrays of pointers to functions returning void

?C: 4 = supports comparisons between pointers to void functions and  
 ?C: addresses of void functions

?C: 8 = supports declaration of generic void pointers

?C:

?C: The package designer should define VOIDUSED to indicate the requirements  
 ?C: of the package. This can be  
 done either by #defining VOIDUSED before  
 ?C: including config.h, or by defining defvoidused in Myinit.U. If the  
 ?C: latter approach is taken, only those flags will be tested. If the  
 ?C: level of void support necessary is not present, defines void to int.

?C:.

?H:%<:#ifndef VOIDUSED

?H:%<:#define VOIDUSED \$defvoidused

```

?H:?%<:#endif
?H:?%<:#define VOIDFLAGS $voidflags
?H:?%<:#if (VOIDFLAGS & VOIDUSED) != VOIDUSED
?H:?%<:#define void int /* is void to be avoided? */
?H:?%<:#define M_VOID /* Xenix strikes again */
?H:?%<:#endif
?H:
?INIT:: full support for void wanted by default
?INIT:defvoidused=15
?INIT:
?LINT:known void M_VOID VOIDUSED
: check for void type
echo " "
echo "Checking to see how well your C compiler groks the void type..." >&4
case "$voidflags" in
")
$cat >try.c <<EOCP
#i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#if TRY & 1
void sub() {
#else
sub() {
#endif
extern void moo(); /* function returning void */
void (*goo()); /* ptr to func returning
void */
#if TRY & 8
void *hue; /* generic ptr */
#endif
#if TRY & 2
void (*foo[10])();
#endif

#if TRY & 4
if(goo == moo) {
exit(0);
}
#endif
exit(0);
}
int main() { sub(); }
EOCP
?X: This unit used to use cc -S in those tests to try to speed up things, but
?X: unfortunately, AIX 3.2 does not support this option.
if $cc $ccflags -c -DTRY=$defvoidused try.c >.out 2>&1 ; then

```

```

voidflags=$defvoidused
echo "Good. It appears to support void to the level $package wants.">&4
if $compiler_warning .out >/dev/null 2>&1; then
    echo "However, you might get some warnings that look like this:"
    $cat .out
fi
else
echo "Hmm, your compiler has some difficulty with void. Checking further..." >&4
if $cc $cflags -c -DTRY=1 try.c >/dev/null 2>&1; then
    echo "It supports 1..."
if $cc $cflags -c -DTRY=3 try.c >/dev/null 2>&1; then
    echo "It also supports 2..."
if $cc $cflags -c -DTRY=7 try.c >/dev/null 2>&1; then
    voidflags=7
    echo "And it supports 4 but not 8
definitely."
else
    echo "It doesn't support 4..."
if $cc $cflags -c -DTRY=11 try.c >/dev/null 2>&1; then
    voidflags=11
    echo "But it supports 8."
else
    voidflags=3
    echo "Neither does it support 8."
fi
fi
else
echo "It does not support 2..."
if $cc $cflags -c -DTRY=13 try.c >/dev/null 2>&1; then
    voidflags=13
    echo "But it supports 4 and 8."
else
if $cc $cflags -c -DTRY=5 try.c >/dev/null 2>&1; then
    voidflags=5
    echo "And it supports 4 but has not heard about 8."
else
    echo "However it supports 8 but not 4."
fi
fi
fi
else
echo "There is no support at all for void."
voidflags=0
fi
fi
esac
?X: Only prompt user if support does not match the level we want
case "$voidflags" in

```

```
"$defvoidused") ;;
*) $cat >&4 <<'EOM'
Support flag bits are:
  1: basic void declarations.
  2: arrays of pointers to functions returning void.
  4: operations between pointers to and addresses
of void functions.
  8: generic void pointers.
```

```
EOM
dflt="$voidflags";
rp="Your void support flags add up to what?"
. ./myread
voidflags="$ans"
;;
esac
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/voidflags.U
```

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```
?RCS: $Id: d_fgetpos.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_fgetpos.U,v $
?RCS: Revision 3.0.1.1 1994/06/20 06:57:33 ram
?RCS: patch30: created
?RCS:
?MAKE:d_fgetpos: Inlibc
?MAKE: -pick add $@ %<
?S:d_fgetpos:
?S: This variable conditionally defines HAS_FGETPOS if fgetpos() is
?S: available to get the file position indicator.
?S:.
?C:HAS_FGETPOS:
?C: This symbol, if defined, indicates that the fgetpos routine is
?C: available to get the file position indicator, similar to ftell().
?C:.
?H:#$d_fgetpos
```

HAS\_FGETPOS /\*\*/

?H:.

?LINT:set d\_fgetpos

: see if fgetpos exists

set fgetpos d\_fgetpos

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_fgetpos.U

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?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:i\_sysaccess: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_sysaccess:

?S: This variable conditionally defines the I\_SYS\_ACCESS symbol,

?S: and indicates whether a C program should include <sys/access.h>.

?S:.

?C:I\_SYS\_ACCESS:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/access.h>.

?C:.

?H:#\$i\_sysaccess I\_SYS\_ACCESS /\*\*/

?H:.

?LINT:set i\_sysaccess

: see if sys/access.h is available

set sys/access.h i\_sysaccess

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/acl/i\_sysaccess.U

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?RCS: License or the Artistic License, as specified in the WRITEME file.

?RCS:

?MAKE:d\_writev: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_writev:

?S: This variable conditionally defines the HAS\_WRITEV symbol, which

?S: indicates to the C program that the writev() routine is available.

?S:.

?C:HAS\_WRITEV:

?C: This symbol, if defined, indicates that the writev routine is

?C: available to do scatter writes.

?C:.

?H:#\$d\_writev HAS\_WRITEV /\*\*/

?H:.

?LINT:set d\_writev

: see if writev exists

set writev d\_writev

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_writev.U

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?RCS:

?MAKE:d\_thread\_local perl\_thread\_local: cat echo Setvar Compile run rm\_try hint

?MAKE: -pick add \$@ %<

?S:d\_thread\_local:

?S: This variable conditionally defines the PERL\_THREAD\_LOCAL symbol. In

?S: turn that gives a linkage specification for thread-local storage.

?S:.

?S:perl\_thread\_local:

?S: This variable gives the value for the PERL\_THREAD\_LOCAL symbol (when

?S: defined), which gives a linkage specification for thread-local storage.

?S:.

?C:PERL\_THREAD\_LOCAL:

?C: This symbol, if defined, gives a linkage specification for thread-local

?C: storage. For example, for a C11 compiler this will be \_Thread\_local.

?C: Beware, some compilers are sensitive to the C language standard they are

?C: told

to parse. For example, suncc defaults to C11, so our probe will  
?C: report that `_Thread_local` can be used. However, if the `-std=c99` is later  
?C: added to the compiler flags, then `_Thread_local` will become a syntax  
?C: error. Hence it is important for these flags to be consistent between  
?C: probing and use.

?C:.

?H:#\$d\_thread\_local PERL\_THREAD\_LOCAL \$perl\_thread\_local /\*\*/

?H:.

?T:thread\_local

?F:!try

?LINT:set d\_thread\_local

: see what flavor, if any, of thread local storage is supported

echo " "

echo "Checking to see if your system supports C11 thread local storage..."

\$cat > try.c <<'EOCP'

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
#include <pthread.h>
```

```
static int plus_one = 1;
```

```
static int minus_one = -1;
```

```
PROBE_MACRO int *minion;
```

```
int callback (const void *a, const void *b) {  
    int val_a = *minion * *(const int *)a;  
    int val_b = *minion * *(const int *)b;  
    return val_a < val_b ? -1 : val_a > val_b;  
}
```

```
#define SIZE 8
```

```
void *thread_function(void *arg) {  
    /* thread local variables  
    should start zeroed in each thread. */  
    if (minion != NULL) {  
        fprintf(stderr, "__thread variable started with %p, should be NULL\n",  
                minion);  
        exit(2);  
    }  
    minion = &minus_one;
```

```
int array[SIZE];  
unsigned int i;  
for (i = 0; i < SIZE; ++i) {  
    /* "Hash randomisation" - this array isn't in sorted order: */  
    array[i ^ 5] = i * i;  
}
```

```

qsort(array, SIZE, sizeof(int), callback);

int bad = 0;
for (i = 0; i < SIZE; ++i) {
    int want = (SIZE - 1 - i) * (SIZE - 1 - i);
    int have = array[i];
    if (want != have) {
        ++bad;
        fprintf(stderr, "array[%u] - want %i, have %i\n", i, want, have);
    }
}
if (bad)
    exit(3);

return NULL;
}

int main(int argc, char **argv) {
    if (minion != NULL) {
        fprintf(stderr, "__thread variable started with %p, should be NULL\n",
            minion);
        exit(4);
    }

    minion = &plus_one;

    pthread_t
tid;
    int result = pthread_create(&tid, NULL, thread_function, NULL);
    if (result) {
        fprintf(stderr, "pthread_create failed (%d)\n", result);
        exit(5);
    }

    result = pthread_join(tid, NULL);
    if (result) {
        fprintf(stderr, "pthread_join failed (%d)\n", result);
        exit(6);
    }

    if (minion == NULL) {
        fprintf(stderr, "__thread variable should not be NULL\n");
        exit(7);
    }
    if (!(minion == &plus_one && *minion == 1)) {
        fprintf(stderr, "__thread variable should be %d @ %p, not %d @ %p\n",
            1, &plus_one, *minion, minion);
    }
}

```

```

        exit(8);
    }

    return 0;
}
EOCP

```

# Respect a hint (or previous) value for perl\_thread\_local, if there is one.

```

case "$perl_thread_local" in
") # Check the various possibilities, and break out on success.
for thread_local in _Thread_local __thread; do
    set try -DPROBE_MACRO=$thread_local
    if eval $compile && $run ./try; then
        $echo "Your compiler supports $thread_local."
    >&4
    val=$define
    perl_thread_local="$thread_local";
    break;
fi
$echo "Your compiler does NOT support $thread_local." >&4
val="$undef"
done
;;
*thread*|*Thread*) # Some variant of thread local exists.
echo "Keeping your $hint value of $perl_thread_local."
val=$define
;;
*) # Unrecognized previous value -- blindly trust the supplied
# value and hope it makes sense. Use old value for
# d_thread_local, if there is one.
echo "Keeping your $hint value of $perl_thread_local."
case "$d_thread_local" in
") val=$define ;;
*) val=$d_thread_local ;;
esac
;;
esac
set d_thread_local
eval $setvar
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_thread_local.U

```

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?RCS:

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?RCS: of the source tree for dist 3.0.  
?RCS:  
?MAKE:i\_thread: Inhdr  
?MAKE: -pick add \$@ %<  
?S:i\_thread:  
?S: This variable conditionally defines the I\_PTHREAD symbol,  
?S: and indicates whether a C program should include <pthread.h>.  
?S:.  
?C:I\_PTHREAD:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <pthread.h>.  
?C:.  
?H:#\$i\_thread I\_PTHREAD /\*\*/  
?H:.  
?LINT:set i\_thread  
: see if POSIX threads are available  
set pthread.h i\_thread  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/i\_thread.U

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?RCS:  
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?RCS:  
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?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_copysignl: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_copysignl:  
?S: This variable conditionally defines the HAS\_COPYSIGNL symbol, which  
?S: indicates to the C program that the copysignl() routine is available.  
?S: If aintl is also present we can emulate modfl.  
?S:.  
?C:HAS\_COPYSIGNL:  
?C: This symbol, if defined, indicates that the copysignl routine is  
?C: available. If aintl is also present we can emulate modfl.  
?C:.

```
?H:#$d_copysignl HAS_COPYSIGNL /**/  
?H:.  
?LINT:set d_copysignl  
: see if copysignl exists  
set copysignl d_copysignl  
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_copysignl.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: vaprotol.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: as specified in the README file that comes with the distribution.
```

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```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>
```

```
?RCS:
```

```
?RCS: $Log: vaprotol.U,v $
```

```
?RCS: Revision 3.0.1.1 1994/01/24 14:17:16 ram
```

```
?RCS: patch16: definition of _V now appears only when needed
```

```
?RCS:
```

```
?RCS: Revision 3.0 1993/08/18 12:09:59 ram
```

```
?RCS: Baseline for dist 3.0 netwide release.
```

```
?RCS:
```

```
?MAKE:vaprotol: prototype i_stdarg Setvar
```

```
?MAKE: -pick add $@ %<
```

```
?S:vaprotol:
```

```
?S: This variable conditionally defines CAN_VAPROTO on systems supporting
```

```
?S: prototype
```

```
declaration of functions with a variable number of
```

```
?S: arguments. See also prototype.
```

```
?S:.
```

```
?C:CAN_VAPROTO ~ %<:
```

```
?C: This variable is defined on systems supporting prototype declaration
```

```
?C: of functions with a variable number of arguments.
```

```
?C:.
```

```
?C:_V:
```

```
?C: This macro is used to declare function parameters in prototypes for
```

```
?C: functions with a variable number of parameters. Use double parentheses.
```

```
?C: For example:
```

```
?C:
```

```

?C: int printf _V((char *fmt, ...));
?C:
?C: Remember to use the plain simple _() macro when declaring a function
?C: with no variable number of arguments, since it might be possible to
?C: have a non-effect _V() macro and still get prototypes via _().
?C:.
?H:?%<:#$vaprotocol CAN_VAPROTO /**/
?H:?_V:#ifdef CAN_VAPROTO
?H:?_V:#define _V(args) args
?H:?_V:#else
?H:?_V:#define _V(args) ()
?H:?_V:#endif
?H:.
?W:?%<:_V
?LINT:set vaprotocol
: see if prototypes support variable argument declarations
echo " "
case "$prototype$i_stdarg" in
$define$define)
echo "It appears we'll
be able to prototype varargs functions." >&4
val="$define"
;;
*)
echo "Too bad... We won't be using prototyped varargs functions..." >&4
val="$undef"
;;
esac
set vaprotocol
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/vaprotocol.U

```

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```

?RCS: $Id$
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: sh.U,v $

```

?RCS: Revision 3.0.1.1 1997/02/28 16:20:13 ram

?RCS: patch61: created

?RCS:

?MAKE:sh: Head

?MAKE: -pick wipe \$@ %<

?S:sh:

?S: This variable contains the full pathname of the shell used

?S: on this system to execute Bourne shell scripts. Usually, this will be

?S: /bin/sh, though it's possible that some systems will have /bin/ksh,

?S: /bin/pdksh, /bin/ash, /bin/bash, or even something such as

?S: D:/bin/sh.exe.

?S: This unit comes before Options.U,  
so you can't set sh with a -D

?S: option, though you can override this (and startsh)

?S: with -O -Dsh=/bin/whatever -Dstartsh=whatever

?S:.

?C:SH\_PATH:

?C: This symbol contains the full pathname to the shell used on this

?C: on this system to execute Bourne shell scripts. Usually, this will be

?C: /bin/sh, though it's possible that some systems will have /bin/ksh,

?C: /bin/pdksh, /bin/ash, /bin/bash, or even something such as

?C: D:/bin/sh.exe.

?C:.

?H:#define SH\_PATH "\$sh" /\*\*/

?H:.

?T:xxx try pth p SYSTYPE

?LINT:extern maintloc maintname

?X:

?X: Be quiet unless something unusual happens because this gets

?X: loaded up even before options are processed.

?X: Can't use ./loc because that depends on startsh, which, in turn

?X: depends on this unit.

?X:

: Find the basic shell for Bourne shell scripts

case "\$sh" in

)

?X: SYSTYPE is for some older MIPS systems.

?X: I do not know if it is still needed.

case "\$SYSTYPE" in

\*bsd\*|sys5\*) xxx="/\$SYSTYPE/bin/sh";;

\*) xxx='/bin/sh';;

esac

if

test -f "\$xxx"; then

sh="\$xxx"

else

: Build up a list and do a single loop so we can 'break' out.

pth=`echo \$PATH | sed -e "s/\$p\_/ /g"



```
for xxx in sh bash ksh pdksh ash; do
  for p in $pth; do
    try="$try ${p}/${xxx}"
  done
done
for xxx in $try; do
  if test -f "$xxx"; then
    sh="$xxx"
    break
  elif test -f "$xxx$_exe"; then
    sh="$xxx"
    break
  elif test -f "$xxx.exe"; then
    sh="$xxx"
    break
  fi
done
fi
;;
esac
```

?X: fd 4 isn't open yet...

```
case "$sh" in
```

```
  ") cat >&2 <<EOM
```

\$me: Fatal Error: I can't find a Bourne Shell anywhere.

Usually it's in /bin/sh. How did you even get this far?

Please contact me (<\$maintname>) at <\$maintloc> and

we'll try to straighten this all out.

```
EOM
```

```
exit 1
```

```
;;
```

```
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/sh.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_msync.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
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```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

?RCS:  
?RCS: \$Log: d\_msync.U,v \$  
?RCS: Revision 3.0.1.1 1993/12/15 08:19:17 ram  
?RCS: patch15: created  
?RCS:  
?MAKE:d\_msync: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_msync:  
?S: This variable conditionally defines HAS\_MSYNCR if msync() is  
?S: available to synchronize a mapped file.  
?S:.  
?C:HAS\_MSYNCR:  
?C: This symbol, if defined, indicates that the msync system call is  
?C: available to synchronize a mapped file.  
?C:.  
?H:#\$d\_msync HAS\_MSYNCR /\*\*/  
?H:.  
?LINT:set d\_msync  
: see if  
msync exists  
set msync d\_msync  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_msync.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
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?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Thomas Neumann <tom@smart.bo.open.de>  
?RCS:  
?RCS: \$Log: Findhdr.U,v \$  
?RCS: Revision 3.0.1.2 1994/10/29 15:53:08 ram  
?RCS: patch36: added ?F: line for metalint file checking  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 14:03:56 ram  
?RCS: patch23: cppminus must be after other cppflags, not before  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:54 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a findhdr script which is used to locate the header

?X: files

in \$usrinc or other stranger places using cpp capabilities. The

?X: script is given an include file base name, like 'stdio.h' or 'sys/file.h'

?X: and it returns the full path of the include file and a zero status or an

?X: empty string with an error status if the file could not be located.

?X:

?MAKE:Findhdr: grep test tr rm +usrinc awk cat startsh \  
 cppstdin cppminus +cppflags eunicefix osname

?MAKE: -pick add \$@ %<

?LINT:define fieldn

?S:fieldn:

?S: This variable is used internally by Configure. It contains the position

?S: of the included file name in cpp output. That is to say, when cpp

?S: pre-processes a #include <file> line, it replaces it by a # line which

?S: contains the original position in the input file and the full name of

?S: included file, between "quotes".

?S:.

?V:fieldn

?F:./findhdr !fieldn

?T:cline pos wanted name awkprg cppfilter testaccess status usrincdir

: determine filename position in cpp output

echo " "

echo "Computing filename position in cpp output for #include

directives..." >&4

echo '#include <stdio.h>' > foo.c

case "\$osname" in

vos)

testaccess=-e

?X: VOS: path component separator is >

cppfilter="tr '\\\>' '/' '|"

;;

\*)

testaccess=-r

cppfilter="

;;

esac

\$cat >fieldn <<EOF

\$startsh

\$cppstdin \$cppflags \$cppminus <foo.c 2>/dev/null |\  
 \$grep '^[ ]\*#. \*stdio\.h'|\  
 while read cline; do

pos=1

set \\${cline}

while \$test \\${#} -gt 0; do

```

if $test $testaccess \`echo \${1} | $str -d ""`; then
  echo "\$pos"
  exit 0
fi
shift
pos=\`expr \$pos + 1\`
done
done
EOF
chmod +x fieldn
fieldn=`./fieldn`
$rm -f foo.c fieldn
case $fieldn in
  ") pos='???';;
  1) pos=first;;
  2) pos=second;;
  3) pos=third;;
  *) pos="{fieldn}th";;
esac
echo "Your cpp writes the filename in the $pos field of the line."

```

?X: To locate a header file, we cannot simply check for \$usrinc/file.h, since  
?X: some machine have the headers in weird places and our only hope is that  
?X: the C pre-processor will know how to find those headers. Thank you Next!

: locate header file

```

$cat
>findhdr <<EOF
$startsh
wanted=\${1}
name=""
for usrincdir in $usrinc; do
  if test -f \${usrincdir}/\${wanted}; then
    echo "\${usrincdir}/\${wanted}"
    exit 0
  fi
done
awkprg='{ print \${fieldn }'
echo "#include <\${wanted}>" > foo\${$.c
$cppstdin $cppminus $cppflags < foo\${$.c 2>/dev/null | \
$cppfilter $grep "^[ ]*#\.*\${wanted}" | \
while read cline; do
  name=\`echo \${cline} | $awk "\${awkprg}" | $str -d ""\`
  case "\${name}" in
    *[\|\\\]\${wanted}) echo "\${name}"; exit 1;;
    *[\|\\\]\${wanted}) echo "\${name}"; exit 1;;
    *) exit 2;;
  esac
done

```

```
?X: status = 0: grep returned 0 lines, case statement not executed
?X: status = 1: headerfile found
?X: status = 2: while loop executed, no headerfile found
status=\$?
$rm -f foo\$\$.c
if test \${status} -eq 1; then
    exit 0
fi
exit 1
EOF
chmod +x findhdr
$unicefix findhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Findhdr.U
```

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?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_trunc: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_trunc:

?S: This variable conditionally defines the HAS\_TRUNC symbol, which

?S: indicates to the C program that the trunc() routine is available

?S: to round doubles towards zero.

?S:.

?C:HAS\_TRUNC:

?C: This symbol, if defined, indicates that the trunc routine is

?C: available to round doubles towards zero.

?C:.

?H:#\$d\_trunc HAS\_TRUNC /\*\*/

?H:.

?LINT:set d\_trunc

: see if trunc exists

set trunc d\_trunc

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_trunc.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_dlsymun.U,v \$

?RCS:

?RCS: Copyright (c) 1996-1998, Andy Dougherty

?RCS:

```

?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: d_dlsymun.U,v $
?RCS:
?RCS:
?MAKE:d_dlsymun: cat cc cflags ldflags ld rm Setvar dlsrc i_dlfcn i_stdlib \
cccdlflags ccdlflags lddlflags libs dlextr _o run to
?MAKE: -pick add $@ %<
?X: This is specific to perl5.
?S:d_dlsymun:
?S: This variable conditionally defines DLSYM_NEEDS_UNDERSCORE, which
?S: indicates that we need to prepend an underscore to the symbol
?S: name before calling dlsym().
?S:
?C:DLSYM_NEEDS_UNDERSCORE:
?C: This symbol, if defined, indicates that we need to prepend an
?C: underscore to the symbol name before calling dlsym(). This only
?C: makes sense if you *have* dlsym, which we will presume is the
?C: case if you're using dl_dlopen.xs.
?C:
?H:#$d_dlsymun DLSYM_NEEDS_UNDERSCORE /**/
?H:
?LINT:set
d_dlsymun
?T: xxx
?F:!fred
: Check if dlsym need a leading underscore
echo " "
val="$undef"

case "$dlsrc" in
dl_dlopen.xs)
echo "Checking whether your dlsym() needs a leading underscore ..." >&4
$cat >dyna.c <<'EOM'
void fred (void) { }
EOM

$cat >fred.c<<'EOM

#include <stdio.h>
#include I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include I_DLFCN
#ifdef I_DLFCN
#include <dlfcn.h> /* the dynamic linker include file for SunOS/Solaris */

```

```

#else
#include <sys/types.h>
#include <nlist.h>
#include <link.h>
#endif

extern void fred(void) ;

int main()
{
    void * handle ;
    void * symbol ;
#ifdef RTLD_LAZY
    int mode = 1 ;
#else
    int mode = RTLD_LAZY ;
#endif
    handle = dlopen("./dyna.$dlext", mode) ;
    if (handle == NULL) {
printf ("1\n") ;
fflush (stdout) ;
exit(0);
    }
    symbol = dlsym(handle, "fred") ;
    if (symbol == NULL) {
/* try putting a leading underscore */
symbol = dlsym(handle, "_fred") ;
    if
(symbol == NULL) {
        printf ("2\n") ;
        fflush (stdout) ;
        exit(0);
    }
printf ("3\n") ;
    }
    else
printf ("4\n") ;
    fflush (stdout) ;
    exit(0);
}
EOM
: Call the object file tmp-dyna.o in case dlext=.o.
if $cc $cflags $cccdlflags -c dyna.c > /dev/null 2>&1 &&
mv dyna${_o} tmp-dyna${_o} > /dev/null 2>&1 &&
$ld -o dyna.$dlext $ldflags $lddlflags tmp-dyna${_o} > /dev/null 2>&1 &&
$cc -o fred $cflags $ldflags $cccdlflags $ccdlflags fred.c $libs > /dev/null 2>&1 && $to dyna.$dlext; then
xxx=`$run ./fred`
case $xxx in

```

```

1) echo "Test program failed using dlopen." >&4
   echo "Perhaps you should not use dynamic loading." >&4;;
2) echo "Test program failed using dlsym." >&4
   echo "Perhaps you should not use dynamic loading." >&4;;
3) echo "dlsym needs a leading underscore" >&4
   val="$define" ;;
4) echo "dlsym doesn't need a leading underscore." >&4;;
   esac
else
   echo "I can't compile and run the test program." >&4
       echo "I'm guessing
that dlsym doesn't need a leading underscore." >&4
fi
;;
esac

```

```
$rm -f fred fred.* dyna.$dlextr dyna.* tmp-dyna.*
```

```
set d_dlsymun
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_dlsymun.U
```

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```
?RCS: $Id: cppstdin.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
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?RCS: as specified in the README file that comes with the distribution.
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?RCS: You may reuse parts of this distribution only within the terms of
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?RCS: that same Artistic License; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: cppstdin.U,v $
```

```
?RCS: Revision 3.0.1.4 1994/10/29 16:08:34 ram
```

```
?RCS: patch36: added ?F: line for metalint file checking
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.3 1994/01/24 14:05:38 ram
```

```
?RCS: patch16: comment for CPPLAST was missing
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.2 1993/12/15 08:18:58 ram
```

```
?RCS: patch15: new variables cpprun and cpplast, guaranteed wrapper-free
```

```
?RCS: patch15: cppstdin now tries to use cc, even at the cost of a wrapper
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1
```



1993/08/25 14:00:53 ram

?RCS: patch6: remove wrapper when not actually used

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:38 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:cppstdin cppminus cpprun cpplast: contains test \  
Myread Oldconfig Loc cpp +cc rm hint osname gccversion

?MAKE: -pick add \$@ %<

?S:cppstdin:

?S: This variable contains the command which will invoke the C

?S: preprocessor on standard input and put the output to stdout.

?S: It is primarily used by other Configure units that ask about

?S: preprocessor symbols.

?S:.

?S:cppminus:

?S: This variable contains the second part of the string which will invoke

?S: the C preprocessor on the standard input and produce to standard

?S: output. This variable will have the value "-" if cppstdin needs

?S: a minus to specify standard input, otherwise the value is "".

?S:.

?S:cpprun:

?S: This variable contains the command which will invoke a C preprocessor

?S: on standard input and put the output to stdout. It is guaranteed

?S: not

?S: to be a wrapper and may be a null string if no preprocessor can be

?S: made directly available. This preprocessor might be different from the

?S: one used by the C compiler. Don't forget to append cpplast after the

?S: preprocessor options.

?S:.

?S:cpplast:

?S: This variable has the same functionality as cppminus, only it applies

?S: to cpprun and not cppstdin.

?S:.

?C:CPPSTDIN:

?C: This symbol contains the first part of the string which will invoke

?C: the C preprocessor on the standard input and produce to standard

?C: output. Typical value of "cc -E" or "/lib/cpp", but it can also

?C: call a wrapper. See CPPRUN.

?C:.

?C:CPPMINUS:

?C: This symbol contains the second part of the string which will invoke

?C: the C preprocessor on the standard input and produce to standard

?C: output. This symbol will have the value "-" if CPPSTDIN needs a minus

?C: to specify standard input, otherwise the value is "".

?C:.

?C:CPPRUN:

?C: This symbol contains the string which will invoke

a C preprocessor on

?C: the standard input and produce to standard output. It needs to end

?C: with CPPLAST, after all other preprocessor flags have been specified.

?C: The main difference with CPPSTDIN is that this program will never be a

?C: pointer to a shell wrapper, i.e. it will be empty if no preprocessor is

?C: available directly to the user. Note that it may well be different from

?C: the preprocessor used to compile the C program.

?C:.

?C:CPPLAST:

?C: This symbol is intended to be used along with CPPRUN in the same manner

?C: symbol CPPMINUS is used with CPPSTDIN. It contains either "-" or "".

?C:.

?H:#define CPPSTDIN "\$cppstdin"

?H:#define CPPMINUS "\$cppminus"

?H:#define CPPRUN "\$cpprun"

?H:#define CPPLAST "\$cpplast"

?H:.

?F:cppstdin !testcpp.out !testcpp.c

?T:wrapper x\_cpp x\_minus ok

?LINT:extern cppflags

: see how we invoke the C preprocessor

echo " "

echo "Now, how can we feed standard input to your C preprocessor..." >&4

cat <<'EOT' >testcpp.c

#define ABC abc

#define

XYZ xyz

ABC.XYZ

EOT

cd ..

if test ! -f cppstdin; then

if test "X\$name" = "Xaix" -a "X\$gccversion" = X; then

# AIX cc -E doesn't show the absolute headerfile

# locations but we'll cheat by using the -M flag.

echo 'cat >.\$\$.c; rm -f .\$\$.u; ""\$cc" "\${1+"\$@"} -M -c .\$\$.c 2>/dev/null; test -s .\$\$.u && awk ""\$2 ~ /\.h\$/ { print "# 0 \\"\$2\\"" } "" "" .\$\$.u; rm -f .\$\$.o .\$\$.u; ""\$cc" -E "\${1+"\$@"} .\$\$.c; rm .\$\$.c' > cppstdin

else

echo 'cat >.\$\$.c; ""\$cc \$cppflags" -E "\${1+"\$@"} .\$\$.c; rm .\$\$.c' >cppstdin

fi

else

echo "Keeping your \$hint cppstdin wrapper."

fi

chmod 755 cppstdin

wrapper=`pwd`/cppstdin

ok='false'

cd UU

?X:

```

?X: We'll run the cpp tests again if we don't have any valid C preprocessor
?X: yet or don't know how to proceed without a wrapper (in which case cpprun
?X: is empty and that's really annoying...)
?X:
if $test "X$cppstdin" != "X" && \
  $cppstdin $cppminus <testcpp.c >testcpp.out 2>&1 && \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1
then
  echo "You used
  to use $cppstdin $cppminus so we'll use that again."
  case "$cpprun" in
  *) echo "But let's see if we can live without a wrapper..." ;;
  *)
  if $cpprun $cppplast <testcpp.c >testcpp.out 2>&1 && \
    $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1
  then
    echo "(And we'll use $cpprun $cppplast to preprocess directly.)"
    ok='true'
  else
    echo "(However, $cpprun $cppplast does not work, let's see...)"
  fi
  ;;
esac
else
  case "$cppstdin" in
  *) ;;
  *)
  echo "Good old $cppstdin $cppminus does not seem to be of any help..."
  ;;
esac
fi

if $ok; then
  : nothing
elif echo 'Maybe ""$cc" -E" will work...'; \
  $cc -E <testcpp.c >testcpp.out 2>&1; \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
  echo "Yup, it does."
  x_cpp="$cc $cppflags -E"
  x_minus="";
elif echo 'Nope...maybe ""$cc" -E -" will work...'; \
  $cc -E - <testcpp.c >testcpp.out 2>&1; \
  $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
  echo "Yup, it does."
  x_cpp="$cc $cppflags -E"
  x_minus='-';
elif

```

```

echo 'Nope...maybe ""$cc" -P" will work...'; \
$cc -P <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "Yipee, that works!"
x_cpp="$cc $cppflags -P"
x_minus="";
elif echo 'Nope...maybe ""$cc" -P -" will work...'; \
$cc -P - <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "At long last!"
x_cpp="$cc $cppflags -P"
x_minus='-';
elif echo 'No such luck, maybe "$cpp" will work...'; \
$cpp <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "It works!"
x_cpp="$cpp $cppflags"
x_minus="";
elif echo 'Nixed again...maybe "$cpp" -" will work...'; \
$cpp - <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "Hooray, it works! I was beginning to wonder."
x_cpp="$cpp $cppflags"
x_minus='-';
elif echo 'Uh-uh. Time to get fancy. Trying a wrapper...'; \
$wrapper <testcpp.c >testcpp.out 2>&1; \
$contains
'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
x_cpp="$wrapper"
x_minus=""
echo "Eureka!"
else
dflt=""
rp="No dice. I can't find a C preprocessor. Name one:"
./myread
x_cpp="$ans"
x_minus=""
$x_cpp <testcpp.c >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "OK, that will do." >&4
else
echo "Sorry, I can't get that to work. Go find one and rerun Configure." >&4
exit 1
fi
fi

case "$ok" in
false)

```

```
cppstdin="$x_cpp"
cppminus="$x_minus"
cpprun="$x_cpp"
cpplast="$x_minus"
?X:
?X: If /lib/cpp is used, try using a wrapper to increase our chances to have
?X: the C compiler and our $cppstdin agree on the same symbols... However,
?X: since cpprun is guaranteed not to be a wrapper, we must clear it if the
?X: only preprocessor we found was a wrapper, with all our luck...
```

```
?X:
set X $x_cpp
shift
case "$1" in
"$cpp")
echo "Perhaps can we force $cc -E using a wrapper..."
if $wrapper <testcpp.c >testcpp.out 2>&1; \
 $contains 'abc.*xyz'
testcpp.out >/dev/null 2>&1
then
echo "Yup, we can."
cppstdin="$wrapper"
cppminus="";
else
echo "Nope, we'll have to live without it..."
fi
;;
esac
case "$cpprun" in
"$wrapper")
cpprun="
cpplast="
;;
esac
;;
esac
```

```
case "$cppstdin" in
"$wrapper"|cppstdin) ;;
*) $rm -f $wrapper;;
esac
$rm -f testcpp.c testcpp.out
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/cppstdin.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_fmod.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```

?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_fmod.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:12:46 ram
?RCS: patch36: created by ADO
?RCS:
?MAKE:d_fmod: Inlibc
?MAKE: -pick add $@ %<
?S:d_fmod:
?S: This variable conditionally defines the HAS_FMOD symbol, which
?S: indicates to the C program that the fmod() routine is available.
?S: See also d_drem for the drem() routine which does roughly the same.
?S:.
?C:HAS_FMOD
:
?C: This symbol, if defined, indicates that the fmod routine is
?C: available to compute the remainder  $r=x-n*y$  where  $n=\text{trunc}(x/y)$ .
?C:.
?H:#$d_fmod HAS_FMOD /**/
?H:.
?LINT:set d_fmod
: see if fmod exists
set fmod d_fmod
eval $inlibc

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_fmod.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 2005 H.Merijn Brand
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?MAKE:d_setenv: Inlibc
?MAKE: -pick add $@ %<

```

?S:d\_setenv:

?S: This variable conditionally defines the HAS\_SETENV symbol, which

?S: indicates to the C program that the setenv routine is available.

?S:.

?C:HAS\_SETENV:

?C: This symbol, if defined, indicates that the setenv routine is

?C: available for use.

?C:.

?H:#\$d\_setenv HAS\_SETENV /\*\*/

?H:.

?LINT:set d\_setenv

: see if setenv exists

set setenv d\_setenv

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_setenv.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_sqrtl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_sqrtl:

?S: This variable conditionally defines the HAS\_SQRTL symbol, which

?S: indicates to the C program that the sqrtl() routine is available.

?S:.

?C:HAS\_SQRTL:

?C: This symbol, if defined, indicates that the sqrtl routine is

?C: available to do long double square roots.

?C:.

?H:#\$d\_sqrtl HAS\_SQRTL /\*\*/

?H:.

?LINT:set d\_sqrtl

: see if sqrtl exists

set sqrtl d\_sqrtl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_sqrtl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: vendorhtml3dir.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1999, Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: vendorhtml3dir.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?MAKE:vendorhtml3dir vendorhtml3direxp installvendorhtml3dir: html3dir Getfile \

Oldconfig Setprefixvar Prefixit test vendorprefix prefix sed

?MAKE: -pick add \$@ %<

?Y:TOP

?S:vendorhtml3dir:

?S: This variable contains the name of the directory for html

?S: library pages. It may have a ~ on the front.

?S: The standard distribution will put nothing  
in this directory.

?S: Vendors who distribute perl may wish to place their own

?S: html pages for modules and extensions in this directory with

?S: MakeMaker Makefile.PL INSTALLDIRS=vendor

?S: or equivalent. See INSTALL for details.

?S:.

?S:vendorhtml3direxp:

?S: This variable is the ~name expanded version of vendorhtml3dir, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?D:installvendorhtml3dir="

?S:installvendorhtml3dir:

?S: This variable is really the same as vendorhtml3direxp but may differ on

?S: those systems using AFS. For extra portability, only this variable

?S: should be used in makefiles.

?S:.

?LINT:change prefixvar

?LINT:set installvendorhtml3dir

: Set the vendorhtml3dir variables

case "\$vendorprefix" in

) vendorhtml3dir="

vendorhtml3direxp="

;;

\*) : determine where vendor-supplied module html pages go.



: There is no standard location, so try to copy the previously-selected  
: directory structure for the core html pages.  
: XXX Better default  
suggestions would be welcome.

```
case "$vendorhtml3dir" in
") dflt=`echo "$html3dir" | $sed "s#^$prefix#$vendorprefix#"` ;;
*) dflt=$vendorhtml3dir ;;
esac
case "$dflt" in
"|' ) dflt=none ;;
esac
fn=dn+~
rp='Pathname for the vendor-supplied html pages?'
./getfile
vendorhtml3dir="$ans"
vendorhtml3direxp="$ansexp"
;;
esac
```

: Use ' ' for none so value is preserved next time through Configure  
\$test X"\$vendorhtml3dir" = "X" && vendorhtml3dir=' '  
prefixvar=vendorhtml3dir  
./installprefix

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/vendorhtml3dir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysioctl.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_sysioctl.U,v \$

?RCS: Revision 3.0.1.2 1994/05/06 15:04:57 ram

?RCS: patch23: added knowledge for <sys/filio.h> (WED)

?RCS: patch23: optimized amount of findhdr calls

?RCS:

?RCS: Revision 3.0.1.1 1993/11/10 17:36:09 ram

?RCS: patch14: now use a compiler check for TIOCNOTTY because of HP-UX 9.x

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:32 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_sysioctl i\_bsdioclt i\_sysfilio i\_syssockio  
d\_voidtty: test contains \  
cat i\_termio i\_termios i\_sgtty Setvar Findhdr +cc rm Inhdr

?MAKE: -pick add \$@ %<

?S:i\_sysioctl:

?S: This variable conditionally defines the I\_SYS\_IOCTL symbol, which  
?S: indicates to the C program that <sys/ioctl.h> exists and should  
?S: be included.

?S:.

?S:i\_sysfilio:

?S: This variable conditionally defines the I\_SYS\_FILIO symbol, which  
?S: indicates to the C program that <sys/filio.h> exists and should  
?S: be included in preference to <sys/ioctl.h>.

?S:.

?S:i\_bsdioclt:

?S: This variable conditionally defines the I\_SYS\_BSDIOCTL symbol, which  
?S: indicates to the C program that <sys/bsdioclt.h> exists and should  
?S: be included.

?S:.

?S:i\_syssockio:

?S: This variable conditionally defines I\_SYS SOCKIO to indicate to the  
?S: C program that socket ioctl codes may be found in <sys/sockio.h>  
?S: instead of <sys/ioctl.h>.

?S:.

?S:d\_voidtty:

?S: This variable conditionally defines USE\_IOCTLTY to indicate that the  
?S: ioctl() call with TIOCNOTTY should be used  
to void tty association.  
?S: Otherwise (on USG probably), it is enough to close the standard file  
?S: descriptors and do a setpgrp().

?S:.

?C:I\_SYS\_IOCTL (I\_SYSIOCTL):

?C: This symbol, if defined, indicates that <sys/ioctl.h> exists and should  
?C: be included. Otherwise, include <sgtty.h> or <termio.h>.

?C:.

?C:I\_SYS\_FILIO:

?C: This symbol, if defined, indicates that <sys/filio.h> exists and  
?C: should be included instead of <sys/ioctl.h>.

?C:.

?C:I\_SYS\_BSDIOCTL (I\_BSDIOCTL):

?C: This symbol, if defined, indicates that <sys/bsdioclt.h> exists and should  
?C: be included. Otherwise, try <sys/ioctl.h>. This is primarily intended for  
?C: definitions of sockets options, like SIOCATMARK.

?C:.

?C:I\_SYS SOCKIO (I\_SYSSOCKIO):

?C: This symbol, if defined, indicates the <sys/sockio.h> should be included  
?C: to get socket ioctl options, like SIOCATMARK.

```

?C:.
?C:USE_TIOCNOTTY (VOIDTTY):
?C: This symbol, if defined indicate to the C program that the ioctl()
?C: call with TIOCNOTTY should be used
to void tty association.
?C: Otherwise (on USG probably), it is enough to close the standard file
?C: descriptors and do a setpgrp().
?C:.
?H:#$i_sysioctl I_SYS_IOCTL /**/
?H:#$i_sysfilio I_SYS_FILIO /**/
?H:#$i_bsdiocntl I_SYS_BSDIOCTL /**/
?H:#$i_syssockio I_SYS_SOCKETIO /**/
?H:#$d_voidtty USE_TIOCNOTTY /**/
?H:.
?T:xxx
: see if ioctl defs are in sgTTY, termio, sys/filio or sys/ioctl
?LINT:set i_sysfilio
set sys/filio.h i_sysfilio
eval $inhdr
echo " "
if $test `./findhdr sys/ioctl.h`; then
val="$define"
echo '<sys/ioctl.h> found.' >&4
else
val="$undef"
if $test $i_sysfilio = "$define"; then
echo '<sys/ioctl.h> NOT found.' >&4
else
$test $i_sgTTY = "$define" && xxx="sgTTY.h"
$test $i_termio = "$define" && xxx="termio.h"
$test $i_termios = "$define" && xxx="termios.h"
echo "No <sys/ioctl.h> found, assuming ioctl args are defined in <$xxx>." >&4
fi
fi
?LINT:set i_sysioctl
set i_sysioctl
eval $setvar

@if I_BSDIOCTL || i_bsdiocntl
?X:
?X: The only machine I know where this
inclusion was necessary is a
?X: BULL DPX 5000 (a French machine).
?X:
: see if socket ioctl defs are in sys/bsdiocntl or sys/ioctl
echo " "
xxx=`./findhdr sys/bsdiocntl.h`
if $test "$xxx"; then

```

```

if $contains SIOCATMARK $xxx >/dev/null 2>&1; then
    val="$define"
    echo "You have socket ioctls defined in <sys/bsdiocl.h>." >&4
else
    val="$undef"
    echo "No socket ioctls found in <sys/bsdiocl.h>." >&4
fi
else
    val="$undef"
    echo "<sys/bsdiocl.h> not found, but that's ok." >&4
fi
?LINT:set i_bsdiocl
set i_bsdiocl
eval $setvar

@end
@if I_SYSSOCKIO || i_syssockio
: see if socket ioctl defs are in sys/sockio.h
echo " "
xxx=`./findhdr sys/sockio.h`
if $test "$xxx"; then
if $contains SIOCATMARK $xxx >/dev/null 2>&1; then
    val="$define"
    echo "You have socket ioctls defined in <sys/sockio.h>." >&4
else
    val="$undef"
    echo "No socket ioctls found in <sys/sockio.h>." >&4
fi
else
    val="$undef"
@if I_BSDIOCTL
case "$i_bsdiocl" in
"$define") $cat <<EOM
<sys/sockio.h> not found, using
ioctls from <sys/bsdiocl.h>.
EOM
;;
*) $cat <<EOM
<sys/sockio.h> not found, assuming socket ioctls are in <sys/ioctl.h>.
EOM
;;
esac
@else
$cat <<EOM
<sys/sockio.h> not found, assuming socket ioctls are in <sys/ioctl.h>.
EOM
@end
fi

```

```

?LINT:set i_syssockio
set i_syssockio
eval $setvar

@end
@if VOIDTTY || d_voidtty
: check how to void tty association
echo " "
case "$i_sysioctl" in
"$define") xxx='sys/ioctl.h';
?X: otherwise $xxx was set during the determination of i_sysioctl, above.
esac
?X:
?X: Can't use $contains here since HP-UX 9.x has TIOCNOTTY between a pair
?X: of #ifdef/#endif and is never actually defined. Oh well...
?X:
$cat > tcio.c <<EOM
#include <sys/types.h> /* Just in case */
#include <$xxx>

int main()
{
#ifdef TIOCNOTTY
exit(0);
#else
exit(1);
#endif
}
EOM
if ($cc -o tcio tcio.c && ./tcio) >/dev/null 2>&1; then
val="$define"
echo "TIOCNOTTY found in <$xxx>." >&4
echo "Using ioctl() call on /dev/tty to void tty association." >&4
else
val="$undef"
echo "Closing
standard file descriptors should void tty association." >&4
fi
?LINT:set d_voidtty
set d_voidtty
eval $setvar
$rm -f tcio tcio.? core

@end

Found in path(s):
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/i_sysioctl.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_stdstdio.U,v 3.0.1.3 1997/02/28 15:46:32 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Tye McQueen <tye@metronet.com>
?RCS:
?RCS: $Log: d_stdstdio.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 15:46:32 ram
?RCS: patch61: merged with perl5's unit
?RCS:
?RCS: Revision 3.0.1.2 1995/07/25 14:06:54 ram
?RCS: patch56: typo fix on ?C: line for FILE_bufsiz
?RCS: patch56: fixed unbalanced parenthesis (ADO)
?RCS: patch56: check whether FILE_cnt and FILE_ptr can be assigned to (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1995/05/12 12:12:11 ram
?RCS:
patch54: complete rewrite by Tye McQueen to fit modern systems
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:31 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_stdstdio d_stdiobase stdio_ptr stdio_cnt \
d_stdio_ptr_lval_sets_cnt d_stdio_ptr_lval_nochange_cnt stdio_base \
stdio_bufsiz d_stdio_cnt_lval d_stdio_ptr_lval stdio_filbuf: cat \
Compile contains rm_try d_gnulibc gnulibc_version i_stdlib \
Setvar Findhdr Oldconfig run to
?MAKE: -pick weed $@ %<
?S:d_stdstdio:
?S: This variable conditionally defines USE_STDIO_PTR if this system
?S: has a FILE structure declaring usable _ptr and _cnt fields (or
?S: equivalent) in stdio.h.
?S:.
?S:stdio_ptr:
?S: This variable defines how, given a FILE pointer, fp, to access the
?S: _ptr field (or equivalent) of stdio.h's FILE structure. This will
?S: be used to define the macro FILE_ptr(fp).
?S:.
?S:d_stdio_ptr_lval:
?S: This variable conditionally defines STDIO_PTR_LVALUE if the
```

?S: FILE\_ptr macro can be used as an lvalue.

?S:.

?S:stdio\_cnt:

?S: This variable defines how, given a FILE pointer, fp, to access the

?S: \_cnt field (or equivalent) of stdio.h's FILE structure. This will

?S: be used to define the macro FILE\_cnt(fp).

?S:.

?S:d\_stdio\_cnt\_lval:

?S: This variable conditionally defines STDIO\_CNT\_LVALUE if the

?S: FILE\_cnt macro can be used as an lvalue.

?S:.

?S:d\_stdio\_ptr\_lval\_sets\_cnt:

?S: This symbol is defined if using the FILE\_ptr macro as an lvalue

?S: to increase the pointer by n has the side effect of decreasing the

?S: value of File\_cnt(fp) by n.

?S:.

?S:d\_stdio\_ptr\_lval\_nochange\_cnt:

?S: This symbol is defined if using the FILE\_ptr macro as an lvalue

?S: to increase the pointer by n leaves File\_cnt(fp) unchanged.

?S:.

?S:stdio\_filbuf:

?S: This variable defines how, given a FILE pointer, fp, to tell

?S: stdio to refill its internal buffers (?). This will

?S: be used to define the macro FILE\_filbuf(fp).

?S:.

?S:d\_stdibase:

?S: This variable conditionally defines USE\_STDIO\_BASE if this system

?S: has

?S: a FILE structure declaring a usable \_base field (or equivalent)

?S: in stdio.h.

?S:.

?S:stdio\_base:

?S: This variable defines how, given a FILE pointer, fp, to access the

?S: \_base field (or equivalent) of stdio.h's FILE structure. This will

?S: be used to define the macro FILE\_base(fp).

?S:.

?S:stdio\_bufsiz:

?S: This variable defines how, given a FILE pointer, fp, to determine

?S: the number of bytes store in the I/O buffer pointer to by the

?S: \_base field (or equivalent) of stdio.h's FILE structure. This will

?S: be used to define the macro FILE\_bufsiz(fp).

?S:.

?C:USE\_STDIO\_PTR ~ d\_stdstdio (USE\_STD\_STDIO STDSTDIO):

?C: This symbol is defined if the \_ptr and \_cnt fields (or similar)

?C: of the stdio FILE structure can be used to access the stdio buffer

?C: for a file handle. If this is defined, then the FILE\_ptr(fp)

?C: and FILE\_cnt(fp) macros will also be defined and should be used

?C: to access these fields.

?C:.

?C:FILE\_ptr:

?C: This macro is used to access the \_ptr field (or equivalent) of the FILE structure pointed to by its argument. This macro will always be defined if USE\_STDIO\_PTR is defined.

?C:.

?C:STDIO\_PTR\_LVALUE:

?C: This symbol is defined if the FILE\_ptr macro can be used as an lvalue.

?C:.

?C:FILE\_cnt:

?C: This macro is used to access the \_cnt field (or equivalent) of the FILE structure pointed to by its argument. This macro will always be defined if USE\_STDIO\_PTR is defined.

?C:.

?C:STDIO\_CNT\_LVALUE:

?C: This symbol is defined if the FILE\_cnt macro can be used as an lvalue.

?C:.

?C:STDIO\_PTR\_LVAL\_SETS\_CNT:

?C: This symbol is defined if using the FILE\_ptr macro as an lvalue to increase the pointer by n has the side effect of decreasing the value of File\_cnt(fp) by n.

?C:.

?C:STDIO\_PTR\_LVAL\_NOCHANGE\_CNT:

?C: This symbol is defined if using the FILE\_ptr macro as an lvalue to increase the pointer by n leaves File\_cnt(fp) unchanged.

?C:.

?C:FILE\_filbuf:

?C: This macro is used to access the internal stdio \_filbuf function (or equivalent), if STDIO\_CNT\_LVALUE and STDIO\_PTR\_LVALUE are defined. It is typically either \_filbuf or \_\_filbuf. This macro will only be defined if both STDIO\_CNT\_LVALUE and STDIO\_PTR\_LVALUE are defined.

?C:.

```
?H:?d_stdstdio:#$d_stdstdio USE_STDIO_PTR /**/
?H:?d_stdstdio:#ifdef USE_STDIO_PTR
?H:#define FILE_ptr(fp) $stdio_ptr
?H:#$d_stdstdio_ptr_lval STDIO_PTR_LVALUE /**/
?H:#define FILE_cnt(fp) $stdio_cnt
?H:#$d_stdstdio_cnt_lval STDIO_CNT_LVALUE /**/
?H:#$d_stdstdio_ptr_lval_sets_cnt STDIO_PTR_LVAL_SETS_CNT /**/
?H:#$d_stdstdio_ptr_lval_nochange_cnt STDIO_PTR_LVAL_NOCHANGE_CNT /**/
?H:?FILE_filbuf:#if defined(STDIO_PTR_LVALUE) && defined(STDIO_CNT_LVALUE)
?H:?FILE_filbuf:#define FILE_filbuf(fp) $stdio_filbuf /**/
```



```

?H:?FILE_filbuf:#endif
?H:?d_stdstdio:#endif
?H:.
?W:d_stdstdio:FILE_ptr FILE_cnt FILE_filbuf
?C:USE_STDIO_BASE ~ d_stdiobase:
?C: This symbol is defined if the _base field (or similar) of the
?C: stdio FILE structure can be used to access the
stdio buffer for
?C: a file handle. If this is defined, then the FILE_base(fp) macro
?C: will also be defined and should be used to access this field.
?C: Also, the FILE_bufsiz(fp) macro will be defined and should be used
?C: to determine the number of bytes in the buffer. USE_STDIO_BASE
?C: will never be defined unless USE_STDIO_PTR is.
?C:.
?C:FILE_base:
?C: This macro is used to access the _base field (or equivalent) of the
?C: FILE structure pointed to by its argument. This macro will always be
?C: defined if USE_STDIO_BASE is defined.
?C:.
?C:FILE_bufsiz:
?C: This macro is used to determine the number of bytes in the I/O
?C: buffer pointed to by _base field (or equivalent) of the FILE
?C: structure pointed to its argument. This macro will always be defined
?C: if USE_STDIO_BASE is defined.
?C:.
?H:?d_stdiobase:#$d_stdiobase USE_STDIO_BASE /**/
?H:?d_stdiobase:#ifdef USE_STDIO_BASE
?H:#define FILE_base(fp) $stdio_base
?H:#define FILE_bufsiz(fp) $stdio_bufsiz
?H:?d_stdiobase:#endif
?H:.
?W:d_stdiobase:FILE_base
FILE_bufsiz
?T:ptr_lval cnt_lval filbuf xxx
?F:!try
?LINT:set d_stdstdio d_stdiobase
: see if _ptr and _cnt from stdio act std
echo " "

if $contains '_lbfsize' `./findhdr stdio.h` >/dev/null 2>&1 ; then
echo "(Looks like you have stdio.h from BSD.)"
case "$stdio_ptr" in
") stdio_ptr='((fp)->_p)'
ptr_lval=$define
;;
*) ptr_lval=$d_stdio_ptr_lval;;
esac
case "$stdio_cnt" in

```

```

") stdio_cnt='((fp)->_r)'
cnt_lval=$define
;;
*) cnt_lval=$d_stdio_cnt_lval;;
esac
case "$stdio_base" in
") stdio_base='((fp)->_ub._base ? (fp)->_ub._base : (fp)->_bf._base)';;
esac
case "$stdio_bufsiz" in
") stdio_bufsiz='((fp)->_ub._base ? (fp)->_ub._size : (fp)->_bf._size)';;
esac
elif $contains '_IO_fpos_t' `./findhdr stdio.h` `./findhdr libio.h` >/dev/null 2>&1 ; then
echo "(Looks like you have stdio.h from Linux.)"
case "$stdio_ptr" in
") stdio_ptr='((fp)->_IO_read_ptr)'
ptr_lval=$define
;;
*) ptr_lval=$d_stdio_ptr_lval;;
esac
case "$stdio_cnt"
in
") stdio_cnt='((fp)->_IO_read_end - (fp)->_IO_read_ptr)'
cnt_lval=$undef
;;
*) cnt_lval=$d_stdio_cnt_lval;;
esac
case "$stdio_base" in
") stdio_base='((fp)->_IO_read_base)';;
esac
case "$stdio_bufsiz" in
") stdio_bufsiz='((fp)->_IO_read_end - (fp)->_IO_read_base)';;
esac
else
case "$stdio_ptr" in
") stdio_ptr='((fp)->_ptr)'
ptr_lval=$define
;;
*) ptr_lval=$d_stdio_ptr_lval;;
esac
case "$stdio_cnt" in
") stdio_cnt='((fp)->_cnt)'
cnt_lval=$define
;;
*) cnt_lval=$d_stdio_cnt_lval;;
esac
case "$stdio_base" in
") stdio_base='((fp)->_base)';;
esac

```

```

case "$stdio_bufsiz" in
") stdio_bufsiz='((fp)->_cnt + (fp)->_ptr - (fp)->_base)';;
esac
fi

: test whether _ptr and _cnt really work
echo "Checking how std your stdio is..." >&4
$cat >try.c <<EOP
#include <stdio.h>
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <string.h>
#define FILE_ptr(fp) $stdio_ptr
#define FILE_cnt(fp) $stdio_cnt
int main() {
FILE *fp = fopen("try.c", "r");
char
c = getc(fp);
if (
18 <= FILE_cnt(fp) &&
strncmp(FILE_ptr(fp), "include <stdio.h>\n", 18) == 0
)
exit(0);
exit(1);
}
EOP
val="$undef"
set try
if eval $compile && $to try.c; then
if $run ./try; then
echo "Your stdio acts pretty std."
val="$define"
else
echo "Your stdio isn't very std."
fi
else
echo "Your stdio doesn't appear very std."
fi
$rm_try

# glibc 2.2.90 and above apparently change stdio streams so Perl's
# direct buffer manipulation no longer works. The Configure tests
# should be changed to correctly detect this, but until then,
# the following check should at least let perl compile and run.
# (This quick fix should be updated before 5.8.1.)
# To be defensive, reject all unknown versions, and all versions > 2.2.9.

```

```

# A. Dougherty, June 3, 2002.
case "$d_gnulibc" in
$define)
case "$gnulibc_version" in
2.[01]*) ;;
2.2) ;;
2.2.[0-9]) ;;
*) echo "But I will not snoop inside glibc $gnulibc_version stdio buffers."
val="$undef"
;;
esac
;;
esac
set
d_stdstdio
eval $setvar

```

```

@if STDIO_PTR_LVALUE || d_stdio_ptr_lval
: Can _ptr be used as an lvalue?
?X: Only makes sense if we have a known stdio implementation.
case "$d_stdstdio$ptr_lval" in
$define$define) val=$define ;;
*) val=$undef ;;
esac
set d_stdio_ptr_lval
eval $setvar
@end

```

```

@if STDIO_CNT_LVALUE || d_stdio_cnt_lval
: Can _cnt be used as an lvalue?
?X: Only makes sense if we have a known stdio implementation.
case "$d_stdstdio$cnt_lval" in
$define$define) val=$define ;;
*) val=$undef ;;
esac
set d_stdio_cnt_lval
eval $setvar
@end

```

```

@if FILE_filbuf
: How to access the stdio _filbuf or __filbuf function.
: If this fails, check how the getc macro in stdio.h works.
case "${d_stdio_ptr_lval}${d_stdio_cnt_lval}" in
${define}${define})
: Try $hint value, if any, then _filbuf, __filbuf, _fill, then punt.
: _fill is for os/2.
xxx='notok'
for filbuf in $stdio_filbuf '_filbuf(fp)' '__filbuf(fp)' '_fill(fp)' ; do

```

```

$cat >try.c <<EOP
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef
I_STDLIB
#include <stdlib.h>
#endif
#define FILE_ptr(fp) $stdio_ptr
#define FILE_cnt(fp) $stdio_cnt
#define FILE_filbuf(fp) $filbuf
int main() {
FILE *fp = fopen("try.c", "r");
int c;
c = getc(fp);
c = FILE_filbuf(fp); /* Just looking for linker errors.*/
exit(0);
}
EOP
set try
if eval $compile && $to try.c && $run ./try; then
echo "Your stdio appears to use $filbuf"
stdio_filbuf="$filbuf"
xxx='ok'
break
else
echo "Hmm. $filbuf doesn't seem to work."
fi
$rm_try
done
case "$xxx" in
notok) echo "I can't figure out how to access _filbuf"
echo "I'll just have to work around it."
d_stdio_ptr_lval="$undef"
d_stdio_cnt_lval="$undef"
;;
esac
;;
esac
@end

@if STDIO_PTR_LVALUE
: test whether setting _ptr sets _cnt as a side effect
d_stdio_ptr_lval_sets_cnt="$undef"
d_stdio_ptr_lval_nochange_cnt="$undef"
case "$d_stdio_ptr_lval$d_stdstdio" in
$define$define)
echo "Checking to see what happens if we set the stdio ptr..." >&4
$cat >try.c <<EOP

```

```

#include
<stdio.h>
/* Can we scream? */
/* Eat dust sed :-) */
/* In the buffer space, no one can hear you scream. */
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#define FILE_ptr(fp) $stdio_ptr
#define FILE_cnt(fp) $stdio_cnt
#include <sys/types.h>
int main() {
FILE *fp = fopen("try.c", "r");
int c;
char *ptr;
size_t cnt;
if (!fp) {
puts("Fail even to read");
exit(1);
}
c = getc(fp); /* Read away the first # */
if (c == EOF) {
puts("Fail even to read");
exit(1);
}
if (!(
18 <= FILE_cnt(fp) &&
strncmp(FILE_ptr(fp), "include <stdio.h>\n", 18) == 0
)) {
puts("Fail even to read");
exit (1);
}
ptr = (char*) FILE_ptr(fp);
cnt = (size_t)FILE_cnt(fp);

FILE_ptr(fp) += 42;

if ((char*)FILE_ptr(fp) != (ptr + 42)) {
printf("Fail ptr check %p != %p", FILE_ptr(fp), (ptr + 42));
exit (1);
}
if (FILE_cnt(fp) <= 20) {
printf ("Fail (<20 chars to test)");
exit (1);
}
if (strncmp(FILE_ptr(fp), "Eat dust sed :-) *\n", 20) != 0) {
puts("Fail

```

```

compare");
exit (1);
}
if (cnt == FILE_cnt(fp)) {
puts("Pass_unchanged");
exit (0);
}
if (FILE_cnt(fp) == (cnt - 42)) {
puts("Pass_changed");
exit (0);
}
printf("Fail count was %d now %d\n", cnt, FILE_cnt(fp));
return 1;

}
EOP
set try
if eval $compile && $to try.c; then
case ` $run ./try ` in
Pass_changed)
echo "Increasing ptr in your stdio decreases cnt by the same amount. Good." >&4
d_stdio_ptr_lval_sets_cnt="$define" ;;
Pass_unchanged)
echo "Increasing ptr in your stdio leaves cnt unchanged. Good." >&4
d_stdio_ptr_lval_nochange_cnt="$define" ;;
Fail*)
echo "Increasing ptr in your stdio didn't do exactly what I expected. We'll not be doing that then." >&4 ;;
*)
echo "It appears attempting to set ptr in your stdio is a bad plan." >&4 ;;
esac
else
echo "It seems we can't set ptr in your stdio. Nevermind." >&4
fi
$rm_try
;;
esac
@end

@if d_stdiobase || USE_STDIO_BASE || FILE_base || FILE_bufsiz
: see if _base is also standard
val="$undef"
case
"$d_stdstdio" in
$define)
$cat >try.c <<EOP
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB

```

```

#include <stdlib.h>
#endif
#define FILE_base(fp) $stdio_base
#define FILE_bufsiz(fp) $stdio_bufsiz
int main() {
FILE *fp = fopen("try.c", "r");
char c =getc(fp);
if (
19 <= FILE_bufsiz(fp) &&
strncmp(FILE_base(fp), "#include <stdio.h>\n", 19) == 0
)
exit(0);
exit(1);
}
EOP
set try
if eval $compile && $to try.c; then
if $run ./try; then
echo "And its _base field acts std."
val="$define"
else
echo "But its _base field isn't std."
fi
else
echo "However, it seems to be lacking the _base field."
fi
$rm_try
;;
esac
set d_stdibase
eval $setvar

@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_stdstdio.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysdir.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

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?RCS: You may redistribute only under the terms of the Artistic Licence,
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```

```
?RCS: of the source tree for dist 4.0.
```



?RCS:  
?RCS: \$Log: i\_sysdir.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:22:30 ram  
?RCS: patch32: fixed typo in I\_SYS\_DIR symbol name  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:08:30 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:i\_sysdir: Inhdr  
?MAKE: -pick add \$@ %<  
?S:i\_sysdir:  
?S: This variable conditionally defines the I\_SYS\_DIR symbol, and indicates  
?S: whether a C program should include <sys/dir.h>.  
?S:.  
?C:I\_SYS\_DIR (I\_SYSDIR):  
?C: This symbol, if  
defined, indicates to the C program that it should  
?C: include <sys/dir.h>.  
?C:.  
?H:#\$i\_sysdir I\_SYS\_DIR /\*\*/  
?H:.  
?LINT:set i\_sysdir  
: see if this is an sysdir system  
set sys/dir.h i\_sysdir  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_sysdir.U

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?RCS: \$Id\$  
?RCS:  
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?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_htonl.U,v \$  
?RCS: Revision 3.0.1.2 1994/08/29 16:09:25 ram  
?RCS: patch32: now properly handles htonl() and friends when macros (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 14:45:00 ram  
?RCS: patch23: now also check for htonl() macro (ADO)  
?RCS:

```

?RCS: Revision 3.0 1993/08/18 12:06:22 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_htonl: Inlibc Setvar i_niin i_sysin cat rm contains \
  cppstdin cppflags cppminus
?MAKE: -pick add $@ %<
?S:d_htonl:
?S: This variable conditionally
  defines HAS_HTONL if htonl() and its
?S: friends are available to do network order byte swapping.
?S:.
?C:HAS_HTONL (HTONL):
?C: This symbol, if defined, indicates that the htonl() routine (and
?C: friends htons() ntohl() ntohs()) are available to do network
?C: order byte swapping.
?C:.
?C:HAS_HTONS (HTONS):
?C: This symbol, if defined, indicates that the htons() routine (and
?C: friends htonl() ntohl() ntohs()) are available to do network
?C: order byte swapping.
?C:.
?C:HAS_NTOHL (NTOHL):
?C: This symbol, if defined, indicates that the ntohl() routine (and
?C: friends htonl() htons() ntohs()) are available to do network
?C: order byte swapping.
?C:.
?C:HAS_NTOHS (NTOHS):
?C: This symbol, if defined, indicates that the ntohs() routine (and
?C: friends htonl() htons() ntohl()) are available to do network
?C: order byte swapping.
?C:.
?H:#$d_htonl HAS_HTONL /**/
?H:#$d_htonl HAS_HTONS /**/
?H:#$d_htonl HAS_NTOHL /**/
?H:#$d_htonl HAS_NTOHS /**/
?H:.
?F:!htonl.c
?LINT:set d_htonl
:
  see if htonl --and friends-- exists
val="
set htonl val
eval $inlibc

: Maybe they are macros.
case "$val" in
$undef)
$cat >htonl.c <<EOM

```

```

#include <stdio.h>
#include <sys/types.h>
#ifdef I_NETINET_IN
#include <netinet/in.h>
#endif
#ifdef I_SYS_IN
#include <sys/in.h>
#endif
#ifdef htonl
printf("Defined as a macro.");
#endif
EOM
Scppstdin Scppflags Scppminus < htonl.c >htonl.E 2>/dev/null
if $contains 'Defined as a macro' htonl.E >/dev/null 2>&1; then
  val="$define"
  echo "But it seems to be defined as a macro." >&4
fi
$rm -f htonl.?
;;
esac
set d_htonl
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_htonl.U
```

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?RCS: \$Id: d\_attribut.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 2020, Raphael Manfredi, Karl Williamson

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_non\_int\_bitfields: \

Myread Oldconfig cat cc ccflags Setvar compiler\_warning rm\_try

?MAKE: -pick add \$@ %<

?S:d\_non\_int\_bitfields:

?S: This variable conditionally defines HAS\_NON\_INT\_BITFIELDS

?S: which indicates that the C compiler accepts struct bitfields of sizes

?S: that aren't 'int' or 'unsigned int'

?S:.

?C:HAS\_NON\_INT\_BITFIELDS:

?C: This symbol, if defined, indicates that the C compiler accepts, without

?C: error or warning, struct bitfields

that are declared with sizes other

?C: than plain 'int'; for example 'unsigned char' is accepted.

?C:.

?H:?:%<:#\$d\_non\_int\_bitfields HAS\_NON\_INT\_BITFIELDS /\*\*/

?H:.

?LINT:set d\_non\_int\_bitfields

?F:!try.out !try.c

: Look for non 'int'-sized bitfields

case "\$d\_non\_int\_bitfields" in

")

echo " " >&4

echo "Checking whether your compiler can handle struct bitfields that aren't 'int' or 'unsigned int' ..." >&4

\$cat >try.c <<'EOCP'

#include <stdio.h>

struct foo {

unsigned char byte:1;

unsigned short halfword:1;

} bar;

EOCP

if \$cc \$ccflags -c try.c >try.out 2>&1 ; then

if \$compiler\_warning try.out >/dev/null 2>&1; then

echo "Your C compiler doesn't support struct bitfields that aren't 'int' or 'unsigned int'." >&4

val="\$undef"

else

echo "Your C compiler supports struct bitfields besides 'int' and 'unsigned int'." >&4

val="\$define"

fi

else

echo "Your C compiler doesn't seem to understand struct bitfields that aren't 'int' or 'unsigned int' at all." >&4

val="\$undef"

fi

::

\*)

val="\$d\_non\_int\_bitfields" ;;

esac

set d\_non\_int\_bitfields

eval \$setvar

\$rm\_try

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_bitfield.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_system.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:  
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?RCS:  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_system.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:44 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_system: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_system:  
?S: This variable conditionally defines HAS\_SYSTEM if system() is  
?S: available to issue a shell command.  
?S:.  
?C:HAS\_SYSTEM (SYSTEM):  
?C: This symbol, if defined, indicates that the system routine is  
?C: available to issue a shell command.  
?C:.  
?H:#\$d\_system HAS\_SYSTEM /\*\*/  
?H:.  
?LINT:set  
d\_system  
: see if system exists  
set system d\_system  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_system.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_nextafter: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_nextafter:

?S: This variable conditionally defines HAS\_NEXTAFTER if nextafter()

?S: is available to return the next machine representable double from

?S: x in direction y.

?S:.

?C:HAS\_NEXTAFTER:

?C: This symbol, if defined, indicates that the nextafter routine is

?C: available to return the next machine representable double from

?C: x in direction y.

?C:.

?H:#\$d\_nextafter HAS\_NEXTAFTER /\*\*/

?H:.

?LINT:set d\_nextafter

: see if nextafter exists

set nextafter d\_nextafter

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_nextafter.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Signal.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Signal.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:20:01 ram

?RCS: patch61: created

?RCS:

?X:

?X: This unit produces three files:

?X: 1- A signal.c file, which, when compiled and run, produces an output like:

?X:

?X: HUP 1

?X: INT 2

?X: QUIT 3

?X: etc...

?X:

?X: 2- A signal.awk script to parse the output of signal.c, fill

?X: in gaps (up to NSIG) and move duplicates to the end.

?X: 3- A signal\_cmd script to compile signal.c and run it

?X: through

sort -n -k 2 | uniq | awk -f signal.awk.

?X: (we try also sort -n +1 since some old hosts don't grok sort -k)

?X: (This is called signal\_cmd to avoid OS/2 confusion with

?X: signal.cmd vs. signal.

?X: The signal\_cmd script also falls back on checking signals one at a

?X: time in case the signal.c program fails. On at least one version of

?X: Linux 2.1.x, the header file #define'd SIGRTMAX to a symbol that  
?X: is not defined by the compiler/linker. :-(. Further, on that same  
?X: version of Linux, the user had a defective C-shell that gave an  
?X: incorrect list for kill -l, so the fall-back didn't work.  
?X:  
?X: This unit is then used by sig\_name.U.  
?X:  
?MAKE:Signal: test tr rm awk cat grep startsh eunicefix sed sort uniq \  
Findhdr cppstdin +cppflags cppminus Compile \_o \_exe trnl run i\_stdlib \  
sysroot  
?MAKE:-pick add \$@ %<  
?X:all files declared as "public" since they're used from other units  
?F:signal.c signal\_cmd signal.lst signal.signal.awk  
?T: xx xxx xxxfiles  
?LINT:use rm run  
\_o \_exe  
?LINT:extern sig\_num\_init  
: Trace out the files included by signal.h, then look for SIGxxx names.  
?X: Remove SIGARRAYSIZE used by HPUX.  
?X: Remove SIGSTKSIZ used by Linux.  
?X: Remove SIGSTKSZ used by POSIX.  
?X: Remove SIGTYP void lines used by OS2.  
?X: Some cpps, like os390, do not give the file name anywhere  
case "\$sig\_num\_init" in  
")  
if [ "X\$fieldn" = X ]; then  
: Just make some guesses. We check them later.  
xxx="\$sysroot/usr/include/signal.h \$sysroot/usr/include/sys/signal.h"  
else  
xxx=`echo '#include <signal.h>' |  
\$cppstdin \$cppminus \$cppflags 2>/dev/null |  
\$grep '^[ ]\*#.\*include' |  
\$awk '{print \\\$fieldn}' | \$sed 's!'!g' \  
\$sed 's!\\\\\\\\\\\\\\\\!g' | \$sort | \$uniq`  
fi  
?X: Check this list of files to be sure we have parsed the cpp output ok.  
?X: This will also avoid potentially non-existent files, such  
?X: as ../foo/bar.h  
xxxfiles="  
?X: Add /dev/null in case the \$xxx list is empty.  
for xx in \$xxx /dev/null ; do  
\$test -f "\$xx" && xxxfiles="\$xxxfiles \$xx"  
done  
?X:  
If we have found no files, at least try signal.h  
case "\$xxxfiles" in  
") xxxfiles=`./findhdr signal.h` ;;  
esac

```

xxx=`awk '
$1 ~ /^#define$/ && $2 ~ /^SIG[A-Z0-9]*$/ && $2 !~ /SIGARRAYSIZE/ && $2 !~ /SIGSTKSIZE/ && $2 !~
/SIGSTKSZ/ && $3 !~ /void/ {
    print substr($2, 4, 20)
}
$1 == "#" && $2 ~ /^define$/ && $3 ~ /^SIG[A-Z0-9]*$/ && $3 !~ /SIGARRAYSIZE/ && $4 !~ /void/ {
    print substr($3, 4, 20)
}' $xxxfiles`
: Append some common names just in case the awk scan failed.
xxx="$xxx ABRT ALRM BUS CANCEL CHLD CLD CONT DIL EMT FPE"
xxx="$xxx FREEZE HUP ILL INT IO IOT KILL LOST LWP PHONE"
xxx="$xxx PIPE POLL PROF PWR QUIT RTMAX RTMIN SEGV STKFLT STOP"
xxx="$xxx SYS TERM THAW TRAP TSTP TTIN TTOU URG USR1 USR2"
xxx="$xxx USR3 USR4 VTALRM WAITING WINCH WIND WINDOW XCPU XFSZ"

```

: generate a few handy files for later

```

$cat > signal.c <<EOCP
#include <sys/types.h>
#include <signal.h>
#ifdef _STDLIB
#include <stdlib.h>
#endif
#include <stdio.h>
int main() {

/* Strange style to avoid
deeply-nested #if/#else/#endif */
#ifdef NSIG
# ifdef _NSIG
#  define NSIG (_NSIG)
# endif
#endif

#ifdef NSIG
# ifdef SIGMAX
#  define NSIG (SIGMAX+1)
# endif
#endif

#ifdef NSIG
# ifdef SIG_MAX
#  define NSIG (SIG_MAX+1)
# endif
#endif

#ifdef NSIG
# ifdef _SIG_MAX

```



```

# define NSIG (_SIG_MAX+1)
# endif
#endif

#ifndef NSIG
# ifdef MAXSIG
# define NSIG (MAXSIG+1)
# endif
#endif

#ifndef NSIG
# ifdef MAX_SIG
# define NSIG (MAX_SIG+1)
# endif
#endif

#ifndef NSIG
# ifdef SIGARRAYSIZE
# define NSIG SIGARRAYSIZE /* Assume ary[SIGARRAYSIZE] */
# endif
#endif

#ifndef NSIG
# ifdef _sys_nsig
# define NSIG (_sys_nsig) /* Solaris 2.5 */
# endif
#endif

/* Default to some arbitrary number that's big enough to get most
of the common signals.
*/
#ifndef NSIG
# define NSIG 50
#endif

printf("NSIG %d\n", NSIG);

#ifndef JUST_NSIG

EOCP

echo $xxx | $tr ' ' $trnl | $sort | $uniq | $awk '
{
printf "#ifdef SIG"; printf $1; printf "\n"
printf "printf(\"";
printf $1; printf " %%d\n\",SIG";
printf $1; printf ");\n"
printf "#endif\n"

```

```

}
END {
    printf "#endif /* JUST_NSIG */\n";
    printf "exit(0);\n}\n";
}
' >>signal.c
$cat >signal.awk <<'EOP'
BEGIN { ndups = 0 }
$1 ~ /^NSIG$/ { nsig = $2 }
($1 !~ /^NSIG$/) && (NF == 2) && ($2 ~ /^[0-9][0-9]*$/) {
    if ($2 > maxsig) { maxsig = $2 }
    if (sig_name[$2]) {
        dup_name[ndups] = $1
        dup_num[ndups] = $2
        ndups++
    }
    else {
        sig_name[$2] = $1
        sig_num[$2] = $2
    }
}
END {
    if (nsig == 0) {
        nsig = maxsig + 1
    }
    printf("NSIG %d\n", nsig);
    for (n = 1; n < nsig; n++) {
        if (sig_name[n]) {
            printf("%s %d\n", sig_name[n], sig_num[n])
        }
        else {
            printf("NUM%d %d\n", n, n)
        }
    }
    for (n = 0; n < ndups; n++) {
        printf("%s %d\n", dup_name[n], dup_num[n])
    }
}
EOP
$cat >signal_cmd <<<EOS
$startsh
if $test -s signal.lst; then
    echo "Using your existing signal.lst file"
    exit 0
fi
xxx="$xxx"
EOS
?X: Avoid variable interpolation problems, especially with

```

```

?X:
xxx, which contains newlines.
$cat >>signal_cmd <<'EOS'

set signal
if eval $compile_ok; then
  $run ./signal$_exe | ($sort -n -k 2 2>/dev/null || $sort -n +1) |\
  $uniq | $awk -f signal.awk >signal.lst
else
  echo "(I can't seem be able to compile the whole test program)" >&4
  echo "(I'll try it in little pieces.)" >&4
  set signal -DJUST_NSIG
  if eval $compile_ok; then
    $run ./signal$_exe > signal.nsg
    $cat signal.nsg
  else
    echo "I can't seem to figure out how many signals you have." >&4
    echo "Guessing 50." >&4
    echo 'NSIG 50' > signal.nsg
  fi
: Now look at all the signal names, one at a time.
for xx in `echo $xxx | $tr ' ' $trnl | $sort | $uniq`; do
  $cat > signal.c <<EOCP
#include <sys/types.h>
#include <signal.h>
#include <stdio.h>
int main() {
printf("$xx %d\n", SIG${xx});
return 0;
}
EOCP
  set signal
  if eval $compile; then
    echo "SIG${xx} found."
    $run ./signal$_exe >> signal.ls1
  else
    echo "SIG${xx} NOT found."
  fi
done
if $test -s signal.ls1; then
  $cat
signal.nsg signal.ls1 |
  $sort -n | $uniq | $awk -f signal.awk >signal.lst
fi

fi
if $test -s signal.lst; then
:

```

```

else
echo "(AAK! I can't compile the test programs -- Guessing)" >&4
echo 'kill -l' >signal
set X `csh -f <signal`
$rm -f signal
shift
case $# in
0) set HUP INT QUIT ILL TRAP ABRT EMT FPE KILL BUS SEGV SYS PIPE ALRM TERM;;
esac
echo $@ | $tr ' ' $trnl | \
    $awk '{ printf "%s %d\n", $1, ++s; }'
    END { printf "NSIG %d\n", ++s }' >signal.lst
fi
$rm -f signal.c signal$_exe signal$_o signal.nsg signal.lst
EOS
chmod a+x signal_cmd
$eunicefix signal_cmd
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Signal.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:gidformat: gidsize gidsign ivsize uvsize longsize intsize shortsize \

ivdformat uvuformat test echo

?MAKE: -pick add \$@ %<

?S:gidformat:

?S: This variable contains the format string used for printing a Gid\_t.

?S:.

?C:Gid\_t\_f:

?C: This symbol defines the format string used for printing a Gid\_t.

?C:.

?H:#define Gid\_t\_f \$gidformat /\*\*/

?H:.

: Check format string for GID

echo " "

\$echo "Checking the format string to be used for gids..." >&4

```

case "$gidsign" in
-1) if $test X"$gidsize" = X"$ivsized"; then
    gidformat="$ivdformat"
else
    if $test X"$gidsize" = X"$longsize"; then
        gidformat="ld"
    else
        if $test X"$gidsize" = X"$sintsize"; then
            gidformat="d"
        else
            if $test X"$gidsize"
= X"$shortsize"; then
                gidformat="hd"
            fi
        fi
    fi
fi
;;
*) if $test X"$gidsize" = X"$svsize"; then
    gidformat="$svuformat"
else
    if $test X"$gidsize" = X"$longsize"; then
        gidformat="lu"
    else
        if $test X"$gidsize" = X"$sintsize"; then
            gidformat="u"
        else
            if $test X"$gidsize" = X"$shortsize"; then
                gidformat="hu"
            fi
        fi
    fi
fi
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/gidf.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_poll.U,v \$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_langinfo: Inhdr Hasfield  
?MAKE: -pick add \$@ %<  
?S:i\_langinfo:  
?S: This variable conditionally defines the I\_LANGINFO symbol,  
?S: and indicates whether a C program should include <langinfo.h>.  
?S:.  
?C:I\_LANGINFO:  
?C: This symbol, if defined, indicates that <langinfo.h> exists and  
?C: should be included.  
?C:.  
?H:#\$i\_langinfo I\_LANGINFO /\*\*/  
?H:.  
?LINT:set i\_langinfo  
: see if this is a langinfo.h system  
set langinfo.h i\_langinfo  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_langinfo.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1999 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_hasmntopt: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_hasmntopt:  
?S: This variable conditionally defines the HAS\_HASMNTOPT symbol, which  
?S: indicates to the C program that the hasmntopt() routine is available  
?S: to query the mount options of file systems.  
?S:.  
?C:HAS\_HASMNTOPT:  
?C: This symbol, if defined, indicates that the hasmntopt routine is  
?C: available to query the mount options of file systems.  
?C:.  
?H:#\$d\_hasmntopt HAS\_HASMNTOPT /\*\*/  
?H:.  
?LINT:set d\_hasmntopt  
: see if hasmntopt exists  
set hasmntopt d\_hasmntopt  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_hasmntopt.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_acosh: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_acosh:

?S: This variable conditionally defines the HAS\_ACOSH symbol, which

?S: indicates to the C program that the acosh() routine is available.

?S:.

?C:HAS\_ACOSH:

?C: This symbol, if defined, indicates that the acosh routine is

?C: available to do the inverse hyperbolic cosine function.

?C:.

?H:#\$d\_acosh HAS\_ACOSH /\*\*/

?H:.

?LINT:set d\_acosh

: see if acosh exists

set acosh d\_acosh

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_acosh.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_mbstowcs.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_mbstowcs.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:29 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_mbstowcs: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mbstowcs:

?S: This variable conditionally defines the HAS\_MBSTOWCS symbol, which

?S: indicates to the C program that the mbstowcs() routine is available

?S: to convert a multibyte string into a wide character string.

?S:.

?C:HAS\_MBSTOWCS (MBSTOWCS):

?C: This symbol, if defined, indicates

that the mbstowcs routine is

?C: available to convert a multibyte string into a wide character string.

?C:.

?H:#\$d\_mbstowcs HAS\_MBSTOWCS /\*\*/

?H:.

?LINT:set d\_mbstowcs

: see if mbstowcs exists

set mbstowcs d\_mbstowcs

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_mbstowcs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Inlibc.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Inlibc.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 15:55:08 ram

?RCS: patch36: call ./whoa explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:03 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit checks for the definition of a given function.

?X:

?X: To use it, say:

?X: set function d\_func

?X: eval \$inlibc

?X:

?MAKE:Inlibc: Csym Whoa Oldconfig

?MAKE: -pick add \$@ %<

?LINT:define inlibc

?V:inlibc

?S:inlibc:



?S: This  
shell variable is used internally by Configure to check  
?S: whether a given function is defined or not. A typical use is:  
?S: set function d\_func  
?S: eval \$inlibc  
?S: That will print a message, saying whether function was found or  
?S: not and set d\_func accordingly.  
?S:.

```
?T:was tx sym tres td tu var
: define an is-in-libc? function
inlibc='echo " "; td=$define; tu=$undef;
sym=$1; var=$2; eval "was=\$2";
tx=yes;
case "$reusieval$was" in
true) ;;
true*) tx=no;;
esac;
case "$tx" in
yes)
set $sym tres -f;
eval $csym;
case "$tres" in
true)
echo "$sym() found." >&4;
case "$was" in $undef) ./whoa; esac; eval "$var=\$td";
*)
echo "$sym() NOT found." >&4;
case "$was" in $define) ./whoa; esac; eval "$var=\$tu";
esac;;
*)
case "$was" in
$define) echo "$sym() found." >&4;;
*) echo "$sym() NOT found." >&4;;
esac;;
esac'
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/inlibc.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_linuxstd.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_linuxstd.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:14:05 ram
?RCS: patch36: created by ADO
?RCS:
?MAKE:d_linuxstd: d_stdstdio cppstdin cppflags cppminus \
contains rm Setvar Findhdr
?MAKE: -pick add $@ %<
?S:d_linuxstd:
?S: This variable conditionally defines USE_LINUX_STDIO if this system
?S: has a FILE structure declaring _IO_read_base, _IO_read_ptr,
?S: and _IO_read_end
in stdio.h.
?S:.
?C:USE_LINUX_STDIO:
?C: This symbol is defined if this system has a FILE structure declaring
?C: _IO_read_base, _IO_read_ptr, and _IO_read_end in stdio.h.
?C:.
?H:#$d_linuxstd USE_LINUX_STDIO /**/
?H:.
?T:xxx
?LINT:set d_linuxstd
: see if stdio is like that in linux
case "$d_stdstdio" in
"$undef")
echo " "
xxx=`./findhdr stdio.h`
$cppstdin $cppflags $cppminus < "$xxx" > stdio.E
if $contains 'char.*_IO_read_base' stdio.E >/dev/null 2>&1 && \
$contains '_IO_read_ptr' stdio.E >/dev/null 2>&1 && \
$contains '_IO_read_end' stdio.E >/dev/null 2>&1 ; then
echo "Your stdio looks like linux." >&4
val="$define"
else
echo "You don't have linux stdio, either." >&4
val="$undef"
fi
$rm -f stdio.E
;;
*) val="$undef" ;;
esac

set d_linuxstd
eval $setvar

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_linuxstd.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: contains.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 2020, Raphael Manfredi and Karl Williamson

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?MAKE:compiler\_warning: contains grep osname

?MAKE: -pick add \$@ %<

?S:compiler\_warning:

?S: This variable holds the command to check if the file specified as a

?S: parameter contains a compiler warning

?S:.

: See if a file contains compiler warnings

: See if a file contains compiler warnings

case "\$osname" in

'aix')

cat >compiler\_warning <<EOSS

# Sample for aix (.5' indicates the column number in the line):

# "op.h", line 203.5: 1506-159 (E) Bit field

type specified for op\_type

# Since the word 'warning' isn't present, use a fairly rigorous match of what

# warning messages look like

# " o p . h ", line 203 . 5 : 1506 - 159 ( E )

\$grep -E "^\\[[A-Za-z][A-Za-z0-9\_]\*\\.[ch]\\]", line [1-9][0-9]\*.[1-9][0-9]\*: [1-9][0-9]\*-[1-9][0-9]\* \\([EW]D) "

"\$1"

EOSS

compiler\_warning=./compiler\_warning

chmod +x \$compiler\_warning

::

# Maybe a colon after the 'warning' would be appropriate

\*) compiler\_warning="\$contains -i warning"

::

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/compiler\_warning.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_srandom_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_srandom_r srandom_r_proto: Inlibc Protochk Hasproto i_systypes \
  usethreads i_stdlib extern_C
?MAKE: -pick add $@ %<
?S:d_srandom_r:
?S: This variable conditionally defines the HAS_SRANDOM_R symbol,
?S: which indicates to the C program that the srandom_r()
?S: routine is available.
?S:.
?S:srandom_r_proto:
?S: This variable encodes the prototype of srandom_r.
?S: It is zero if d_srandom_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_srandom_r
?S: is defined.
?S:.
?C:HAS_SRANDOM_R:
?C: This symbol, if defined, indicates that the srandom_r routine
?C: is available to srandom re-entrantly.
?C:.
?C:SRANDOM_R_PROTO:
?C: This
  symbol encodes the prototype of srandom_r.
?C: It is zero if d_srandom_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_srandom_r
?C: is defined.
?C:.
?H:#$d_srandom_r HAS_SRANDOM_R /**/
?H:#define SRANDOM_R_PROTO $srandom_r_proto /**/
?H:.
?T:try hdrs d_srandom_r_proto
: see if srandom_r exists
set srandom_r d_srandom_r
eval $inlibc
case "$d_srandom_r" in
"$define")
  hdrs="$i_systypes sys/types.h define stdio.h $i_stdlib stdlib.h"
  case "$d_srandom_r_proto:$usethreads" in
  ":define") d_srandom_r_proto=define
  set d_srandom_r_proto srandom_r $hdrs
```

```

eval $hasproto ;;
*) ;;
esac
case "$d_srandom_r_proto" in
define)
case "$srandom_r_proto" in
"|0) try='int srandom_r(unsigned int, struct random_data*);'
./protochk "$extern_C $try" $hdrs && srandom_r_proto=I_TS ;;
esac
case "$srandom_r_proto" in
"|0) d_srandom_r=undef
srandom_r_proto=0
echo "Disabling srandom_r, cannot determine prototype." >&4 ;;
*
) case "$srandom_r_proto" in
REENTRANT_PROTO*) ;;
*) srandom_r_proto="REENTRANT_PROTO_$$srandom_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susetthreads" in
define) echo "srandom_r has no prototype, not using it." >&4 ;;
esac
d_srandom_r=undef
srandom_r_proto=0
;;
esac
;;
*) srandom_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_srandom\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: cf\_name.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

```

?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>
?RCS:
?RCS: $Log: cf_name.U,v $
?RCS: Revision 3.0.1.2 1994/05/06 14:29:36 ram
?RCS: patch23: fixed user name computation from /etc/passwd in bsd systems
?RCS:
?RCS: Revision 3.0.1.1 1994/01/24 14:05:11 ram
?RCS: patch16: created
?RCS:
?RCS:
?MAKE:+cf_name: cf_by passcat Filexp nametype cat test
?MAKE: -pick add $@ %<
?S:cf_name:
?S: Full name of the person who ran the Configure script and
answered the
?S: questions. This can be used by units that require the user's full name.
?S: This variable is for internal use only.
?S:.
?T:xxx fn NAME
: figure out their full name
case "$NAME" in
") case "$nametype" in
other)
fn=`./filexp ~/.fullname`
xxx=usg
$test -f $fn && xxx=other
;;
*)
xxx="$nametype"
;;
esac

case "$xxx" in
bsd)
cf_name=`$passcat | grep "^$cf_by:" | \
sed -e 's/^[^:]*:[^:]*:[^:]*:[^:]*\([^:]*\):.*\1/' \
-e 's/,.*//'^
;;
usg)
cf_name=`$passcat | grep "^$cf_by:" | \
sed -e 's/^[^:]*:[^:]*:[^:]*:[^:]*\([^:]*\):.*\1/' \
-e 's/[^-]*-\(.*\)(.*)\1/'^
;;
*)
cf_name=`$cat $fn`
;;
esac
;;

```

```

*)
cf_name="$NAME"
;;
esac
?X:
?X: In the original unit, Graham asked for the user name, in case the above
?X: code was unable to figure it out correctly. Since now cf_name has been
?X: made an internal variable only (i.e. it is not saved in config.sh), letting
?X: the user override the computed default each time would be a pain.
?X:
Therefore, I have decided to trust the above code to get it right, and for
?X: those rare cases where it will fail, too bad :-)--RAM.
?X:
echo " "
echo "Pleased to meet you, $cf_name."

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/cf_name.U

```

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?RCS: \$Id\$

?RCS:

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i32dformat u32XUformat u32oformat u32uformat u32xformat: \  
i32type echo

?MAKE: -pick add \$@ %<

?S:i32dformat:

?S: This variable contains the format string used for printing

?S: a Perl I32 as a signed decimal integer.

?S:.

?S:u32oformat:

?S: This variable contains the format string used for printing

?S: a Perl U32 as an unsigned octal integer.

?S:.

?S:u32uformat:

?S: This variable contains the format string used for printing

?S: a Perl U32 as an unsigned decimal integer.

?S:.

?S:u32xformat:

?S: This variable contains the format string used for printing

?S: a Perl U32 as an unsigned hexadecimal integer in lowercase abcdef.

?S:.

?S:u32XUformat:

```

?S: This variable contains the format string
used for printing
?S: a Perl U32 as an unsigned hexadecimal integer in uppercase ABCDEF.
?S:.
?C:I32df:
?C: This symbol defines the format string used for printing a Perl I32
?C: as a signed decimal integer.
?C:.
?C:U32uf:
?C: This symbol defines the format string used for printing a Perl U32
?C: as an unsigned decimal integer.
?C:.
?C:U32of:
?C: This symbol defines the format string used for printing a Perl U32
?C: as an unsigned octal integer.
?C:.
?C:U32xf:
?C: This symbol defines the format string used for printing a Perl U32
?C: as an unsigned hexadecimal integer in lowercase abcdef.
?C:.
?C:U32Xf:
?C: This symbol defines the format string used for printing a Perl U32
?C: as an unsigned hexadecimal integer in uppercase ABCDEF.
?C:.
?H:#define I32df $i32dformat /**/
?H:#define U32of $u32offormat /**/
?H:#define U32uf $u32uformat /**/
?H:#define U32xf $u32xformat /**/
?H:#define U32Xf $u32XUformat /**/
?H:.
: Check format strings for internal 32bit types
echo " "
$echo "Checking
the format strings to be used for Perl's internal 32bit-types..." >&4

case "$i32dformat" in
") case "$i32type" in
int)
i32dformat="d"
u32uformat="u"
u32offormat="o"
u32xformat="x"
u32XUformat="X"
;;
long)
i32dformat="ld"
u32uformat="lu"
u32offormat="lo"

```



```

u32xformat="lx"
u32XUformat="lX"
;;
int_least32_t) : will not happen currently
i32dformat=PRIdLEAST32
u32uformat=PRIuLEAST32
u32oformat=PRIoLEAST32
u32xformat=PRILEAST32
u32XUformat=PRIXLEAST32
;;
int32_t)
i32dformat=PRId32
u32uformat=PRIu32
u32oformat=PRIo32
u32xformat=PRIX32
u32XUformat=PRIX32
;;
esac ;;
esac

case "$i32dformat" in
") echo "$0: Fatal: failed to find format strings for 32-bit integers, cannot continue." >&4
    exit 1
    ;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/perl32f.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_strdup.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_strdup.U,v $
?RCS: Revision 3.0.1.1 1993/12/15 08:21:41 ram
?RCS: patch15: created
?RCS:
?MAKE:d_strdup: Inlibc
?MAKE: -pick add $@ %<
?S:d_strdup:

```

?S: This variable conditionally defines HAS\_STRDUP if strdup() is

?S: available to duplicate strings in memory.

?S:.

?C:HAS\_STRDUP:

?C: This symbol, if defined, indicates that the strdup routine is

?C: available to duplicate strings in memory. Otherwise, roll up

?C: your own...

?C:.

?H:#\$d\_strdup HAS\_STRDUP /\*\*/

?H:.

?LINT:set

d\_strdup

: see if strdup exists

set strdup d\_strdup

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_strdup.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: MailList.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>

?RCS:

?RCS: \$Log: MailList.U,v \$

?RCS: Revision 3.0.1.1 1994/01/24 14:01:49 ram

?RCS: patch16: created

?RCS:

?RCS:

?X:

?X: This unit offers the user the option of subscribing to the mailing

?X: list. To force inclusion of this unit, you must add it's name to the

?X: dependancies on the MAKE line in your private copy of End.U.

?X: The address of the mailing list server must be set via a "list\_request=..."

?X:

entry in the .package file. This is usually done by running packinit and

?X: answering the proper questions.

?X:

?MAKE:MailList: cat mailer package Myread cf\_name cf\_email

```
?MAKE: -pick wipe $@ %<
?T:list_request list_sub list_unsub list_name
?X:
?X: The cf_name dependency is used through list_sub when the mailing list
?X: manager happens to be listserv, whereas cf_email is used with majordomo
?X: or when the mailing list request address is scanned by a human. Since
?X: they do not appear within the unit itself, we need a lint hint.
?X:
?LINT:use cf_name cf_email
: offer to join the mailing list
list_request='<$list_request>'
list_sub="<$list_sub>"
list_unsub="<$list_unsub>"
list_name="<$list_name>"
$cat <<EOM
```

There is a mailing list for discussion about \$package and related issues. This is the preferred place to ask questions about the program and discuss modifications and additions with the author and other users. If you are able to send mail to the Internet, you are encouraged to subscribe. You need only ever subscribe once, and you can unsubscribe automatically at any time in the future. If you have already subscribed and you wish to unsubscribe now, you may do so by answering "unsubscribe". Answer "subscribe" to subscribe to the list.

```
EOM
rp="Subscribe to or unsubscribe from the $list_name mailing list?"
dflt=neither
. ./myread
case "$ans" in
[sS]*) $cat <<EOM
```

You will be sent a message from the list server to let you know when your subscription has been successful and telling you how to submit articles and how to unsubscribe again when necessary. You may also unsubscribe by running this script again and asking it to do so for you.

```
EOM
echo "Sending mail to subscribe you to the $list_name list..." >&4
$mailler $list_request <<EOM >/dev/null 2>&1
Precedence: junk
To: $list_request
```

```
$list_sub
EOM
;;
[uU]*) echo "Sending mail to unsubscribe you from the $list_name list..." >&4
```

\$mailer \$list\_request <<EOM >/dev/null 2>&1

Precedence: junk

To:

\$list\_request

\$list\_unsub

EOM

::

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/MailList.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: cppstdin.U,v \$

?RCS: Revision 3.0.1.4 1994/10/29 16:08:34 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0.1.3 1994/01/24 14:05:38 ram

?RCS: patch16: comment for CPPLAST was missing

?RCS:

?RCS: Revision 3.0.1.2 1993/12/15 08:18:58 ram

?RCS: patch15: new variables cprun and cpplast, guaranteed wrapper-free

?RCS: patch15: cppstdin now tries to use cc, even at the cost of a wrapper

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:00:53 ram

?RCS: patch6:

remove wrapper when not actually used

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:38 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:cppstdin cppminus cprun cpplast: contains test Myread Oldconfig Loc \  
cpp +cc rm hint osname gccversion startsh eunicefix

?MAKE: -pick add \$@ %<

?S:cppstdin:

?S: This variable contains the command which will invoke the C

?S: preprocessor on standard input and put the output to stdout.  
?S: It is primarily used by other Configure units that ask about  
?S: preprocessor symbols.  
?S:.  
?S:cppminus:  
?S: This variable contains the second part of the string which will invoke  
?S: the C preprocessor on the standard input and produce to standard  
?S: output. This variable will have the value "-" if cppstdin needs  
?S: a minus to specify standard input, otherwise the value is "".  
?S:.  
?S:cprun:  
?S: This variable contains the command which will invoke a C preprocessor  
?S: on standard input and put the output to stdout. It is guaranteed not  
?S: to be a wrapper  
and may be a null string if no preprocessor can be  
?S: made directly available. This preprocessor might be different from the  
?S: one used by the C compiler. Don't forget to append cpplast after the  
?S: preprocessor options.  
?S:.  
?S:cpplast:  
?S: This variable has the same functionality as cppminus, only it applies to  
?S: cprun and not cppstdin.  
?S:.  
?C:CPPSTDIN:  
?C: This symbol contains the first part of the string which will invoke  
?C: the C preprocessor on the standard input and produce to standard  
?C: output. Typical value of "cc -E" or "/lib/cpp", but it can also  
?C: call a wrapper. See CPPRUN.  
?C:.  
?C:CPPMINUS:  
?C: This symbol contains the second part of the string which will invoke  
?C: the C preprocessor on the standard input and produce to standard  
?C: output. This symbol will have the value "-" if CPPSTDIN needs a minus  
?C: to specify standard input, otherwise the value is "".  
?C:.  
?C:CPPRUN:  
?C: This symbol contains the string which will invoke a C preprocessor on  
?C: the  
standard input and produce to standard output. It needs to end  
?C: with CPPLAST, after all other preprocessor flags have been specified.  
?C: The main difference with CPPSTDIN is that this program will never be a  
?C: pointer to a shell wrapper, i.e. it will be empty if no preprocessor is  
?C: available directly to the user. Note that it may well be different from  
?C: the preprocessor used to compile the C program.  
?C:.  
?C:CPPLAST:  
?C: This symbol is intended to be used along with CPPRUN in the same manner  
?C: symbol CPPMINUS is used with CPPSTDIN. It contains either "-" or "".

```

?C:.
?H:#define CPPSTDIN "$cppstdin"
?H:#define CPPMINUS "$cppminus"
?H:#define CPPRUN "$cpprun"
?H:#define CPPLAST "$cpplast"
?H:.
?F:cppstdin !testcpp.out !testcpp.c
?T:wrapper x_cpp x_minus ok
: see how we invoke the C preprocessor
echo " "
echo "Now, how can we feed standard input to your C preprocessor..." >&4
cat <<'EOT' >testcpp.c
#define ABC abc
#define XYZ xyz
ABC.XYZ
EOT
cd ..
if $test ! -f cppstdin;
then
echo "$startsh" >cppstdin
if $test "X$osname" = "Xaix" -a "X$gccversion" = X; then
?X: AIX cc -E doesn't show the absolute headerfile
?X: locations but we'll cheat by using the -M flag.
echo 'cat >.$$.c; rm -f .$$.u; ""$cc"" ${1+"$@"} -M -c .$$.c 2>/dev/null; \
test -s .$$.u && \
awk """"$2 ~ /\.h$/ { print "# 0 \\""$2"\\""" }"""" .$$.u; \
rm -f .$$.o .$$.u; ""$cc"" -E ${1+"$@"} .$$.c; rm .$$.c' >> cppstdin
else
echo 'cat >.$$.c; ""$cc"" -E ${1+"$@"} .$$.c; rm .$$.c' >>cppstdin
fi; else
echo "Keeping your $hint cppstdin wrapper."
fi
chmod 755 cppstdin
$unicefix cppstdin
wrapper=`pwd`/cppstdin
ok='false'
cd UU

?X:
?X: We'll run the cpp tests again if we don't have any valid C preprocessor
?X: yet or don't know how to proceed without a wrapper (in which case cpprun
?X: is empty and that's really annoying...)
?X:
if $test "X$cppstdin" != "X" && \
$cppstdin $cppminus <testcpp.c >testcpp.out 2>&1 && \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1
then
echo "You used to use

```

```

$cppstdin $cppminus so we'll use that again."
case "$cpprun" in
*) echo "But let's see if we can live without a wrapper..." ;;
*)
if $cpprun $cpplast <testcpp.c >testcpp.out 2>&1 && \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1
then
echo "(And we'll use $cpprun $cpplast to preprocess directly.)"
ok='true'
else
echo "(However, $cpprun $cpplast does not work, let's see...)"
fi
;;
esac
else
case "$cppstdin" in
") ;;
*)
echo "Good old $cppstdin $cppminus does not seem to be of any help..."
;;
esac
fi

if $ok; then
: nothing
elif echo 'Maybe ""$cc" -E" will work...'; \
$cc -E <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "Yup, it does."
x_cpp="$cc -E"
x_minus="";
elif echo 'Nope...maybe ""$cc" -E -" will work...'; \
$cc -E - <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "Yup, it does."
x_cpp="$cc -E"
x_minus='-';
elif echo 'Nope...maybe ""$cc"
-P" will work...'; \
$cc -P <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "Yipee, that works!"
x_cpp="$cc -P"
x_minus="";
elif echo 'Nope...maybe ""$cc" -P -" will work...'; \
$cc -P - <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "At long last!"

```

```

x_cpp="$cc -P"
x_minus='-';
elif echo 'No such luck, maybe "$cpp" will work...'; \
$cpp <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "It works!"
x_cpp="$cpp"
x_minus="";
elif echo 'Nixed again...maybe "$cpp" -" will work...'; \
$cpp - <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "Hooray, it works! I was beginning to wonder."
x_cpp="$cpp"
x_minus='-';
elif echo 'Uh-uh. Time to get fancy. Trying a wrapper...'; \
$wrapper <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
x_cpp="$wrapper"
x_minus="
echo
"Eureka!"
else
dflt="
rp="No dice. I can't find a C preprocessor. Name one:"
./myread
x_cpp="$ans"
x_minus="
$x_cpp <testcpp.c >testcpp.out 2>&1
if $contains 'abc.*xyz' testcpp.out >/dev/null 2>&1 ; then
echo "OK, that will do." >&4
else
echo "Sorry, I can't get that to work. Go find one and rerun Configure." >&4
exit 1
fi
fi

case "$ok" in
false)
cppstdin="$x_cpp"
cppminus="$x_minus"
cpprun="$x_cpp"
cpplast="$x_minus"
?X:
?X: If /lib/cpp is used, try using a wrapper to increase our chances to have
?X: the C compiler and our $cppstdin agree on the same symbols... However,
?X: since cpprun is guaranteed not to be a wrapper, we must clear it if the
?X: only preprocessor we found was a wrapper, with all our luck...
?X:

```



```

set X $x_cpp
shift
case "$1" in
"$cpp")
echo "Perhaps can we force $cc -E using a wrapper..."
if $wrapper <testcpp.c >testcpp.out 2>&1; \
$contains 'abc.*xyz' testcpp.out >/dev/null 2>&1
then
echo "Yup, we can."
cppstdin="$wrapper"
cppminus=";
else
echo
"Nope, we'll have to live without it..."
fi
;;
esac
case "$cpprun" in
"$wrapper")
cpprun="
cpplast="
;;
esac
;;
esac

case "$cppstdin" in
"$wrapper"|"cppstdin") ;;
*) $rm -f $wrapper;;
esac
$rm -f testcpp.c testcpp.out

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/cppstdin.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: errnolist.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:48:01 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS: patch61: likewise for .o replaced by \$\_o

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:10:54 ram

?RCS: patch16: created

?RCS:

?MAKE:errnolist errnolist\_SH errnolist\_a errnolist\_c errnolist\_o: cat +cc \  
+ccflags +libs +d\_sysernlst \_a \_o

?MAKE: -pick add \$@ %<

?S:errnolist:

?S: This variable holds the base name of a file containing the  
?S: definition of the sys\_errnolist  
array, if the C library

?S: doesn't provide it already. Otherwise, its value is empty.

?S: The following lines should be included in your Makefile.SH:

?S:

?S: case "\$serrnolist" in

?S: ") ;;

?S: \*)

?S: \$spitshell >>Makefile <<!GROK!THIS!

?S: \$serrnolist\_c: \$serrnolist\_SH \$serrnolist\_a

?S: sh ./serrnolist\_SH

?S:

?S: !GROK!THIS!

?S: ;;

?S: esac

?S:

?S: You may define the 'errnolist' variable in your Myinit.U if you  
?S: wish to override its default value "errnolist".

?S:.

?S:errnolist\_SH:

?S: This is the name of a file which will generate errnolistic.

?S:.

?S:errnolist\_a:

?S: This is the name of the awk script called by errnolist\_SH.

?S:.

?S:errnolist\_c:

?S: This is the name of a generated C file which provides the  
?S: definition of the sys\_errnolist array.

?S:.

?S:errnolist\_o:

?S: This is the name of the object file which provides the  
?S: definition of the sys\_errnolist array, if the C library

?S: doesn't provide it already. Otherwise, its value is empty.

?S:.

?INIT:errnolist=errnolist

:

```

check for sys_errnolist
@if d_sysernlist || HAS_SYS_ERRNOLIST
case "$d_sysernlist" in
"$define")
    errnolist="
    errnolist_SH="
    errnolist_a="
    errnolist_c="
    errnolist_o="
;;
*)
echo " "
echo "I'll make sure your Makefile provides sys_errnolist in $errnolist.c"
    errnolist_SH=$errnolist.SH
    errnolist_a=$errnolist$_a
    errnolist_c=$errnolist.c
    errnolist_o=$errnolist$_o
;;
esac
@else
echo " "
$cat <<EOM
Checking to see if your C library provides us with sys_errnolist[...]
EOM
$cat >errnolist.c <<'EOCP'
extern char *sys_errnolist[];
int main() {
    char *p0 = sys_errnolist[0];
    char *p1 = sys_errnolist[1];

    return (p0 == p1); /* Make sure they're not optimized away */
}
EOCP
if $cc $ccflags -o errnolist errnolist.c $libs >/dev/null 2>&1 ; then
    echo "It does."
    errnolist="
    errnolist_SH="
    errnolist_a="
    errnolist_c="
    errnolist_o="
else
echo "I'll make sure your Makefile provides sys_errnolist in $errnolist.c"

    errnolist_SH=$errnolist.SH
    errnolist_a=$errnolist$_a
    errnolist_c=$errnolist.c
    errnolist_o=$errnolist$_o
fi

```

@end

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/errnolist.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_regex.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Sidney C. Smith <scsmith@cbda9.apgea.army.mil>

?RCS:

?RCS: \$Log: i\_regex.U,v \$

?RCS: Revision 3.0.1.1 1995/01/30 14:35:45 ram

?RCS: patch49: created

?RCS:

?RCS:

?MAKE:i\_regex: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_regex:

?S: This variable conditionally defines the I\_REGEX symbol, which

?S: indicates to the C program that <regex.h> exists and should

?S: be included.

?S:.

?C:I\_REGEX:

?C: This symbol, if defined, indicates that <regex.h> exists

and should

?C: be included.

?C:.

?H:#\$i\_regex I\_REGEX /\*\*/

?H:.

?LINT:set i\_regex

: see if regex is available

set regex.h i\_regex

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_regex.U

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: sig\_name.U,v \$

?RCS: Revision 3.0.1.5 1997/02/28 16:21:25 ram

?RCS: patch61: brand new algorithm for sig\_name and (new!) sig\_num

?RCS:

?RCS: Revision 3.0.1.4 1995/07/25 14:14:54 ram

?RCS: patch56: added <asm/signal.h> lookup for linux

?RCS:

?RCS: Revision 3.0.1.3 1995/05/12 12:24:11 ram

?RCS: patch54: now looks for <linux/signal.h> too (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1994/06/20 07:06:57 ram

?RCS: patch30: final echo was missing to close awk-printed string

?RCS:

?RCS: Revision 3.0.1.1  
1994/05/06 15:17:55 ram

?RCS: patch23: signal list now formatted to avoid scroll-ups (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:47 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:sig\_name sig\_name\_init sig\_num sig\_num\_init sig\_count sig\_size: \  
awk Signal Oldconfig rm

?MAKE: -pick add \$@ %<

?S:sig\_name:

?S: This variable holds the signal names, space separated. The leading  
?S: SIG in signal name is removed. A ZERO is prepended to the  
?S: list. This is currently not used.

?S:.

?S:sig\_name\_init:

?S: This variable holds the signal names, enclosed in double quotes and  
?S: separated by commas, suitable for use in the SIG\_NAME definition  
?S: below. A "ZERO" is prepended to the list, and the list is  
?S: terminated with a plain 0. The leading SIG in signal names  
?S: is removed. See sig\_num.

?S:.

?S:sig\_num:

?S: This variable holds the signal numbers, space separated. A ZERO is  
?S: prepended to the list (corresponding to the fake SIGZERO), and

?S: the list is terminated  
with a 0. Those numbers correspond to  
?S: the value of the signal listed in the same place within the  
?S: sig\_name list.  
?S:.  
?S:sig\_num\_init:  
?S: This variable holds the signal numbers, enclosed in double quotes and  
?S: separated by commas, suitable for use in the SIG\_NUM definition  
?S: below. A "ZERO" is prepended to the list, and the list is  
?S: terminated with a plain 0.  
?S:.  
?S:sig\_count (sig\_name.U):  
?S: This variable holds a number larger than the largest valid  
?S: signal number. This is usually the same as the NSIG macro.  
?S:.  
?S:sig\_size:  
?S: This variable contains the number of elements of the sig\_name  
?S: and sig\_num arrays, excluding the final NULL entry.  
?S:.  
?C:SIG\_NAME:  
?C: This symbol contains a list of signal names in order of  
?C: signal number. This is intended  
?C: to be used as a static array initialization, like this:  
?C: char \*sig\_name[] = { SIG\_NAME };  
?C: The signals in the list are separated with commas, and each signal  
?C: is surrounded by double  
quotes. There is no leading SIG in the signal  
?C: name, i.e. SIGQUIT is known as "QUIT".  
?C: Gaps in the signal numbers (up to NSIG) are filled in with NUMnn,  
?C: etc., where nn is the actual signal number (e.g. NUM37).  
?C: The signal number for sig\_name[i] is stored in sig\_num[i].  
?C: The last element is 0 to terminate the list with a NULL. This  
?C: corresponds to the 0 at the end of the sig\_num list.  
?C:.  
?C:SIG\_NUM:  
?C: This symbol contains a list of signal numbers, in the same order as the  
?C: SIG\_NAME list. It is suitable for static array initialization, as in:  
?C: int sig\_num[] = { SIG\_NUM };  
?C: The signals in the list are separated with commas, and the indices  
?C: within that list and the SIG\_NAME list match, so it's easy to compute  
?C: the signal name from a number or vice versa at the price of a small  
?C: dynamic linear lookup.  
?C: Duplicates are allowed, but are moved to the end of the list.  
?C: The signal number corresponding to sig\_name[i] is sig\_number[i].  
?C: if (i  
< NSIG) then sig\_number[i] == i.  
?C: The last element is 0, corresponding to the 0 at the end of  
?C: the sig\_name list.

```

?C:.
?C:SIG_COUNT:
?C: This variable contains a number larger than the largest
?C: signal number. This is usually the same as the NSIG macro.
?C:.
?C:SIG_SIZE:
?C: This variable contains the number of elements of the sig_name
?C: and sig_num arrays, excluding the final NULL entry.
?C:.
?H:#define SIG_NAME $sig_name_init /**/
?H:#define SIG_NUM $sig_num_init /**/
?H:#define SIG_COUNT $sig_count /**/
?H:#define SIG_SIZE $sig_size /**/
?H:.
?T:i doinit
?F:!= !signal_cmd
?X: signal.cmd creates a file signal.lst which has two columns:
?X: NAME number, e.g.
?X: HUP 1
?X: The list is sorted on signal number, with duplicates moved to
?X: the end..
: generate list of signal names
echo " "
case "$sig_name_init" in
") doinit=yes ;;
*) case "$sig_num_init" in
"*,*") doinit=yes ;;
esac ;;
esac
case "$doinit" in
yes)
echo "Generating a list of signal names and
numbers..." >&4
. ./signal_cmd
sig_count=`$awk '/^NSIG/ { printf "%d", $2 }' signal.lst`
sig_name=`$awk 'BEGIN { printf "ZERO " }
!/^NSIG/ { printf "%s ", $1 }' signal.lst`
sig_num=`$awk 'BEGIN { printf "0 " }
!/^NSIG/ { printf "%d ", $2 }' signal.lst`
sig_name_init=`$awk 'BEGIN { printf "\"ZERO\", " }
!/^NSIG/ { printf "\"%s\", ", $1 }
END { printf "0\n" }' signal.lst`
sig_num_init=`$awk 'BEGIN { printf "0, " }
!/^NSIG/ { printf "%d, ", $2 }
END { printf "0\n" }' signal.lst`
;;
esac
echo "The following $sig_count signals are available:"

```

```

echo " "
echo $sig_name | $awk \
'BEGIN { linelen = 0 }
{
for (i = 1; i <= NF; i++) {
name = "SIG" $i " "
linelen = linelen + length(name)
if (linelen > 70) {
printf "\n"
linelen = length(name)
}
printf "%s", name
}
printf "\n"
}'
sig_size=`echo $sig_name | awk '{print NF}'`
$rm -f signal signal.c signal.awk signal.lst signal_cmd

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/sig_name.U
```

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?RCS:

?MAKE:st\_ino\_size st\_ino\_sign: cat echo i\_stdlib Setvar Compile run rm\_try

?MAKE: -pick add \$@ %<

?S:st\_ino\_sign:

?S: This variable contains the signedness of struct stat's st\_ino.

?S: 1 for unsigned, -1 for signed.

?S:.

?S:st\_ino\_size:

?S: This variable contains the size of struct stat's st\_ino in bytes.

?S:.

?C:ST\_INO\_SIZE:

?C: This variable contains the size of struct stat's st\_ino in bytes.

?C:.

?C:ST\_INO\_SIGN:

?C: This symbol holds the signedness of struct stat's st\_ino.

?C: 1 for unsigned, -1 for signed.

?C:.

?H:#define ST\_INO\_SIGN



```

$st_ino_sign /* st_ino sign */
?H:#define ST_INO_SIZE $st_ino_size /* st_ino size */
?H:
?F:!try
: Check the size of st_ino
$echo " "
$echo "Checking the size of st_ino..." >&4
$cat > try.c <<EOCP
#include <sys/stat.h>
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main() {
    struct stat st;
    printf("%d\n", (int)sizeof(st.st_ino));
    exit(0);
}
EOCP
set try
if eval $compile_ok; then
    val=`$run ./try`
    case "$val" in
        *) st_ino_size=4
            $echo "(I can't execute the test program--guessing $st_ino_size.)" >&4
            ;;
        *) st_ino_size=$val
            $echo "Your st_ino is $st_ino_size bytes long."
            ;;
    esac
else
    st_ino_size=4
    $echo "(I can't compile the test program--guessing $st_ino_size.)" >&4
fi
$rm_try

: Check if st_ino is signed
$echo " "
$echo "Checking the sign of st_ino..." >&4
$cat > try.c <<EOCP
#include <sys/stat.h>
#include <stdio.h>
int main() {
    struct stat foo;
    foo.st_ino = -1;
    if (foo.st_ino < 0)
        printf("-1\n");
}
EOCP
$rm_try

```

```

else
  printf("1\n");
}
EOCP
set
try
if eval $compile; then
  val=`$run ./try`
  case "$val" in
  *) st_ino_sign=1
    $echo "(I can't execute the test program--guessing unsigned.)" >&4
    ;;
  *) st_ino_sign=$val
    case "$st_ino_sign" in
    1) $echo "Your st_ino is unsigned." ;;
    -1) $echo "Your st_ino is signed." ;;
    esac
    ;;
  esac
else
  st_ino_sign=1
  $echo "(I can't compile the test program--guessing unsigned.)" >&4
fi
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/st_ino_def.U
```

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?RCS:

?RCS: \$Log: Oldsym.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:06:58 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:13 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

```

?X: This unit follows the creation of the config.sh file. It adds some
?X: special symbols: defines from patchlevel.h file if any and CONFIG,
?X: which is set to true. Then, we try to keep all the new symbols that
?X: may come from a hint file or a previous config.sh file.
?X:
?MAKE:Oldsym:
  Config_sh Options test hint src sed sort uniq
?MAKE: -pick add $@ %<
?T:CONFIG sym tmp
?F:!UU
: add special variables
$test -f $src/patchlevel.h && \
awk '/^#define/ {printf "%s=%s\n", $2, $3}' $src/patchlevel.h >>config.sh
echo "CONFIG=true" >>config.sh

: propagate old symbols
if $test -f UU/config.sh; then
?X: Make sure each symbol is unique in oldconfig.sh
  <UU/config.sh $sort | $uniq >UU/oldconfig.sh
?X:
?X: All the symbols that appear twice come only from config.sh (hence the
?X: two config.sh in the command line). These symbols will be removed by
?X: the uniq -u command. The oldsyms file thus contains all the symbols
?X: that did not appear in the produced config.sh (Larry Wall).
?X:
?X: Do not touch the -u flag of uniq. This means you too, Jarkko.
?X:
$sed -n 's/^\([a-zA-Z_0-9]*\)=.*/\1/p' \
  config.sh config.sh UU/oldconfig.sh | \
  $sort | $uniq -u >UU/oldsyms
set X `cat UU/oldsyms`
shift
case $# in
0) ;;
*)
  cat <<EOM
  Hmm...You had some extra variables I don't know about...I'll
  try to keep 'em...
  EOM
  echo ": Variables propagated from previous config.sh file." >>config.sh
  for sym in `cat UU/oldsyms`; do
    echo "  Propagating $hint variable ""$sym..."
    eval 'tmp=""${sym}""'
    echo "$tmp" | \
      sed -e "s/'\"/\"/g" -e "s/^\$sym='/" -e "s/$/'/" >>config.sh
  done
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Oldsym.U
```

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```
?RCS: $Id$
```

```
?RCS:
```

```
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```

```
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```

```
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```

```
?RCS:
```

```
?MAKE:default_inc_excludes_dot: Myread cat
```

```
?MAKE: -pick add $@ %<
```

```
?S:default_inc_excludes_dot:
```

```
?S: When defined, remove the legacy '.' from @INC
```

```
?S:.
```

```
?C:DEFAULT_INC_EXCLUDES_DOT:
```

```
?C: This symbol, if defined, removes the legacy default behavior of
```

```
?C: including '.' at the end of @INC.
```

```
?C:.
```

```
?H:#$default_inc_excludes_dot DEFAULT_INC_EXCLUDES_DOT /**/
```

```
?H:.
```

```
: Include . in @INC
```

```
$cat <<EOM
```

Historically Perl has provided a final fallback of the current working directory '.' when searching for a library. This, however, can lead to problems when a Perl program which loads optional modules is called from a shared directory. This can lead to executing unexpected code.

EOM

```
# When changing to exclude by
```

```
default:
```

```
case "$default_inc_excludes_dot" in
```

```
  $undef|false|[nN]*) dflt="n" ;;
```

```
  *) dflt="y" ;;
```

```
esac
```

```
# To turn exclude off by default:
```

```
#case "$default_inc_excludes_dot" in
```

```
#  $define|true|[yY]*) dflt="y" ;;
```

```
#  *) dflt="n" ;;
```

```
#esac
```

```
rp='Exclude '.' from @INC by default? '
```

```
./myread
case "$ans" in
  [nN])undef) default_inc_excludes_dot="$undef" ;;
  *)      default_inc_excludes_dot="$define" ;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/defaultincdot.U
```

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?RCS:

?RCS: \$Log: d\_NOFILE.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:08:38 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:39 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:nofile d\_gettblsz tablesize: Myread Guess cat +cc +ccflags +libs \  
test rm Csym

?MAKE: -pick add \$@ %<

?S:nofile:

?S: This variable contains the number of file descriptors available to the

?S: process.

?S:.

?S:d\_gettblsz:

?S: This variable conditionally handles remapping

of the getdtablesize()

?S: subroutine to ulimit(4,0), or the NOFILE manifest constant.

?S:.

?S:tablesize:

?S: This variable contains either the 'NOFILE' constant or 'ulimit(4, 0L)'

?S: and is used as the remapped value for the getdtablesize() macro.

?S:.

?C:getdtablesize:

?C: This catches use of the getdtablesize() subroutine, and remaps it

?C: to either ulimit(4,0) or NOFILE, if getdtablesize() isn't available.

?C:.

```

?C:VAL_NOFILE:
?C: This symbol contains the number of file descriptors available to the
?C: process, as determined at configuration time. Unless a static constant
?C: is needed, you should rely on getdtablesize() to obtain that number.
?C:.
?H:#$d_gettblsz getdtablesize() $tablesize /**/
?H:#define VAL_NOFILE $nofile /* Number of file descriptors */
?H:.
?F:!nofile
?T:d_ulimit4 val
: see if getdtablesize exists
echo " "
?X: Revert logical value (d_gettblsz is undef iff getdtablesize is present)
case "$d_gettblsz" in
$define) d_gettblsz="$undef";;
$undef) d_gettblsz="$define";;
esac
if
set getdtablesize val -f d_gettblsz; eval $csym; $val; then
echo 'getdtablesize() found.' >&4
d_gettblsz="$undef"
tablesize="
@if VAL_NOFILE || nofile
$cat >nofile.c <<'EOCP'
#include <stdio.h>
int main()
{
printf("%d\n", getdtablesize());
}
EOCP
nofile="
if $cc $ccflags -o nofile nofile.c $libs >/dev/null 2>&1; then
nofile=`./nofile 2>/dev/null`
fi
if $test "$nofile"; then
echo "(You have $nofile file descriptors available per process.)"
else
nofile='20'
if ./bsd; then
nofile='64'
fi
echo "(Hmm... Let's say you have $nofile file descriptors available.)"
fi
@end
else
echo 'getdtablesize() NOT found...' >&4
if set ulimit val -f; eval $csym; $val; then
echo 'Maybe ulimit(4,0) will work...'
```

```

$cat >nofile.c <<'EOCP'
#include <stdio.h>
#ifdef GETPARAM_H
#include <sys/param.h>
#endif
int main()
{
    printf("%d %d\n",
#ifdef NOFILE
        NOFILE,
#else
        0,
#endif
        ulimit(4,0));
    exit(0);
}
EOCP
if $cc $cflags -DGETPARAM_H -o nofile nofile.c $libs
>/dev/null 2>&1 \
|| $cc $cflags -o nofile nofile.c $libs >/dev/null 2>&1 ; then
set `./nofile`
d_gettblsz=$1
d_ulimit4=$2
if $test "$d_ulimit4" -lt 0; then
echo "Your ulimit() call doesn't tell me what I want to know."
echo "We'll just use NOFILE in this case."
nofile=$d_gettblsz
d_gettblsz="$define"
tablesize='NOFILE'
else
if $test "$d_gettblsz" -gt 0; then
echo "Your system defines NOFILE to be $d_gettblsz, and" >&4
else
echo "I had trouble getting NOFILE from your system, but" >&4
fi
echo "ulimit returns $d_ulimit4 as the number of available file descriptors." >&4
dflt='y';
echo " "
rp='Should I use ulimit to get the number of available file descriptors?'
. ./myread
case "$ans" in
y*)
    nofile=$d_ulimit4
    d_gettblsz="$define"
    tablesize='ulimit(4, 0L)'
    echo "Using ulimit(4,0)."
;;
*)

```

```

nofile=$(d_gettblsz
d_gettblsz="$define"
tablesize='NOFILE'
echo "Using NOFILE."
;;
esac
fi
else
echo
"Strange, I couldn't get my test program to compile."
echo "We'll just use NOFILE in this case."
d_gettblsz="$define"
tablesize='NOFILE'
nofile=""
fi
else
echo 'Using NOFILE instead.'
d_gettblsz="$define"
tablesize='NOFILE'
nofile=""
fi
fi
@if VAL_NOFILE || nofile
case "$nofile" in
")
$cat >nofile.c <<'EOCP'
#include <stdio.h>
#ifdef GETPARAM_H
#include <sys/param.h>
#endif
int main()
{
printf("%d\n",
#ifdef NOFILE
NOFILE,
#else
0,
#endif
);
exit(0);
}
EOCP
if $cc $ccflags -DGETPARAM_H -o nofile nofile.c $libs >/dev/null 2>&1 \
|| $cc $ccflags -o nofile nofile.c $libs >/dev/null 2>&1 ; then
nofile=`./nofile 2>/dev/null`
fi
if $test "$nofile"; then
echo "(You have $nofile file descriptors available per process.)"

```



```

else
  nofile='20'
if ./bsd; then
  nofile='64'
fi
echo "(Hmm... Let's say you have $nofile file descriptors available.)"
fi
;;
esac
@end
$rm -f nofile*

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_NOFILE.U
```

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?RCS:

?RCS: \$Log: randfunc.U,v \$

?RCS: Revision 3.0 1993/08/18 12:09:39 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This is the new unit that should be used when random

?X: functions are to be used. It thus makes randbits.U obsolete.

?X:

?MAKE:randfunc mrand seedfunc nrandbits: cat +cc rm test Myread Csym

?MAKE: -pick add \$@ %<

?S:randfunc:

?S: Indicates the name of the random number function to use.

?S: Values include drand48, random, and rand. In C programs,

?S: the 'nrand' macro is defined

to generate uniformly distributed

?S: random numbers over the range [0., 1.] (see mrand and nrand).

?S:.

?S:mrand:

?S: Indicates the macro to be used to generate normalized

?S: random numbers. Uses randfunc, often divided by

?S: (double) ((1 << nrandbits) -1) in order to normalize the result.

?S: In C programs, the macro 'rand' is mapped on mrand.

?S:.

?S:seedfunc:

?S: Indicates the random number generating seed function.

?S: Values include srand48, srand, and rand.

?S:.

?S:randbits:

?S: Indicates how many bits are produced by the function used to

?S: generate normalized random numbers.

?S:.

?C:rand:

?C: This macro is to be used to generate uniformly distributed

?C: random numbers over the range [0., 1.].

?C:.

?C:seedrand:

?C: This symbol defines the macro to be used in seeding the

?C: random number generator (see rand).

?C:.

?H:#define rand() \$mrand /\*\*/

?H:#define seedrand(x) \$seedfunc(x) /\*\*/

?H:.

?T:cont val

?LINT:nothere \$randbits)

: How can we generate normalized

random numbers ?

echo " "

case "\$randfunc" in

")

if set drand48 val -f; eval \$csym; \$val; then

dflt="drand48"

echo "Good, found drand48()." >&4

elif set random val -f; eval \$csym; \$val; then

dflt="random"

echo "OK, found random()." >&4

else

dflt="rand"

echo "Yick, looks like I have to use rand()." >&4

fi

echo " "

::

\*)

dflt="\$randfunc"

::

esac

cont=true

while \$test "\$cont"; do

rp="Use which function to generate random numbers?"

. ./myread

?X: Invalidates nrandbits if the answer is not the default so

?X: that the value stored in config.sh will not be used when

?X: we change our random function.

```
if $test "$sans" = "$dflt"; then
: null
else
nrandbits=""
fi
randfunc="$sans"
if set $sans val -f; eval $csym; $val; then
cont=""
else
dflt=n
rp="Function $sans does not exists. Use that name anyway?"
./myread
dflt=rand
case "$sans" in
[yY]*) cont="";;
esac
fi
case "$cont" in
")
case "$randfunc" in
drand48)
mrand="drand48()"
seedfunc="srand48"
;;
rand*)
case
"$nrandbits" in
")
echo "Checking to see how many bits your $randfunc() function produces..." >&4
$cat >try.c <<EOCP
#include <stdio.h>
int main()
{
register int i;
register unsigned long tmp;
register unsigned long max = 0L;
extern long random();

for (i = 1000; i; i--) {
tmp = (unsigned long)$randfunc();
if (tmp > max) max = tmp;
}
for (i = 0; max; i++)
max /= 2;
printf("%d\n",i);
```

```

}
EOCP
if $cc -o try try.c >/dev/null 2>&1 ; then
dflt=`try`
else
dflt=?
echo "(I can't seem to compile the test program...)"
fi
;;
*)
dflt="$nrandbits"
;;
esac
rp="How many bits does your $randfunc() function produce?"
./myread
nrandbits="$sans"
$rm -f try.c try
mrand="($randfunc() / (double) ((1 << $nrandbits) - 1))"
seedfunc="srand"
;;
?X: The following is provided just in case...
*)
dflt="31"
rp="How many bits does your $randfunc() function produce?"
./myread
nrandbits="$sans"
seedfunc="$s$randfunc"
mrand="($randfunc()
/ (double) ((1 << $nrandbits) - 1))"
if set $seedfunc val -f; eval $csym; $val; then
echo "(Using $seedfunc() to seed random generator)"
else
echo "(Warning: no $seedfunc() to seed random generator)"
seedfunc=rand
fi
;;
esac
;;
esac
done

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/randfunc.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Guess.U,v 3.0.1.5 1995/07/25 13:37:14 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: Guess.U,v \$

?RCS: Revision 3.0.1.5 1995/07/25 13:37:14 ram

?RCS: patch56: now knows about OS/2 platforms

?RCS:

?RCS: Revision 3.0.1.4 1994/10/29 15:53:55 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS: patch36: call ./xenix explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0.1.3 1993/12/15 08:14:35 ram

?RCS: patch15: variable d\_bsd was not always set properly

?RCS:

?RCS: Revision 3.0.1.2 1993/08/30 08:57:14 ram

?RCS:

patch8: fixed comment which wrongly attributed the usrinc symbol

?RCS: patch8: no more ugly messages when no /usr/include/ctype.h

?RCS:

?RCS: Revision 3.0.1.1 1993/08/27 14:37:37 ram

?RCS: patch7: added support for OSF/1 machines

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:57 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit hazards some guesses as to what the general nature of the system  
?X: is. The information it collects here is used primarily to establish default  
?X: answers to other questions.

?X:

?MAKE:Guess d\_eunice d\_xenix d\_bsd: cat test echo n c contains \  
rm Loc eunicefix tr sysroot

?MAKE: -pick add \$@ %<

?S:d\_eunice:

?S: This variable conditionally defines the symbols EUNICE and VAX, which  
?S: alerts the C program that it must deal with idiosyncrasies of VMS.

?S:.

?S:d\_xenix:

?S: This variable conditionally defines the symbol XENIX, which alerts  
?S: the C program that it runs under Xenix.

?S:.

?S:d\_bsd:

?S: This symbol conditionally defines the

symbol BSD when running on a  
?S: BSD system.  
?S:.  
?C:EUNICE:  
?C: This symbol, if defined, indicates that the program is being compiled  
?C: under the EUNICE package under VMS. The program will need to handle  
?C: things like files that don't go away the first time you unlink them,  
?C: due to version numbering. It will also need to compensate for lack  
?C: of a respectable link() command.  
?C:.  
?X: Should we define VMS here? Is Eunice actually used anymore?  
?X:?C:VMS:  
?X:?C: This symbol, if defined, indicates that the program is running under  
?X:?C: VMS. It is currently only set in conjunction with the EUNICE symbol.  
?X:?C:.  
?C:XENIX:  
?C: This symbol, if defined, indicates that the program is running under  
?C: Xenix (at least 3.0 ?).  
?C:.  
?X: We don't use BSD in the perl source. It's too vague, and already  
?X: defined in some header files anyway (e.g. NetBSD). This just gives  
?X: us a spurious redefinition error upon compilation.  
?X: --Andy Dougherty Feb 11, 1998  
?X: ?C:BSD:  
?X:  
?C: This symbol, if defined, indicates that the program is running under  
?X: ?C: a BSD system.  
?X: ?C:.  
?H:#\$d\_eunice EUNICE /\*\*/  
?X:?H:#\$d\_eunice VMS /\*\*/  
?H:#\$d\_xenix XENIX /\*\*/  
?X: ?H:#\$d\_bsd BSD /\*\*/  
?H:.  
?F:./bsd ./usg ./v7 ./osf1 ./eunice ./xenix ./venix ./os2  
?T:xxx  
: make some quick guesses about what we are up against  
echo " "  
\$echo \$n "Hmm... \$c"  
echo exit 1 >bsd  
echo exit 1 >usg  
echo exit 1 >v7  
echo exit 1 >osf1  
echo exit 1 >eunice  
echo exit 1 >xenix  
echo exit 1 >venix  
echo exit 1 >os2  
d\_bsd="\$undef"  
?X:

```

?X: Do not use 'usrinc', or we get a circular dependency. because
?X: usrinc is defined in usrinc.U, which relies on us...
?X:
$cat $sysroot/usr/include/signal.h $sysroot/usr/include/sys/signal.h >foo 2>/dev/null
if test -f /osf_boot || $contains 'OSF/1' $sysroot/usr/include/ctype.h >/dev/null 2>&1
then
echo "Looks kind of like an OSF/1 system, but we'll see..."
echo exit 0 >osf1
elif test `echo abc | $tr a-z A-Z` = Abc ; then
xxx=`./loc addbib blurfl $pth`
if $test
-f $xxx; then
echo "Looks kind of like a USG system with BSD features, but we'll see..."
echo exit 0 >bsd
echo exit 0 >usg
else
if $contains SIGTSTP foo >/dev/null 2>&1 ; then
echo "Looks kind of like an extended USG system, but we'll see..."
else
echo "Looks kind of like a USG system, but we'll see..."
fi
echo exit 0 >usg
fi
elif $contains SIGTSTP foo >/dev/null 2>&1 ; then
echo "Looks kind of like a BSD system, but we'll see..."
d_bsd="$define"
echo exit 0 >bsd
else
echo "Looks kind of like a Version 7 system, but we'll see..."
echo exit 0 >v7
fi
case "$eunicefix" in
*unixtovms*)
$cat <<'EOI'
There is, however, a strange, musty smell in the air that reminds me of
something...hmm...yes...I've got it...there's a VMS nearby, or I'm a Blit.
EOI
echo exit 0 >eunice
d_eunice="$define"
: it so happens the Eunice I know will not run shell scripts in Unix format
;;
*)
echo " "
echo "Congratulations. You aren't running Eunice."
d_eunice="$undef"
;;
esac
: Detect

```

OS2. The p\_ variable is set above in the Head.U unit.

: Note that this also -- wrongly -- detects e.g. dos-djgpp, which also uses

: semicolon as a patch separator

```
case "$p_" in
```

```
:) ;;
```

```
*)
```

```
$cat <<'EOI'
```

I have the feeling something is not exactly right, however...don't tell me...

lemme think...does HAL ring a bell?...no, of course, you're only running OS/2!

(Or you may be running DOS with DJGPP.)

```
EOI
```

```
echo exit 0 >os2
```

```
::
```

```
esac
```

```
if test -f /xenix; then
```

```
echo "Actually, this looks more like a XENIX system..."
```

```
echo exit 0 >xenix
```

```
d_xenix="$define"
```

```
else
```

```
echo " "
```

```
echo "It's not Xenix..."
```

```
d_xenix="$undef"
```

```
fi
```

```
chmod +x xenix
```

```
$eunicefix xenix
```

```
if test -f /venix; then
```

```
echo "Actually, this looks more like a VENIX system..."
```

```
echo exit 0 >venix
```

```
else
```

```
echo " "
```

```
if ./xenix; then
```

```
: null
```

```
else
```

```
echo "Nor is it Venix..."
```

```
fi
```

```
fi
```

```
chmod +x bsd usg v7 osf1 eunice xenix venix os2
```

```
$eunicefix bsd usg v7 osf1 eunice xenix venix os2
```

```
$rm -f foo
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Guess.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysresrc.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```



```

?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_sysresrc.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:34 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: Look wether <sys/resource.h> needs to be included
?X:
?MAKE:i_sysresrc: Inhdr
?MAKE: -pick add $@ %<
?S:i_sysresrc:
?S: This variable conditionally defines the I_SYS_RESOURCE symbol,
?S: and indicates whether a C program should include <sys/resource.h>.
?S:.
?C:I_SYS_RESOURCE (I_SYSRESOURCE):
?C: This symbol, if defined, indicates
?C: to the C program that it should
?C: include <sys/resource.h>.
?C:.
?H:#$i_sysresrc I_SYS_RESOURCE /**/
?H:.
?LINT:set i_sysresrc
: see if sys/resource.h has to be included
set sys/resource.h i_sysresrc
eval $inhdr

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/i_sysresrc.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_gethname.U,v $

```

?RCS: Revision 3.0.1.1 1994/10/29 16:13:00 ram  
?RCS: patch36: call ./xenix explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:06:11 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_gethname d\_uname d\_phostname aphostname: phostname cat \  
myhostname package d\_portable Loc echo n c +i\_whoami +usrinc \  
Myread Guess Oldconfig Csym  
?MAKE: -pick add \$@ %<  
?S:d\_gethname:  
?S: This variable conditionally defines the HAS\_GETHOSTNAME symbol,  
which  
?S: indicates to the C program that the gethostname() routine may be  
?S: used to derive the host name.  
?S:.  
?S:d\_uname:  
?S: This variable conditionally defines the HAS\_UNAME symbol, which  
?S: indicates to the C program that the uname() routine may be  
?S: used to derive the host name.  
?S:.  
?S:d\_phostname:  
?S: This variable conditionally defines the PHOSTNAME symbol, which  
?S: contains the shell command which, when fed to popen(), may be  
?S: used to derive the host name.  
?S:.  
?S:aphostname:  
?S: This variable contains the command which can be used to compute the  
?S: host name. The command is fully qualified by its absolute path, to make  
?S: it safe when used by a process with super-user privileges.  
?S:.  
?C:HAS\_GETHOSTNAME (GETHOSTNAME):  
?C: This symbol, if defined, indicates that the C program may use the  
?C: gethostname() routine to derive the host name. See also HAS\_UNAME  
?C: and PHOSTNAME.  
?C:.  
?C:HAS\_UNAME (UNAME):  
?C: This symbol, if defined, indicates that the C program may  
use the  
?C: uname() routine to derive the host name. See also HAS\_GETHOSTNAME  
?C: and PHOSTNAME.  
?C:.  
?C:PHOSTNAME:  
?C: This symbol, if defined, indicates that the C program may use the  
?C: contents of PHOSTNAME as a command to feed to the popen() routine  
?C: to derive the host name. See also HAS\_GETHOSTNAME and HAS\_UNAME.  
?C: Note that the command uses a fully qualified path, so that it is safe  
?C: even if used by a process with super-user privileges.

```

?C:.
?H:#$d_gethname HAS_GETHOSTNAME /**/
?H:#$d_uname HAS_UNAME /**/
?H:#$d_phostname PHOSTNAME "$aphostname" /* How to get the host name */
?H:.
?T:file val call
?LINT:change i_whoami
: see how we will look up host name
echo " "
if false; then
: dummy stub to allow use of elif
@if HAS_GETHOSTNAME
elif set gethostname val -f d_gethname; eval $csym; $val; then
echo 'gethostname() found.' >&4
d_gethname="$define"
call=gethostname
@end
@if HAS_UNAME
elif set uname val -f d_uname; eval $csym; $val; then
if ./xenix; then
$cat <<'EOM'
uname()
was found, but you're running xenix, and older versions of xenix
have a broken uname(). If you don't really know whether your xenix is old
enough to have a broken system call, use the default answer.

```

```

EOM
dflt=y
case "$d_uname" in
"$define") dflt=n;;
esac
rp='Is your uname() broken?'
./myread
case "$ans" in
n*) d_uname="$define"; call=uname;;
esac
else
echo 'uname() found.' >&4
d_uname="$define"
call=uname
fi
@end
fi
case "$d_gethname" in
") d_gethname="$undef";;
esac
case "$d_uname" in
") d_uname="$undef";;

```

```

esac
@if PHOSTNAME || MYHOSTNAME
case "$d_undef$d_gethname" in
*define*)
dflt=n
cat <<EOM

```

Every now and then someone has a \$call() that lies about the hostname but can't be fixed for political or economic reasons. If you wish, I can

```

@if MYHOSTNAME && PHOSTNAME
pretend $call() isn't there and maybe compile in the hostname or
compute it from the '$phostname' command at run-time.
@elsif MYHOSTNAME
pretend $call() isn't there and maybe compile
in the hostname.
@elsif PHOSTNAME
pretend $call() isn't there and maybe compute hostname at run-time
thanks to the '$phostname' command.
@elsif WHOAMI
get the hostname from whomai.h (provided you have one).
@else
simply ignore your host name and use something like "noname" instead.
@end

```

```

EOM
rp="Shall I ignore $call() from now on?"
./myread
case "$ans" in
y*) d_undef="$undef" d_gethname="$undef"; $echo $n "Okay...$c";;
esac;;
esac
@end
@if PHOSTNAME || aphostname
?X: Compute the full path name for the command
case "$phostname" in
") aphostname="";;
*) case "$aphostname" in
/*) ;;
*) set X $phostname
shift
file=$1
shift
file=`./loc $file $file $pth`
aphostname=`echo $file $*`
;;
esac
;;
esac

```

```

@end
@if PHOSTNAME && MYHOSTNAME
case "$d_uname$d_gethname" in
*define*) ;;
*)
case "$phostname" in
") ;;
*)
$cat <<EOT

```

There is no gethostname() or uname() on this system. You have two possibilities at this point:

- 1) You can have your host name (\$myhostname) compiled into \$package, which lets \$package start up faster, but makes your binaries non-portable, or
- 2) you can have \$package use a

```
popen("$aphostname","r")
```

which will start slower but be more portable.

```
@ if WHOAMI
```

Option 1 will give you the option of using whoami.h if you have one.

```
@ end
```

If you want option 2 but with a different command, you can edit config.sh at the end of this shell script.

```
EOT
```

```

case "$d_phostname" in
"$define") dflt=n;;
"$undef") dflt=y;;
")
case "$d_portable" in
"$define") dflt=n ;;
*) dflt=y ;;
esac;;
esac
rp="Do you want your host name compiled in?"
./myread
case "$ans" in
n*) d_phostname="$define" ;;
*) aphostname=""; d_phostname="$undef";;
esac;;
esac
case "$aphostname" in
")
@ if WHOAMI

```

```
case "$i_whoami" in
"$define")
dflt=y
$cat <<EOM
```

No hostname function--you can either use the whoami.h file, which has this line:

```
`grep sysname $usrinc/whoami.h`
```

or you can have the name we came up with earlier  
(\$myhostname) hardwired in.

EOM

```
rp="Use whoami.h to get hostname?"
./myread
case "$ans" in
n*) i_whoami="$undef";;
esac
;;
"$undef")
$cat <<EOM
```

No hostname function and no whoami.h -- hardwiring "\$myhostname".

EOM

```
;;
esac;;
@ else
echo 'No hostname function -- hardwiring "$myhostname".' >&4;;
@ end
esac;;
esac
@elsif PHOSTNAME
case "$d_uname$d_gethname" in
*define*) ;;
*)
case "$phostname" in
")
@ if WHOAMI
case "$i_whoami" in
"$define")
$cat <<EOM
```

No hostname function--we'll use the whoami.h file, which has this line:

```
`grep sysname $usrinc/whoami.h`
```

EOM

```
;;
*) echo "There will be no way for $package to get your hostname." >&4;;
esac;;
```

```

@ else
  echo "There will be no way for $package to get your hostname." >&4;;
@ end
*)
echo "I'll use 'popen('"'$aphostname"', "r")' to get your hostname." >&4
;;
esac;;
esac
@elsif MYHOSTNAME
case "$d_uname$d_gethname" in
*define*) ;;
*)
@ if WHOAMI
case "$i_whoami" in
"$define")
  dflt=y
  $cat
<<EOM

```

No hostname function--you can either use the whoami.h file, which has this line:

```
`grep sysname $usrinc/whoami.h`
```

or you can have the name we came up with earlier (\$myhostname) hardwired in.

EOM

```

rp="Use whoami.h to get hostname?"
. ./myread
case "$ans" in
n*) i_whoami="$undef";;
esac
;;
"$undef")
  echo 'No whoami.h--hardwiring "$myhostname".' >&4;;
esac;;
@ else
  echo 'Hardwiring "$myhostname".' >&4;;
@ end
esac
@end
case "$d_phostname" in
") d_phostname="$undef";;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_gethname.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_strtold\_l: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strtold\_l:  
?S: This variable conditionally defines the HAS\_STRTOLD\_L symbol, which  
?S: indicates to the C program that the strtold\_l() routine is available.  
?S:.  
?C:HAS\_STRTOLD\_L:  
?C: This symbol, if defined, indicates that the strtold\_l routine is  
?C: available to convert strings to long doubles.  
?C:.  
?H:#\$d\_strtold\_l HAS\_STRTOLD\_L /\*\*/  
?H:.  
?LINT:set d\_strtold\_l  
: see if strtold\_l exists  
set strtold\_l d\_strtold\_l  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_strtold\_l.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Csym.U,v 3.0.1.4 1995/07/25 13:36:29 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: Csym.U,v \$  
?RCS: Revision 3.0.1.4 1995/07/25 13:36:29 ram  
?RCS: patch56: re-arranged compile line to include ldflags before objects  
?RCS: patch56: added quotes for OS/2 support  
?RCS:  
?RCS: Revision 3.0.1.3 1995/05/12 12:00:33 ram  
?RCS: patch54: fixed C test program to bypass gcc builtin type checks (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/10/31 09:34:13 ram



?RCS: patch44: added Options to the MAKE line since it's no longer in Init.U

?RCS:

?RCS: Revision

3.0.1.1 1993/08/25 14:00:05 ram

?RCS: patch6: added ldflags as a conditional dependency and to compile line

?RCS: patch6: a final double quote was missing in csym variable after eval

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:50 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:Csym mistrustnm extern\_C: Options contains libc libs runnm test \

+cc +optimize +ccflags +ldflags run rm\_try \_exe d\_cplusplus

?MAKE: -pick add \$@ %<

?LINT:define csym

?LINT:use libc

?LINT:extern mistrustnm

?LINT:set mistrustnm

?S:csym:

?S: This shell variable is used internally by Configure to check

?S: whether a given C symbol is defined or not. A typical use is:

?S: set symbol result [-fva] [previous]

?S: eval \$csym

?S: That will set result to 'true' if the function [-f], variable [-v]

?S: or array [-a] is defined, 'false' otherwise. If a previous value is

?S: given and the -r flag was provided on the command line, that value

?S: is reused without questioning.

?S:.

?S:extern\_C:

?S: ANSI C

requires 'extern' where C++ requires 'extern "C"'. This

?S: variable can be used in Configure to do the right thing.

?S:.

?S:mistrustnm:

?S: This variable can be used to establish a fallback for the cases

?S: where nm fails to find a symbol. If usenm is false or usenm is true

?S: and mistrustnm is false, this variable has no effect. If usenm is true

?S: and mistrustnm is "compile", a test program will be compiled to try to

?S: find any symbol that can't be located via nm lookup. If mistrustnm is

?S: "run", the test program will be run as well as being compiled.

?S:.

?V:csym

?T:tval tx tlook tf tdc

?F:!try

: is a C symbol defined?

csym='tlook=\$1;

case "\$3" in

-v) tf=libc.tmp; tdc="";;

-a) tf=libc.tmp; tdc="[]";;

```

*) tlook="^$1\$"; tf=libc.list; tdc="()";;
esac;
case "$d_cplusplus" in
  $define) extern_C="extern \"C\"";;
  *) extern_C="extern";;
esac;
tx=yes;
case "$reuseval-$4" in
true-) ;;
true-*) tx=no; eval "tval=\$4"; case "$tval" in "") tx=yes;; esac;;
esac;
case "$tx"
in
yes)
?X:
?X: Put symbol inside a printf to fool optimizing compilers...
?X:
?X: We use 'short' instead of 'int' to try to circumvent overzealous
?X: optimizing compilers using built-in prototypes for commonly used
?X: routines to complain when seeing a different external declaration. For
?X: instance, gcc 2.6.3 fails if we use 'int' and we attempt a test against
?X: memcpy() on machines where sizeof(int) == sizeof(char *) (the usual return
?X: type), the compiler assuming it's a built-in declaration given that the
?X: returned size matches. At least with 'short' we are safe! -- RAM, for ADO
?X:
?X: Let's thank GNU cc for making our lives so easy! :-)
?X: (An alternative for the future would be to use our knowledge about gcc
?X: to force a -fno-builtin option in the compile test, in case the 'short'
?X: trick is obsoleted by future gcc releases). -- RAM
?X:
tval=false;
if $test "$runnm" = true; then
if $contains $tlook $tf >/dev/null 2>&1; then
tval=true;
elif $test "$mistrustnm"
= compile -o "$mistrustnm" = run; then
echo "$extern_C void *$1$tdc; void (*(p()))$tdc { return &$1; } int main(int argc, char **argv) { if(p() && p() !=
(void *)argv[0]) return(0); else return(1); }"> try.c;
$cc -o try $optimize $ccflags $ldflags try.c >/dev/null 2>&1 $libs && tval=true;
$test "$mistrustnm" = run -a -x try && { $run ./try$_exe >/dev/null 2>&1 || tval=false; };
$rm_try;
fi;
else
echo "$extern_C void *$1$tdc; void (*(p()))$tdc { return &$1; } int main(int argc, char **argv) { if(p() && p() !=
(void *)argv[0]) return(0); else return(1); }"> try.c;
$cc -o try $optimize $ccflags $ldflags try.c $libs >/dev/null 2>&1 && tval=true;
$rm_try;
fi;

```

```
;;
*)
case "$tval" in
$define) tval=true;;
*) tval=false;;
esac;
;;
esac;
eval "$2=$tval"
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/Csym.U
```

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```
?RCS: $Id: d_cuserid.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_cuserid.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:07:25 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_cuserid: Inlibc
?MAKE: -pick add $@ %<
?S:d_cuserid:
?S: This variable conditionally defines the HAS_CUSERID symbol, which
?S: indicates to the C program that the cuserid() routine is available
?S: to get character login names.
?S:.
?C:HAS_CUSERID :
?C: This symbol,
if defined, indicates that the cuserid routine is
?C: available to get character login names.
?C:.
?H:#$d_cuserid HAS_CUSERID /**/
?H:.
?LINT:set d_cuserid
: see if cuserid exists
set cuserid d_cuserid
```

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_cuserid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_mkfifo.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

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?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_mkfifo.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:14:17 ram

?RCS: patch36: created by ADO

?RCS:

?RCS:

?MAKE:d\_mkfifo: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mkfifo:

?S: This variable conditionally defines the HAS\_MKFIFO symbol, which

?S: indicates to the C program that the mkfifo() routine is available.

?S:.

?C:HAS\_MKFIFO :

?C: This symbol, if defined, indicates that the mkfifo  
routine is

?C: available to create FIFOs. Otherwise, mknod should be able to

?C: do it for you. However, if mkfifo is there, mknod might require

?C: super-user privileges which mkfifo will not.

?C:.

?H:#\$d\_mkfifo HAS\_MKFIFO /\*\*/

?H:.

?LINT:set d\_mkfifo

: see if mkfifo exists

set mkfifo d\_mkfifo

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_mkfifo.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_sysndir.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_sysndir.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:33 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_sysndir: Inhdr
?MAKE: -pick add $@ %<
?S:i_sysndir:
?S: This variable conditionally defines the I_SYS_NDIR symbol, and indicates
?S: whether a C program should include <sys/ndir.h>.
?S:.
?C:I_SYS_NDIR (I_SYSNDIR):
?C: This symbol, if defined, indicates to the C program that it should
?C: include <sys/ndir.h>.
?C:.
?H:#$i_sysndir
I_SYS_NDIR /**/
?H:.
?LINT:set i_sysndir
: see if this is an sysndir system
set sys/ndir.h i_sysndir
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_sysndir.U
```

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```
?RCS: $Id: Prefixit.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
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?RCS: of the source tree for dist 4.0.
```

?RCS:  
?RCS: \$Log: Prefixit.U,v \$  
?RCS: Revision 3.0.1.1 1995/01/30 14:29:22 ram  
?RCS: patch49: created  
?RCS:  
?X:  
?X: Used as: "set dflt var dir; eval \$prefixit" to set \$dflt to be  
?X: \$prefix/dir by default, or the previous \$var depending on certain  
?X: conditions:  
?X: - If the \$oldprefix variable is empty, then \$prefix holds the same  
?X: value as on previous runs. Therefore, reuse \$var if set, otherwise  
?X: set \$dflt to \$prefix/dir.  
?X: - If \$oldprefix is not  
empty, then set \$dflt to \$prefix/dir if \$var  
?X: is empty (first run). Otherwise, if \$var is \$oldprefix/dir, then  
?X: change it to \$prefix/dir. If none of the above, reuse the old \$var.  
?X:  
?X: When dir is omitted, the dflt variable is set to \$var if prefix did not  
?X: change, to an empty value otherwise. If dir=none, then a single space  
?X: in var is kept as-is, even if the prefix changes.  
?X:  
?MAKE:Prefixit: prefix oldprefix  
?MAKE: -pick add \$@ %<  
?LINT:define prefixit  
?S:prefixit:  
?S: This shell variable is used internally by Configure to reset  
?S: the leading installation prefix correctly when it is changed.  
?S: set dflt var [dir]  
?S: eval \$prefixit  
?S: That will set \$dflt to \$var or \$prefix/dir depending on the  
?S: value of \$var and \$oldprefix.  
?S:.  
?V:prefixit  
?T:tp  
: set the prefixit variable, to compute a suitable default value  
prefixit='case "\$3" in  
""|none)  
case "\$oldprefix" in  
"") eval "\$1=\\"\$2\"";;  
\*)  
case "\$3" in  
"") eval "\$1=";;  
none)  
eval "tp=\\"\$2\"";  
case  
"\$tp" in  
""|" |none) eval "\$1=\\"\$2\"";;  
\*) eval "\$1=";;

```

    esac;;
    esac;;
    esac;;
*)
eval "tp=\"\$oldprefix-\$2-\""; eval "tp=\"\$tp\"";
case "$tp" in
-/*--|\~*--) eval "$1=\"\$prefix/$3\"";;
/*-$oldprefix/*|\~*-$oldprefix/*)
    eval "$1=\`echo \$2 | sed \s,^\$oldprefix,\$prefix,\`\"";;
*) eval "$1=\"\$2\"";;
    esac;;
esac'

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Prefixit.U
```

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?RCS:

?MAKE:d\_int64\_t: Inhdr cat rm\_try Setvar Compile i\_inttypes

?MAKE: -pick add \$@ %<

?S:d\_int64\_t:

?S: This symbol will be defined if the C compiler supports int64\_t.

?S:.

?C:HAS\_INT64\_T:

?C: This symbol will defined if the C compiler supports int64\_t.

?C: Usually the <inttypes.h> needs to be included, but sometimes

?C: <sys/types.h> is enough.

?C:.

?H:#\$d\_int64\_t HAS\_INT64\_T /\*\*/

?H:.

?LINT:set d\_int64\_t

: check for int64\_t

echo " "

echo "Checking to see if you have int64\_t..." >&4

\$cat >try.c <<EOCP

#include

<sys/types.h>

#\$i\_inttypes I\_INTTYPES

```

#ifdef I_INTTYPES
#include <inttypes.h>
#endif
int main() { int64_t x = 7; }
EOCP
set try
if eval $compile; then
val="$define"
echo "You have int64_t."
else
val="$undef"
echo "You do not have int64_t."
fi
$rm_try
set d_int64_t
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_int64_t.U

```

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?RCS:

?MAKE:d\_scalbnl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_scalbnl:

?S: This variable conditionally defines the HAS\_SCALBNL symbol, which

?S: indicates to the C program that the scalbnl() routine is available.

?S: If ilogbl is also present we can emulate frexpl.

?S:.

?C:HAS\_SCALBNL:

?C: This symbol, if defined, indicates that the scalbnl routine is

?C: available. If ilogbl is also present we can emulate frexpl.

?C:.

?H:#\$d\_scalbnl HAS\_SCALBNL /\*\*/

?H:.

?LINT:set d\_scalbnl

: see if scalbnl exists

set scalbnl d\_scalbnl

eval \$inlibc

Found in path(s):



```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_scalbn.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_dlerror.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
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```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
```

```
?RCS:
```

```
?RCS: $Log: d_dlerror.U,v $
```

```
?RCS: Revision 3.0.1.2 1995/07/25 13:52:49 ram
```

```
?RCS: patch56: force compile-link test since symbol might lie in crt0.o (ADO)
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1994/10/29 16:11:23 ram
```

```
?RCS: patch36: created by ADO
```

```
?RCS:
```

```
?MAKE:d_dlerror: Inlibc runnm
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_dlerror:
```

```
?S: This variable conditionally defines the HAS_DLERROR symbol, which
```

```
?S: indicates
```

```
to the C program that the dlerror() routine is available.
```

```
?S:.
```

```
?C:HAS_DLERROR :
```

```
?C: This symbol, if defined, indicates that the dlerror routine is
```

```
?C: available to return a string describing the last error that
```

```
?C: occurred from a call to dlopen(), dlclose() or dlsym().
```

```
?C:.
```

```
?H:#$d_dlerror HAS_DLERROR /**/
```

```
?H:.
```

```
?T: xxx_runnm
```

```
?LINT:set d_dlerror
```

```
?X: We don't permanently change runnm, but we do temporarily.
```

```
?LINT: change runnm
```

```
: see if dlerror exists
```

```
?X: On NetBSD and FreeBSD, dlerror might be available, but it is in
```

```
?X: /usr/lib/crt0.o, not in any of the libraries. Therefore, do not
```

```
?X: use the nm extraction, but use a real compile and link test instead.
```

```
xxx_runnm="$runnm"
```

```
runnm=false
```

```
set dlerror d_dlerror
```

```
eval $inlibc
runnm="$xxx_runnm"
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_dlerror.U
```

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?RCS:

?MAKE:d\_unsetenv: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_unsetenv:

?S: This variable conditionally defines the HAS\_UNSETENV symbol, which

?S: indicates to the C program that the unsetenv () routine is available.

?S:.

?C:HAS\_UNSETENV:

?C: This symbol, if defined, indicates that the unsetenv () routine is

?C: available for use.

?C:.

?H:#\$d\_unsetenv HAS\_UNSETENV /\*\*/

?H:.

?LINT:set d\_unsetenv

: see if unsetenv exists

set unsetenv d\_unsetenv

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_unsetenv.U
```

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?RCS: \$Id: d\_scannl.U,v 3.0.1.2 1997/02/28 15:41:27 ram Exp \$

?RCS:

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?RCS:

?RCS: \$Log: d\_scannl.U,v \$

```

?RCS: Revision 3.0.1.2 1997/02/28 15:41:27 ram
?RCS: patch61: added ?F: metalint hint
?RCS:
?RCS: Revision 3.0.1.1 1995/07/25 13:59:12 ram
?RCS: patch56: made cc and ccflags optional dependencies
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:00 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: Does the scanf routine read "\n" correctly ? This is was not
?X: the case on AIX...
?X:
?MAKE:d_scannl: cat rm Setvar Compile run
?MAKE: -pick
add $@ %<
?S:d_scannl:
?S: This variable conditionally defines SCAN_NL, which indicates
?S: whether the C library routines scanf() and friends can deal with
?S: a '\n' in the input correctly. They do most of the time.
?S:.
?C:SCAN_NL:
?C: This symbol is defined if the C library routines scanf() and friends
?C: can deal with a '\n' in the input correctly, so that you can say
?C: scanf("%d\n"); instead of scanf("%d"); getc(c); to handle the '\n'.
?C:.
?H:#$d_scannl SCAN_NL /* scanf("%d\n") works */
?H:.
?F:!try
?LINT:set d_scannl
: does scanf handle "\n" correctly ?
echo " "
val="$define"
?X: I really want to say "\n" instead of '\n', because I am referring
?X: to the string given as argument to scanf().
echo 'Let''''s see if scanf() handles "\\n" correctly...' >&4
$cat >try.c <<'EOCP'
int main()
{
int i = 0, j = 0;
scanf("%d\n%d", &i, &j);
if (j != 3)
exit(1);
exit(0);
}
EOCP
set try
if eval $compile_ok; then

```

```

if $run ./try <<'EOD'
2
3
EOD
then
echo "Yes, it does."
else
echo
"No, it doesn't."
val="$undef"
fi
else
echo "(I can't seem to compile the test program. Assuming it does.)"
fi
set d_scannl
eval $setvar
$rm -f try.* try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_scannl.U
```

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?RCS:

?MAKE:d\_wcrtomb: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_wcrtomb:

?S: This variable conditionally defines the HAS\_WCRTOMB symbol if the

?S: wcrtomb() routine is available to be used to convert a wide character

?S: into a multi-byte character.

?S:.

?C:HAS\_WCRTOMB:

?C: This symbol, if defined, indicates that the wcrtomb routine is

?C: available to convert a wide character into a multi-byte character.

?C:.

?H:#\$d\_wcrtomb HAS\_WCRTOMB /\*\*/

?H:.

?LINT: set d\_wcrtomb

: see if wcrtomb exists

set wcrtomb d\_wcrtomb

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_wcrtomb.U

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_socket.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 15:46:00 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:08:04 ram

?RCS: patch16: can now safely declare private nm\_extract in dependencies

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:26 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_socket d\_oldsock d\_sockpair socketlib sockethdr: contains libc \  
echo n c nm\_opt nm\_extract Inlibc Csym \_a

?MAKE: -pick add \$@ %<

?S:d\_socket:

?S: This

variable conditionally defines HAS\_SOCKET, which indicates

?S: that the BSD socket interface is supported.

?S:.

?S:d\_sockpair:

?S: This variable conditionally defines the HAS\_SOCKETPAIR symbol, which

?S: indicates that the BSD socketpair() is supported.

?S:.

?S:d\_oldsock:

?S: This variable conditionally defines the OLDSOCKET symbol, which

?S: indicates that the BSD socket interface is based on 4.1c and not 4.2.

?S:.

?S:socketlib:

?S: This variable has the names of any libraries needed for socket support.

?S:.

?S:sockethdr:

?S: This variable has any cpp -I flags needed for socket support.

?S:.

?C:HAS\_SOCKET (SOCKET):

?C: This symbol, if defined, indicates that the BSD socket interface is

?C: supported.

?C:.

?C:HAS\_SOCKETPAIR (SOCKETPAIR):

?C: This symbol, if defined, indicates that the BSD socketpair() call is

?C: supported.

?C:.

?C:USE\_OLD\_SOCKET (OLDSOCKET):

?C: This symbol, if defined, indicates that the 4.1c BSD socket interface

?C: is supported instead of the 4.2/4.3 BSD

socket interface. For instance,

?C: there is no setsockopt() call.

?C:.

?H:#\$d\_socket HAS\_SOCKET /\*\*/

?H:#\$d\_socketpair HAS\_SOCKETPAIR /\*\*/

?H:#\$d\_oldsock USE\_OLD\_SOCKET /\*\*/

?H:.

?T:val

?LINT:use libc

?LINT:set d\_socketpair

: see whether socket exists

socketlib="

sockethdr="

echo " "

\$echo \$n "Hmm... \$c" >&4

if set socket val -f d\_socket; eval \$csym; \$val; then

echo "Looks like you have Berkeley networking support." >&4

d\_socket="\$define"

?X: now check for advanced features

if set setsockopt val -f; eval \$csym; \$val; then

d\_oldsock="\$undef"

else

echo "...but it uses the old 4.1c interface, rather than 4.2" >&4

d\_oldsock="\$define"

fi

else

?X: HP-UX, for one, puts all the socket stuff in socklib.o. Note that if we

?X: come here on HP-UX, then we must have used nm to get symbols, or we really

?X: don't have sockets anyway...

if \$contains socklib libc.list >/dev/null 2>&1; then

echo "Looks like you have Berkeley networking support." >&4

d\_socket="\$define"

: we will have

to assume that it supports the 4.2 BSD interface

d\_oldsock="\$undef"

else

echo "You don't have Berkeley networking in libc\$\_a..." >&4

```

?X: look for an optional networking library
if test -f /usr/lib/libnet$_a; then
?X: space between two '(' needed for ksh
( (nm $nm_opt /usr/lib/libnet$_a | eval $nm_extract) || \
ar t /usr/lib/libnet$_a 2>/dev/null >> libc.list
if $contains socket libc.list >/dev/null 2>&1; then
echo "...but the Wollongong group seems to have hacked it in." >&4
socketlib="-lnet"
sockethdr="-I/usr/netinclude"
d_socket="$define"
?X: now check for advanced features
if $contains setsockopt libc.list >/dev/null 2>&1; then
d_oldsock="$undef"
else
echo "...using the old 4.1c interface, rather than 4.2" >&4
d_oldsock="$define"
fi
else
echo "or even in libnet$_a, which is peculiar." >&4
d_socket="$undef"
d_oldsock="$undef"
fi
else
echo "or anywhere else I see." >&4
d_socket="$undef"
d_oldsock="$undef"
fi
fi
fi

```

```

@if
HAS_SOCKETPAIR || d_socketpair
: see if socketpair exists
set socketpair d_socketpair
eval $inlibc

```

```
@end
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_socket.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Options.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Options.U,v \$  
?RCS: Revision 3.0.1.7 1997/02/28 15:08:15 ram  
?RCS: patch61: optdef.sh now starts with a "startsh"  
?RCS: patch61: moved some code from Head.U  
?RCS:  
?RCS: Revision 3.0.1.6 1995/09/25 09:14:46 ram  
?RCS: patch59: protected option parsing code against 'echo -\*' option failure  
?RCS:  
?RCS: Revision 3.0.1.5 1995/05/12 12:04:52 ram  
?RCS: patch54: added -K option for experts  
?RCS:  
?RCS: Revision 3.0.1.4 1995/01/30 14:27:52 ram  
?RCS:  
patch49: this unit now exports file optdef.sh, not a variable  
?RCS:  
?RCS: Revision 3.0.1.3 1995/01/11 15:19:00 ram  
?RCS: patch45: new -O option allowing -D and -U to override config.sh settings  
?RCS: patch45: file optdef.sh is no longer removed after sourcing  
?RCS:  
?RCS: Revision 3.0.1.2 1994/10/29 15:58:06 ram  
?RCS: patch36: ensure option definition file is removed before appending  
?RCS: patch36: protect variable definitions with spaces in them  
?RCS:  
?RCS: Revision 3.0.1.1 1994/06/20 06:55:44 ram  
?RCS: patch30: now uses new me symbol to tag error messages  
?RCS: patch30: new -D and -U options to define/undef symbols (JHI)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:14 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: Command line parsing. It is really important that the variables used here  
?X: be not listed in the MAKE line, or they will be saved in config.sh and  
?X: loading this file to fetch default answers would clobber the values set  
?X: herein.  
?X:  
?MAKE:Options:  
startsh  
?MAKE: -pick wipe \$@ %<  
?V:reuseval alldone error realsilent silent extractsh fastread \  
knowitall: config\_sh  
?T:arg argn symbol config\_arg0 config\_args config\_argc xxx yyy zzz uuu  
?T:args\_exp args\_sep arg\_exp ccflags



```

?F:!Configure
?F:./optdef.sh ./cmdline.opt ./posthint.sh ./cmdl.opt
: Save command line options in file UU/cmdline.opt for later use in
: generating config.sh.
?X: This temporary file will be read by Oldsym.U. I used a temporary
?X: file to preserve all sorts of potential command line quotes and
?X: also because we don't know in advance how many variables we'll
?X: need, so I can't actually declare them on the MAKE line.
?X: The config_args variable won't be quite correct if Configure is
?X: fed something like ./Configure -Dcc="gcc -B/usr/ccs/bin/"
?X: since the quotes are gone by the time we see them. You'd have to
?X: reconstruct the command line from the config_arg? lines, but since
?X: I don't imagine anyone actually having to do that, I'm not going
?X:
to worry too much.
cat > cmdline.opt <<EOSH
: Configure command line arguments.
config_arg0='$0'
config_args='$*'
config_argc=$#
EOSH
argn=1
args_exp=""
args_sep=""
for arg in "$@"; do
cat >>cmdline.opt <<EOSH
config_arg$argn='$arg'
EOSH
?X: Extreme backslashitis: replace each ' by """"
cat <<EOC | sed -e "s/'/""""/g" > cmdl.opt
$arg
EOC
arg_exp=`cat cmdl.opt`
args_exp="$args_exp$args_sep$args_exp"
argn=`expr $argn + 1`
args_sep=' '
done
?X: args_exp is good for restarting self: eval "set X $args_exp"; shift; $0 "$@"
?X: used by hints/os2.sh in Perl, for instance
rm -f cmdl.opt

```

```

: produce awk script to parse command line options
cat >options.awk <<'EOF'
BEGIN {
optstr = "A:dD:eEf:hKOrsSU:V"; # getopt-style specification

len = length(optstr);
for (i = 1; i <= len; i++) {

```

```

c = substr(optstr, i, 1);
?X: some older awk's do not have the C ?: construct
if (i < len) a = substr(optstr, i + 1, 1); else a = "";
if (a == ":") {
    arg[c] = 1;
    i++;
}
opt[c]
= 1;
}
}
{
expect = 0;
str = $0;
if (substr(str, 1, 1) != "-") {
    printf("%s\n", str);
    next;
}
len = length($0);
for (i = 2; i <= len; i++) {
    c = substr(str, i, 1);
    if (!opt[c]) {
        printf("-%s\n", substr(str, i));
        next;
    }
    printf("-%s\n", c);
    if (arg[c]) {
        if (i < len)
            printf("%s\n", substr(str, i + 1));
        else
            expect = 1;
        next;
    }
}
}
END {
    if (expect)
        print "?";
}
EOF

```

: process the command line options

?X: Use "\$@" to keep arguments with spaces in them from being split apart.

?X: For the same reason, awk will output quoted arguments and the final eval

?X: removes them and sets a proper \$\* array. An 'X' is prepended to each

?X: argument before being fed to echo to guard against 'echo -x', where -x

?X: would be understood as an echo option! It is removed before feeding awk.

set X `for arg in "\$@"; do echo "X\$arg"; done |

```
sed -e s/X// | awk -f options.awk`
eval "set $*"
shift
rm -f options.awk
```

```
: set up default values
fastread=""
reuseval=false
config_sh=""
alldone=""
error=""
silent=""
extractsh=""
knowitall=""
rm
-f optdef.sh posthint.sh
cat >optdef.sh <<EOS
$startsh
EOS
```

?X:

?X: Given that we now have the possibility to execute Configure remotely

?X: thanks to the new src.U support, we have to face the possibility

?X: of having to ask where the source lie, which means we need the Myread.U

?X: stuff and possibly other things that might echo something on the

?X: screen...

?X:

?X: That's not pretty, and might be confusing in 99% of the time. So...

?X: We introduce a new realsilent variable which is set when -s is given,

?X: and we force silent=true if -S is supplied. The Extractall.U unit

?X: will then undo the >&4 redirection based on the value of the

?X: realsilent variable... -- RAM, 18/93/96

?X:

: option parsing

```
while test $# -gt 0; do
case "$1" in
-d) shift; fastread=yes;;
-e) shift; alldone=cont;;
-f)
shift
cd ..
if test -r "$1"; then
config_sh="$1"
else
echo "$me: cannot read config file $1."
>&2
error=true
```

```

fi
cd UU
shift;;
--help\
-h) shift; error=true;;
-r) shift; reuseval=true;;
-s) shift; silent=true; realsilent=true;;
-E) shift; alldone=exit;;
-K) shift; knowitall=true;;
-O) shift;;
-S) shift; silent=true; extractsh=true;;
-D)
shift
case "$1" in
*=)
echo "$me: use '-U symbol=', not '-D symbol='." >&2
echo "$me: ignoring -D $1" >&2
;;
*=*) echo "$1" | \
sed -e "s/^\\""/g" -e "s/=(.*)/=\\1/" >> optdef.sh;;
*) echo "$1='define'" >> optdef.sh;;
esac
shift
;;
-U)
shift
case "$1" in
*=) echo "$1" >> optdef.sh;;
*=*)
echo "$me: use '-D symbol=val', not '-U symbol=val'." >&2
echo "$me: ignoring -U $1" >&2
;;
*) echo "$1='undef'" >> optdef.sh;;
esac
shift
;;
-A)
shift
xxx=""
yyy="$1"
zzz=""
uuu=undef
case "$yyy" in
*=*) zzz=`echo "$yyy"|sed 's!=.*!!'^
case "$zzz" in
*:* ) zzz="" ;;
*) xxx=append

```

```

        zzz=" `echo "$yyy"|sed 's!^[^=]*=!'^
        yyy=`echo "$yyy"|sed 's!=.*!!'^ ;;
    esac
    ;;
esac
case "$xxx" in
") case "$yyy" in
    *.* ) xxx=`echo "$yyy"|sed 's!:.*!!'^
        yyy=`echo "$yyy"|sed 's!^[^:]*!!'^
        zzz=`echo "$yyy"|sed 's!^[^=]*=!'^
        yyy=`echo "$yyy"|sed 's!=.*!!'^ ;;
    *) xxx=`echo "$yyy"|sed 's!:.*!!'^
        yyy=`echo "$yyy"|sed 's!^[^:]*!!'^ ;;
    esac
    ;;
esac
case "$xxx" in
append)
echo "$yyy=\"\${$yyy}$zzz\""" >> posthint.sh ;;
clear)
echo "$yyy="" >> posthint.sh ;;
define)
    case "$zzz" in
") zzz=define ;;
    esac
echo "$yyy='$zzz'" >> posthint.sh ;;
eval)
echo "eval \"\$yyy=$zzz\""" >> posthint.sh ;;
prepend)
echo "$yyy=\"\$zzz\${$yyy}\""" >> posthint.sh ;;
undef)

    case "$zzz" in
") zzz="$uuu" ;;
    esac
echo "$yyy=$zzz" >> posthint.sh ;;
    *) echo "$me: unknown -A command '$xxx', ignoring -A $1" >&2 ;;
    esac
    shift
    ;;
-V) echo "$me generated by metaconfig <VERSION> PL<PATCHLEVEL>." >&2
    exit 0;;
--) break;;
-*) echo "$me: unknown option $1" >&2; shift; error=true;;
*) break;;
    esac
done

```

```

case "$error" in
true)
cat >&2 <<EOM
Usage: $me [-dehrsEKOSV] [-f config.sh] [-D symbol] [-D symbol=value]
        [-U symbol] [-U symbol=] [-A command:symbol...]
-d : use defaults for all answers.
-e : go on without questioning past the production of config.sh.
-f : specify an alternate default configuration file.
-h : print this help message and exit (with an error status).
-r : reuse C symbols value if possible (skips costly nm extraction).
-s : silent mode, only echoes questions and essential information.
-D : define symbol to have some value:
    -D symbol          symbol gets the
value 'define'
    -D symbol='some value'  symbol is set to 'some value'
common used examples (see INSTALL for more info):
    -Duse64bitint        use 64bit integers
    -Duse64bitall        use 64bit integers and pointers
    -Dusetthreads        use thread support
    -Dinc_version_list=none do not include older perl trees in @INC
    -DEBUGGING=none      DEBUGGING options
    -Dcc=gcc              choose your compiler
    -Dprefix=/opt/perl5   choose your destination
-E : stop at the end of questions, after having produced config.sh.
-K : do not use unless you know what you are doing.
-O : ignored for backward compatibility
-S : perform variable substitutions on all .SH files (can mix with -f)
-U : undefine symbol:
    -U symbol  symbol gets the value 'undef'
    -U symbol= symbol gets completely empty
e.g.: -Uversiononly
-A : manipulate symbol after the platform specific hints
have been applied:
    -A append:symbol=value  append value to symbol
    -A symbol=value         like append:, but with a separating space
    -A define:symbol=value  define symbol to have value
    -A clear:symbol         define symbol to be ""
    -A define:symbol        define symbol to be 'define'
    -A eval:symbol=value    define symbol to be eval of value
    -A prepend:symbol=value prepend value to symbol
    -A undef:symbol         define symbol to be 'undef'
    -A undef:symbol=        define symbol to be ""
e.g.: -A prepend:libswanted='cl pthread '
    -A ccflags=-DSOME_MACRO
-V : print version number and exit (with a zero status).
EOM
exit 1
;;

```

esac

?X:

?X: Unless they specified either -S or both -d and -e/E, make sure we're

?X: running interactively, i.e. attached to a terminal. Moved from Head.U to

?X: be able to handle batch configurations...

?X:

?X: We have to hardwire the Configure name and

cannot use \$me, since if they

?X: said 'sh <Configure', then \$me is 'sh'...

?X:

: Sanity checks

```
case "$fastread$alldone" in
```

```
yescont|yesexit) ;;
```

```
*)
```

```
case "$extractsh" in
```

```
true) ;;
```

```
*)
```

```
if test ! -t 0; then
```

```
    echo "Say 'sh Configure', not 'sh <Configure'"
```

```
    exit 1
```

```
fi
```

```
;;
```

```
esac
```

```
;;
```

```
esac
```

?X: In silent mode, the standard output is closed. Questions are asked by

?X: outputting on file descriptor #4, which is the original stdout descriptor.

?X: This filters out all the "junk", since all the needed information is written

?X: on #4. Note that ksh will not let us redirect output if the file descriptor

?X: has not be defined yet, unlike sh, hence the following line...--RAM.

```
exec 4>&1
```

```
case "$silent" in
```

```
true) exec 1>/dev/null;;
```

```
esac
```

: run the defines and the undefines, if any, but leave the file out there...

```
touch optdef.sh
```

?X: -q is POSIX

?X: It does not work in SysV (solaris) or old BSD greps.

```
grep '\\ optdef.sh >/dev/null 2>&1
```

```
if test $? = 0; then
```

```
    echo "Configure does not support \\
```

```
in -D arguments"
```

```
    exit 1
```

```
fi
```

```
./optdef.sh
```

: create the posthint manipulation script and leave the file out there...

?X: this file will be perused by Oldconfig.U

touch posthint.sh

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Options.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: prototype.U,v \$

?RCS: Revision 3.0.1.3 1994/05/06 15:11:49 ram

?RCS: patch23: ensure cc flags used when looking for prototype support

?RCS:

?RCS: Revision 3.0.1.2 1994/01/24 14:15:36 ram

?RCS: patch16: prototype handling macros now appear only when needed

?RCS:

?RCS: Revision 3.0.1.1 1993/08/25 14:03:12 ram

?RCS: patch6: defines were referring to non-existent VOID symbol

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:36 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:prototype:

Myread Oldconfig cat +cc +ccflags rm Setvar

?MAKE: -pick add \$@ %<

?S:prototype:

?S: This variable holds the eventual value of CAN\_PROTOTYPE, which

?S: indicates the C compiler can handle function prototypes.

?S:.

?C:CAN\_PROTOTYPE ~ %<:

?C: If defined, this macro indicates that the C compiler can handle

?C: function prototypes.

?C:.

?C:DOTS:

?C: This macro is used to specify the ... in function prototypes which

?C: have arbitrary additional arguments.

?C:.

?C:NXT\_ARG:



?C: This macro is used to separate arguments in the declared argument list.

?C:.

?C:P\_FUNC:

?C: This macro is used to declare "private" (static) functions.

?C: It takes three arguments: the function type and name, a parenthesized

?C: traditional (comma separated) argument list, and the declared argument

?C: list (in which arguments are separated with NXT\_ARG, and additional

?C: arbitrary arguments are specified with DOTS). For example:

?C:

?C: P\_FUNC(int foo, (bar, baz), int bar NXT\_ARG char \*baz[])

?C:.

?C:P\_FUNC\_VOID:

?C: This

macro is used to declare "private" (static) functions that have

?C: no arguments. The macro takes one argument: the function type and name.

?C: For example:

?C:

?C: P\_FUNC\_VOID(int subr)

?C:.

?C:V\_FUNC:

?C: This macro is used to declare "public" (non-static) functions.

?C: It takes three arguments: the function type and name, a parenthesized

?C: traditional (comma separated) argument list, and the declared argument

?C: list (in which arguments are separated with NXT\_ARG, and additional

?C: arbitrary arguments are specified with DOTS). For example:

?C:

?C: V\_FUNC(int main, (argc, argv), int argc NXT\_ARG char \*argv[])

?C:.

?C:V\_FUNC\_VOID:

?C: This macro is used to declare "public" (non-static) functions that have

?C: no arguments. The macro takes one argument: the function type and name.

?C: For example:

?C:

?C: V\_FUNC\_VOID(int fork)

?C:.

?C:\_ (P):

?C: This macro is used to declare function parameters for folks who want

?C: to make declarations with prototypes using a

different style than

?C: the above macros. Use double parentheses. For example:

?C:

?C: int main \_((int argc, char \*argv[]));

?C:.

?H:?%<:#\$prototype CAN\_PROTOTYPE /\*\*/

?H:?%<:#ifdef CAN\_PROTOTYPE

?H:?NXT\_ARG:#define NXT\_ARG ,

?H:?DOTS:#define DOTS , ...

?H:?V\_FUNC:#define V\_FUNC(name, arglist, args)name(args)

```

?H:?P_FUNC:#define P_FUNC(name, arglist, args)static name(args)
?H:?V_FUNC_VOID:#define V_FUNC_VOID(name)name(void)
?H:?P_FUNC_VOID:#define P_FUNC_VOID(name)static name(void)
?H:?_:#define _(args) args
?H:?%<:#else
?H:?NXT_ARG:#define NXT_ARG ;
?H:?DOTS:#define DOTS
?H:?V_FUNC:#define V_FUNC(name, arglist, args)name arglist args;
?H:?P_FUNC:#define P_FUNC(name, arglist, args)static name arglist args;
?H:?V_FUNC_VOID:#define V_FUNC_VOID(name)name()
?H:?P_FUNC_VOID:#define P_FUNC_VOID(name)static name()
?H:?_:#define _(args) ()
?H:?%<:#endif
?H:.
?W:?%<:NXT_ARG DOTS V_FUNC P_FUNC V_FUNC_VOID P_FUNC_VOID _
?LINT:set prototype
: Cruising for prototypes
echo " "
echo "Checking out
function prototypes..." >&4
$cat >prototype.c <<'EOCP'
int main(int argc, char *argv[]) {
    exit(0);}
EOCP
if $cc $ccflags -c prototype.c >prototype.out 2>&1 ; then
    echo "Your C compiler appears to support function prototypes."
    val="$define"
else
    echo "Your C compiler doesn't seem to understand function prototypes."
    val="$undef"
fi
set prototype
eval $setvar
$rm -f prototype*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/prototype.U

```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_lrint: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lrint:

?S: This variable conditionally defines the HAS\_LRINT symbol, which

?S: indicates to the C program that the lrint() routine is available

?S: to return the integral value closest to a double (according

?S: to the current rounding mode).

?S:.

?C:HAS\_LRINT:

?C: This symbol, if defined, indicates that the lrint routine is

?C: available to return the integral value closest to a double

?C: (according to the current rounding mode).

?C:.

?H:#\$d\_lrint HAS\_LRINT /\*\*/

?H:.

?LINT:set d\_lrint

: see if lrint exists

set lrint d\_lrint

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_lrint.U

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2014-2014, Karl Williamson & H.Merijn Brand

?RCS:

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_wscmp: Compile cat rm\_try run Oldconfig Setvar

?MAKE: -pick add \$@ %<

?S:d\_wscmp:

?S: This variable conditionally defines the HAS\_WCSCMP symbol if the

?S: wscmp() routine is available and can be used to compare wide

?S: character strings.

?S:.

?C:HAS\_WCSCMP:

?C: This symbol, if defined, indicates that the wscmp routine is

?C: available to compare two wide character strings.

?C:.

?H:#\$d\_wscmp HAS\_WCSCMP /\*\*/

?H:.

?F:!try

?LINT: set d\_wscmp

: look for wscmp

echo " "

\$cat >try.c <<'EOCP'

#include <stdio.h>

#include

```

<wchar.h>
int main ()
{
    wchar_t *s = L" ";
    return (wcsncmp (s, s) ? 1 : 0);
}
EOCP
set try
?X: if $cc $ccflags $ldflags -o try try.c $libs >/dev/null 2>&1 ; then
val="$undef"
if eval $compile; then
    ` $run ./try `
    case "$?" in
0) echo "A working wcsncmp() found." >&4
    val="$define" ;;
*) echo "wcsncmp() found, but it doesn't work" >&4
    ;;
esac
else
    echo "wcsncmp() NOT found." >&4
fi
set d_wcsncmp
eval $setvar
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_wcsncmp.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_drnd48\_r.U,v 0RCS:

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?RCS:

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?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_drnd48\_r drand48\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_stdlib extern\_C

?MAKE: -pick add \$@ %<

?S:d\_drnd48\_r:

?S: This variable conditionally defines the HAS\_DRAND48\_R symbol,

?S: which indicates to the C program that the drand48\_r()

?S: routine is available.

?S:.

?S:drand48\_r\_proto:

?S: This variable encodes the prototype of drand48\_r.

?S: It is zero if d\_drand48\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_drand48\_r  
?S: is defined.  
?S:.  
?C:HAS\_DRAND48\_R:  
?C: This symbol, if defined, indicates that the drand48\_r routine  
?C: is available to drand48 re-entrantly.  
?C:.  
?C:DRAND48\_R\_PROTO:  
?C: This  
symbol encodes the prototype of drand48\_r.  
?C: It is zero if d\_drand48\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_drand48\_r  
?C: is defined.  
?C:.  
?H:#\$d\_drand48\_r HAS\_DRAND48\_R /\*\*/  
?H:#define DRAND48\_R\_PROTO \$drand48\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_drand48\_r\_proto  
: see if drand48\_r exists  
set drand48\_r d\_drand48\_r  
eval \$inlibc  
case "\$d\_drand48\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_stdlib stdlib.h"  
case "\$d\_drand48\_r\_proto:\$usethreads" in  
":define") d\_drand48\_r\_proto=define  
set d\_drand48\_r\_proto drand48\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_drand48\_r\_proto" in  
define)  
case "\$drand48\_r\_proto" in  
"|0) try='int drand48\_r(struct drand48\_data\*, double\*);'  
./protochk "\$extern\_C \$try" \$hdrs && drand48\_r\_proto=I\_ST ;;  
esac  
case "\$drand48\_r\_proto" in  
"|0) d\_drand48\_r=undef  
drand48\_r\_proto=0  
echo "Disabling drand48\_r, cannot determine prototype." >&4 ;;  
\* ) case  
"\$drand48\_r\_proto" in  
REENTRANT\_PROTO\*) ;;  
\*) drand48\_r\_proto="REENTRANT\_PROTO\_\$drand48\_r\_proto" ;;  
esac  
echo "Prototype: \$try" ;;  
esac

```
::
*) case "$susetthreads" in
define) echo "drand48_r has no prototype, not using it." >&4 ;;
esac
d_drand48_r=undef
drand48_r_proto=0
::
esac
::
*) drand48_r_proto=0
::
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_drand48_r.U
```

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?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_statvfs d\_fstatvfs: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_statvfs:

?S: This variable conditionally defines the HAS\_STATVFS symbol, which

?S: indicates to the C program that the statvfs() routine is available.

?S:.

?S:d\_fstatvfs:

?S: This variable conditionally defines the HAS\_FSTATVFS symbol, which

?S: indicates to the C program that the fstatvfs() routine is available.

?S:.

?C:HAS\_STATVFS:

?C: This symbol, if defined, indicates that the statvfs routine is

?C: available to stat filesystems by filenames.

?C:.

?C:HAS\_FSTATVFS:

?C: This symbol, if defined, indicates that the fstatvfs routine is

?C: available to stat filesystems by file descriptors.

?C:.

?H:#\$d\_statvfs HAS\_STATVFS /\*\*/

?H:#\$d\_fstatvfs

HAS\_FSTATVFS /\*\*/

?H:.

?LINT:set d\_statvfs

```
?LINT:set d_statvfs
: see if statvfs exists
set statvfs d_statvfs
eval $inlibc
```

```
: see if fstatvfs exists
set fstatvfs d_fstatvfs
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_statvfs.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: man1dir.U,v 3.2 1999/07/08 20:57:21 doughera Exp doughera $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1996, 1999 Andy Dougherty
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
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```

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```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: man1dir.U,v $
```

```
?RCS: Revision 3.2 1999/07/08 20:57:21 doughera
```

```
?RCS: Used installprefix.
```

```
?RCS:
```

```
?RCS: Revision 3.1 1999/07/08 20:52:19 doughera
```

```
?RCS: Updated for perl5.005_5x
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1997/02/28 16:10:29 ram
```

```
?RCS: patch61: created
```

```
?RCS:
```

```
?X: This was originally specific to perl5. Since perl5 has man pages that
```

```
?X: go in both man1/ and man3/ directories, we need both man1dir
```

```
?X: and
```

```
man3dir. This unit is basically dist's mansrc.U with
```

```
?X: man1 used instead of man everywhere.
```

```
?X:
```

```
?MAKE:man1dir man1direxp man1ext installman1dir: cat nroff Loc Oldconfig \
```

```
spackage test Getfile Setprefixvar Prefixit Prefixup sysman Myread \
```

```
prefixexp
```

```
?MAKE: -pick add $@ %<
```

```
?Y:TOP
```

```
?D:man1dir="
```

```
?S:man1dir:
```

?S: This variable contains the name of the directory in which manual  
 ?S: source pages are to be put. It is the responsibility of the  
 ?S: Makefile.SH to get the value of this into the proper command.  
 ?S: You must be prepared to do the ~name expansion yourself.  
 ?S:.  
 ?D:man1direxp="  
 ?S:man1direxp:  
 ?S: This variable is the same as the man1dir variable, but is filename  
 ?S: expanded at configuration time, for convenient use in makefiles.  
 ?S:.  
 ?D:installman1dir="  
 ?S:installman1dir:  
 ?S: This variable is really the same as man1direxp, unless you are using  
 ?S: AFS in which case it points to the read/write location whereas  
 ?S: man1direxp only points to the read-only access location.  
 For extra  
 ?S: portability, you should only use this variable within your makefiles.  
 ?S:.  
 ?S:man1ext:  
 ?S: This variable contains the extension that the manual page should  
 ?S: have: one of 'n', 'l', or '1'. The Makefile must supply the '!'.  
 ?S: See man1dir.  
 ?S:.  
 ?T:lookpath  
 ?LINT:change prefixvar  
 ?LINT:set man1direxp  
 : determine where manual pages go  
 set man1dir man1dir none  
 eval \$prefixit  
 \$cat <<EOM

\$spackage has manual pages available in source form.

```
EOM
case "$nroff" in
nroff)
echo "However, you don't have nroff, so they're probably useless to you."
case "$man1dir" in
") man1dir="none";;
esac;;
esac
echo "If you don't want the manual sources installed, answer 'none'."
case "$man1dir" in
') dflt=none
;;
")
lookpath="$prefixexp/share/man/man1"
lookpath="$lookpath $prefixexp/man/man1 $prefixexp/man/l_man/man1"
lookpath="$lookpath $prefixexp/man/p_man/man1"
```



```

lookpath="$lookpath $prefixexp/man/u_man/man1"
lookpath="$lookpath $prefixexp/man/man.1"
?X: Experience has shown people
expect man1dir to be under prefix,
?X: so we now always put it there. Users who want other behavior
?X: can answer interactively or use a command line option.
?X: Does user have System V-style man paths.
case "$sysman" in
*/?_man*) dflt=`./loc . $prefixexp/l_man/man1 $lookpath` ;;
*) dflt=`./loc . $prefixexp/man/man1 $lookpath` ;;
esac
set dflt
eval $prefixup
;;
*) dflt="$man1dir"
;;
esac
echo " "
fn=dn+~
rp="Where do the main $spackge manual pages (source) go?"
./getfile
if $test "X$man1direxp" != "X$ansexp"; then
installman1dir="
fi
prefixvar=man1dir
./setprefixvar

case "$man1dir" in
") man1dir='
installman1dir=";;
esac

```

: What suffix to use on installed man pages

```

case "$man1dir" in
')
man1ext='0'
;;
*)
rp="What suffix should be used for the main $spackge man pages?"
case "$man1ext" in
") case "$man1dir" in
*1) dflt=1 ;;
*1p) dflt=1p ;;
*1pm) dflt=1pm ;;
*l) dflt=l;;
*n) dflt=n;;
*o) dflt=o;;

```

```
*p) dflt=p;;
*C) dflt=C;;
*L) dflt=L;;
*L1)
dflt=L1;;
*) dflt=1;;
esac
;;
*) dflt="$man1ext";;
esac
./myread
man1ext="$ans"
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/man1dir.U
```

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?RCS: \$Id\$

?RCS:

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?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: libs.U,v \$

?RCS: Revision 3.0.1.6 1997/02/28 16:09:11 ram

?RCS: patch61: replaced .a with \$\_a all over the place

?RCS:

?RCS: Revision 3.0.1.5 1995/07/25 14:12:05 ram

?RCS: patch56: now knows about OS/2 platforms

?RCS:

?RCS: Revision 3.0.1.4 1994/10/29 16:24:22 ram

?RCS: patch36: removed old broken thislib/thatlib processing (ADO)

?RCS:

?RCS: Revision 3.0.1.3 1994/06/20 07:05:44 ram

?RCS: patch30: code cleanup with if/elif by ADO and RAM

?RCS: patch30: undone patch23 for libswanted default

setting

?RCS:

?RCS: Revision 3.0.1.2 1994/05/06 15:08:45 ram

?RCS: patch23: now includes ordered default libswanted variable (ADO)

?RCS: patch23: major cleanup for library lookups (ADO)

?RCS:  
?RCS: Revision 3.0.1.1 1993/08/25 14:02:31 ram  
?RCS: patch6: added default for libs  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:03 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:libs libsfound libsfiles libsdirs libspath libscheck: \  
test cat Myread Oldconfig Loc libpth package xlibpth so \_a \  
+usesocks sed +cc +ccflags +ldflags rm  
?MAKE: -pick add \$@ %<  
?S:libs:  
?S: This variable holds the additional libraries we want to use.  
?S: It is up to the Makefile to deal with it. The list can be empty.  
?S:.  
?S:libsfound:  
?S: This variable holds the full pathnames of the libraries  
?S: we found and accepted.  
?S:.  
?S:libsfiles:  
?S: This variable holds the filenames aka basenames of the libraries  
?S: we found and accepted.  
?S:.  
?S:libsdirs:  
?S: This variable holds the directory  
names aka dirnames of the libraries  
?S: we found and accepted, duplicates are removed.  
?S:.  
?S:libspath:  
?S: This variable holds the directory names probed for libraries.  
?S:.  
?S:libscheck:  
?S: This variable is intended to be set by hint files, if needed.  
?S: It should contain shell code that will be eval'ed with \$xxx holding  
?S: some library file. It may change \$xxx if needed.  
?S: For instance, on an Irix platform, you may make sure the right  
?S: library file is used depending on the cc command line, so that the  
?S: correct library is used depending on the selected ABI (for 32 and  
?S: 64-bit compilations).  
?S:  
?S: Here is an example of code that could be found in a hint file on Irix  
?S: when the selected compiler was for 32-bit -- that code is put in the  
?S: cc.cbu call-back unit to be invoked AFTER the C compiler and its  
?S: flags have been chosen:  
?S:  
?S: libscheck='case "\$xxx" in  
?S: \*.a) /bin/ar p \$xxx ` /bin/ar t \$xxx | sed q` >\$.o;  
?S: case "` /usr/bin/file \$.o`" in

```

?S: *N32*)
rm -f $$o ;;
?S: *) rm -f $$o; xxx=/no/n32$xxx ;;
?S: esac ;;
?S: *) case "`/usr/bin/file $xxx`" in
?S: *N32*) ;;
?S: *) xxx=/no/n32$xxx ;;
?S: esac ;;
?S: esac'
?S:.
?D:libs="
?LINT:extern libswanted
?LINT:change libswanted
?INIT:: default library list
?INIT:libswanted="
?X: This order is chosen so that libraries -lndir, -ldir, -lucb, -lbsd,
?X: -lBSD, -lPW, and -lx only get used if there are unresolved
?X: routines at link time. Usually, these are backwards compatability
?X: libraries, and may not be as reliable as the standard c library.
?X:
?X: The -lsocket -linet -lnsl order has been reported to be necessary
?X: for at least one SVR4 implementation.
?X: -lc must proceed -lucb or -lbsd for most Solaris applications.
?X: -lc_s proceeds -lc so we pick up the shared library version, if
?X: it is available.
?X:
?X: The ordering of c, posix, and cposix is a guess and almost
?X: certainly wrong on about half of all systems.
?X:
?X: Set proper libswanted in your private
Myinit.U if needed.
?X:
?X:: default ordered library list
?X:libswanted='net socket inet bind nsl nm sdbm gdbm ndbm dbm malloc dl'
?X:libswanted="$libswanted dld sun m c_s c posix cposix ndir dir ucb"
?X:libswanted="$libswanted bsd BSD PW x"
?X:
?INIT:: should be set by hint files if needed
?INIT:libscheck="
?T:xxx yyy thislib thisdir libstyle linkmsg
?F:lt.c lt
: Looking for optional libraries
echo " "
echo "Checking for optional libraries..." >&4
case "$libs" in
'|') dflt="";;
*) dflt="$libs";;
esac

```

```

case "$libswanted" in
") libswanted='c_s';;
esac
?X: libsocks has nasty naming scheme.
?X: This does not work if somebody wants SOCKS 4.
case "$usesocks" in
"$define") libswanted="$libswanted socks5 socks5_sh" ;;
esac
?X: Used later for link checks
echo "extern char printf(); int main() { printf(); return 0; }" > lt.c
libsfound=""
libsfiles=""
libsdirs=""
libspath=""
for thisdir in $libpth $xlibpth; do
test -d $thisdir && libspath="$libspath $thisdir"
done
for thislib in $libswanted;
do
for thisdir in $libspath; do
xxx=""
if test ! -f "$xxx" ; then
xxx=`ls $thisdir/lib$thislib.$so.[0-9]* 2>/dev/null | $sed -n '1p`
$stest -f "$xxx" && eval $libscheck
$stest -f "$xxx" && libstyle=shared
fi
if test ! -f "$xxx"; then
xxx=$thisdir/lib$thislib.$so
$stest -f "$xxx" && eval $libscheck
$stest -f "$xxx" && libstyle=shared
fi
if test ! -f "$xxx"; then
xxx=$thisdir/lib$thislib$_a
$stest -f "$xxx" && eval $libscheck
$stest -f "$xxx" && libstyle=static
fi
if test ! -f "$xxx"; then
xxx=$thisdir/$thislib$_a
$stest -f "$xxx" && eval $libscheck
$stest -f "$xxx" && libstyle=static
fi
if test ! -f "$xxx"; then
xxx=$thisdir/lib${thislib}_s$_a
$stest -f "$xxx" && eval $libscheck
$stest -f "$xxx" && libstyle=static
$stest -f "$xxx" && thislib=${thislib}_s
fi
if test ! -f "$xxx"; then

```

```

xxx=$thisdir/Slib$thislib$_a
    $test -f "$xxx" && eval $libscheck
$test
-f "$xxx" && libstyle=static
    fi
    if $test -f "$xxx"; then
?X:
?X: It is not sufficient to find a .so on the disk. We must make sure
?X: that we can indeed supply the -lfoo line on the cc line to link against
?X: that library. On Linux for instance, a versioned .so will not be
?X: implicitly linked against, whereas it will work fine on Solaris 2.6.
?X: --RAM, 10/10/2003
?X:
    if $cc -o lt $ccflags $ldflags lt.c -l$thislib >/dev/null 2>&1;
    then
        linkmsg=""
    else
        linkmsg=" but I can't link against it"
    fi
    case "$libstyle" in
    shared) echo "Found -l$thislib (shared)$linkmsg." ;;
    static) echo "Found -l$thislib$linkmsg." ;;
    *)    echo "Found -l$thislib ($libstyle)$linkmsg." ;;
    esac
    case " $dflt " in
    *"-l$thislib" *) ;;
    *)
        case "$linkmsg" in
        ")
            dflt="$dflt -l$thislib"
            libsfound="$libsfound $xxx"
            yyy=`basename $xxx`
            libsfiles="$libsfiles $yyy"
            yyy=`echo $xxx|sed -e "s%/$yyy\\|$%"`
            case " $libsdirs
" in
            *"$yyy" *) ;;
            *) libsdirs="$libsdirs $yyy" ;;
            esac
            ;;
        esac
        break
    fi
done
if $test ! -f "$xxx"; then
    echo "No -l$thislib."

```

```

fi
done
set X $dflt
shift
dflt="$*"
case "$libs" in
") dflt="$dflt";;
*) dflt="$libs";;
esac
case "$dflt" in
'|') dflt='none';;
esac
$rm -f lt.c lt

```

\$cat <<EOM

In order to compile \$package on your machine, a number of libraries are usually needed. Include any other special libraries here as well. Say "none" for none. The default list is almost always right.

EOM

```

echo " "
rp="Which libraries to use?"
./myread
case "$ans" in
none) libs=' ';;
*) libs="$ans";;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/libs.U

```

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```

?RCS: $Id: d_wait4.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_wait4.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:01 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:

```

?MAKE:d\_wait4: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_wait4:  
?S: This variable conditionally defines the HAS\_WAIT4 symbol, which  
?S: indicates the wait4() routine is available.  
?S:.  
?C:HAS\_WAIT4 (WAIT4):  
?C: This symbol, if defined, indicates that wait4() exists.  
?C:.  
?H:#\$d\_wait4 HAS\_WAIT4 /\*\*/  
?H:.  
?LINT:set d\_wait4  
: see if there is a wait4  
set  
wait4 d\_wait4  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_wait4.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_isnanl: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_isnanl:  
?S: This variable conditionally defines the HAS\_ISNANL symbol, which  
?S: indicates to the C program that the isnanl() routine is available.  
?S:.  
?C:HAS\_ISNANL:  
?C: This symbol, if defined, indicates that the isnanl routine is  
?C: available to check whether a long double is a NaN.  
?C:.  
?H:#\$d\_isnanl HAS\_ISNANL /\*\*/  
?H:.  
?LINT:set d\_isnanl  
: see if isnanl exists  
set isnanl d\_isnanl  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-



5.38.0/U/perl/d\_isnanl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_sterror.U,v \$

?RCS: Revision 3.0.1.3 1994/05/13 15:20:27 ram

?RCS: patch27: now uses new macro support for cleaner Strerror def

?RCS:

?RCS: Revision 3.0.1.2 1994/05/06 14:58:26 ram

?RCS: patch23: renamed strerror into Strerror to protect name space (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:08:56 ram

?RCS: patch16: protected code looking for sys\_errnolist[] with @if

?RCS: patch16: added default value for d\_sysernlst

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:35 ram

?RCS: Baseline

for dist 3.0 netwide release.

?RCS:

?MAKE:d\_sterror d\_syserrlst d\_sysernlst d\_strerrm: contains Csym Findhdr

?MAKE: -pick add \$@ %<

?S:d\_sterror:

?S: This variable conditionally defines HAS\_STRERROR if strerror() is

?S: available to translate error numbers to strings.

?S:.

?S:d\_syserrlst:

?S: This variable conditionally defines HAS\_SYS\_ERRLIST if sys\_errlist[] is

?S: available to translate error numbers to strings.

?S:.

?S:d\_sysernlst:

?S: This variable conditionally defines HAS\_SYS\_ERRNOLIST if sys\_errnolist[]

?S: is available to translate error numbers to the symbolic name.

?S:.

?S:d\_strerrm:

?S: This variable holds what Strerrr is defined as to translate an error

?S: code condition into an error message string. It could be 'strerror'

?S: or a more complex macro emulating strrror with sys\_errlist[], or the

?S: "unknown" string when both strerror and sys\_errlist are missing.

?S:.

?C:HAS\_STRERROR (STRERROR):

?C: This symbol, if defined, indicates that the strerror routine is

?C: available

to translate error numbers to strings. See the writeup

?C: of Strerror() in this file before you try to define your own.

?C:.

?C:HAS\_SYS\_ERRLIST (SYSERRLIST):

?C: This symbol, if defined, indicates that the sys\_errlist array is

?C: available to translate error numbers to strings. The extern int

?C: sys\_nerr gives the size of that table.

?C:.

?C:HAS\_SYS\_ERRNOLIST (SYSERRNOLIST):

?C: This symbol, if defined, indicates that the sys\_errnolist array is

?C: available to translate an errno code into its symbolic name (e.g.

?C: ENOENT). The extern int sys\_nerrno gives the size of that table.

?C:.

?C:Strerror:

?C: This preprocessor symbol is defined as a macro if strerror() is

?C: not available to translate error numbers to strings but sys\_errlist[]

?C: array is there.

?C:.

```
?H:#$d_strerror HAS_STRERROR /**/
```

```
?H:#$d_syserrlst HAS_SYS_ERRLIST /**/
```

```
?H:#$d_sysernlst HAS_SYS_ERRNOLIST /**/
```

```
?H:#define Strerror(e) $d_strerror
```

?H:.

```
?D:d_sysernlst="
```

```
?T:xxx val
```

```
: see if strerror and/or sys_errlist[]
```

```
exist
```

```
echo " "
```

```
if set strerror val -f d_strerror; eval $csym; $val; then
```

```
echo 'strerror() found.' >&4
```

```
d_strerror="$define"
```

```
d_strerrorm='strerror(e)'
```

```
if set sys_errlist val -a d_syserrlst; eval $csym; $val; then
```

```
echo "(You also have sys_errlist[], so we could roll our own strerror.)"
```

```
d_syserrlst="$define"
```

```
else
```

```
echo "(Since you don't have sys_errlist[], sterror() is welcome.)"
```

```
d_syserrlst="$undef"
```

```
fi
```

```
elif xxx=`./findhdr string.h`; test "$xxx" || xxx=`./findhdr strings.h`; \
```

```
$contains '#[ ]*define.*strerror' "$xxx" >/dev/null 2>&1; then
```

```
echo 'strerror() found in string header.' >&4
```

```
d_strerror="$define"
```

```
d_strerrorm='strerror(e)'
```

```
if set sys_errlist val -a d_syserrlst; eval $csym; $val; then
```

```

echo "(Most probably, strerror() uses sys_errlist[] for descriptions.)"
d_syserrlst="$define"
else
echo "(You don't appear to have any sys_errlist[], how can this be?)"
d_syserrlst="$undef"
fi
elif set sys_errlist val -a d_syserrlst; eval $csym; $val; then
echo "strerror()
not found, but you have sys_errlist[] so we'll use that." >&4
d_strerror="$undef"
d_syserrlst="$define"
d_strerrorm='((e)<0||(e)>=sys_nerr?"unknown":sys_errlist[e])'
else
echo 'strerror() and sys_errlist[] NOT found.' >&4
d_strerror="$undef"
d_syserrlst="$undef"
d_strerrorm=""
fi
@if d_syserrlst || HAS_SYS_ERRNOLIST
if set sys_errnolist val -a d_syserrlst; eval $csym; $val; then
echo "(Symbolic error codes can be fetched via the sys_errnolist[] array.)"
d_syserrlst="$define"
else
echo "(However, I can't extract the symbolic error code out of errno.)"
d_syserrlst="$undef"
fi
@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_strerror.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000, Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:versiononly: cat Myread Setvar Devel

?MAKE: -pick add \$@ %<

?LINT:set versiononly

?Y:TOP

?S:versiononly:

?S: If set, this symbol indicates that only the version-specific  
 ?S: components of a perl installation should be installed.  
 ?S: This may be useful for making a test installation of a new  
 ?S: version without disturbing the existing installation.  
 ?S: Setting versiononly is equivalent to setting installperl's -v option.  
 ?S: In particular, the non-versioned scripts and programs such as  
 ?S: a2p, c2ph, h2xs, pod2\*, and perldoc  
 are not installed  
 ?S: (see INSTALL for a more complete list). Nor are the man  
 ?S: pages installed.  
 ?S: Usually, this is undef.  
 ?S:.

```
?LINT:extern inc_version_list
?LINT:change inc_version_list
?LINT:extern inc_version_list_init
?LINT:change inc_version_list_init
?LINT:extern version
: determine whether to use a version number suffix for installed binaries
echo " "
```

```
$cat <<EOM
```

Do you want to use a version number suffix for installed binaries? This will install 'perl\$version' instead of 'perl', and likewise for other binaries like 'perldoc' and 'cpan'. This allows many versions of perl to be installed side-by-side. Unless you are a developer, you probably do *not* want to do this.

```
EOM
```

```
case "$versiononly" in
"$define"|[Yy]*|true) dflt='y' ;;
*) dflt='n';
esac
rp="Do you want to use a version number suffix for installed binaries?"
./myread
case "$ans" in
[yY]*) val="$define";;
*) val="$undef" ;;
esac
set versiononly
eval $setvar
```

```
case "$versiononly" in
"$define") inc_version_list="
            inc_version_list_init=0
            ;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/versiononly.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_readlink.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_readlink.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:11:52 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_readlink: Inlibc
?MAKE: -pick add $@ %<
?S:d_readlink:
?S: This variable conditionally defines the HAS_READLINK symbol, which
?S: indicates to the C program that the readlink() routine is available
?S: to read the value of a symbolic link.
?S:.
?C:HAS_READLINK :
?C: This
symbol, if defined, indicates that the readlink routine is
?C: available to read the value of a symbolic link.
?C:.
?H:#$d_readlink HAS_READLINK /**/
?H:.
?LINT:set d_readlink
: see if readlink exists
set readlink d_readlink
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_readlink.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
```

?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_sigaction.U,v \$  
?RCS: Revision 3.0.1.1 1997/02/28 15:44:29 ram  
?RCS: patch61: created  
?RCS:  
?RCS:  
?MAKE:d\_sigaction: Csym Setvar cat cc cflags ldflags libs rm \_o  
?MAKE: -pick add \$@ %<  
?S:d\_sigaction:  
?S: This variable conditionally defines the HAS\_SIGACTION symbol, which  
?S: indicates that the Vr4 sigaction() routine is available.  
?S:.  
?C:HAS\_SIGACTION:  
?C: This symbol, if defined, indicates that Vr4's sigaction() routine  
?C: is available.  
?C:.  
?H:#\$d\_sigaction HAS\_SIGACTION /\*\*/  
?H:.  
?T:val  
?LINT:set  
d\_sigaction  
: see if we have sigaction  
echo " "  
if set sigaction val -f d\_sigaction; eval \$csym; \$val; then  
echo 'sigaction() found.'>&4  
val="\$define"  
else  
echo 'sigaction NOT found.'>&4  
val="\$undef"  
fi  
?X:  
?X: Solaris 2.5\_x86 with SunWorks Pro C 3.0.1 doesn't have a complete  
?X: sigaction structure if compiled with cc -Xc. This compile test  
?X: will fail then. <doughera@lafcol.lafayette.edu>  
?X:  
\$cat > set.c <<'EOP'  
#include <stdio.h>  
#include <sys/types.h>  
#include <signal.h>  
int main()  
{  
struct sigaction act, oact;  
}  
EOP  
if \$cc \$ccflags \$ldflags -o set set.c \$libs >/dev/null 2>&1; then

```
:
else
echo "But you don't seem to have a useable struct sigaction." >&4
val="$undef"
fi
set d_sigaction; eval $setvar
$rm -f set set$_o set.c
```

Found in path(s):

```
*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_sigaction.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strtok.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_strtok.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:38 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: The strtok routine now appears to be a standard one, but it was

?X: missing in early BSD systems.

?X:

?MAKE:d\_strtok: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_strtok:

?S: This variable conditionally defines HAS\_STRTOK if strtok() is

?S: available to scan strings for tokens.

?S:.

?C:HAS\_STRTOK (STRTOK):

?C: This symbol, if defined, indicates

that the strtok routine is

?C: available to scan strings for tokens.

?C:.

?H:#\$d\_strtok HAS\_STRTOK /\*\*/

?H:.

?LINT:set d\_strtok

: see if strtok exists

set strtok d\_strtok

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_strtok.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: startperl.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:25:06 ram

?RCS: patch61: warn them if the #! line is too long for their OS

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:50 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:startperl: cat rm sharpbang perlpath d\_portable Myread

?MAKE: -pick add \$@ %<

?S:startperl:

?S: This variable contains the string to put on the front of a perl

?S: script to make sure (hopefully) that it runs with perl and not some

?S: shell. Of course, that

leading line must be followed by the classical

?S: perl idiom:

?S: eval 'exec perl -S \$0 \${1+"\$@"}'

?S: if \$running\_under\_some\_shell;

?S: to guarantee perl startup should the shell execute the script. Note

?S: that this magic incantation is not understood by csh.

?S:.

?C:STARTPERL:

?C: This symbol is the string that should be put on the front of a

?C: perl script to make sure (hopefully) that it runs with perl and

?C: not under some shell. That line should be followed by the classical

?C: invocation magic:

?C: eval 'exec perl -S \$0 \${1+"\$@"}'

?C: if \$running\_under\_some\_shell;

?C: to guarantee perl startup should the shell execute the script at first.

?C:.

?H:#define STARTPERL "\$startperl"

?H:.

?T:pdft



```

?F:!xtry
: figure out how to guarantee perl startup
case "$sharpbang" in
*!)
?X:
?X: Make sure the #!$perlpath magic incantation indeed works on this
?X: system... It might not if the length of the #! hook is greater
?X: than some hardwired kernel limit. -- RAM, 15/03/96
?X:
$cat
>xtry <<EOP
#!$perlpath
system("exit 0");
EOP
chmod a+x xtry
if ./xtry >/dev/null 2>&1; then
$cat <<EOH

```

I can use the #! construct to start perl on your system. This will make startup of perl scripts faster, but may cause problems if you want to share those scripts and perl is not in a standard place (/usr/bin/perl) on all your platforms. The alternative is to force a shell by starting the script with a single ':' character.

```

EOH
pdfmt=y
else
$cat <<EOH

```

I could use the #! construct to start perl on your system, but using #!\$perlpath would be too long for your kernel to grok. Indeed, most systems do limit the size of the leading #! string to 32 characters.

```

EOH
pdfmt=n
fi
$rm -f xtry
case "$startperl" in
*!*) dflt=y;;
") case "$d_portable" in
"$define") dflt=n;;
*) dflt=$pdfmt;;
esac;;
*) dflt=n;;
esac
rp='Shall I use #! to start up perl?'
. ./myread

```

```
case "$ans" in
y*|Y*) startperl="#!$perlpath";
*) startperl=": # use perl";;
esac;;
*) startperl=":
# use perl";;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/startperl.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_gethent.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:09 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_gethent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_gethent:

?S: This variable conditionally defines HAS\_GETHOSTENT if gethostent() is

?S: available to dup file descriptors.

?S:.

?C:HAS\_GETHOSTENT (GETHOSTENT):

?C: This symbol, if defined, indicates that the gethostent routine is

?C: available to lookup host names in some data base or other.

?C:.

?H:#\$d\_gethent HAS\_GETHOSTENT /\*\*/

?H:.

?LINT:set

d\_gethent

: see if gethostent exists

set gethostent d\_gethent

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_gethent.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: dlsrc.U,v\$

?RCS:

?RCS: Copyright (c) 1996-1998, Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: dlsrc.U,v \$

?RCS:

?X: hpux support thanks to Jeff Okamoto <okamoto@hpcc101.corp.hp.com>

?X:

?X: To create a shared library, you must compile ALL source files in the

?X: library with +z (or possibly +Z if the library is whopping huge),

?X: then link the library with -b. Example:

?X: cc -c +z module\_a.c

?X: cc -c +z module\_b.c

?X: ld -b module\_a.o module\_b.o -o module.sl

?X:

?MAKE:usedl ld dlsrc cccdlflags lddlflags ccdlflags bin\_ELF ld\_can\_script: \  
rm\_try Getfile Myread test osname sed d\_dlopen Findhdr Setvar \  
src run cc cflags ldflags optimize ls gccversion cat rsrc i\_stdlib \  
i\_unistd osvers sysroot

?MAKE: -pick add \$@ %<

?Y:BOTTOM

?S:usedl:

?S: This variable

indicates if the system supports dynamic

?S: loading of some sort. See also dlsrc and dlobj.

?S:.

?S:ld:

?S: This variable indicates the program to be used to link

?S: libraries for dynamic loading. On some systems, it is 'ld'.

?S: On ELF systems, it should be \$cc. Mostly, we'll try to respect

?S: the hint file setting.

?S:.

?S:dlsrc:

?S: This variable contains the name of the dynamic loading file that

?S: will be used with the package.

?S:.

?S:cccdlflags:

?S: This variable contains any special flags that might need to be

?S: passed with 'cc -c' to compile modules to be used to create a shared

?S: library that will be used for dynamic loading. For hpux, this

?S: should be +z. It is up to the makefile to use it.

?S:.

?S:lddlflags:

?S: This variable contains any special flags that might need to be  
 ?S: passed to \$ld to create a shared library suitable for dynamic  
 ?S: loading. It is up to the makefile to use it. For hpux, it  
 ?S: should be '-b'. For sunos 4.1, it is empty.  
 ?S:.  
 ?S:ccdflags:  
 ?S: This  
 variable contains any special flags that might need to be  
 ?S: passed to cc to link with a shared library for dynamic loading.  
 ?S: It is up to the makefile to use it. For sunos 4.1, it should  
 ?S: be empty.  
 ?S:.  
 ?S:bin\_ELF:  
 ?S: This variable saves the result from configure if generated binaries  
 ?S: are in ELF format. Only set to defined when the test has actually  
 ?S: been performed, and the result was positive.  
 ?S:.  
 ?S:ld\_can\_script:  
 ?S: This variable shows if the loader accepts scripts in the form of  
 ?S: -Wl,--version-script=ld.script. This is currently only supported  
 ?S: for GNU ld on ELF in dynamic loading builds.  
 ?S:.  
 ?C:USE\_DYNAMIC\_LOADING ~ %<:  
 ?C: This symbol, if defined, indicates that dynamic loading of  
 ?C: some sort is available.  
 ?C:.  
 ?H:%<:#\$usedl USE\_DYNAMIC\_LOADING /\*\*/  
 ?H:.  
 ?W:%<:dlopen  
 ?T:dldir thisflag tdir  
 ?F:!a.out  
 : determine which dynamic loading, if any, to compile in  
 echo " "  
 dldir="ext/DynaLoader"  
 case "\$usedl" in  
 \$define|y|true)  
 dflt='y'  
 usedl="\$define"  
 ;;  
 \$undef|n|false)  
 dflt='n'  
 usedl="\$undef"  
 ;;  
 \*)  
 dflt='n'  
 case "\$d\_dlopen" in  
 \$define) dflt='y' ;;  
 esac

```

: Does a dl_XXX.XS file exist for this operating system
$test -f $rsrc/$dldir/dl_${osname}.xs && dflt='y'
;;
esac
rp="Do you wish to use dynamic loading?"
./myread
usedl="$ans"
bin_ELF="$undef"
case "$ans" in
  y*) usedl="$define"
case "$dlsrc" in
  ") if $test -f $rsrc/$dldir/dl_${osname}.xs ; then
    dflt="$dldir/dl_${osname}.xs"
  elif $test "$d_dlopen" = "$define" ; then
    dflt="$dldir/dl_dlopen.xs"
  else
    dflt="
  fi
;;
  *) dflt="$dldir/$dlsrc"
;;
esac
echo "The following dynamic loading files are available:"
: Can not go over to $dldir because getfile has path hard-coded in.
tdir=`pwd`; cd "$rsrc"; $ls -C $dldir/dl*.xs; cd "$tdir"
rp="Source file to use for dynamic loading"
fn="fne"
gfpth="$src"
./getfile
usedl="$define"
: emulate basename
dlsrc=`echo $ans | $sed -e 's%.*^\([^/]*\)$%\1%'`

$cat
<< EOM

```

Some systems may require passing special flags to \$cc -c to compile modules that will be used to create a shared library. To use no flags, say "none".

```

EOM
case "$cccdlflags" in
  ") case "$gccversion" in
  ") case "$osname" in
    hpux) dflt='+z' ;;
    irix*) dflt='-KPIC' ;;
    svr4*|esix*|solaris|nonstopux) dflt='-KPIC' ;;
    sunos) dflt='-pic' ;;

```

```

*) dflt='none' ;;
    esac
    ;;
*) case "$osname" in
darwin) dflt='none' ;;
*linux*|svr4*|esix*|solaris|nonstopux) dflt='-fPIC' ;;
*) dflt='-fpic' ;;
    esac ;;
esac ;;
' ') dflt='none' ;;
*) dflt="$cccdlflags" ;;
esac

case "$dflt" in
    none) dflt="" ;;
esac

# If -Dsysroot was specified, now's the time to add it
# to cccdflags
if test "X$sysroot" != X; then
    case "$gccversion" in
    ") ;;
    *) case "$dflt" in
    *sysroot*) ;;
    'undef'|*)
        dflt="$dflt --sysroot=$sysroot" ;;
    esac
    ;;
    esac
fi

case "$dflt" in
    ") dflt='none';;
esac

rp="Any
special flags to pass to $cc -c to compile shared library modules?"
. ./myread
case "$ans" in
?X: Use ' ' so that a subsequent Configure run preserves the old state.
    none) cccdflags=' ' ;;
    *) cccdflags="$ans" ;;
esac

cat << EOM

```

Some systems use ld to create libraries that can be dynamically loaded, while other systems (such as those using ELF) use \$cc.

EOM

: Determine if this is ELF

```
$cat >try.c <<EOM
/* Test for whether ELF binaries are produced */
#include <fcntl.h>
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#ifdef I_UNISTD
#include <unistd.h>
#endif
int main() {
    char b[4];
    int i = open("a.out",O_RDONLY);
    if(i == -1)
        exit(1); /* fail */
    if(read(i,b,4)==4 && b[0]==127 && b[1]=='E' && b[2]=='L' && b[3]=='F')
        exit(0); /* succeed (yes, it is ELF) */
    else
        exit(1); /* fail */
}
```

EOM

```
if $cc $ccflags $ldflags -o a.out try.c >/dev/null 2>&1 && $run ./a.out; then
    bin_ELF="$define"
fi
$rm_try
```

```
case "$ld" in
```

```
    *) if $test $bin_ELF = "$define"; then
```

```
        cat <<EOM
```

You appear to have ELF support. I'll use \$cc to build dynamic libraries.

EOM

```
        dflt="$cc"
    else
        echo "I'll use ld to build dynamic libraries."
        dflt='ld'
    fi
    ;;
    *) dflt="$ld"
    ;;
esac
```

```
rp="What command should be used to create dynamic libraries?"
```

```
./myread
```

```
ld="$ans"
```

```
cat << EOM
```

Some systems may require passing special flags to `$ld` to create a library that can be dynamically loaded. If your `ld` flags include `-L/other/path` options to locate libraries outside your loader's normal search path, you may need to specify those `-L` options here as well. To use no flags, say "none".

```
EOM
```

```
case "$lddflags" in
  *) case "$osname" in
      haiku) dflt='-shared' ;;
      hpux) dflt='-b';
      case "$gccversion" in
        *) dflt="$dflt +vnocompatwarnings" ;;
      esac
    ;;
  *linux*|irix*|gnu*) dflt="-shared $optimize" ;;
  solaris) # See [perl #66604].
    # On Solaris 11, gcc -m64
on amd64
  # appears not to understand -G. gcc versions at
  # least as old as 3.4.3 support -shared, so just
  # use that with Solaris 11 and later, but keep
  # the old behavior for older Solaris versions.
  case "$gccversion" in
    *) dflt='-G' ;;
  *) case "$osvers" in
      2.?|2.10) dflt='-G' ;;
    *) dflt='-shared' ;;
  esac
  ;;
  esac
  ;;
  sunos) dflt='-assert nodefinitions' ;;
  svr4*|esix*|nonstopux) dflt="-G $ldflags" ;;
  *) dflt='none' ;;
esac
;;
*) dflt="$lddflags" ;;
esac
```

```
: Only do this for gcc, since, for example, qcc has no concept
: of --sysroot.
```

```
if $test "X$sysroot" != X; then
```

```
  case "$gccversion" in
```



```

") ;;
*) dflt="$dflt --sysroot=$sysroot" ;;
    esac
fi

```

: Try to guess additional flags to pick up local libraries.

: Be careful not to append to a plain 'none'

```

case "$dflt" in
    none) dflt="" ;;
    esac
for thisflag in $ldflags; do
    case "$thisflag" in
        -L*|-R*|-Wl,-R*)

            case " $dflt " in
                *" $thisflag "*) ;;
                *) dflt="$dflt $thisflag" ;;
            esac
            ;;
        esac
    done

```

```

case "$dflt" in
    '| ') dflt='none' ;;
    esac

```

```

case "$ldflags" in
    *-fstack-protector-strong*)
        case "$dflt" in
            *-fstack-protector-strong*) ;; # Don't add it again
            *) dflt="$dflt -fstack-protector-strong" ;;
        esac
        ;;
    *-fstack-protector*)
        case "$dflt" in
            *-fstack-protector*) ;; # Don't add it again
            *) dflt="$dflt -fstack-protector" ;;
        esac
        ;;
    esac

```

rp="Any special flags to pass to \$ld to create a dynamically loaded library?"

. /myread

```

case "$ans" in

```

?X: Use ' ' so that a subsequent Configure run preserves the old state.

```

    none) lddflags=' ' ;;
    *) lddflags="$ans" ;;
    esac

```

```
cat <<EOM
```

Some systems may require passing special flags to \$cc to indicate that the resulting executable will use dynamic linking. To use no flags, say "none".

```
EOM
```

```
case "$ccdlflags" in
  *) case "$osname" in
      *linux*|hpux|gnu*)
        dflt='-Wl,-E' ;;
      sunos)          dflt='none' ;;
      *)              dflt='none' ;;
    esac ;;
  *) dflt='none' ;;
  *) dflt="$ccdlflags" ;;
esac

rp="Any special flags to pass to $cc to use dynamic linking?"
./myread
case "$ans" in
  none) ccdlflags=' ' ;;
  *)    ccdlflags="$ans" ;;
esac
;;
?X: End of usedl=y section
```

```
*) usedl="$undef"
ld='ld'
dlsrc='dl_none.xs'
lddlflags=""
ccdlflags=""
;;
esac
```

```
ld_can_script="$undef"
case "$bin_ELF$usedl" in
  $define$define)
    # Abuse try.h and a.out names for neat cleanup
    $cat >try.c <<EOM
void foo() {}
void bar() {}
EOM
    $cat >try.h <<EOM
LIBTEST_42 {
global:
foo;
```

```

local: *;
};
EOM
if $cc $cccdlflags $ccdflflags $ccflags \
    $ldflags $lddlflags -o a.out try.c \
    -Wl,--version-script=try.h >/dev/null 2>&1 \
    && $stest -s a.out ; then
    echo "ld supports scripting" >&4
    ld_can_script="$define"
else

    echo "ld does not support scripting" >&4
fi
$rm_try
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/dlsrc.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: libnlist.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: libnlist.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 16:08:02 ram
?RCS: patch61: added usrinc and mips on the dependency line
?RCS: patch61: make sure we call ./mips
?RCS: patch61: added a ?LINT: hint
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:00 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:libnlist: Loc libpth Guess usrinc _a
?MAKE: -pick add $@ %<
?S:libnlist (libmld):
?S: This variable contains the name of the library required to
get the
?S: definition of the nlist() function. On a MIPS RISC/OS box, it is -lml.
?S: Under Sys Vr4, it is -lelf. Otherwise, its value is empty.

```

```

?S:.
?T:xxx
?LINT:use usrincl
: see if we need a special library for 'nlist()'
echo " "
: How about doing this if nlist is not in libc...
if ./mips ; then
  libnlist='-lmlld'
else
  xxx=`./loc libelf$_a x $libpth`
  case "$xxx" in
  x) ;;
  *)
    libnlist="$xxx"
    ;;
  esac
fi
case "$libnlist" in
") echo "No special library for nlist() seems necessary." >&4
;;
*) echo "nlist() can be found in $libnlist." >&4
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/libnlist.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getprotobynumber\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getprotobynumber\_r getprotobynumber\_r\_proto: Inlibc Protochk \

Hasproto i\_systypes usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getprotobynumber\_r:

?S: This variable conditionally defines the HAS\_GETPROTOBYNUMBER\_R symbol,

?S: which indicates to the C program that the getprotobynumber\_r()

?S: routine is available.

?S:.

?S:getprotobynumber\_r\_proto:

?S: This variable encodes the prototype of getprotobynumber\_r.

?S: It is zero if d\_getprotobynumber\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getprotobynumber\_r  
?S: is defined.  
?S:.  
?C:HAS\_GETPROTOBYNUMBER\_R:  
?C: This  
symbol, if defined, indicates that the getprotobynumber\_r routine  
?C: is available to getprotobynumber re-entrantly.  
?C:.  
?C:GETPROTOBYNUMBER\_R\_PROTO:  
?C: This symbol encodes the prototype of getprotobynumber\_r.  
?C: It is zero if d\_getprotobynumber\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getprotobynumber\_r  
?C: is defined.  
?C:.  
?H:#\$d\_getprotobynumber\_r HAS\_GETPROTOBYNUMBER\_R /\*\*/  
?H:#define GETPROTOBYNUMBER\_R\_PROTO \$getprotobynumber\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_getprotobynumber\_r\_proto  
: see if getprotobynumber\_r exists  
set getprotobynumber\_r d\_getprotobynumber\_r  
eval \$inlibc  
case "\$d\_getprotobynumber\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"  
case "\$d\_getprotobynumber\_r\_proto:\$usetreads" in  
":define") d\_getprotobynumber\_r\_proto=define  
set d\_getprotobynumber\_r\_proto getprotobynumber\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_getprotobynumber\_r\_proto" in  
define)  
case "\$getprotobynumber\_r\_proto"  
in  
"|0) try='int getprotobynumber\_r(int, struct protoent\*, char\*, size\_t, struct protoent\*\*);'  
./protochk "\$extern\_C \$try" \$hdrs && getprotobynumber\_r\_proto=I\_ISBWR ;;  
esac  
case "\$getprotobynumber\_r\_proto" in  
"|0) try='struct protoent\* getprotobynumber\_r(int, struct protoent\*, char\*, int);'  
./protochk "\$extern\_C \$try" \$hdrs && getprotobynumber\_r\_proto=S\_ISBI ;;  
esac  
case "\$getprotobynumber\_r\_proto" in  
"|0) try='int getprotobynumber\_r(int, struct protoent\*, struct protoent\_data\*);'  
./protochk "\$extern\_C \$try" \$hdrs && getprotobynumber\_r\_proto=I\_ISD ;;  
esac  
case "\$getprotobynumber\_r\_proto" in  
"|0) d\_getprotobynumber\_r=undef  
getprotobynumber\_r\_proto=0

```

echo "Disabling getprotobynumber_r, cannot determine prototype." >&4 ;;
*) case "$getprotobynumber_r_proto" in
REENTRANT_PROTO*) ;;
*) getprotobynumber_r_proto="REENTRANT_PROTO_${getprotobynumber_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "getprotobynumber_r
has no prototype, not using it." >&4 ;;
esac
d_getprotobynumber_r=undef
getprotobynumber_r_proto=0
;;
esac
;;
*) getprotobynumber_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_getprotobynumber_r.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: ipc.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: ipc.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:53 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:ipc serve\_shm serve\_msg serve\_inet\_udp serve\_inet\_tcp serve\_unix\_udp \

serve\_unix\_tcp: test Myread Oldconfig d\_socket d\_msg d\_shm d\_sem

?MAKE: -pick add \$@ %<

?LINT:use d\_msg d\_sem

?S:ipc:

?S: This variable holds the type of IPC service we'll be using. Values

?S: include "ip", "shm", "msg", "cms" and "os9". We don't worry about

?S: cms or os9

here, because Configure doesn't run in those places--HMS.

?S:.

?S:serve\_shm:

?S: This variable controls the definition of SERVE\_SHM, which tells the

?S: C program to use USG shared memory for IPC.

?S:.

?S:serve\_msg:

?S: This variable controls the definition of SERVE\_MSG, which tells the

?S: C program to use USG message queues for IPC.

?S:.

?S:serve\_inet\_udp:

?S: This variable controls the definition of SERVE\_INET\_UDP, which tells

?S: the C program to enable InterNet-domain UDP support for IPC.

?S:.

?S:serve\_inet\_tcp:

?S: This variable controls the definition of SERVE\_INET\_TCP, which tells

?S: the C program to enable InterNet-domain TCP support for IPC.

?S:.

?S:serve\_unix\_udp:

?S: This variable controls the definition of SERVE\_UNIX\_UDP, which tells

?S: the C program to enable Unix-domain UDP support for IPC.

?S:.

?S:serve\_unix\_tcp:

?S: This variable controls the definition of SERVE\_UNIX\_TCP, which tells

?S: the C program to enable Unix-domain TCP support for IPC.

?S:.

?C:SERVE\_SHM:

?C: If

defined, tells the C program to use USG shared memory for IPC.

?C:.

?C:SERVE\_MSG:

?C: If defined, tells the C program to use USG message queues for IPC.

?C:.

?C:SERVE\_INET\_UDP:

?C: If defined, tells the C program to enable InterNet-domain UDP

?C: support for IPC.

?C:.

?C:SERVE\_INET\_TCP:

?C: If defined, tells the C program to enable InterNet-domain TCP

?C: support for IPC.

?C:.

?C:SERVE\_UNIX\_UDP:

?C: If defined, tells the C program to enable Unix-domain UDP

?C: support for IPC.

?C:.

?C:SERVE\_UNIX\_TCP:

?C: If defined, tells the C program to enable Unix-domain TCP

?C: support for IPC.

```

?C:.
?H:#$serve_shm SERVE_SHM /**/
?H:#$serve_msg SERVE_MSG /**/
?H:#$serve_inet_udp SERVE_INET_UDP /**/
?H:#$serve_inet_tcp SERVE_INET_TCP /**/
?H:#$serve_unix_udp SERVE_UNIX_UDP /**/
?H:#$serve_unix_tcp SERVE_UNIX_TCP /**/
?H:.
?X: FIXME -- RAM
?INIT:serve_shm=""
?INIT:serve_msg="$undef"
?INIT:serve_inet_udp=""
?INIT:serve_inet_tcp=""
?INIT:serve_unix_udp=""
?INIT:serve_unix_tcp=""
: get IPC mechanism
echo
" "
ipc=""
while $test -z "$ipc"
do
if $test "$ipc" != "shm" -a "$d_socket" = "$define"; then
ipc=""
if $test "$serve_inet_udp" = "$undef"; then
dflt=n
else
dflt=y
fi
rp='Provide InterNet-domain UDP service?'
./myread
dflt=""
case "$ans" in
n*) serve_inet_udp="$undef";;
*)
serve_inet_udp="$define"
ipc='ip'
;;
esac

if $test "$serve_inet_tcp" = "$define"; then
dflt=y
else
dflt=n
fi
rp='Provide InterNet-domain TCP service?'
./myread
dflt=""
case "$ans" in

```



```

n*) serve_inet_tcp="$undef";;
*)
serve_inet_tcp="$define"
ipc='ip'
;;
esac

if $test "$serve_unix_udp" = "$define"; then
dflt=y
else
dflt=n
fi
rp='Provide Unix-domain UDP service?'
./myread
dflt=""
case "$ans" in
n*) serve_unix_udp="$undef";;
*)
serve_unix_udp="$define"
ipc='ip'
;;
esac

if $test "$serve_unix_tcp" = "$define"; then
dflt=y
else
dflt=n
fi
rp='Provide Unix-domain TCP service?'
./myread
dflt=""
case
"$ans" in
n*) serve_unix_tcp="$undef";;
*)
serve_unix_tcp="$define"
ipc='ip'
;;
esac
else
serve_inet_udp="$undef"
serve_inet_tcp="$undef"
serve_unix_udp="$undef"
serve_unix_tcp="$undef"
fi
if $test "$ipc" != "ip" -a "$d_shm" = "$define"; then
echo "Providing USG shared memory IPC support." >&4
serve_shm="$define"

```

```

ipc='shm'
else
  serve_shm="$undef"
fi
if $test -z "$ipc"; then
  echo "You must select an IPC mechanism." >&4
fi
done

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/ipc.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strerror\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_strerror\_r strerror\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads extern\_C

?MAKE: -pick add \$@ %<

?S:d\_strerror\_r:

?S: This variable conditionally defines the HAS\_STRERROR\_R symbol,

?S: which indicates to the C program that the strerror\_r()

?S: routine is available.

?S:.

?S:strerror\_r\_proto:

?S: This variable encodes the prototype of strerror\_r.

?S: It is zero if d\_strerror\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_strerror\_r

?S: is defined.

?S:.

?C:HAS\_STRERROR\_R:

?C: This symbol, if defined, indicates that the strerror\_r routine

?C: is available to strerror

re-entrantly.

?C:.

?C:STRERROR\_R\_PROTO:

?C: This symbol encodes the prototype of strerror\_r.

?C: It is zero if d\_strerror\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_strerror\_r

?C: is defined.

?C:.

?H:#\$d\_strerror\_r HAS\_STRERROR\_R /\*\*/

```

?H:#define STRError_R_PROTO $sterror_r_proto /**/
?H:.
?T:try hdrs d_sterror_r_proto
: see if sterror_r exists
set sterror_r d_sterror_r
eval $inlibc
case "$d_sterror_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h define string.h"
case "$d_sterror_r_proto:$usethreads" in
":define") d_sterror_r_proto=define
set d_sterror_r_proto sterror_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_sterror_r_proto" in
define)
case "$sterror_r_proto" in
"|0) try='int sterror_r(int, char*, size_t);'
./protochk "$extern_C $try" $hdrs && sterror_r_proto=I_IBW ;;
esac
case "$sterror_r_proto" in
"|0) try='int sterror_r(int, char*, int);'
./protochk "$extern_C $try" $hdrs && sterror_r_proto=I_IBI
;;
esac
case "$sterror_r_proto" in
"|0) try='char* sterror_r(int, char*, size_t);'
./protochk "$extern_C $try" $hdrs && sterror_r_proto=B_IBW ;;
esac
case "$sterror_r_proto" in
"|0) d_sterror_r=undef
sterror_r_proto=0
echo "Disabling sterror_r, cannot determine prototype." >&4 ;;
*) case "$sterror_r_proto" in
REENTRANT_PROTO*) ;;
*) sterror_r_proto="REENTRANT_PROTO_$sterror_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "sterror_r has no prototype, not using it." >&4 ;;
esac
d_sterror_r=undef
sterror_r_proto=0
;;
esac

```

```
::
*) strerror_r_proto=0
::
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_strerror_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_gethent.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_gethent.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:09 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_gethent: Inlibc
?MAKE: -pick add $@ %<
?S:d_gethent:
?S: This variable conditionally defines HAS_GETHOSTENT if gethostent() is
?S: available to look up host names in some data base or another.
?S:.
?C:HAS_GETHOSTENT:
?C: This symbol, if defined, indicates that the gethostent() routine is
?C: available to look up host names in some
?C: data base or another.
?C:.
?H:#$d_gethent HAS_GETHOSTENT /**/
?H:.
?LINT:set d_gethent
: see if gethostent exists
set gethostent d_gethent
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_gethent.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_unistd.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```

?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
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?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_unistd.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:46 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_unistd: Inhdr
?MAKE: -pick add $@ %<
?S:i_unistd:
?S: This variable conditionally defines the I_UNISTD symbol, and indicates
?S: whether a C program should include <unistd.h>.
?S:.
?C:I_UNISTD:
?C: This symbol, if defined, indicates to the C program that it should
?C: include <unistd.h>.
?C:.
?H:#$i_unistd I_UNISTD /**/
?H:.
?LINT:set
i_unistd
: see if this is a unistd.h system
set unistd.h i_unistd
eval $inhdr

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/dist/U/i_unistd.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_crypt_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_crypt_r crypt_r_proto: Inlibc Protochk Hasproto i_systypes \
usethreads i_crypt extern_C
?MAKE: -pick add $@ %<
?S:d_crypt_r:

```

?S: This variable conditionally defines the HAS\_CRYPT\_R symbol,  
 ?S: which indicates to the C program that the crypt\_r()  
 ?S: routine is available.  
 ?S:.  
 ?S: crypt\_r\_proto:  
 ?S: This variable encodes the prototype of crypt\_r.  
 ?S: It is zero if d\_crypt\_r is undef, and one of the  
 ?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_crypt\_r  
 ?S: is defined.  
 ?S:.  
 ?C: HAS\_CRYPT\_R:  
 ?C: This symbol, if defined, indicates that the crypt\_r routine  
 ?C: is available to crypt re-entrantly.  
 ?C:.  
 ?C: CRYPT\_R\_PROTO:  
 ?C: This  
 symbol encodes the prototype of crypt\_r.  
 ?C: It is zero if d\_crypt\_r is undef, and one of the  
 ?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_crypt\_r  
 ?C: is defined.  
 ?C:.  
 ?H: #d\_crypt\_r HAS\_CRYPT\_R /\*\*/  
 ?H: #define CRYPT\_R\_PROTO \$crypt\_r\_proto /\*\*/  
 ?H:.  
 ?T: try hdrs d\_crypt\_r\_proto  
 : see if crypt\_r exists  
 set crypt\_r d\_crypt\_r  
 eval \$inlibc  
 case "\$d\_crypt\_r" in  
 "\$define")  
 hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_crypt crypt.h"  
 case "\$d\_crypt\_r\_proto:\$usethreads" in  
 ":define") d\_crypt\_r\_proto=define  
 set d\_crypt\_r\_proto crypt\_r \$hdrs  
 eval \$hasproto ;;  
 \*) ;;  
 esac  
 case "\$d\_crypt\_r\_proto" in  
 define)  
 case "\$crypt\_r\_proto" in  
 "|0) try='char\* crypt\_r(const char\*, const char\*, struct crypt\_data\*);'  
 ./protochk "\$extern\_C \$try" \$hdrs && crypt\_r\_proto=B\_CCS ;;  
 esac  
 case "\$crypt\_r\_proto" in  
 "|0) try='char\* crypt\_r(const char\*, const char\*, CRYPTD\*);'  
 ./protochk "\$extern\_C \$try" \$hdrs && crypt\_r\_proto=B\_CCD ;;  
 esac  
 case "\$crypt\_r\_proto" in

```

"|0) d_crypt_r=undef
crypt_r_proto=0
echo
"Disabling crypt_r, cannot determine prototype." >&4 ;;
* ) case "$crypt_r_proto" in
REENTRANT_PROTO*) ;;
*) crypt_r_proto="REENTRANT_PROTO_$crypt_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "crypt_r has no prototype, not using it." >&4 ;;
esac
d_crypt_r=undef
crypt_r_proto=0
;;
esac
;;
*) crypt_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_crypt_r.U
```

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_builtin\_choose\_expr d\_builtin\_expect : Compile Setvar cat run rm\_try

?MAKE: -pick add \$@ %<

?S:d\_builtin\_choose\_expr:

?S: This conditionally defines HAS\_BUILTIN\_CHOOSE\_EXPR, which

?S: indicates that the compiler supports \_\_builtin\_choose\_expr(x,y,z).

?S: This built-in function is analogous to the "x?y:z" operator in C,

?S: except that the expression returned has its type unaltered by

?S: promotion rules. Also, the built-in function does not evaluate

?S: the expression that was not chosen.

?S:.

?S:d\_builtin\_expect:

?S: This conditionally

```

defines HAS_BUILTIN_EXPECT, which indicates
?S: that the compiler supports __builtin_expect(exp,c). You may use
?S: __builtin_expect to provide the compiler with branch prediction
?S: information.
?S:.
?C:HAS_BUILTIN_CHOOSE_EXPR:
?C: Can we handle GCC builtin for compile-time ternary-like expressions
?C:.
?C:HAS_BUILTIN_EXPECT:
?C: Can we handle GCC builtin for telling that certain values are more
?C: likely
?C:.
?H:#$d_builtin_expect HAS_BUILTIN_EXPECT /**/
?H:#$d_builtin_choose_expr HAS_BUILTIN_CHOOSE_EXPR /**/
?H:.
?F:!try
?LINT:set d_builtin_expect d_builtin_choose_expr
: Look for GCC-style __builtin_choose_expr
case "$d_builtin_choose_expr" in
")
    echo " "
    echo "Checking whether your compiler can handle __builtin_choose_expr ..." >&4
    $cat >try.c <<'EOCP'
#include <assert.h>
#include <stdlib.h>
#include <stdio.h>

#define SYRINX(x) __builtin_choose_expr( x, (1056*2), (103*50) )

int main(void) {
    assert( SYRINX(1) == 2112 );
    assert( SYRINX(1) != 5150 );
    assert( SYRINX(0) == 5150 );
    assert( SYRINX(0) != 2112 );
    puts( "All good!" );
    exit(0);
}

EOCP
set try
if eval $compile && $run ./try; then
echo "Your C compiler supports __builtin_choose_expr."
val="$define"
else
echo "Your C compiler doesn't seem to understand __builtin_choose_expr."
val="$undef"
fi
;;

```



```

*) val="$d_builtin_choose_expr" ;;
esac

set d_builtin_choose_expr
eval $setvar
$rm_try

: Look for GCC-style __builtin_expect
case "$d_builtin_expect" in
")
    echo " "
    echo "Checking whether your compiler can handle __builtin_expect ..." >&4
    $cat >try.c <<'EOCP'
int main(void) {
    int n = 50;
    if ( __builtin_expect(n, 0) ) n = 1;
    /* Remember shell exit code truth is 0, C truth is non-zero */
    return !(n == 1);
}
EOCP
    set try
    if eval $compile && $run ./try; then
    echo "Your C compiler supports __builtin_expect."
    val="$define"
    else
    echo "Your C compiler doesn't seem to understand __builtin_expect."
    val="$undef"
    fi
    ;;
*) val="$d_builtin_expect" ;;
esac

set d_builtin_expect
eval $setvar
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_builtin.U

```

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?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?MAKE:intsize longsize shortsize: Assert Myread cat rm\_try +cc +ccflags echo n c  
?MAKE: -pick add \$@ %<  
?S:intsize:  
?S: This variable contains the value of the INTSIZE symbol, which  
?S: indicates to the C program how many bytes there are in an int.  
?S:.  
?S:longsize:  
?S: This variable contains the value of the LONGSIZE symbol, which  
?S: indicates to the C program how many bytes there are in a long.  
?S:.  
?S:shortsize:  
?S: This variable contains the value of the SHORTSIZE symbol which  
?S: indicates to the  
C program how many bytes there are in a short.  
?S:.  
?C:INTSIZE:  
?C: This symbol contains the value of sizeof(int) so that the C  
?C: preprocessor can make decisions based on it.  
?C:.  
?C:LONGSIZE:  
?C: This symbol contains the value of sizeof(long) so that the C  
?C: preprocessor can make decisions based on it.  
?C:.  
?C:SHORTSIZE:  
?C: This symbol contains the value of sizeof(short) so that the C  
?C: preprocessor can make decisions based on it.  
?C:.  
?H:#define INTSIZE \$intsize  
?H:#define LONGSIZE \$longsize  
?H:#define SHORTSIZE \$shortsize  
?H:.  
?T:types t size var  
?LINT: set shortsize intsize longsize  
: check for lengths of integral types  
echo " "  
types="  
@if SHORTSIZE || shortsize  
types="\$types short"  
@end  
@if INTSIZE || intsize  
types="\$types int"  
@end  
@if LONGSIZE || longsize  
types="\$types long"  
@end

```

for t in $types; do
  $echo $n "Checking to see how big your ${t}s are...$c" >&4
  for size in 2 4 8 16 error; do
    $cat >try.c <<EOCP
#include "static_assert.h"
$t foo;
int main()
{
  STATIC_ASSERT($size
  == sizeof(foo));
  return 0;
}
EOCP
  if $cc -c $ccflags try.c >/dev/null 2>&1; then break; fi
done
var=${t}size
case "$size" in
error)
  echo " cannot compute it." >&4
  case $t in
short) dflt=2;;
int) dflt=4;;
long) dflt=4;;
esac
  rp="What is the size of the \"${t}\" type (in bytes)?"
  ./myread
  eval $var="$ans"
  ;;
*)
  echo " $size bytes." >&4
  eval $var=$size
  ;;
esac
done
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/intsize.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_ulimit.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_ulimit.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:51 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_ulimit: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_ulimit:

?S: This variable conditionally defines HAS\_ULIMIT if ulimit() is

?S: available to get the user limits.

?S:.

?C:HAS\_ULIMIT (ULIMIT):

?C: This symbol, if defined, indicates that the ulimit system call is

?C: available to get the user limits.

?C:.

?H:#\$d\_ulimit HAS\_ULIMIT /\*\*/

?H:.

?LINT:set

d\_ulimit

: see if ulimit exists

set ulimit d\_ulimit

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_ulimit.U

No license file was found, but licenses were detected in source scan.

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?RCS:

?MAKE:d\_nexttoward: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_nexttoward:

?S: This variable conditionally defines HAS\_NEXTTOWARD if nexttoward()

?S: is available to return the next machine representable long double from

?S: x in direction y.

?S:.

?C:HAS\_NEXTTOWARD:

?C: This symbol, if defined, indicates that the nexttoward routine is

?C: available to return the next machine representable long double from

?C: x in direction y.

?C:.

?H:#\$d\_nexttoward HAS\_NEXTTOWARD /\*\*/

?H:.

?LINT:set d\_nexttoward

```
: see if nexttoward exists
set nexttoward d_nexttoward
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_nexttoward.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998, Jarkko Hietaniemi

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?RCS: of the source tree for dist 3.0.

?X:

?X: Useless unit dropped. Use randfunc instead.

?X:

?LINT:empty

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/randbits.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_inetntop: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_inetntop:

?S: This variable conditionally defines the HAS\_INETNTOP symbol,

?S: which indicates to the C program that the inet\_ntop() function

?S: is available.

?S:.

?C:HAS\_INETNTOP:

?C: This symbol, if defined, indicates that the inet\_ntop() function

?C: is available to parse IPv4 and IPv6 strings.

?C:.

?H:#\$d\_inetntop HAS\_INETNTOP /\*\*/

?H:.

```
?LINT:set d_inetntop
: see if inet_ntop exists
set inet_ntop d_inetntop
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_inetntop.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 1999 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:d_statfs_f_flags: \
```

```
Hasfield i_sysparam i_sysmount i_systypes \
```

```
i_sysvfs i_sysstatfs Setvar d_statfs_s
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_statfs_f_flags:
```

```
?S: This variable conditionally defines the HAS_STRUCT_STATFS_F_FLAGS
```

```
?S: symbol, which indicates to struct statfs from has f_flags member.
```

```
?S: This kind of struct statfs is coming from sys/mount.h (BSD),
```

```
?S: not from sys/statfs.h (SYSV).
```

```
?S:.
```

```
?C:HAS_STRUCT_STATFS_F_FLAGS:
```

```
?C: This symbol, if defined, indicates that the struct statfs
```

```
?C: does have the f_flags member containing the mount flags of
```

```
?C: the filesystem containing the file.
```

```
?C: This kind of struct statfs is coming from <sys/mount.h> (BSD 4.3),
```

```
?C: not from <sys/statfs.h> (SYSV). Older BSDs
```

```
(like Ultrix) do not
```

```
?C: have statfs() and struct statfs, they have ustat() and getmnt()
```

```
?C: with struct ustat and struct fs_data.
```

```
?C:.
```

```
?H:#$d_statfs_f_flags HAS_STRUCT_STATFS_F_FLAGS /**/
```

```
?H:.
```

```
?LINT:set d_statfs_f_flags
```

```
: see if struct statfs knows about f_flags
```

```
case "$d_statfs_s" in
```

```
define)
```

```
echo " "
```

```
echo "Checking to see if your struct statfs has f_flags field..." >&4
```

```
set d_statfs_f_flags statfs f_flags $i_systypes sys/types.h $i_sysparam sys/param.h $i_sysmount sys/mount.h
```

```
$i_sysvfs sys/vfs.h $i_sysstatfs sys/statfs.h
```

```
eval $hasfield
```

```

;;
*) val="$undef"
set d_statfs_f_flags
eval $setvar
;;
esac
case "$d_statfs_f_flags" in
"$define") echo "Yes, it does." ;;
*) echo "No, it doesn't." ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_statfs_f_flags.U

```

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```

?RCS: $Id: d_itimer.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_itimer.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:25 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_itimer: Inlibc
?MAKE: -pick add $@ %<
?S:d_itimer:
?S: This variable conditionally defines the HAS_ITIMER symbol, which
?S: indicates that the setitimer() routine exists. The setitimer()
?S: routine supports sub-second accuracy for one real-time and two
?S: cpu clocks.
?S:.
?C:HAS_ITIMER (ITIMER):
?C: This symbol, if defined, indicates
?C: that the setitimer() routine exists.
?C:.
?H:#$d_itimer HAS_ITIMER /**/
?H:.
?LINT:set d_itimer
: see if setitimer exists
set setitimer d_itimer
eval $inlibc

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_itimer.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: lib.U,v \$

?RCS: Revision 3.0.1.3 1995/09/25 09:16:47 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.2 1995/01/30 14:38:08 ram

?RCS: patch49: can now handle installation prefix changes (from WED)

?RCS:

?RCS: Revision 3.0.1.1 1994/08/29 16:27:40 ram

?RCS: patch32: now uses installation prefix to set the default

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:56 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:lib libexp: Getfile

Loc Oldconfig Prefixit Prefixup prefixexp

?MAKE: -pick add \$@ %<

?Y:TOP

?S:lib:

?S: This variable holds the name of the directory in which the user wants

?S: to put public library files for the package in question. It is most

?S: often a local directory such as /usr/local/lib. Programs using this

?S: variable must be prepared to deal with filename expansion.

?S:.

?S:libexp:

?S: This variable is the same as the lib variable, but is filename expanded

?S: at configuration time, for convenient use in your makefiles.

?S:.

: determine where public libraries go

set lib lib

eval \$prefixit

case "\$lib" in

")



```

dflt=`./loc . ." $prefixexp/lib /usr/local/lib /usr/lib /lib`
set dflt
eval $prefixup
;;
*) dflt="$lib";;
esac
echo " "
fn=d~
rp='Where do you want to put the public libraries?'
./getfile
lib="$ans"
libexp="$ansexp"

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/lib.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_setlocale_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
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?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_setlocale_r setlocale_r_proto: Inlibc Protochk Hasproto i_systypes \
  usethreads i_locale extern_C
?MAKE: -pick add $@ %<
?S:d_setlocale_r:
?S: This variable conditionally defines the HAS_SETLOCALE_R symbol,
?S: which indicates to the C program that the setlocale_r()
?S: routine is available.
?S:.
?S:setlocale_r_proto:
?S: This variable encodes the prototype of setlocale_r.
?S: It is zero if d_setlocale_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_setlocale_r
?S: is defined.
?S:.
?C:HAS_SETLOCALE_R:
?C: This symbol, if defined, indicates that the setlocale_r routine
?C: is
  available to setlocale re-entrantly.
?C:.
?C:SETLOCALE_R_PROTO:
?C: This symbol encodes the prototype of setlocale_r.
?C: It is zero if d_setlocale_r is undef, and one of the

```

```

?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_setlocale_r
?C: is defined.
?C:.
?H:#$d_setlocale_r HAS_SETLOCALE_R /**/
?H:#define SETLOCALE_R_PROTO $setlocale_r_proto /**/
?H:.
?T:try hdrs d_setlocale_r_proto
: see if setlocale_r exists
set setlocale_r d_setlocale_r
eval $inlibc
case "$d_setlocale_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_locale locale.h"
case "$d_setlocale_r_proto:$usethreads" in
":define") d_setlocale_r_proto=define
set d_setlocale_r_proto setlocale_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_setlocale_r_proto" in
define)
case "$setlocale_r_proto" in
"|0) try='int setlocale_r(int, const char*, char*, int);'
./protochk "$extern_C $try" $hdrs && setlocale_r_proto=I_ICBI ;;
esac
case "$setlocale_r_proto" in
"|0) d_setlocale_r=undef
setlocale_r_proto=0
echo
"Disabling setlocale_r, cannot determine prototype." >&4 ;;
*) case "$setlocale_r_proto" in
REENTRANT_PROTO*) ;;
*) setlocale_r_proto="REENTRANT_PROTO_$setlocale_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "setlocale_r has no prototype, not using it." >&4 ;;
esac
d_setlocale_r=undef
setlocale_r_proto=0
;;
esac
;;
*) setlocale_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_setlocale_r.U
```

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?RCS:

?RCS: \$Log: d\_getpagsz.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:13:10 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:14 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_getpagsz pagesize: Oldconfig Myread Inlibc cat contains +cc +ccflags \  
libs rm Findhdr

?MAKE: -pick add \$@ %<

?S:d\_getpagsz:

?S: This variable conditionally defines HAS\_GETPAGESIZE if getpagesize()

?S: is available to get the system page size.

?S:.

?S:pagesize (pagesize):

?S: This

variable holds the size in bytes of a system page.

?S:.

?C:HAS\_GETPAGESIZE (GETPAGESIZE):

?C: This symbol, if defined, indicates that the getpagesize system call

?C: is available to get system page size, which is the granularity of

?C: many memory management calls.

?C:.

?X: Don't name it PAGESIZE, this is sometimes used by <sys/param.h>

?C:PAGESIZE\_VALUE (PAGESIZE):

?C: This symbol holds the size in bytes of a system page (obtained via

?C: the getpagesize() system call at configuration time or asked to the

?C: user if the system call is not available).

?C:.

?H:#\$d\_getpagsz HAS\_GETPAGESIZE /\*\*/

?H:#define PAGESIZE\_VALUE \$pagesize /\* System page size, in bytes \*/

?H:.

```

?F:!page
?T:guess
?LINT:set d_getpagsz
: see if getpagesize exists
set getpagesize d_getpagsz
eval $inlibc

@if pagesize || PAGESIZE_VALUE
: determine the system page size
echo " "
guess='(OK to guess)'
case "$pagesize" in
")
$cat >page.c <<EOP
extern int getpagesize();
int main()
{
printf("%d\n", getpagesize());
}
EOP
echo
"Computing the granularity of memory management calls..." >&4
dflt='4096'
case "$d_getpagsz" in
"$define")
if $cc $ccflags -o page page.c $libs >/dev/null 2>&1; then
dflt=`./page`
guess="
else
echo "(I can't seem to compile the test program--guessing)"
fi
;;
*)
if $cc $ccflags -o page page.c $libs -IPW >/dev/null 2>&1; then
dflt=`./page`
guess="
echo "(For your eyes only: I used the getpagesize() from -IPW.)"
else
if $contains PAGESIZE `./findhdr sys/param.h` >/dev/null 2>&1; then
$cat >page.c <<EOP
#include <sys/param.h>
int main()
{
printf("%d\n", PAGESIZE);
}
EOP
if $cc $ccflags -o page page.c $libs >/dev/null 2>&1; then
dflt=`./page`

```

```

guess="
echo "(Using value of PAGESIZE found in <sys/param.h>.)"
fi
fi
fi
;;
esac
;;
*) dflt="$pagesize"; guess=";;
esac
rp="What is the system page size, in bytes$guess?"
./myread
pagesize=$ans
$rm -f page.c page

@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_getpagsz.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_syscall.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

?RCS: \$Log: d\_syscall.U,v \$

?RCS: Revision 3.0 1993/08/18 12:07:42 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_syscall: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_syscall:

?S: This variable conditionally defines HAS\_SYSCALL if syscall() is

?S: available call arbitrary system calls.

?S:.

?C:HAS\_SYSCALL (SYSCALL):

?C: This symbol, if defined, indicates that the syscall routine is

?C: available to call arbitrary system calls. If undefined, that's tough.

?C:.

?H:#\$d\_syscall

HAS\_SYSCALL /\*\*/

?H:.

?LINT:set d\_syscall

: see if syscall exists

set syscall d\_syscall

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_syscall.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: sizetype.U,v 3.0.1.1 1994/08/29 16:32:10 ram Exp \$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: sizetype.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:32:10 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:sizetype: Myread Typedef

?MAKE: -pick add \$@ %<

?S:sizetype:

?S: This variable defines sizetype to be something like size\_t,

?S: unsigned long, or whatever type is used to declare length

?S: parameters for string functions.

?S:.

?C:Size\_t:

?C: This symbol holds the type used

to declare length parameters

?C: for string functions. It is usually size\_t, but may be

?C: unsigned long, int, etc. It may be necessary to include

?C: <sys/types.h> to get any typedef'ed information.

?C:.

?H:#define Size\_t \$sizetype /\* length parameter for string functions \*/

?H:.

?LINT: set sizetype

: see what type is used for size\_t

rp="What is the type used for the length parameter for string functions?"

set size\_t sizetype 'unsigned int' stdio.h sys/types.h

eval \$stypedef\_ask

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/sizetype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpgrp.U,v 3.0.1.1 1997/02/28 15:34:28 ram Exp \$

?RCS:

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?RCS:

?RCS: \$Log: d\_getpgrp.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:34:28 ram

?RCS: patch61: new USE\_BSD\_GETPGRP to detect the getpgrp() flavor

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:15 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_getpgrp d\_bsdgetpgrp: Guess Inlibc Setvar cat rm\_try \

+cc +ccflags +ldflags +libs i\_unistd i\_stdlib run

?MAKE: -pick add \$@ %<

?S:d\_getpgrp:

?S: This variable conditionally defines HAS\_GETPGRP if getpgrp() is

?S: available

to get the current process group.

?S:.

?S:d\_bsdgetpgrp:

?S: This variable conditionally defines USE\_BSD\_GETPGRP if

?S: getpgrp needs one arguments whereas USG one needs none.

?S:.

?C:HAS\_GETPGRP (GETPGRP):

?C: This symbol, if defined, indicates that the getpgrp routine is

?C: available to get the current process group.

?C:.

?C:USE\_BSD\_GETPGRP:

?C: This symbol, if defined, indicates that getpgrp needs one

?C: arguments whereas USG one needs none.

?C:.

?H:#\$d\_getpgrp HAS\_GETPGRP /\*\*/

?H:#\$d\_bsdgetpgrp USE\_BSD\_GETPGRP /\*\*/

?H:.

?T:xxx

```

?F:!try
?LINT:set d_getpgrp d_bsdgetpgrp
: see if getpgrp exists
set getpgrp d_getpgrp
eval $inlibc

@if USE_BSD_GETPGRP || d_bsdgetpgrp
case "$d_getpgrp" in
"$define")
echo " "
echo "Checking to see which flavor of getpgrp is in use..."
$cat >try.c <<EOP
#include <stdio.h>
#$i_unistd I_UNISTD
#include <sys/types.h>
#ifdef I_UNISTD
# include <unistd.h>
#endif
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main()
{
if (getuid()
== 0) {
printf("(I see you are running Configure as super-user...)\n");
setuid(1);
}
#ifdef TRY_BSD_PGRP
if (getpgrp(1) == 0)
exit(0);
#else
if (getpgrp() > 0)
exit(0);
#endif
exit(1);
}
EOP
if $cc -o try -DTRY_BSD_PGRP $ccflags $ldflags try.c $libs >/dev/null 2>&1 && $run ./try; then
echo "You have to use getpgrp(pid) instead of getpgrp()." >&4
val="$define"
elif $cc -o try $ccflags $ldflags try.c $libs >/dev/null 2>&1 && $run ./try; then
echo "You have to use getpgrp() instead of getpgrp(pid)." >&4
val="$undef"
else
echo "I can't seem to compile and run the test program."
if ./usg; then

```



```

xxx="a USG one, i.e. you use getpgrp()."
else
# SVR4 systems can appear rather BSD-ish.
case "$i_unistd" in
$undef)
xxx="a BSD one, i.e. you use getpgrp(pid)."
val="$define"
;;
$define)
xxx="probably a USG one, i.e. you use getpgrp()."
val="$undef"
;;
esac
fi
echo "Assuming your getpgrp is $xxx" >&4
fi
;;
*) val="$undef";;
esac
set
d_bsdgetpgrp
eval $setvar
$rm_try
@end

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_getpgrp.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_sfio.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1996, Andy Dougherty
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_sfio.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:48:27 ram
?RCS: patch61: created
?RCS:
?MAKE:i_sfio: Inhdr Setvar
?MAKE: -pick add $@ %<
?S:i_sfio:

```

?S: This variable conditionally defines the I\_SFIO symbol,  
?S: and indicates whether a C program should include <sfio.h>.  
?S:.  
?C:I\_SFIO:  
?C: This symbol, if defined, indicates to the C program that it should  
?C: include <sfio.h>.  
?C:.  
?H:#\$i\_sfio I\_SFIO /\*\*/  
?H:.  
?LINT:set  
i\_sfio  
: see if sfio.h is available  
set sfio.h i\_sfio  
eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_sfio.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_fsetpos.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_fsetpos.U,v \$  
?RCS: Revision 3.0.1.1 1994/06/20 06:57:38 ram  
?RCS: patch30: created  
?RCS:  
?MAKE:d\_fsetpos: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_fsetpos:  
?S: This variable conditionally defines HAS\_FSETPOS if fsetpos() is  
?S: available to set the file position indicator.  
?S:.  
?C:HAS\_FSETPOS:  
?C: This symbol, if defined, indicates that the fsetpos routine is  
?C: available to set the file position indicator, similar to fseek().  
?C:.  
?H:#\$d\_fsetpos  
HAS\_FSETPOS /\*\*/  
?H:.  
?LINT:set d\_fsetpos

```
: see if fsetpos exists
set fsetpos d_fsetpos
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_fsetpos.U
```

No license file was found, but licenses were detected in source scan.

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?RCS:

?MAKE:d\_readv: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_readv:

?S: This variable conditionally defines the HAS\_READV symbol, which

?S: indicates to the C program that the readv() routine is available.

?S:.

?C:HAS\_READV:

?C: This symbol, if defined, indicates that the readv routine is

?C: available to do gather reads. You will also need <sys/uio.h>

?C: and there I\_SYSUIO.

?C:.

?H:#\$d\_readv HAS\_READV /\*\*/

?H:.

?LINT:set d\_readv

: see if readv exists

set readv d\_readv

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_readv.U
```

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_lc\_monetary\_2008: cat Compile rm\_try d\_locconv

?MAKE: -pick add \$@ %<

?S:d\_lc\_monetary\_2008:

?S: This variable conditionally defines HAS\_LC\_MONETARY\_2008 if libc

?S: has the international currency locale rules from POSIX

?S: 1003.1-2008.

?S:.

?C:HAS\_LC\_MONETARY\_2008:

?C: This symbol, if defined, indicates that the localeconv routine is

?C: available and has the additional members added in POSIX 1003.1-2008.

?C:.

?H:#\$d\_lc\_monetary\_2008 HAS\_LC\_MONETARY\_2008 /\*\*/

?H:.

: see if libc has the POSIX.1-2008 currency locale rules

case "\$d\_loconv:\$d\_lc\_monetary\_2008" in

\$define:)

\$cat

>try.c <<EOCP

#include <locale.h>

int main() {

struct lconv \*lc = localeconv();

char int\_p\_cs\_precedes = lc->int\_p\_cs\_precedes;

return 0;

}

EOCP

set try

if eval \$compile; then

d\_lc\_monetary\_2008="\$define"

else

d\_lc\_monetary\_2008="\$undef"

fi;

\$rm\_try

::

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_lc\_monetary\_2008.U

No license file was found, but licenses were detected in source scan.

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?RCS:

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?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fp\_classl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fp\_classl:

?S: This variable conditionally defines the HAS\_FP\_CLASSL symbol, which

?S: indicates to the C program that the fp\_classl() routine is available.

?S:.

?C:HAS\_FP\_CLASSL:

?C: This symbol, if defined, indicates that the fp\_classl routine is

?C: available to classify long doubles. Available for example in

?C: Digital UNIX. See for possible values HAS\_FP\_CLASS.

?C:.

?H:#\$d\_fp\_classl HAS\_FP\_CLASSL /\*\*/

?H:.

?LINT:set d\_fp\_classl

: see if fp\_classl exists

set fp\_classl d\_fp\_classl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_fp\_classl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_time.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:45 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit finds which "time" include to use. If 'timezone' is used by the

?X: program, we also try to find which header should be included. Eventually,

?X: we look for <sys/select.h> if I\_SYSESELECT is used, to get struct timeval.

?X:

?MAKE:i\_time i\_systime i\_systimek timeincl: cat cc cflags contains rm\_try \  
echo n c +i\_sysselect Findhdr

?MAKE: -pick add \$@ %<

?S:i\_time:

?S: This

variable conditionally defines I\_TIME, which indicates

?S: to the C program that it should include <time.h>.

?S:.

?S:i\_systime:

?S: This variable conditionally defines I\_SYS\_TIME, which indicates

?S: to the C program that it should include <sys/time.h>.

?S:.

?S:i\_systimek:

?S: This variable conditionally defines I\_SYS\_TIME\_KERNEL, which

?S: indicates to the C program that it should include <sys/time.h>

?S: with KERNEL defined.

?S:.

?S:timeincl:

?S: This variable holds the full path of the included time header(s).

?S:.

?C:I\_TIME (USE\_TIME\_H):

?C: This symbol, if defined, indicates to the C program that it should

?C: include <time.h>.

?C:.

?C:I\_SYS\_TIME (I\_SYSTIME USE\_SYS\_TIME\_H NO\_TIME\_WITH\_SYS\_TIME):

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/time.h>.

?C:.

?C:I\_SYS\_TIME\_KERNEL (I\_SYSTIMEKERNEL):

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/time.h> with KERNEL defined.

?C:.

?H:#\$i\_time I\_TIME /\*\*/

?H:#\$i\_systime

I\_SYS\_TIME /\*\*/

?H:#\$i\_systimek I\_SYS\_TIME\_KERNEL /\*\*/

?H:.

?W::timezone

?T:xselect flags sysselect s\_timeval s\_timezone

?LINT:change i\_sysselect

: see if we should include time.h, sys/time.h, or both

echo " "

echo "Testing to see if we should include <time.h>, <sys/time.h> or both." >&4

\$echo \$n "I'm now running the test program...\$c"

\$cat >try.c <<'EOCP'

#include <sys/types.h>

#ifdef I\_TIME

#include <time.h>

#endif

#ifdef I\_SYSTIME

#ifdef SYSTIMEKERNEL

#define KERNEL

#endif

#include <sys/time.h>

#endif

#ifdef I\_SYSSELECT

#include <sys/select.h>

#endif

```

int main()
{
    struct tm foo;
#ifdef S_TIMEVAL
    struct timeval bar;
#endif
#ifdef S_TIMEZONE
    struct timezone tzp;
#endif
    if (foo.tm_sec == foo.tm_sec)
        exit(0);
#ifdef S_TIMEVAL
    if (bar.tv_sec == bar.tv_sec)
        exit(0);
#endif
    exit(1);
}
EOCP
flags="
@if I_SYSSELECT
if $contains 'timeval.*{' `./findhdr sys/select.h` >/dev/null 2>&1; then
    xselect='-DI_SYSSELECT'
else
    xselect="
fi
@end
@if timezone
for s_timezone
in '-DS_TIMEZONE' "; do
@else
s_timezone="
@end
?X: Every package is given a try with 'struct timeval'
@if I_SYSSELECT
for sysselect in $xselect "; do
@else
sysselect="
@end
for s_timeval in '-DS_TIMEVAL' "; do
for i_systimek in "-DSYSTEMEKERNEL"; do
for i_time in "-DI_TIME"; do
for i_systime in '-DI_SYSTIME' "; do
case "$flags" in
") $echo $n ".$.c"
if $cc $ccflags \
    $i_time $i_systime $i_systimek $sysselect $s_timeval $s_timezone \
-o try try.c >/dev/null 2>&1 ; then
    set X $i_time $i_systime $i_systimek $sysselect $s_timeval

```

```

shift
flags="$*"
echo " "
$echo $n "Succeeded with $flags$c"
fi
;;
esac
done
done
done
done
done
@if I_SYSSSELECT
done
@end
@if timezone
done
@end
timeincl="
echo " "
case "$flags" in
*SYSTIMEKERNEL*) i_systimek="$define"
timeincl=`./findhdr sys/time.h`
echo "We'll include <sys/time.h> with KERNEL defined." >&4;;
*) i_systimek="$undef";;
esac
case "$flags" in
*I_TIME*) i_time="$define"
timeincl=`./findhdr time.h`" $timeincl"
echo
"We'll include <time.h>." >&4;;
*) i_time="$undef";;
esac
case "$flags" in
*I_SYSTIME*) i_systime="$define"
timeincl=`./findhdr sys/time.h`" $timeincl"
echo "We'll include <sys/time.h>." >&4;;
*) i_systime="$undef";;
esac
@if I_SYSSSELECT
case "$flags" in
*I_SYSSSELECT*) i_syssselct="$define"
timeincl=`./findhdr sys/select.h`" $timeincl"
echo "We'll also include <sys/select.h> to get struct timeval." >&4;;
*) case "$i_syssselct" in
") i_syssselct="$undef";;
esac
esac
@end

```



\$rm\_try

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_time.U

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?RCS:

?MAKE:d\_sigprocmask: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_sigprocmask:

?S: This variable conditionally defines HAS\_SIGPROCMASK

?S: if sigprocmask() is available to examine or change the signal mask

?S: of the calling process.

?S:.

?C:HAS\_SIGPROCMASK:

?C: This symbol, if defined, indicates that the sigprocmask

?C: system call is available to examine or change the signal mask

?C: of the calling process.

?C:.

?H:#\$d\_sigprocmask HAS\_SIGPROCMASK /\*\*/

?H:.

?LINT:set d\_sigprocmask

: see if sigprocmask exists

set sigprocmask d\_sigprocmask

eval

\$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_sigprocmask.U

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?RCS: \$Id: d\_gethbyad.U,v \$

?RCS:

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?RCS:  
?MAKE:d\_gethbyaddr: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_gethbyaddr:  
?S: This variable conditionally defines the HAS\_GETHOSTBYADDR symbol, which  
?S: indicates to the C program that the gethostbyaddr() routine is available  
?S: to look up hosts by their IP addresses.  
?S:.  
?C:HAS\_GETHOSTBYADDR:  
?C: This symbol, if defined, indicates that the gethostbyaddr() routine is  
?C: available to look up hosts by their IP addresses.  
?C:.  
?H:#\$d\_gethbyaddr HAS\_GETHOSTBYADDR /\*\*/  
?H:.  
?LINT:set d\_gethbyaddr  
: see if gethostbyaddr exists  
set gethostbyaddr d\_gethbyaddr  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_gethbyad.U

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?RCS: \$Id: install.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: install.U,v \$  
?RCS: Revision 3.0.1.2 1995/09/25 09:16:37 ram  
?RCS: patch59: all possible install programs are now looked for  
?RCS:  
?RCS: Revision 3.0.1.1 1995/01/11 15:30:41 ram  
?RCS: patch45: created  
?RCS:  
?MAKE:install installdir: Loc Oldconfig Getfile cat test startsh rm +cc \  
eunicefix package contains mkdir echo n c  
?MAKE: -pick add \$@ %<  
?S:install:  
?S: This variable contains the name of an install program that can accept  
?S: BSD-style arguments.

It must correctly support -c, -s, and -m at least.

?S: It is a fully qualified pathname when found. If you have a local  
?S: install.SH file at the root directory of your package, it is assumed to  
?S: be the default script emulating a BSD install and the variable will be  
?S: set to ./install. Otherwise, it is set to plain 'install', relying on  
?S: the user's PATH to perform miracles.

?S:.

?S:installdir:

?S: This variable contains the name of a program that can install nested  
?S: directories. Often set to 'mkdir -p', it can also be 'install -d' if  
?S: you have such a beast and lack the former. If you have an install.SH  
?S: file at the root directory of your package, it will be used in last  
?S: resort, setting the variable to './install -d'. Otherwise, it is set to  
?S: plain 'mkdir', and cross your fingers!

?S:.

?T:dir file tryit prog creatdir either

?F:!tryinst

: locate a BSD compatible install program

```

echo " "
echo "Looking for a BSD-compatible install program..." >&4
@if installdir
creatdir="
@end
case
"$install" in
")
tryit="
for dir in $pth; do
for file in ginstall installbsd scoinst install; do
if $test -f $dir/$file; then
tryit="$tryit $dir/$file"
fi
done
done
$cat >try.c <<EOC
int main()
{
printf("OK\n");
exit(0);
}
EOC
if $cc -o try try.c >/dev/null 2>&1; then
cp try try.ns
strip try >/dev/null 2>&1
else
echo "(I can't seem to compile a trivial C program -- bypassing.)"
echo "try" >try
cp try try.ns

```

```

fi
$cat >tryinst <<EOS
$startsh
$rm -rf foo d
@if installdir
\ $1 -d foo/bar
@end
$mkdir d
\ $1 -c -m 764 try.ns d
\ $1 -c -s -m 642 try.ns d/try
EOS
chmod +x tryinst
$eunicefix tryinst
dflt=""
either=""
for prog in $stryit; do
  $echo $n "Checking $prog... $c"
  ./tryinst $prog >/dev/null 2>&1
@if installdir
  if $test -d foo/bar; then
    creatdir="$prog -d"
  fi
@end
  (ls -l d/try >try.ls; ls -l d/try.ns >tryno.ls) 2>/dev/null
  if (cmp -s d/try try && cmp -s d/try.ns try.ns && \
    $contains 'rwxrw-r--' tryno.ls && \
    \
    $contains 'rw-r---w-' try.ls) >/dev/null 2>&1
  then
    dflt="$prog"
    echo "ok, that will do."
    break
  fi
  echo "not good$either."
  either='either'
  $rm -f try*.ls
done
$rm -rf foo d tryinst try try*.ls try.*
case "$dflt" in
  ")
@if {test -f ../install.SH}
  echo "Hopefully, $package comes with its own install script!"
  dflt='./install'
@else
  dflt='install'
@end
;;
esac

```

```
;;
*) dflt="$install";;
esac
$cat <<EOM
```

I will be requiring a BSD-compatible install program (one that allows options like -s to strip executables or -m to specify a file mode) to install \$package.

If the question below contains a fully qualified default path, then it is probably ok. If it is an unqualified name such as 'install', then it means I was unable to find out a good install program I could use. If

```
@if {test -f ../install.SH}
```

you know of one, please tell me about it. If the default is './install', then I shall be using the install script supplied with \$package.

```
@else
```

you know of one,

please tell me about it.

```
@end
```

```
EOM
```

```
@if {test -f ../install.SH}
```

```
fn='/fe~(install,./install)'
```

```
@else
```

```
fn='/fe~(install)'
```

```
@end
```

```
rp='Which install program shall I use?'
```

```
./getfile
```

```
install="$ans"
```

```
@if installdir
```

```
: how can we create nested directories?
```

```
echo " "
```

```
echo "Ok, let's see how we can create nested directories..." >&4
```

```
case "$installdir" in
```

```
")
```

```
?X: First time, maybe we already found out a working one in $creatdir above...
```

```
?X: Prefer "mkdir -p" because of bugs in GNU install when not running as root
```

```
$mkdir -p foo/bar >/dev/null 2>&1
```

```
if $test -d foo/bar; then
```

```
echo "Great, we can build them using 'mkdir -p'."
```

```
creatdir='mkdir -p'
```

```
else
```

```
case "$creatdir" in
```

```
")
```

```
if eval "$install -d foo/bar"; $test -d foo/bar; then
```

```
creatdir="install -d"
```

```
echo "It looks like '$creatdir' will do it for us."
```

```

fi
;;
*)
eval "$creatdir foo/bar" >/dev/null 2>&1
if $test -d foo/bar; then
echo "Ah! We can use 'creatdir' to do just that."
else
creatdir="
fi
;;
esac
fi
$rm
-rf foo
case "$creatdir" in
")
echo "Heck! Another ancient system lacking the comfort of modern ones!"
@if {test -f ../install.SH}
echo "You can thank $package for bringing you its own install script!"
installdir='./install -d'
@else
echo "We have no choice but to use plain old 'mkdir' -- wish me luck!"
installdir=mkdir
@end
;;
*) installdir="$creatdir";;
esac
;;
*) echo "As you already told me, '$installdir' should work.";;
esac

@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/install.U
```

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```
?RCS: $Id: d_gnulibc.U,v 3.0.1.1 1997/02/28 15:34:33 ram Exp $
?RCS:
?RCS: Copyright (c) 1996,1998 Andy Dougherty
?RCS: Copyright (c) 1996, Sven Verdoolaege
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
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```

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_gnulibc.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:34:33 ram

?RCS: patch61: created

?RCS:

?MAKE:d\_gnulibc gnulibc\_version: Myread Oldconfig Setvar rm\_try \  
cat Compile run

?MAKE: -pick add \$@ %<

?S:d\_gnulibc:

?S: Defined if we're dealing with the GNU C Library.

?S:.

?S:gnulibc\_version:

?S: This variable contains the version number of the GNU C library.

?S: It is  
usually something like '2.2.5'. It is a plain " if this

?S: is not the GNU C library, or if the version is unknown.

?S:.

?C:HAS\_GNULIBC:

?C: This symbol, if defined, indicates to the C program that  
?C: the GNU C library is being used. A better check is to use  
?C: the \_\_GLIBC\_\_ and \_\_GLIBC\_MINOR\_\_ symbols supplied with glibc.

?C:.

?H:#\$d\_gnulibc HAS\_GNULIBC /\*\*/  
?H:?%<:#if defined(HAS\_GNULIBC) && !defined(\_GNU\_SOURCE)  
?H:?%<:# define \_GNU\_SOURCE  
?H:?%<:#endif

?H:.

?F:!glibc.ver !try

?LINT: set d\_gnulibc

?X: gnulibc can be executed by calling \_\_libc\_main().  
?X: Ulrich Drepper doesn't think any other libc does that,  
?X: but we check if it says 'GNU C Library' to be sure.

?X:

?X: Alas, as of 3/1998 glibc 2.0.7 reportedly isn't going to  
?X: have \_\_libc\_main() anymore. :-(. Fortunately, all released  
?X: versions of glibc 2.x.x \_do\_ have CPP variables. For 2.0.6,  
?X: they are:  
?X: #define \_\_GLIBC\_\_ 2  
?X: #define \_\_GLIBC\_MINOR\_\_ 0.  
?X: (The '6' isn't available :-(.  
?X: glibc2.1 will also  
have  
?X: extern const char \* \_\_gnu\_get\_libc\_release(void);  
?X: extern const char \* \_\_gnu\_get\_libc\_version(void);  
?X: functions. --thanks to Andreas Jaeger. --AD 6/1998.  
?X: Although the exact format isn't documented, \_\_gnu\_get\_libc\_version()  
?X: returns a simple string '2.1.3' in glibc 2.1.3.

?X:

: Check if we are using the GNU C library

echo " "

echo "Checking for GNU C Library..." >&4

cat >try.c <<'EOCP'

```
/* Find out version of GNU C library. __GLIBC__ and __GLIBC_MINOR__
   alone are insufficient to distinguish different versions, such as
   2.0.6 and 2.0.7. The function gnu_get_libc_version() appeared in
   libc version 2.1.0. A. Dougherty, June 3, 2002.
```

```
*/
```

```
#include <stdio.h>
```

```
int main(void)
```

```
{
```

```
#ifdef __GLIBC__
```

```
# ifdef __GLIBC_MINOR__
```

```
#   if __GLIBC__ >= 2 && __GLIBC_MINOR__ >= 1 && !defined(__cplusplus)
```

```
#       include <gnu/libc-version.h>
```

```
       printf("%s\n", gnu_get_libc_version());
```

```
#   else
```

```
       printf("%d.%d\n", __GLIBC__, __GLIBC_MINOR__);
```

```
#
```

```
       endif
```

```
# else
```

```
       printf("%d\n", __GLIBC__);
```

```
# endif
```

```
       return 0;
```

```
#else
```

```
       return 1;
```

```
#endif
```

```
}
```

```
EOCP
```

```
set try
```

```
if eval $compile_ok && $run ./try > glibc.ver; then
```

```
val="$define"
```

```
gnulibc_version=`$cat glibc.ver`
```

```
echo "You are using the GNU C Library version $gnulibc_version"
```

```
else
```

```
val="$undef"
```

```
gnulibc_version="
```

```
echo "You are not using the GNU C Library"
```

```
fi
```

```
$rm_try glibc.ver
```

```
set d_gnulibc
```

```
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
```

```
5.38.0/U/compline/d_gnulibc.U
```



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```
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?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:d_sbrkproto: Hasproto i_unistd
?MAKE: -pick add $@ %<
?S:d_sbrkproto:
?S: This variable conditionally defines the HAS_SBRK_PROTO symbol,
?S: which indicates to the C program that the system provides
?S: a prototype for the sbrk() function. Otherwise, it is
?S: up to the program to supply one.
?S:.
?C:HAS_SBRK_PROTO:
?C: This symbol, if defined, indicates that the system provides
?C: a prototype for the sbrk() function. Otherwise, it is up
?C: to the program to supply one. Good guesses are
?C: extern void* sbrk(int);
?C: extern
void* sbrk(size_t);
?C:.
?H:#$d_sbrkproto HAS_SBRK_PROTO /**/
?H:.
?LINT:set d_sbrkproto
: see if prototype for sbrk is available
echo " "
set d_sbrkproto sbrk $i_unistd unistd.h
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_sbrkproto.U
```

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```
?RCS: $Id: d_attribut.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
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```

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?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_attribut.U,v \$  
?RCS: Revision 3.0.1.3 1995/01/30 14:33:45 ram  
?RCS: patch49: test C program now includes <stdio.h> (WED)  
?RCS:  
?RCS: Revision 3.0.1.2 1995/01/11 15:25:47 ram  
?RCS: patch45: fixed typo in the d\_attribut variable (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:08:55 ram  
?RCS: patch36: created by ADO  
?RCS:  
?MAKE:d\_attribute\_deprecated d\_attribute\_format  
d\_attribute\_malloc \  
d\_attribute\_nonnull d\_attribute\_noreturn d\_attribute\_pure \  
d\_attribute\_unused d\_attribute\_warn\_unused\_result \  
d\_printf\_format\_null d\_attribute\_always\_inline \  
d\_attribute\_visibility: \  
Myread Oldconfig cat cc cflags rm Setvar compiler\_warning \  
i\_stdlib run i\_inttypes  
?MAKE: -pick add \$@ %<  
?S:d\_attribute\_format:  
?S: This variable conditionally defines HASATTRIBUTE\_FORMAT, which  
?S: indicates the C compiler can check for printf-like formats.  
?S:.  
?S:d\_attribute\_deprecated:  
?S: This variable conditionally defines HASATTRIBUTE\_DEPRECATED, which  
?S: indicates that GCC can handle the attribute for marking deprecated  
?S: APIs  
?S:.  
?S:d\_printf\_format\_null:  
?S: This variable conditionally defines PRINTF\_FORMAT\_NULL\_OK, which  
?S: indicates the C compiler allows printf-like formats to be null.  
?S:.  
?S:d\_attribute\_malloc:  
?S: This variable conditionally defines HASATTRIBUTE\_MALLOC, which  
?S: indicates the C compiler can understand functions as having  
?S: malloc-like  
semantics.  
?S:.  
?S:d\_attribute\_nonnull:  
?S: This variable conditionally defines HASATTRIBUTE\_NONNULL, which  
?S: indicates that the C compiler can know that certain arguments  
?S: must not be NULL, and will check accordingly at compile time.  
?S:.

?S:d\_attribute\_noreturn:

?S: This variable conditionally defines HASATTRIBUTE\_NORETURN, which

?S: indicates that the C compiler can know that certain functions

?S: are guaranteed never to return.

?S:.

?S:d\_attribute\_pure:

?S: This variable conditionally defines HASATTRIBUTE\_PURE, which

?S: indicates that the C compiler can know that certain functions

?S: are "pure" functions, meaning that they have no side effects, and

?S: only rely on function input and/or global data for their results.

?S:.

?S:d\_attribute\_unused:

?S: This variable conditionally defines HASATTRIBUTE\_UNUSED, which

?S: indicates that the C compiler can know that certain variables

?S: and arguments may not always be used, and to not throw warnings

?S: if they

don't get used.

?S:.

?S:d\_attribute\_warn\_unused\_result:

?S: This variable conditionally defines

?S: HASATTRIBUTE\_WARN\_UNUSED\_RESULT, which indicates that the C

?S: compiler can know that certain functions have a return values

?S: that must not be ignored, such as malloc() or open().

?S:.

?S:d\_attribute\_always\_inline:

?S: This variable conditionally defines HASATTRIBUTE\_ALWAYS\_INLINE,

?S: which indicates that the C compiler can know that certain

?S: functions should always be inlined.

?S:.

?S:d\_attribute\_visibility:

?S: This variable conditionally defines the HASATTRIBUTE\_VISIBILITY symbol,

?S: and indicates different GCC attribute visibility

?S:.

?C:HASATTRIBUTE\_FORMAT ~ %< (GNU\_ATTRIBUTE\_CHECK):

?C: Can we handle GCC attribute for checking printf-style formats

?C:.

?C:PRINTF\_FORMAT\_NULL\_OK:

?C: Allows \_\_printf\_\_ format to be null when checking printf-style

?C:.

?C:HASATTRIBUTE\_MALLOC:

?C: Can we handle GCC attribute for malloc-style functions.

?C:.

?C:HASATTRIBUTE\_NONNULL:

?C: Can we

handle GCC attribute for nonnull function parms.

?C:.

?C:HASATTRIBUTE\_NORETURN:

?C: Can we handle GCC attribute for functions that do not return

```

?C:.
?C:HASATTRIBUTE_PURE:
?C: Can we handle GCC attribute for pure functions
?C:.
?C:HASATTRIBUTE_UNUSED:
?C: Can we handle GCC attribute for unused variables and arguments
?C:.
?C:HASATTRIBUTE_DEPRECATED:
?C: Can we handle GCC attribute for marking deprecated APIs
?C:.
?C:HASATTRIBUTE_WARN_UNUSED_RESULT ~ %< (HASATTRIBUTE):
?C: Can we handle GCC attribute for warning on unused results
?C:.
?C:HASATTRIBUTE_ALWAYS_INLINE:
?C: Can we handle GCC attribute for functions that should always be
?C: inlined.
?C:.
?C:HASATTRIBUTE_VISIBILITY:
?C: Can we handle GCC attribute for functions that should have a
?C: different visibility.
?C:.
?H:?%<:#$d_attribute_deprecated HASATTRIBUTE_DEPRECATED /**/
?H:?%<:#$d_attribute_format HASATTRIBUTE_FORMAT /**/
?H:?%<:#$d_printf_format_null PRINTF_FORMAT_NULL_OK /**/
?H:?%<:#$d_attribute_noreturn HASATTRIBUTE_NORETURN /**/
?H:?%<:#$d_attribute_malloc
HASATTRIBUTE_MALLOC /**/
?H:?%<:#$d_attribute_nonnull HASATTRIBUTE_NONNULL /**/
?H:?%<:#$d_attribute_pure HASATTRIBUTE_PURE /**/
?H:?%<:#$d_attribute_unused HASATTRIBUTE_UNUSED /**/
?H:?%<:#$d_attribute_warn_unused_result HASATTRIBUTE_WARN_UNUSED_RESULT /**/
?H:?%<:#$d_attribute_always_inline HASATTRIBUTE_ALWAYS_INLINE /**/
?H:?%<:#$d_attribute_visibility HASATTRIBUTE_VISIBILITY /**/
?H:.
?F:!attrib !attrib.out !attrib.c
?LINT:set d_attribute_deprecated
?LINT:set d_attribute_format
?LINT:set d_printf_format_null
?LINT:set d_attribute_malloc
?LINT:set d_attribute_nonnull
?LINT:set d_attribute_noreturn
?LINT:set d_attribute_pure
?LINT:set d_attribute_unused
?LINT:set d_attribute_warn_unused_result
?LINT:set d_attribute_always_inline
?LINT:set d_attribute_visibility
: Look for GCC-style attribute format
case "$d_attribute_format" in

```

```

")
echo " "
echo "Checking whether your compiler can handle __attribute__((format)) ..." >&4
$cat >attrib.c <<'EOCP'
#include
<stdio.h>
void my_special_printf(char* pat,...) __attribute__((__format__(__printf__,1,2)));
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $compiler_warning attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((format))."
val="$undef"
else
echo "Your C compiler supports __attribute__((format))."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_format" ;;
esac
set d_attribute_format
eval $setvar
$rm -f attrib*

```

: Look for GCC-style attribute format with null format allowed

```

case "$d_printf_format_null" in
") case "$d_attribute_format" in
    $define)
echo " "
echo "Checking whether your compiler allows __printf__ format to be null ..." >&4
$cat >attrib.c <<EOCP
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#$i_inttypes I_INTTYPES
#ifdef I_INTTYPES
#include <inttypes.h>
#endif
#ifdef INTPTR_MAX
#define
intptr_t int
#endif
int null_printf (char* pat,...) __attribute__((__format__(__printf__,1,2)));

```

```

int null_printf (char* pat,...) { return (int)(intptr_t)pat; }
int main () { exit(null_printf(NULL)); }
EOCP
if $cc $cflags -o attrib attrib.c >attrib.out 2>&1 ; then
    : run the executable in case it produces a run-time warning
    if $run ./attrib >>attrib.out 2>&1; then
if $compiler_warning attrib.out >/dev/null 2>&1; then
    echo "Your C compiler doesn't allow __printf__ format to be null."
    val="$undef"
else
    echo "Your C compiler allows __printf__ format to be null."
    val="$define"
fi
else
    echo "Your C compiler executable failed with __printf__ format null."
    val="$undef"
fi
else
    echo "Your C compiler fails with __printf__ format null."
    val="$undef"
fi
;;
*) val="$undef" ;;
esac
;;
*) val="$d_printf_format_null" ;;
esac
set d_printf_format_null
eval $setvar
$rm -f attrib*

: Look for GCC-style attribute malloc
case
"$d_attribute_malloc" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((malloc)) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
char *go_get_some_memory( int how_many_bytes ) __attribute__((malloc));
EOCP
if $cc $cflags -c attrib.c >attrib.out 2>&1 ; then
if $compiler_warning attrib.out >/dev/null 2>&1; then
    echo "Your C compiler doesn't support __attribute__((malloc))."
    val="$undef"
else
    echo "Your C compiler supports __attribute__((malloc))."
    val="$define"

```

```

fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_malloc" ;;
esac
set d_attribute_malloc
eval $setvar
$rm -f attrib*

: Look for GCC-style attribute nonnull
case "$d_attribute_nonnull" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((nonnull(1))) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
void do_something (char *some_pointer,...) __attribute__((nonnull(1)));
EOCP
if $cc $ccflags
-c attrib.c >attrib.out 2>&1 ; then
if $compiler_warning attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((nonnull))."
val="$undef"
else
echo "Your C compiler supports __attribute__((nonnull))."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_nonnull" ;;
esac
set d_attribute_nonnull
eval $setvar
$rm -f attrib*

: Look for GCC-style attribute noreturn
case "$d_attribute_noreturn" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((noreturn)) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>

```

```

void fall_over_dead( void ) __attribute__((noreturn));
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $compiler_warning attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((noreturn))."
val="$undef"
else
echo "Your C compiler supports __attribute__((noreturn))."
val="$define"
fi
else
echo
"Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_noreturn" ;;
esac
set d_attribute_noreturn
eval $setvar
$rm -f attrib*

: Look for GCC-style attribute pure
case "$d_attribute_pure" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((pure)) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
int square( int n ) __attribute__((pure));
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $compiler_warning attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((pure))."
val="$undef"
else
echo "Your C compiler supports __attribute__((pure))."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_pure" ;;
esac
set d_attribute_pure
eval $setvar

```



```
$rm -f attrib*
```

```
: Look for GCC-style attribute unused
```

```
case "$d_attribute_unused" in
")
echo " "
echo "Checking whether your
compiler can handle __attribute__((unused)) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
int do_something( int dummy __attribute__((unused)), int n );
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $compiler_warning attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((unused))."
val="$undef"
else
echo "Your C compiler supports __attribute__((unused))."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_unused" ;;
esac
set d_attribute_unused
eval $setvar
$rm -f attrib*
```

```
: Look for GCC-style attribute deprecated
```

```
case "$d_attribute_deprecated" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((deprecated)) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
int I_am_deprecated(void) __attribute__((deprecated));
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $compiler_warning attrib.out >/dev/null 2>&1;
then
echo "Your C compiler doesn't support __attribute__((deprecated))."
val="$undef"
else
echo "Your C compiler supports __attribute__((deprecated))."
val="$define"
fi
fi
;;
*) val="$d_attribute_deprecated" ;;
esac
set d_attribute_deprecated
eval $setvar
$rm -f attrib*
```

```

fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_deprecated" ;;
esac
set d_attribute_deprecated
eval $setvar
$rm -f attrib*

: Look for GCC-style attribute warn_unused_result
case "$d_attribute_warn_unused_result" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((warn_unused_result)) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
int I_will_not_be_ignored(void) __attribute__((warn_unused_result));
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $compiler_warning attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((warn_unused_result))."
val="$undef"
else
echo "Your C compiler supports __attribute__((warn_unused_result))."
val="$define"
fi
else
echo "Your
C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_warn_unused_result" ;;
esac
set d_attribute_warn_unused_result
eval $setvar
$rm -f attrib*

: Look for GCC-style attribute always_inline
case "$d_attribute_always_inline" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((always_inline)) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>

```

```

static __inline__ __attribute__((always_inline)) int I_will_always_be_inlined(void);
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $compiler_warning attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((always_inline))."
val="$undef"
else
echo "Your C compiler supports __attribute__((always_inline))."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_always_inline" ;;
esac
set d_attribute_always_inline
eval $setvar
$rm -f attrib*

:
Look for GCC-style attribute visibility
case "$d_attribute_visibility" in
")
echo " "
echo "Checking whether your compiler can handle __attribute__((visibility)) ..." >&4
$cat >attrib.c <<'EOCP'
#include <stdio.h>
__attribute__((visibility("hidden"))) int I_will_be_hidden(void);
EOCP
if $cc $ccflags -c attrib.c >attrib.out 2>&1 ; then
if $compiler_warning attrib.out >/dev/null 2>&1; then
echo "Your C compiler doesn't support __attribute__((visibility))."
val="$undef"
else
echo "Your C compiler supports __attribute__((visibility))."
val="$define"
fi
else
echo "Your C compiler doesn't seem to understand __attribute__ at all."
val="$undef"
fi
;;
*) val="$d_attribute_visibility" ;;
esac
set d_attribute_visibility
eval $setvar

```

\$rm -f attrib\*

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_attribut.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_malloc.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:21 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_malloc: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_malloc:

?S: This variable conditionally defines the I\_MALLOC symbol, and indicates

?S: whether a C program should include <malloc.h>.

?S:.

?C:I\_MALLOC:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <malloc.h>.

?C:.

?H:#\$i\_malloc I\_MALLOC /\*\*/

?H:.

?LINT:set i\_malloc

: see if this is a malloc.h system

set

malloc.h i\_malloc

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_malloc.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_sysmman.U,v \$

?RCS: Revision 3.0.1.1 1994/01/24 14:11:20 ram

?RCS: patch16: created

?RCS:

?X:

?X: Look whether <sys/mman.h> needs to be included.

?X:

?MAKE:i\_sysmman: Inhdr

?MAKE:-pick add \$@ %<

?S:i\_sysmman:

?S: This variable conditionally defines the I\_SYS\_MMAN symbol,

?S: and indicates whether a C program should include <sys/mman.h>.

?S:.

?C:I\_SYS\_MMAN:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/mman.h>.

?C:.

?H:#\$i\_sysmman I\_SYS\_MMAN /\*\*/

?H:.

?LINT:set

i\_sysmman

: see if sys/mman.h has to be included

set sys/mman.h i\_sysmman

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_sysmman.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999, Jarkko Hietaniemi

?RCS:

?RCS: This file is included with or a derivative work of a file included

?RCS: with the metaconfig program of Raphael Manfredi's "dist" distribution.

?RCS: In accordance with clause 7 of dist's modified Artistic License:

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:multiarch: osname

?MAKE: -pick add \$@ %<

?S:multiarch:

?S: This variable conditionally defines the MULTIARCH symbol

?S: which signifies the presence of multiplatform files.

?S: This is normally set by hints files.

?S:.

?C:MULTIARCH:

?C: This symbol, if defined, signifies that the build

?C: process will produce some binary files that are going to be

?C: used in a cross-platform environment. This is the case for

?C: example with the NeXT "fat" binaries that contain executables

?C: for

several CPUs.

?C:.

?H:#\$multiarch MULTIARCH /\*\*/

?H:.

: Check if is a multiplatform env

case "\$osname" in

darwin) multiarch="\$define" ;;

esac

case "\$multiarch" in

"|[nN]\*") multiarch="\$undef" ;;

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/a\_dvisory/multiarch.U

No license file was found, but licenses were detected in source scan.

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_expm1: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_expm1:

?S: This variable conditionally defines the HAS\_EXPM1 symbol, which

?S: indicates to the C program that the expm1() routine is available.

?S:.

?C:HAS\_EXPM1:

?C: This symbol, if defined, indicates that the expm1 routine is

?C: available to do the exp(x) - 1 when x is near 1 function.

?C:.

?H:#\$d\_expm1 HAS\_EXPM1 /\*\*/

?H:.

?LINT:set d\_expm1

: see if expm1 exists

set expm1 d\_expm1

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_expm1.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_syssock.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_syssock.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:36 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_syssock: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_syssock:

?S: This variable conditionally defines the I\_SYS\_SOCKET symbol, and indicates

?S: whether a C program should include <sys/socket.h> before performing socket

?S: operations.

?S:.

?C:I\_SYS\_SOCKET:

?C: This symbol, if defined, indicates to the C program that it should

?C: include

<sys/socket.h> before performing socket calls.

?C:.

?H:#\$i\_syssock I\_SYS\_SOCKET /\*\*/

?H:.

?LINT:set i\_syssock

: see if this is a sys/socket.h system

set sys/socket.h i\_syssock

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_syssock.U

No license file was found, but licenses were detected in source scan.

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_logb: Inlibc

?MAKE: -pick add \$@ %<  
?S:d\_logb:  
?S: This variable conditionally defines the HAS\_LOGB symbol, which  
?S: indicates to the C program that the logb() routine is available  
?S: to extract the exponent of x.  
?S:.  
?C:HAS\_LOGB:  
?C: This symbol, if defined, indicates that the logb routine is  
?C: available to do the logb function.  
?C:.  
?H:#\$d\_logb HAS\_LOGB /\*\*/  
?H:.  
?LINT:set d\_logb  
: see if logb exists  
set logb d\_logb  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_logb.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_strtol.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_strtol.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:39 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_strtol: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_strtol:  
?S: This variable conditionally defines the HAS\_STRTOL symbol, which  
?S: indicates to the C program that the strtol() routine is available  
?S: to provide better numeric string conversion than atoi() and friends.  
?S:.  
?C:HAS\_STRTOL (STRTOL):  
?C: This symbol, if defined, indicates that  
the strtol routine is available  
?C: to provide better numeric string conversion than atoi() and friends.  
?C:.



?H:#\$d\_strtol HAS\_STRTOL /\*\*/

?H:.

?LINT:set d\_strtol

: see if strtol exists

set strtol d\_strtol

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_strtol.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_syswait.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_syswait.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:42 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit looks wether <sys/wait.h> is available or not

?X:

?MAKE:i\_syswait: Inhdr

?MAKE:-pick add \$@ %<

?S:i\_syswait:

?S: This variable conditionally defines I\_SYS\_WAIT, which indicates

?S: to the C program that it should include <sys/wait.h>.

?S:.

?C:I\_SYS\_WAIT (I\_SYSWAIT):

?C: This symbol, if defined, indicates to the C program

that it should

?C: include <sys/wait.h>.

?C:.

?H:#\$i\_syswait I\_SYS\_WAIT /\*\*/

?H:.

?LINT:set i\_syswait

: see if this is a syswait system

set sys/wait.h i\_syswait

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_syswait.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_endgrent.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_endgrent.U,v \$

?RCS:

?MAKE:d\_endgrent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_endgrent:

?S: This variable conditionally defines the HAS\_ENDGRENT symbol, which

?S: indicates to the C program that the endgrent() routine is available

?S: for sequential access of the group database.

?S:.

?C:HAS\_ENDGRENT:

?C: This symbol, if defined, indicates that the getgrent routine is

?C: available for finalizing sequential access of the group database.

?C:.

?H:#\$d\_endgrent HAS\_ENDGRENT /\*\*/

?H:.

?LINT:set d\_endgrent

: see if endgrent exists

set endgrent d\_endgrent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_endgrent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fseeko: Inlibc longsize

?MAKE: -pick add \$@ %<

?S:d\_fseeko:

?S: This variable conditionally defines the HAS\_FSEEKO symbol, which

?S: indicates to the C program that the fseeko() routine is available.

```

?S:.
?C:HAS_FSEEKO:
?C: This symbol, if defined, indicates that the fseeko routine is
?C: available to fseek beyond 32 bits (useful for ILP32 hosts).
?C:.
?H:#$d_fseeko HAS_FSEEKO /**/
?H:.
?LINT:set d_fseeko
: see if fseeko exists
set fseeko d_fseeko
eval $inlibc
case "$longsize" in
8) echo "(Your long is 64 bits, so you could use fseek.)" ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_fseeko.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: lex.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Graham Stoney <greyham@research.canon.oz.au>
?RCS:
?RCS: $Log: lex.U,v $
?RCS: Revision 3.0.1.3 1994/10/29 16:22:50 ram
?RCS: patch36: spurious single quote could cause Configure to crash
?RCS: patch36: (reported by Xavier Le Vourch <xavierl@eiffel.com>.)
?RCS:
?RCS: Revision 3.0.1.2 1994/08/29 16:27:09 ram
?RCS: patch32: added lexflags variable for lex flags setting
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 15:06:01 ram
?RCS: patch23: added
trailing blank line for metalint
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:55 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:lex lexflags: Guess Myread Oldconfig flex test

```

```

?MAKE: -pick add $@ %<
?S:lex:
?S: This variable holds the name of the lexical analyser generator we
?S: want to use in the Makefile. It can be lex or flex.
?S:.
?S:lexflags:
?S: This variable holds any flags that should be passed to the lexical
?S: analyzer. It is up to the Makefile to use it.
?S:.
: determine lexical analyser generator
case "$lex" in
")
dflt=lex;;
*)
dflt="$lex";;
esac
echo " "
if $test -f "$flex"; then
rp='Which lexical analyser generator (lex or flex) shall I use?'
else
rp='Which lexical analyser generator shall I use?'
fi
./myread
lex="$ans"

@if lexflags
: if using lex this will normally be useless, but flex frequently takes args
echo " "
case "$lexflags" in
") dflt='none';;
*) dflt="$lexflags";;
esac
rp="What flags should be given to $lex?"
./myread
case "$ans"
in
none) lexflags="";;
*) lexflags="$ans";;
esac

@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/lex.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_strcoll.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_strcoll.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:12:01 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_strcoll: Inlibc
?MAKE: -pick add $@ %<
?S:d_strcoll:
?S: This variable conditionally defines HAS_STRCOLL if strcoll() is
?S: available to compare strings using collating information.
?S:
?C:HAS_STRCOLL:
?C: This symbol, if defined, indicates that the strcoll routine
is
?C: available to compare strings using collating information.
?C:
?H:#$d_strcoll HAS_STRCOLL /**/
?H:
?LINT:set d_strcoll
: see if strcoll exists
set strcoll d_strcoll
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_strcoll.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: basicshell.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
```

```

?RCS: $Log: basicshell.U,v $
?RCS: Revision 3.0 1993/08/18 12:05:25 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:basicshell: Getfile Oldconfig bash csh ksh sh
?MAKE: -pick add $@ %<
?S:basicshell:
?S: This variable contains the eventual value of the BASICSHELL symbol,
?S: which contains the full name of the basic script shell on this
?S: system. Usual values are /bin/sh, /bin/ksh, /bin/csh.
?S:.
?C:BASICSHELL:
?C: This symbol contains the
full name of the basic script shell on this
?C: system. Usual values are /bin/sh, /bin/ksh, /bin/csh.
?C:.
?H:#define BASICSHELL "$basicshell" /**/
?H:.
: find the most basic shell for scripts
echo " "
case "$basicshell" in
")
case "$sh $bash $csh $ksh" in
*/sh*) dflt="$sh" ;;
*/ksh*) dflt="$ksh" ;;
*/csh*) dflt="$csh" ;;
*/bash*) dflt="$bash" ;;
*) dflt='/bin/sh' ;;
esac
;;
*)
dflt="$basicshell";;
esac
fn=f
rp="Give the full path name of the most basic shell used on your system"
./getfile
basicshell=$ans

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/basicshell.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

```
?RCS: Copyright (c) 2001 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_sresgproto: Hasproto i\_unistd

?MAKE: -pick add \$@ %<

?S:d\_sresgproto:

?S: This variable conditionally defines the HAS\_SETRESGID\_PROTO symbol,

?S: which indicates to the C program that the system provides

?S: a prototype for the setresgid() function. Otherwise, it is

?S: up to the program to supply one.

?S:.

?C:HAS\_SETRESGID\_PROTO:

?C: This symbol, if defined, indicates that the system provides

?C: a prototype for the setresgid() function. Otherwise, it is up

?C: to the program to supply one. Good guesses are

?C: extern

int setresgid(uid\_t ruid, uid\_t euid, uid\_t suid);

?C:.

?H:#\$d\_sresgproto HAS\_SETRESGID\_PROTO /\*\*/

?H:.

?LINT:set d\_sresgproto

: see if prototype for setresgid is available

echo " "

set d\_sresgproto setresgid \$i\_unistd unistd.h

eval \$hasproto

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_sresgproto.U

No license file was found, but licenses were detected in source scan.

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_j0 d\_j0l: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_j0:

?S: This variable conditionally defines the HAS\_J0 symbol, which

?S: indicates to the C program that the j0() routine is available.

?S:.

?S:d\_j0l:

?S: This variable conditionally defines the HAS\_J0L symbol, which

?S: indicates to the C program that the j0l() routine is available.

?S:.

?C:HAS\_J0:

?C: This symbol, if defined, indicates to the C program that the

?C: j0() function is available for Bessel functions of the first

?C: kind of the order zero, for doubles.

?C:.

?C:HAS\_J0L:

?C: This symbol, if defined, indicates to the C program that the

?C: j0l() function is available for Bessel functions of the first

?C: kind of the order zero, for long doubles.

?C:.

?H:#\$d\_j0 HAS\_J0 /\*\*/

?H:#\$d\_j0l HAS\_J0L /\*\*/

?H:.

?LINT:set

d\_j0

?LINT:set d\_j0l

: see if j0 exists

set j0 d\_j0

eval \$inlibc

: see if j0l exists

set j0l d\_j0l

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_j0.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_ustat.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_ustat: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_ustat:

?S: This variable conditionally defines the I\_USTAT symbol, and indicates

?S: whether a C program should include <ustat.h>.

?S:.

?C:I\_USTAT:

?C: This symbol, if defined, indicates that <ustat.h> exists and

?C: should be included.

?C:.

?H:#\$i\_ustat I\_USTAT /\*\*/

?H:.

?LINT:set i\_ustat

: see if this is a ustat.h system



```
set ustat.h i_ustat
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i_ustat.U
```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_lrintl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lrintl:

?S: This variable conditionally defines the HAS\_LRINTL symbol, which

?S: indicates to the C program that the lrintl() routine is available

?S: to return the integral value closest to a long double (according

?S: to the current rounding mode).

?S:.

?C:HAS\_LRINTL:

?C: This symbol, if defined, indicates that the lrintl routine is

?C: available to return the integral value closest to a long double

?C: (according to the current rounding mode).

?C:.

?H:#\$d\_lrintl HAS\_LRINTL /\*\*/

?H:.

?LINT:set d\_lrintl

: see if lrintl exists

set lrintl d\_lrintl

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_lrintl.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_msghdr\_s: Hasstruct i\_systypes d\_socket i\_sysuio Setvar

?MAKE: -pick add \$@ %<

?S:d\_msghdr\_s:

?S: This variable conditionally defines the HAS\_STRUCT\_MSGHDR symbol,

?S: which indicates that the struct msghdr is supported.

```

?S:.
?C:HAS_STRUCT_MSGHDR:
?C: This symbol, if defined, indicates that the struct msghdr
?C: is supported.
?C:.
?H:#$d_msghdr_s HAS_STRUCT_MSGHDR /**/
?H:.
?LINT:set d_msghdr_s
: Check for msghdr_s
echo " "
echo "Checking to see if your system supports struct msghdr..." >&4
set d_msghdr_s msghdr $i_systypes sys/types.h $d_socket sys/socket.h $i_sysuio sys/uio.h
eval $hasstruct
case "$d_msghdr_s" in
"$define") echo "Yes, it does." ;;
*) echo "No, it doesn't."
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_msghdr_s.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: startsh.U 1 2006-08-24 12:32:52Z rmanfredi $

```

```

?RCS:

```

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

```

?RCS:

```

```

?RCS: You may redistribute only under the terms of the Artistic Licence,

```

```

?RCS: as specified in the README file that comes with the distribution.

```

```

?RCS: You may reuse parts of this distribution only within the terms of

```

```

?RCS: that same Artistic Licence; a copy of which may be found at the root

```

```

?RCS: of the source tree for dist 4.0.

```

```

?RCS:

```

```

?RCS: $Log: startsh.U,v $

```

```

?RCS: Revision 3.0.1.1 1997/02/28 16:25:31 ram

```

```

?RCS: patch61: avoid needless chatter since this is now done very early

```

```

?RCS:

```

```

?RCS: Revision 3.0 1993/08/18 12:09:51 ram

```

```

?RCS: Baseline for dist 3.0 netwide release.

```

```

?RCS:

```

```

?MAKE:startsh: sh sharpbang eunicefix

```

```

?MAKE: -pick add $@ %<

```

```

?S:startsh:

```

```

?S: This variable contains the string to put on the front of a shell

```

```

?S: script to make sure (hopefully) that it runs with sh and not some

```

```

?S: other

```

```

shell.
?S:.
?F:!sharp
: figure out how to guarantee sh startup
?X: Avoid needless chatter since this is now done very early.
?X: echo " "
?X: echo "Checking out how to guarantee sh startup..." >&2
case "$startsh" in
*) startsh=${sharpbang}${sh} ;;
*)
?X: echo "Let's see if '$startsh' works..." ;;
esac
cat >sharp <<EOSS
$startsh
set abc
test "$?abc" != 1
EOSS

chmod +x sharp
$unicefix sharp
if ./sharp; then
: echo "Yup, it does."
else
echo "Hmm... '$startsh' does not guarantee sh startup..."
echo "You may have to fix up the shell scripts to make sure $sh runs them."
fi
rm -f sharp

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/startsh.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_link.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_link.U,v $
?RCS: Revision 3.0.1.1 1993/08/25 14:01:13 ram
?RCS: patch6: created for completeness
?RCS:
?MAKE:d_link: Inlibc

```

?MAKE: -pick add \$@ %<  
?S:d\_link:  
?S: This variable conditionally defines HAS\_LINK if link() is  
?S: available to create hard links.  
?S:.  
?C:HAS\_LINK:  
?C: This symbol, if defined, indicates that the link routine is  
?C: available to create hard links.  
?C:.  
?H:#\$d\_link HAS\_LINK /\*\*/  
?H:.  
?LINT:set d\_link  
: see if link exists  
set  
link d\_link  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_link.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fdim: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fdim:

?S: This variable conditionally defines the HAS\_FDIM symbol, which

?S: indicates to the C program that the fdim() routine is available.

?S:.

?C:HAS\_FDIM:

?C: This symbol, if defined, indicates that the fdim routine is

?C: available to do the positive difference function.

?C:.

?H:#\$d\_fdim HAS\_FDIM /\*\*/  
?H:.

?LINT:set d\_fdim

: see if fdim exists

set fdim d\_fdim

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_fdim.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_inetaton.U 1 2006-08-24 12:32:52Z rmanfredi \$

```
?RCS:
?RCS: Copyright (c) 1996, Spider Boardman
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_inetaton.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:36:35 ram
?RCS: patch61: created
?RCS:
?MAKE:d_inetaton: Inlibc
?MAKE: -pick add $@ %<
?S:d_inetaton:
?S: This variable conditionally defines the HAS_INET_ATON symbol, which
?S: indicates to the C program that the inet_aton() function is available
?S: to parse IP address "dotted-quad" strings.
?S:.
?C:HAS_INET_ATON:
?C: This symbol, if defined, indicates
to the C program that the
?C: inet_aton() function is available to parse IP address "dotted-quad"
?C: strings.
?C:.
?H:#$d_inetaton HAS_INET_ATON /**/
?H:.
?LINT:set d_inetaton
: check whether inet_aton exists
set inet_aton d_inetaton
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_inetaton.U
```

No license file was found, but licenses were detected in source scan.

\* Feel free to modify any of this as the need arises.&nbsp;&nbsp;&nbsp;Note, however,

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/metaconfig.html
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
```

```
?RCS:
```

?RCS: Copyright (c) 2017, 2019, Karl Williamson

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:i\_wctype: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_wctype:

?S: This variable conditionally defines the I\_WCTYPE symbol,

?S: that indicates whether a C program may include <wctype.h>.

?S:.

?C:I\_WCTYPE:

?C: This symbol, if defined, indicates that <wctype.h> exists.

?C:.

?H:#\$i\_wctype I\_WCTYPE /\*\*/

?H:.

?LINT:set i\_wctype

: see if this system has wctype.h

set wctype.h i\_wctype

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_wctype.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_asinh: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_asinh:

?S: This variable conditionally defines the HAS\_ASINH symbol, which

?S: indicates to the C program that the asinh() routine is available.

?S:.

?C:HAS\_ASINH:

?C: This symbol, if defined, indicates that the asinh routine is

?C: available to do the inverse hyperbolic sine function.

?C:.

?H:#\$d\_asinh HAS\_ASINH /\*\*/

?H:.

?LINT:set d\_asinh

: see if asinh exists

set asinh d\_asinh

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_asinh.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Extractall.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:00:43 ram

?RCS: patch61: created

?RCS:

?X:

?X: If extraction has been requested, load the configuration file, perform

?X: the extraction and exit.

?X:

?X: This unit was originally a part of Options.U. It had to be removed from

?X: it to prevent a dependency cycle: Extract -> src -> Options -> Extract

?X: The Begin.U unit now requires us before beginning to do anything

?X: interesting, to ensure proper semantics. -- RAM, 15/03/96

?X:

?MAKE:Extractall:

Extract Options

?MAKE: -pick wipe \$@ %<

: extract files and exit if asked to do so

case "\$extractsh" in

true)

?X: Undo the forced silent=true when -S was supplied, by probing realsilent

?X: which was set iff -s was also given. See Options.U for details.

case "\$realsilent" in

true) ;;

\*) exec 1>&4;;

esac

case "\$config\_sh" in

") config\_sh='config.sh';;

esac

echo " "

echo "Fetching answers from \$config\_sh..."

cd ..

. \$config\_sh

```
test "$override" && . /optdef.sh
echo " "
?X: extract has to be run from the top directory, not within UU.
. UU/extract
rm -rf UU
echo "Extraction done."
exit 0
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Extractall.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_wifstat.U,v 3.0.1.3 1997/02/28 15:47:43 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_wifstat.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 15:47:43 ram
?RCS: patch61: added a ?F: metalint hint
?RCS:
?RCS: Revision 3.0.1.2 1995/07/25 14:09:10 ram
?RCS: patch56: re-arranged compile line to include ldflags before objects
?RCS:
?RCS: Revision 3.0.1.1 1995/03/21 08:47:46 ram
?RCS: patch52: created
?RCS:
?MAKE:d_wifstat: Compile d_uwait Oldconfig cat rm
?MAKE: -pick add $@ %<
?S:d_wifstat:
?S: This symbol conditionally defines USE_WIFSTAT
if the C program can
?S: safely use the WIFxxx macros with the kind of wait() parameter
?S: declared in the program (see UNION_WAIT), or if it can't. Should
?S: only matter on HP-UX, where the macros are incorrectly written and
?S: therefore cause programs using them with an 'union wait' variable
?S: to not compile properly.
?S:.
?C:USE_WIFSTAT:
?C: This symbol, if defined, indicates to the C program that the argument
```



?C: for the WIFxxx set of macros such as WIFSIGNALED or WIFEXITED can  
?C: be of the same kind as the one used to hold the wait() status. Should  
?C: only matter on HP-UX, where the macros are incorrectly written and  
?C: therefore cause programs using them with an 'union wait' variable  
?C: to not compile properly. See also UNION\_WAIT.

?C:.

```
?H:#$d_wifstat USE_WIFSTAT /**/
```

?H:.

?T:type

?F:!foo

: see if we can use WIFxxx macros

```
echo " "
```

```
case "$d_wifstat" in
```

```
"$define") echo "As before, you can safely use WIFEXITED and friends!" >&4;;
```

```
"$undef") echo "You still can't use WIFEXITED
```

```
and friends!" >&4;;
```

```
*)
```

```
echo "Let's see whether you can use the WIFEXITED(status) macro and its"
```

```
case "$d_uwait" in
```

```
"$define") type='union wait';;
```

```
*) type='int';;
```

```
esac
```

```
echo "friends with status declared as '$type status'..."
```

```
$cat >foo.c <<EOCP
```

```
#include <sys/types.h>
```

```
#include <sys/wait.h>
```

```
int main()
```

```
{
```

```
    $type status;
```

```
    int e = 0;
```

```
#ifdef WIFEXITED
```

```
    if (WIFEXITED(status))
```

```
        printf("\n");
```

```
        exit(0);
```

```
#else
```

```
    exit(2);
```

```
#endif
```

```
}
```

```
EOCP
```

```
d_wifstat="$undef"
```

```
set foo
```

```
if eval $compile; then
```

```
    if ./foo >/dev/null; then
```

```
        echo "Great! Looks like we can use the WIFxxx macros." >&4
```

```
        d_wifstat="$define"
```

```
    else
```

```
    echo "You don't seem to have WIFxxx macros, but that's ok." >&4
fi
else
    echo "Apparently you can't use WIFxxx macros properly." >&4
fi
$rm -f foo.* foo core
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_wifstat.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_shadow.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 2000 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?MAKE:i_prot: Inhdr Hasfield
```

```
?MAKE: -pick add $@ %<
```

```
?S:i_prot:
```

```
?S: This variable conditionally defines the I_PROT symbol, and indicates
```

```
?S: whether a C program should include <prot.h>.
```

```
?S:.
```

```
?C:I_PROT:
```

```
?C: This symbol, if defined, indicates that <prot.h> exists and
```

```
?C: should be included.
```

```
?C:.
```

```
?H:#$i_prot I_PROT /**/
```

```
?H:.
```

```
?LINT:set i_prot
```

```
: see if this is a prot.h system
```

```
set prot.h i_prot
```

```
eval $inhdr
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i_prot.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_longlong.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1998 Andy Dougherty
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```

?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: d_longlong.U,v $
?RCS:
?MAKE:d_longlong longlongsize: Compile Setvar Myread run \
cat rm_try test longsize
?MAKE: -pick add $@ %<
?S:d_longlong:
?S: This variable conditionally defines HAS_LONG_LONG if
?S: the long long type is supported.
?S:.
?S:longlongsize:
?S: This variable contains the value of the LONGLONGSIZE symbol, which
?S: indicates to the C program how many bytes there are in a long long,
?S: if this system supports long long.
?S:.
?C:HAS_LONG_LONG:
?C: This symbol will be defined if the C compiler supports long long.
?C:.
?C:LONGLONGSIZE:
?C: This symbol contains the size of a long long, so that the
?C: C preprocessor can make decisions based on it. It is only
?C: defined
if the system supports long long.
?C:.
?H:#$d_longlong HAS_LONG_LONG /**/
?H:?LONGLONGSIZE:#ifdef HAS_LONG_LONG
?H:?LONGLONGSIZE:#define LONGLONGSIZE $longlongsize /**/
?H:?LONGLONGSIZE:#endif
?H:.
?F:!try
?LINT:set d_longlong
: check for long long
echo " "
echo "Checking to see if you have long long..." >&4
echo 'int main() { long long x = 7; return 0; }' > try.c
set try
if eval $compile; then
val="$define"
echo "You have long long."
else
val="$undef"
echo "You do not have long long."
fi
$rm_try
set d_longlong
eval $setvar

```

```

@if LONGLONGSIZE || longlongsize
: check for length of long long
?X: Check only if d_longlong and if longlongsize is not already set.
case "${d_longlong}${longlongsize}" in
$define)
echo " "
echo "Checking to see how big your long longs are..." >&4
$cat >try.c <<'EOCP'
#include <stdio.h>
int main()
{
printf("%d\n", (int)sizeof(long long));
return(0);
}
EOCP
set try
if eval $compile_ok; then
longlongsize=`$run ./try`
echo "Your long
longs are $longlongsize bytes long."
else
dflt='8'
echo " "
echo "(I can't seem to compile the test program. Guessing...)"
rp="What is the size of a long long (in bytes)?"
./myread
longlongsize="$ans"
fi
if $test "X$longsize" = "X$longlongsize"; then
echo "(That isn't any different from an ordinary long.)"
fi
;;
esac
$rm_try
@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_longlong.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_utime.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_utime.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:47 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_utime: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_utime:

?S: This variable conditionally defines the I\_UTIME symbol, and indicates

?S: whether a C program should include <utime.h>.

?S:.

?C:I\_UTIME:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <utime.h>.

?C:.

?H:#\$i\_utime I\_UTIME /\*\*/

?H:.

?LINT:set i\_utime

:

see if this is an utime system

set utime.h i\_utime

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_utime.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getgrnam\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

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?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getgrnam\_r getgrnam\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_grp extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getgrnam\_r:

?S: This variable conditionally defines the HAS\_GETGRNAM\_R symbol,

?S: which indicates to the C program that the getgrnam\_r()

?S: routine is available.

?S:.

?S:getgrnam\_r\_proto:

?S: This variable encodes the prototype of getgrnam\_r.

?S: It is zero if d\_getgrnam\_r is undef, and one of the  
 ?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getgrnam\_r  
 ?S: is defined.  
 ?S:.  
 ?C:HAS\_GETGRNAM\_R:  
 ?C: This symbol, if defined, indicates that the getgrnam\_r routine  
 ?C: is available to  
 getgrnam re-entrantly.  
 ?C:.  
 ?C:GETGRNAM\_R\_PROTO:  
 ?C: This symbol encodes the prototype of getgrnam\_r.  
 ?C: It is zero if d\_getgrnam\_r is undef, and one of the  
 ?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getgrnam\_r  
 ?C: is defined.  
 ?C:.  
 ?H:#\$d\_getgrnam\_r HAS\_GETGRNAM\_R /\*\*/  
 ?H:#define GETGRNAM\_R\_PROTO \$getgrnam\_r\_proto /\*\*/  
 ?H:.  
 ?T:try hdrs d\_getgrnam\_r\_proto  
 : see if getgrnam\_r exists  
 set getgrnam\_r d\_getgrnam\_r  
 eval \$inlibc  
 case "\$d\_getgrnam\_r" in  
 "\$define")  
 hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_grp grp.h"  
 case "\$d\_getgrnam\_r\_proto:\$usetthreads" in  
 ":define") d\_getgrnam\_r\_proto=define  
 set d\_getgrnam\_r\_proto getgrnam\_r \$hdrs  
 eval \$hasproto ;;  
 \*) ;;  
 esac  
 case "\$d\_getgrnam\_r\_proto" in  
 define)  
 case "\$getgrnam\_r\_proto" in  
 "|0) try='int getgrnam\_r(const char\*, struct group\*, char\*, size\_t, struct group\*\*);'  
 ./protochk "\$extern\_C \$try" \$hdrs && getgrnam\_r\_proto=I\_CSBWR ;;  
 esac  
 case "\$getgrnam\_r\_proto" in  
 "|0) try='int getgrnam\_r(const char\*, struct group\*, char\*,  
 int, struct group\*\*);'  
 ./protochk "\$extern\_C \$try" \$hdrs && getgrnam\_r\_proto=I\_CSBR ;;  
 esac  
 case "\$getgrnam\_r\_proto" in  
 "|0) try='struct group\* getgrnam\_r(const char\*, char\*, int);'  
 ./protochk "\$extern\_C \$try" \$hdrs && getgrnam\_r\_proto=S\_CBI ;;  
 esac  
 case "\$getgrnam\_r\_proto" in  
 "|0) try='int getgrnam\_r(const char\*, struct group\*, char\*, int);'

```

./prochck "$extern_C $try" $hdrs && getgrnam_r_proto=I_CSBI ;;
esac
case "$getgrnam_r_proto" in
"|0) try='struct group* getgrnam_r(const char*, struct group*, char*, int);'
./prochck "$extern_C $try" $hdrs && getgrnam_r_proto=S_CSBI ;;
esac
case "$getgrnam_r_proto" in
"|0) d_getgrnam_r=undef
getgrnam_r_proto=0
echo "Disabling getgrnam_r, cannot determine prototype." >&4 ;;
*) case "$getgrnam_r_proto" in
REENTRANT_PROTO*) ;;
*) getgrnam_r_proto="REENTRANT_PROTO_$getgrnam_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "getgrnam_r has no prototype, not using it."
>&4 ;;
esac
d_getgrnam_r=undef
getgrnam_r_proto=0
;;
esac
;;
*) getgrnam_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_getgrnam_r.U
```

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2005-2007 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_libm\_lib\_version: Compile cat run rm\_try

?MAKE: -pick add \$@ %<

?S:d\_libm\_lib\_version:

?S: This variable conditionally defines the LIBM\_LIB\_VERSION symbol,

?S: which indicates to the C program that math.h defines \_LIB\_VERSION

?S: being available in libm

?S:.

?C:LIBM\_LIB\_VERSION:

?C: This symbol, if defined, indicates that libm exports `_LIB_VERSION`

?C: and that `math.h` defines the enum to manipulate it.

?C:.

?H: `#$d_libm_lib_version LIBM_LIB_VERSION /**/`

?H:.

?T:foo

?F:!try

: check to see if `math.h` defines `_LIB_VERSION`

`d_libm_lib_version="$undef"`

`echo " "`

`echo "Checking to see if your libm supports _LIB_VERSION..." >&4`

`$cat >try.c <<EOCP`

`#include <unistd.h>`

`#include <math.h>`

`#include <stdio.h>`

`int main (int argc,`

`char *argv[])`

`{`

`printf ("%d\n", _LIB_VERSION);`

`return (0);`

`} /* main */`

`EOCP`

`set try`

`if eval $compile; then`

`foo=`$run ./try``

`echo "Yes, it does ($foo)" >&4`

`d_libm_lib_version="$define"`

`else`

`echo "No, it does not (probably harmless)" >&4`

`fi`

`$rm_try`

Found in path(s):

`* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_libm_lib_version.U`

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: `d_getgrent_r.U,v` 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the `reentr.pl` from the Perl 5.8 distribution.

?RCS:

?MAKE:`d_getgrent_r getgrent_r_proto: Inlibc Protochk Hasproto i_systypes \`  
`usethreads i_grp extern_C`

?MAKE: `-pick add $@ %<`



?S:d\_getgrent\_r:  
?S: This variable conditionally defines the HAS\_GETGRENTR symbol,  
?S: which indicates to the C program that the getgrent\_r()  
?S: routine is available.  
?S:.  
?S:getgrent\_r\_proto:  
?S: This variable encodes the prototype of getgrent\_r.  
?S: It is zero if d\_getgrent\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getgrent\_r  
?S: is defined.  
?S:.  
?C:HAS\_GETGRENTR:  
?C: This symbol, if defined, indicates that the getgrent\_r routine  
?C: is available to  
getgrent re-entrantly.  
?C:.  
?C:GETGRENTR\_PROTO:  
?C: This symbol encodes the prototype of getgrent\_r.  
?C: It is zero if d\_getgrent\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getgrent\_r  
?C: is defined.  
?C:.  
?H:#\$d\_getgrent\_r HAS\_GETGRENTR /\*\*/  
?H:#define GETGRENTR\_PROTO \$getgrent\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_getgrent\_r\_proto  
: see if getgrent\_r exists  
set getgrent\_r d\_getgrent\_r  
eval \$inlibc  
case "\$d\_getgrent\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_grp grp.h"  
case "\$d\_getgrent\_r\_proto:\$usetthreads" in  
":define") d\_getgrent\_r\_proto=define  
set d\_getgrent\_r\_proto getgrent\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_getgrent\_r\_proto" in  
define)  
case "\$getgrent\_r\_proto" in  
"|0) try='int getgrent\_r(struct group\*, char\*, size\_t, struct group\*\*);'  
./protochk "\$extern\_C \$try" \$hdrs && getgrent\_r\_proto=I\_SBWR ;;  
esac  
case "\$getgrent\_r\_proto" in  
"|0) try='int getgrent\_r(struct group\*, char\*, int, struct group\*\*);'  
./protochk

```

"$extern_C $try" $hdrs && getgrent_r_proto=I_SBIR ;;
esac
case "$getgrent_r_proto" in
"|0) try='struct group* getgrent_r(struct group*, char*, size_t);'
./prochk "$extern_C $try" $hdrs && getgrent_r_proto=S_SBW ;;
esac
case "$getgrent_r_proto" in
"|0) try='struct group* getgrent_r(struct group*, char*, int);'
./prochk "$extern_C $try" $hdrs && getgrent_r_proto=S_SBI ;;
esac
case "$getgrent_r_proto" in
"|0) try='int getgrent_r(struct group*, char*, int);'
./prochk "$extern_C $try" $hdrs && getgrent_r_proto=I_SBI ;;
esac
case "$getgrent_r_proto" in
"|0) try='int getgrent_r(struct group*, char*, int, FILE**);'
./prochk "$extern_C $try" $hdrs && getgrent_r_proto=I_SBIH ;;
esac
case "$getgrent_r_proto" in
"|0) d_getgrent_r=undef
getgrent_r_proto=0
echo "Disabling getgrent_r, cannot determine prototype." >&4 ;;
*) case "$getgrent_r_proto" in
REENTRANT_PROTO*) ;;
*) getgrent_r_proto="REENTRANT_PROTO_$getgrent_r_proto" ;;
esac
echo "Prototype:
$try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "getgrent_r has no prototype, not using it." >&4 ;;
esac
d_getgrent_r=undef
getgrent_r_proto=0
;;
esac
;;
*) getgrent_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_getgrent\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_fd\_set.U,v \$  
?RCS: Revision 3.0.1.3 1997/02/28 15:33:16 ram  
?RCS: patch61: added ?F: metalint hint  
?RCS:  
?RCS: Revision 3.0.1.2 1994/06/20 06:57:23 ram  
?RCS: patch30: extended scope for fd\_set checks (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/01/24 14:06:27 ram  
?RCS: patch16: comments for HAS\_FD\_\* symbols were not consistent  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:06:02 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_fd\_set d\_fd\_macros d\_fds\_bits: cat +cc +ccflags rm Oldconfig  
\  
d\_socket i\_systime i\_sysselect i\_syssock  
?MAKE: -pick add \$@ %<  
?S:d\_fd\_set:  
?S: This variable contains the eventual value of the HAS\_FD\_SET symbol,  
?S: which indicates if your C compiler knows about the fd\_set typedef.  
?S:.  
?S:d\_fd\_macros:  
?S: This variable contains the eventual value of the HAS\_FD\_MACROS symbol,  
?S: which indicates if your C compiler knows about the macros which  
?S: manipulate an fd\_set.  
?S:.  
?S:d\_fds\_bits:  
?S: This variable contains the eventual value of the HAS\_FDS\_BITS symbol,  
?S: which indicates if your fd\_set typedef contains the fds\_bits member.  
?S: If you have an fd\_set typedef, but the dweebs who installed it did  
?S: a half-fast job and neglected to provide the macros to manipulate  
?S: an fd\_set, HAS\_FDS\_BITS will let us know how to fix the gaffe.  
?S:.  
?C:HAS\_FD\_SET:  
?C: This symbol, when defined, indicates presence of the fd\_set typedef  
?C: in <sys/types.h>  
?C:.  
?C:HAS\_FD\_MACROS:  
?C: This symbol, when defined, indicates presence of the macros used

```

to
?C: manipulate an fd_set.
?C:.
?C:HAS_FDS_BITS:
?C: This symbol, when defined, indicates presence of the fds_bits member in
?C: fd_set. This knowledge is useful if fd_set is available but the macros
?C: aren't.
?C:.
?H:#$d_fd_set HAS_FD_SET /**/
?H:#$d_fd_macros HAS_FD_MACROS /**/
?H:#$d_fds_bits HAS_FDS_BITS /**/
?H:.
?F:!fd_set
: check for fd_set items
$cat <<EOM

```

Checking to see how well your C compiler handles fd\_set and friends ...

EOM

?X: The FD\_SET macros can be in strange places. On some SysV-based

?X: systems, they are in <sys/bsdtypes.h>, which is included (perhaps)

?X: by <sys/socket.h>. We won't force people to include

?X: <sys/bsdtypes.h> because it might introduce other

?X: incompatibilities.

```
$cat >fd_set.c <<EOCP
```

```
#$i_systime I_SYS_TIME
```

```
#$i_sysselect I_SYS_SELECT
```

```
#$d_socket HAS_SOCKET
```

```
#$i_syssock I_SYS_SOCKET
```

```
#include <sys/types.h>
```

```
#ifdef HAS_SOCKET
```

```
#ifdef I_SYS_SOCKET
```

```
#include <sys/socket.h> /* Might include <sys/bsdtypes.h> */
```

```
#endif
```

```
#endif
```

```
#ifdef I_SYS_TIME
```

```
#include
```

```
<sys/time.h>
```

```
#endif
```

```
#ifdef I_SYS_SELECT
```

```
#include <sys/select.h>
```

```
#endif
```

```
int main() {
```

```
fd_set fds;
```

```
#ifdef TRYBITS
```

```
if(fds.fds_bits);
```

```
#endif
```

```

#if defined(FD_SET) && defined(FD_CLR) && defined(FD_ISSET) && defined(FD_ZERO)
    exit(0);
#else
    exit(1);
#endif
}
EOCP
if $cc $ccflags -DTRYBITS -o fd_set fd_set.c >fd_set.out 2>&1 ; then
    d_fds_bits="$define"
    d_fd_set="$define"
    echo "Well, your system knows about the normal fd_set typedef..." >&4
    if ./fd_set; then
        echo "and you have the normal fd_set macros (just as I'd expect)." >&4
        d_fd_macros="$define"
    else
        $cat >&4 <<'EOM'
but not the normal fd_set macros! Gaaack! I'll have to cover for you.
EOM
        d_fd_macros="$undef"
    fi
else
    $cat <<'EOM'
Hmm, your compiler has some difficulty with fd_set. Checking further...
EOM
if $cc $ccflags -o fd_set fd_set.c >fd_set.out 2>&1 ; then
    d_fds_bits="$undef"
    d_fd_set="$define"
    echo "Well, your system has some sort of fd_set available..." >&4
    if ./fd_set; then
        echo "and you have the
normal fd_set macros." >&4
        d_fd_macros="$define"
    else
        $cat <<'EOM'
but not the normal fd_set macros! Gross! More work for me...
EOM
        d_fd_macros="$undef"
    fi
else
    echo "Well, you got zip. That's OK, I can roll my own fd_set stuff." >&4
    d_fd_set="$undef"
    d_fds_bits="$undef"
    d_fd_macros="$undef"
fi
fi
$rm -f fd_set*

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_fd_set.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_getgrgid_r.U,v 0RCS:
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
?RCS:
?MAKE:d_getgrgid_r getgrgid_r_proto: Inlibc Protochk Hasproto i_systypes \
  usethreads i_grp extern_C
?MAKE:-pick add $@ %<
?S:d_getgrgid_r:
?S: This variable conditionally defines the HAS_GETGRGID_R symbol,
?S: which indicates to the C program that the getgrgid_r()
?S: routine is available.
?S:.
?S:getgrgid_r_proto:
?S: This variable encodes the prototype of getgrgid_r.
?S: It is zero if d_getgrgid_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getgrgid_r
?S: is defined.
?S:.
?C:HAS_GETGRGID_R:
?C: This symbol, if defined, indicates that the getgrgid_r routine
?C: is available to
  getgrgid re-entrantly.
?C:.
?C:GETGRGID_R_PROTO:
?C: This symbol encodes the prototype of getgrgid_r.
?C: It is zero if d_getgrgid_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getgrgid_r
?C: is defined.
?C:.
?H:#$d_getgrgid_r HAS_GETGRGID_R /**/
?H:#define GETGRGID_R_PROTO $getgrgid_r_proto /**/
?H:.
?T:try hdrs d_getgrgid_r_proto
: see if getgrgid_r exists
set getgrgid_r d_getgrgid_r
eval $inlibc
case "$d_getgrgid_r" in
"$define")
  hdrs="$i_systypes sys/types.h define stdio.h $i_grp grp.h"
  case "$d_getgrgid_r_proto:$usethreads" in
```

```

":define") d_getgrgid_r_proto=define
set d_getgrgid_r_proto getgrgid_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getgrgid_r_proto" in
define)
case "$getgrgid_r_proto" in
"|0) try='int getgrgid_r(gid_t, struct group*, char*, size_t, struct group**);'
./protochk "$extern_C $try" $hdrs && getgrgid_r_proto=I_TSBWR ;;
esac
case "$getgrgid_r_proto" in
"|0) try='int getgrgid_r(gid_t, struct group*, char*, int, struct
group**);'
./protochk "$extern_C $try" $hdrs && getgrgid_r_proto=I_TSBIR ;;
esac
case "$getgrgid_r_proto" in
"|0) try='int getgrgid_r(gid_t, struct group*, char*, int);'
./protochk "$extern_C $try" $hdrs && getgrgid_r_proto=I_TSBI ;;
esac
case "$getgrgid_r_proto" in
"|0) try='struct group* getgrgid_r(gid_t, struct group*, char*, int);'
./protochk "$extern_C $try" $hdrs && getgrgid_r_proto=S_TSBI ;;
esac
case "$getgrgid_r_proto" in
"|0) d_getgrgid_r=undef
getgrgid_r_proto=0
echo "Disabling getgrgid_r, cannot determine prototype." >&4 ;;
*) case "$getgrgid_r_proto" in
REENTRANT_PROTO*) ;;
*) getgrgid_r_proto="REENTRANT_PROTO_$getgrgid_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susethreads" in
define) echo "getgrgid_r has no prototype, not using it." >&4 ;;
esac
d_getgrgid_r=undef
getgrgid_r_proto=0
;;
esac
;;
*) getgrgid_r_proto=0
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_getgrgid_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_strxfrm.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_strxfrm.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:12:04 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:d_strxfrm: Inlibc
?MAKE: -pick add $@ %<
?S:d_strxfrm:
?S: This variable conditionally defines HAS_STRXFRM if strxfrm() is
?S: available to transform strings.
?S:.
?C:HAS_STRXFRM:
?C: This symbol, if defined, indicates that the strxfrm() routine is
?C: available to transform
?C: strings.
?C:.
?H:#$d_strxfrm HAS_STRXFRM /**/
?H:.
?LINT:set d_strxfrm
: see if strxfrm exists
set strxfrm d_strxfrm
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_strxfrm.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: vendorman1dir.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera $
?RCS:
?RCS: Copyright (c) 1999, Andy Dougherty
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
```



?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: vendorman1dir.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?MAKE:vendorman1dir vendorman1direxp installvendorman1dir: man1dir Getfile \

Oldconfig Setprefixvar Prefixit test vendorprefix prefix sed

?MAKE: -pick add \$@ %<

?Y:TOP

?S:vendorman1dir:

?S: This variable contains the name of the directory for man1

?S: pages. It may have a ~ on the front.

?S: The standard distribution will put nothing in this directory.

?S: Vendors

who distribute perl may wish to place their own

?S: man1 pages in this directory with

?S: MakeMaker Makefile.PL INSTALLDIRS=vendor

?S: or equivalent. See INSTALL for details.

?S:.

?S:vendorman1direxp:

?S: This variable is the ~name expanded version of vendorman1dir, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?D:installvendorman1dir="

?S:installvendorman1dir:

?S: This variable is really the same as vendorman1direxp but may differ on

?S: those systems using AFS. For extra portability, only this variable

?S: should be used in makefiles.

?S:.

?LINT:change prefixvar

?LINT:set installvendorman1dir

: Set the vendorman1dir variables

case "\$vendorprefix" in

) vendorman1dir="

vendorman1direxp="

;;

\*) : determine where vendor-supplied manual pages go.

case "\$vendorman1dir" in

) dflt=`echo "\$man1dir" | \$sed "s#^\$prefix#\$vendorprefix#"` ;;

\*) dflt=\$vendorman1dir ;;

esac

case "\$dflt" in

"|" ) dflt=none ;;

esac

```
fn=nd~+
rp='Pathname for
the vendor-supplied manual section 1 pages?'
./getfile
vendorman1dir="$ans"
vendorman1direxp="$ansexp"
;;
esac
: Use ' ' for none so value is preserved next time through Configure
$test X"$vendorman1dir" = "X" && vendorman1dir=' '
prefixvar=vendorman1dir
./installprefix
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/vendorman1dir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fma: Inlibc

?MAKE:-pick add \$@ %<

?S:d\_fma:

?S: This variable conditionally defines the HAS\_FMA symbol, which

?S: indicates to the C program that the fma() routine is available.

?S:.

?C:HAS\_FMA:

?C: This symbol, if defined, indicates that the fma routine is

?C: available to do the multiply-add function.

?C:.

?H:#\$d\_fma HAS\_FMA /\*\*/

?H:.

?LINT:set d\_fma

: see if fma exists

set fma d\_fma

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_fma.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Finish.U,v \$

?RCS: Revision 3.0.1.6 1995/02/15 14:09:30 ram

?RCS: patch51: now clearer about how to edit config.sh at the prompt (WED)

?RCS:

?RCS: Revision 3.0.1.5 1994/10/29 15:53:14 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0.1.4 1994/05/06 14:19:37 ram

?RCS: patch23: added blank lines around 'End of Configure'

?RCS:

?RCS: Revision 3.0.1.3 1993/10/16 13:46:09 ram

?RCS: patch12: replaced Config\_h by Magic\_h in the dependency line

?RCS:

?RCS:

Revision 3.0.1.2 1993/09/13 15:45:26 ram

?RCS: patch10: fixed shell evaluation w/o shell escape while in silent mode

?RCS:

?RCS: Revision 3.0.1.1 1993/08/30 08:55:59 ram

?RCS: patch8: prevents myread from blocking on empty answers, exceptionally

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:55 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit is the very last one in the Configure script. It runs all the

?X: SH files, which among other things produce config.h and (usually) Makefile.

?X: It offers to do a make depend if the Makefile contains that target.

?X:

?MAKE:Finish: Chk\_MANI Extract Myread Oldsym Magic\_h cat rm contains \  
test package make

?MAKE: -pick add \$@ %<

?F:!config.sh

?T:pwd

: Finish up by extracting the .SH files

case "\$alldone" in

exit)

?X: They supplied the -E switch

echo "Stopping at your request, leaving temporary files around."

exit 0

::

cont)

::

")

```
dflt="
nostick=true
$cat <<EOM
```

If you'd like to make any changes to the config.sh file before I begin to configure things, do it as a shell escape now (e.g. !vi config.sh).

```
EOM
rp="Press return or use a shell escape to edit config.sh:"
. UU/myread
nostick="
case "$ans" in
") ;;
*) : in case they cannot read
sh 1>&4 -c "$ans";;
esac
;;
esac
```

: if this fails, just run all the .SH files by hand  
./config.sh

```
?X:
?X: Turn silent mode off from now on (we want a verbose file extraction).
?X: This means we have to explicitly test for '$silent' from now on to
?X: strip off any verbose messages.
?X:
echo " "
exec 1>&4
pwd=`pwd`
. ./UU/extract
cd "$pwd"
```

```
if $contains '^depend:' [Mm]akefile >/dev/null 2>&1; then
dflt=y
case "$silent" in
true) ;;
*)
$cat <<EOM
```

Now you need to generate make dependencies by running "\$make depend". You might prefer to run it in background: "\$make depend > makedepend.out &" It can take a while, so you might not want to run it right now.

```
EOM
;;
esac
```

```

rp="Run $make depend now?"
. UU/myread
case "$ans" in
y*)
$make depend
&& echo "Now you must run '$make'."
;;
*)
echo "You must run '$make depend' then '$make'."
;;
esac
elif test -f [Mm]akefile; then
echo " "
echo "Now you must run a $make."
else
echo "Configure done."
fi

```

```

if $test -f Policy.sh; then
$cat <<EOM

```

If you compile \$package on a different machine or from a different object directory, copy the Policy.sh file from this object directory to the new one before you run Configure -- this will help you with most of the policy defaults.

```

EOM
fi
if $test -f UU/config.msg; then
echo "Hmm. I also noted the following information while running:"
echo " "
$cat UU/config.msg >&4

```

```

fi
?X:
?X: kit*isdone files are left over by shell archives built using the makedist
?X: script which comes from dist, while ark*isdone files are left over by
?X: the cshar archive maker.
?X:
$rm -f kit*isdone ark*isdone
$rm -rf UU

```

: End of Configure

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Finish.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: vendorprefix.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera $
?RCS:
?RCS: Copyright (c) 1999 Andy Dougherty
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: vendorprefix.U,v $
?RCS: Revision 1.1 1999/07/08 18:32:57 doughera
?RCS: Initial revision
?RCS:
?MAKE:usevendorprefix vendorprefix vendorprefixexp +oldvendorprefix: \
  Getfile Loc Oldconfig cat prefix Myread
?MAKE: -pick add $@ %<
?S:usevendorprefix:
?S: This variable tells whether the vendorprefix
?S: and consequently other vendor* paths are in use.
?S:.
?S:vendorprefix:
?S: This variable holds the full absolute path of the directory below
?S: which
  the vendor will install add-on packages.
?S: See INSTALL for usage and examples.
?S:.
?S:vendorprefixexp:
?S: This variable holds the full absolute path of the directory below
?S: which the vendor will install add-on packages. Derived from vendorprefix.
?S:.
?S:oldvendorprefix:
?S: This variable is set non-null if the vendorprefix was previously defined
?S: and gets set to a new value. Used internally by Configure only.
?S:.
: Set the vendorprefix variables
$cat <<EOM

```

The installation process will also create a directory for vendor-supplied add-ons. Vendors who supply perl with their system may find it convenient to place all vendor-supplied files in this directory rather than in the main distribution directory. This will ease upgrades between binary-compatible maintenance versions of perl.

Of course you may also use these directories in whatever way you see fit. For example, you might use them to access modules shared over a company-wide network.

The default answer should be

fine for most people.

This causes further questions about vendor add-ons to be skipped and no vendor-specific directories will be configured for perl.

EOM

```
rp='Do you want to configure vendor-specific add-on directories?'
case "$usevendorprefix" in
define|true|[yY]*) dflt=y ;;
*) : User may have set vendorprefix directly on Configure command line.
case "$vendorprefix" in
'| ') dflt=n ;;
*) dflt=y ;;
esac
;;
esac
./myread
case "$sans" in
[yY]*) fn=d~+
rp='Installation prefix to use for vendor-supplied add-ons?'
case "$vendorprefix" in
") dflt="$prefix" ;;
*) dflt=$vendorprefix ;;
esac
./getfile
: XXX Prefixit unit does not yet support siteprefix and vendorprefix
oldvendorprefix="
case "$vendorprefix" in
") ;;
*) case "$sans" in
"$prefix" ) ;;
*) oldvendorprefix="$prefix";;
esac
;;
esac
usevendorprefix="$define"
vendorprefix="$sans"
vendorprefixexp="$sansexp"
;;
*) usevendorprefix="$undef"
vendorprefix="
vendorprefixexp="
;;
esac
```

Found in path(s):

\*

/opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/vendorprefix.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_ndbm.U,v \$

?RCS: Revision 3.0.1.1 1995/05/12 12:16:53 ram

?RCS: patch54: made more robust by checking both header and lib (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:23 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_ndbm: Inhdr Inlibc Setvar

?MAKE: -pick add @\$@ %<

?S:i\_ndbm (d\_ndbm):

?S: This variable conditionally defines the I\_NDBM symbol, which

?S: indicates to the C program that <ndbm.h> exists and should

?S: be included.

?S:.

?C:I\_NDBM (HAS\_NDBM NDBM):

?C: This

symbol, if defined, indicates that <ndbm.h> exists and should

?C: be included.

?C:.

?H:#\$i\_ndbm I\_NDBM /\*\*/

?H:.

?T:t\_ndbm d\_dbm\_open

?LINT:set i\_ndbm

: see if ndbm.h is available

?X: t\_ndbm is a tentative check. We might just have the .h, not the lib -- ADO

set ndbm.h t\_ndbm

eval \$inhdr

case "\$t\_ndbm" in

\$define)

: see if dbm\_open exists

set dbm\_open d\_dbm\_open

eval \$inlibc

case "\$d\_dbm\_open" in

\$undef)



```

t_ndbm="$undef"
echo "We won't be including <ndbm.h>"
;;
esac
;;
esac
val="$t_ndbm"
set i_ndbm
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_ndbm.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_gethostprotos.U,v \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_gethostprotos : Hasproto i\_netdb

?MAKE: -pick add \$@ %<

?S:d\_gethostprotos:

?S: This variable conditionally defines the HAS\_GETHOST\_PROTOS symbol,

?S: which indicates to the C program that <netdb.h> supplies

?S: prototypes for the various gethost\*() functions.

?S: See also netdbtype.U for probing for various netdb types.

?S:.

?C:HAS\_GETHOST\_PROTOS:

?C: This symbol, if defined, indicates that <netdb.h> includes

?C: prototypes for gethostent(), gethostbyname(), and

?C: gethostbyaddr(). Otherwise,

it is up to the program to guess

?C: them. See netdbtype.U for probing for various Netdb\_xxx\_t types.

?C:.

?H:#\$d\_gethostprotos HAS\_GETHOST\_PROTOS /\*\*/

?H:.

?LINT:set d\_gethostprotos

?X: This test actually only checks for gethostent() and assumes the

?X: others follow suit. This test fails for ChorusOS, which has

?X: gethostbyname and gethostbyaddr, but not gethostent.

: see if prototypes for various gethostxxx netdb.h functions are available

echo " "

```
set d_gethostprotos gethostent $i_netdb netdb.h
eval $hasproto
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/protos/d_gethostprotos.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_union\_semun.U,v \$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: d\_union\_semun.U,v \$

?RCS:

?MAKE:d\_union\_semun d\_semctl\_semun d\_semctl\_semid\_ds: Compile Setvar Myread run \  
cat rm\_try d\_sem

?MAKE: -pick add \$@ %<

?S:d\_union\_semun:

?S: This variable conditionally defines HAS\_UNION\_SEMUN if the

?S: union semun is defined by including <sys/sem.h>.

?S:.

?S:d\_semctl\_semun:

?S: This variable conditionally defines USE\_SEMCTL\_SEMUN, which

?S: indicates that union semun is to be used for semctl IPC\_STAT.

?S:.

?S:d\_semctl\_semid\_ds:

?S: This variable conditionally defines USE\_SEMCTL\_SEMID\_DS, which

?S: indicates that struct semid\_ds \* is to be used for semctl IPC\_STAT.

?S:.

?C:HAS\_UNION\_SEMUN:

?C: This symbol, if defined, indicates that the union semun  
is

?C: defined by including <sys/sem.h>. If not, the user code

?C: probably needs to define it as:

```
?C: union semun {
```

```
?C:   int val;
```

```
?C:   struct semid_ds *buf;
```

```
?C:   unsigned short *array;
```

```
?C: }
```

?C:.

?C:USE\_SEMCTL\_SEMUN:

?C: This symbol, if defined, indicates that union semun is

?C: used for semctl IPC\_STAT.

?C:.

?C:USE\_SEMCTL\_SEMID\_DS:

?C: This symbol, if defined, indicates that struct semid\_ds \* is

?C: used for semctl IPC\_STAT.

?C:.

?H:#\$d\_union\_semun HAS\_UNION\_SEMUN /\*\*/

?H:#\$d\_semctl\_semun USE\_SEMCTL\_SEMUN /\*\*/

?H:#\$d\_semctl\_semid\_ds USE\_SEMCTL\_SEMID\_DS /\*\*/

?H:.

?T:xxx also

?F:!try !tryh.h

?LINT: set d\_union\_semun d\_semctl\_semun d\_semctl\_semid\_ds

: see whether sys/sem.h defines union semun

echo " "

\$cat > try.c <<'END'

#include <sys/types.h>

#include <sys/ipc.h>

#include <sys/sem.h>

int main () { union semun semun; semun.buf = 0; }

END

set try

if eval \$compile; then

    echo "You have union semun in <sys/sem.h>." >&4

    val="\$define"

else

    echo "You do not have union

semun in <sys/sem.h>." >&4

    val="\$undef"

fi

\$rm\_try

set d\_union\_semun

eval \$setvar

: see how to do semctl IPC\_STAT

case "\$d\_sem" in

\$define)

    echo " "

?X: use tryh.h instead of try.h because \$rm\_try cleans up try.\*

    \$cat > tryh.h <<END

#ifndef S\_IRUSR

#  ifdef S\_IREAD

#  define S\_IRUSR S\_IREAD

#  define S\_IWUSR S\_IWRITE

#  define S\_IXUSR S\_IEXEC

#  else

#  define S\_IRUSR 0400

#  define S\_IWUSR 0200

#  define S\_IXUSR 0100

#  endif

#  define S\_IRGRP (S\_IRUSR>>3)

```

# define S_IWGRP (S_IWUSR>>3)
# define S_IXGRP (S_IXUSR>>3)
# define S_IROTH (S_IRUSR>>6)
# define S_IWOTH (S_IWUSR>>6)
# define S_IXOTH (S_IXUSR>>6)
#endif
#ifndef S_IRWXU
# define S_IRWXU (S_IRUSR|S_IWUSR|S_IXUSR)
# define S_IRWXG (S_IRGRP|S_IWGRP|S_IXGRP)
# define S_IRWXO (S_IROTH|S_IWOTH|S_IXOTH)
#endif
END
: see whether semctl IPC_STAT can use union semun
case "$d_semctl_semun" in
")
    val="$undef"
    $cat > try.c <<END
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/sem.h>
#include
<sys/stat.h>
#include <stdio.h>
#include <errno.h>
#include "tryh.h"
#ifndef errno
extern int errno;
#endif
#$d_union_semun HAS_UNION_SEMUN
int main() {
    union semun
#ifndef HAS_UNION_SEMUN
    {
    int val;
    struct semid_ds *buf;
    unsigned short *array;
    }
#endif
    arg;
    int sem, st;

#if defined(IPC_PRIVATE) && defined(S_IRWXU) && defined(S_IRWXG) && defined(S_IRWXO) &&
defined(IPC_CREAT)
    sem = semget(IPC_PRIVATE, 1, S_IRWXU|S_IRWXG|S_IRWXO|IPC_CREAT);
    if (sem > -1) {
    struct semid_ds argbuf;
    arg.buf = &argbuf;
# ifdef IPC_STAT

```

```

st = semctl(sem, 0, IPC_STAT, arg);
if (st == 0)
    printf("semun\n");
else
# endif /* IPC_STAT */
    printf("semctl IPC_STAT failed: errno = %d\n", errno);
# ifdef IPC_RMID
if (semctl(sem, 0, IPC_RMID, arg) != 0)
# endif /* IPC_RMID */
    printf("semctl IPC_RMID failed: errno = %d\n", errno);
    } else
#endif /* IPC_PRIVATE && ... */
printf("semget failed: errno = %d\n", errno);
return 0;
}
END

set try

if eval $compile; then
xxx=`$run ./try`
    case "$xxx" in
        semun) val="$define" ;;
    esac
fi
$rm_try
set d_semctl_semun
eval $setvar
;;
esac
case "$d_semctl_semun" in
$define)
    echo "You can use union semun for semctl IPC_STAT." >&4
also='also'
    ;;
*) echo "You cannot use union semun for semctl IPC_STAT." >&4
also=""
    ;;
esac

: see whether semctl IPC_STAT can use struct semid_ds pointer
case "$d_semctl_semid_ds" in
")
    val="$undef"
    $cat > try.c <<'END'
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/sem.h>
#include <sys/stat.h>

```

```

#include "tryh.h"
#include <stdio.h>
#include <errno.h>
#ifndef errno
extern int errno;
#endif
int main() {
    union semun
#ifdef HAS_UNION_SEMUN
    {
    int val;
    struct semid_ds *buf;
    unsigned short *array;
    }
#endif
    arg;
    struct semid_ds argbuf;
    int sem, st;

#ifdef IPC_PRIVATE && defined(S_IRWXU) &&
defined(S_IRWXG) && defined(S_IRWXO) && defined(IPC_CREAT)
    sem = semget(IPC_PRIVATE, 1, S_IRWXU|S_IRWXG|S_IRWXO|IPC_CREAT);
    if (sem > -1) {
        arg.buf = &argbuf;
#ifdef IPC_STAT
        st = semctl(sem, 0, IPC_STAT, arg);
        if (st == 0)
            printf("semid_ds\n");
        else
#ifdef IPC_STAT */
            printf("semctl IPC_STAT failed: errno = %d\n", errno);
#ifdef IPC_RMID
        if (semctl(sem, 0, IPC_RMID, arg) != 0)
#ifdef IPC_RMID */
            printf("semctl IPC_RMID failed: errno = %d\n", errno);
        } else
#ifdef IPC_PRIVATE && ... */
        printf("semget failed: errno = %d\n", errno);

        return 0;
    }
END
    set try
    if eval $compile; then
        xxx=`$run ./try`
        case "$xxx" in
            semid_ds) val="$define" ;;
        esac

```

```

fi
$rm_try
set d_semctl_semids
eval $setvar
;;
esac
case "$d_semctl_semids" in
$define)
    echo "You can $also use struct semids* for semctl IPC_STAT." >&4
    ;;
*) echo "You cannot use
struct semids* for semctl IPC_STAT." >&4
    ;;
esac
;;
*) val="$undef"

```

```

# We do not have the full sem*(2) library, so assume we can not
# use either.

```

```

set d_semctl_semun
eval $setvar

set d_semctl_semids
eval $setvar
;;
esac
$rm_try tryh.h

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/modified/d_union_semun.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_longdbl.U,v $
?RCS:
?RCS: Copyright (c) 1998 Andy Dougherty
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: d_longdbl.U,v $
?RCS:
?MAKE:d_longdbl longdblsize d_ldexpl longdblkind \
d_long_double_style_ieee d_long_double_style_ieee_doubledouble \
d_long_double_style_ieee_extended d_long_double_style_ieee_std \
d_long_double_style_vax: Compile Setvar Myread \
Inlibc run echo cat rm_try test doublesize i_stdlib

```

?MAKE: -pick add \$@ %<

?S:d\_longdbl:

?S: This variable conditionally defines HAS\_LONG\_DOUBLE if

?S: the long double type is supported.

?S:.

?S:d\_ldexpl:

?S: This variable conditionally defines the HAS\_LDEXPL symbol, which

?S: indicates to the C program that the ldexpl() routine is available.

?S:.

?S:longdblsize:

?S: This variable contains the value of the LONG\_DOUBLESIZE symbol,

which

?S: indicates to the C program how many bytes there are in a long double,

?S: if this system supports long doubles. Note that this is

?S: sizeof(long double), which may include unused bytes.

?S:.

?S:longdblkind:

?S: This variable, if defined, encodes the type of a long double:

?S: 0 = double,

?S: 1 = IEEE 754 128-bit little endian,

?S: 2 = IEEE 754 128-bit big endian,

?S: 3 = x86 80-bit little endian,

?S: 4 = x86 80-bit big endian,

?S: 5 = double-double 128-bit little endian,

?S: 6 = double-double 128-bit big endian,

?S: 7 = 128-bit mixed-endian double-double (64-bit LEs in BE),

?S: 8 = 128-bit mixed-endian double-double (64-bit BEs in LE),

?S: 9 = 128-bit PDP-style mixed-endian long doubles,

?S: -1 = unknown format.

?S:.

?S:d\_long\_double\_style\_ieee:

?S: This variable conditionally defines LONG\_DOUBLE\_STYLE\_IEEE

?S: if the long double is any of the IEEE 754 style long doubles:

?S: LONG\_DOUBLE\_STYLE\_IEEE\_STD, LONG\_DOUBLE\_STYLE\_IEEE\_EXTENDED,

?S: LONG\_DOUBLE\_STYLE\_IEEE\_DOUBLEDDOUBLE.

?S:.

?S:d\_long\_double\_style\_ieee\_doubledouble:

?S: This

variable conditionally defines LONG\_DOUBLE\_STYLE\_IEEE\_DOUBLEDDOUBLE

?S: if the long double is the 128-bit IEEE 754 double-double.

?S:.

?S:d\_long\_double\_style\_ieee\_extended:

?S: This variable conditionally defines LONG\_DOUBLE\_STYLE\_IEEE\_EXTENDED

?S: if the long double is the 80-bit IEEE 754 extended precision.

?S: Note that despite the 'extended' this is less than the 'std',

?S: since this is an extension of the double precision.

?S:.

?S:d\_long\_double\_style\_ieee\_std:



?S: This variable conditionally defines LONG\_DOUBLE\_STYLE\_IEEE\_STD

?S: if the long double is the 128-bit IEEE 754.

?S:.

?S:d\_long\_double\_style\_vax:

?S: This variable conditionally defines LONG\_DOUBLE\_STYLE\_VAX

?S: if the long double is the 128-bit VAX format H.

?S:.

?C:HAS\_LONG\_DOUBLE:

?C: This symbol will be defined if the C compiler supports long

?C: doubles.

?C:.

?C:LONG\_DOUBLESIZE:

?C: This symbol contains the size of a long double, so that the

?C: C

preprocessor can make decisions based on it. It is only

?C: defined if the system supports long doubles. Note that this

?C: is sizeof(long double), which may include unused bytes.

?C:.

?C:HAS\_LDEXPL:

?C: This symbol, if defined, indicates that the ldexpl routine is

?C: available to shift a long double floating-point number

?C: by an integral power of 2.

?C:.

?C:LONG\_DOUBLEKIND:

?C: LONG\_DOUBLEKIND will be one of

?C: LONG\_DOUBLE\_IS\_DOUBLE

?C: LONG\_DOUBLE\_IS\_IEEE\_754\_128\_BIT\_LITTLE\_ENDIAN

?C: LONG\_DOUBLE\_IS\_IEEE\_754\_128\_BIT\_BIG\_ENDIAN

?C: LONG\_DOUBLE\_IS\_X86\_80\_BIT\_LITTLE\_ENDIAN

?C: LONG\_DOUBLE\_IS\_X86\_80\_BIT\_BIG\_ENDIAN

?C: LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_LE\_LE

?C: LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_BE\_BE

?C: LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_LE\_BE

?C: LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_BE\_LE

?C: LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_LITTLE\_ENDIAN

?C: LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_BIG\_ENDIAN

?C: LONG\_DOUBLE\_IS\_VAX\_H\_FLOAT

?C: LONG\_DOUBLE\_IS\_UNKNOWN\_FORMAT

?C: It is only defined

if the system supports long doubles.

?C:.

?C:LONG\_DOUBLE\_STYLE\_IEEE:

?C: This symbol, if defined, indicates that the long double

?C: is any of the IEEE 754 style long doubles:

?C: LONG\_DOUBLE\_STYLE\_IEEE\_STD, LONG\_DOUBLE\_STYLE\_IEEE\_EXTENDED,

?C: LONG\_DOUBLE\_STYLE\_IEEE\_DOUBLEDDOUBLE.

?C:.

?C:LONG\_DOUBLE\_STYLE\_IEEE\_DOUBLEDDOUBLE:

?C: This symbol, if defined, indicates that the long double is  
?C: the 128-bit double-double.  
?C:.  
?C:LONG\_DOUBLE\_STYLE\_IEEE\_EXTENDED:  
?C: This symbol, if defined, indicates that the long double is  
?C: the 80-bit IEEE 754. Note that despite the 'extended' this  
?C: is less than the 'std', since this is an extension of  
?C: the double precision.  
?C:.  
?C:LONG\_DOUBLE\_STYLE\_IEEE\_STD:  
?C: This symbol, if defined, indicates that the long double is  
?C: the 128-bit IEEE 754.  
?C:.  
?C:LONG\_DOUBLE\_STYLE\_VAX:  
?C: This symbol, if defined, indicates that the long double is  
?C: the 128-bit VAX format H.  
?C:.  
?H:#\$d\_ldexpl HAS\_LDEXPL /\*\*/  
?H:#\$d\_longdbl HAS\_LONG\_DOUBLE /\*\*/  
?H:?LONG\_DOUBLESIZE:#ifdef  
HAS\_LONG\_DOUBLE  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLESIZE \$longdblsize /\*\*/  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLEKIND \$longdblkind /\*\*/  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_DOUBLE 0  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_IEEE\_754\_128\_BIT\_LITTLE\_ENDIAN 1  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_IEEE\_754\_128\_BIT\_BIG\_ENDIAN 2  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_X86\_80\_BIT\_LITTLE\_ENDIAN 3  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_X86\_80\_BIT\_BIG\_ENDIAN 4  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_LE\_LE 5  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_BE\_BE 6  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_LE\_BE 7  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_BE\_LE 8  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_VAX\_H\_FLOAT 9  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_UNKNOWN\_FORMAT -1  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_LITTLE\_ENDIAN  
LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_LE\_LE  
/\* back-compat \*/  
?H:?LONG\_DOUBLESIZE:#define LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_BIG\_ENDIAN  
LONG\_DOUBLE\_IS\_DOUBLEDDOUBLE\_128\_BIT\_BE\_BE /\* back-compat \*/  
?H:?LONG\_DOUBLESIZE:#\$d\_long\_double\_style\_ieee LONG\_DOUBLE\_STYLE\_IEEE  
?H:?LONG\_DOUBLESIZE:#\$d\_long\_double\_style\_ieee\_doubledouble  
LONG\_DOUBLE\_STYLE\_IEEE\_DOUBLEDDOUBLE  
?H:?LONG\_DOUBLESIZE:#\$d\_long\_double\_style\_ieee\_extended  
LONG\_DOUBLE\_STYLE\_IEEE\_EXTENDED  
?H:?LONG\_DOUBLESIZE:#\$d\_long\_double\_style\_ieee\_std LONG\_DOUBLE\_STYLE\_IEEE\_STD  
?H:?LONG\_DOUBLESIZE:#\$d\_long\_double\_style\_vax LONG\_DOUBLE\_STYLE\_VAX  
?H:?LONG\_DOUBLESIZE:#endif  
?H:.

```

?F:!try
?LINT:known LONG_DOUBLE_IS_DOUBLE LONG_DOUBLE_IS_IEEE_754_128_BIT_LITTLE_ENDIAN
?LINT:known LONG_DOUBLE_IS_IEEE_754_128_BIT_BIG_ENDIAN
LONG_DOUBLE_IS_X86_80_BIT_LITTLE_ENDIAN
?LINT:known LONG_DOUBLE_IS_X86_80_BIT_BIG_ENDIAN
LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_LITTLE_ENDIAN
?LINT:known LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_BIG_ENDIAN
LONG_DOUBLE_IS_UNKNOWN_FORMAT
?LINT:known
LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_LE_LE
?LINT:known LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_BE_BE
?LINT:known LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_LE_BE
?LINT:known LONG_DOUBLE_IS_DOUBLEDDOUBLE_128_BIT_BE_LE
?LINT:known LONG_DOUBLE_IS_VAX_H_FLOAT
?LINT:set d_longdbl
?LINT:set d_ldexpl
: check for long doubles
echo " " >&4
echo "Checking to see if you have long double..." >&4
echo 'int main() { long double x = 7.0; }' > try.c
set try
if eval $compile; then
    val="$define"
    echo "You have long double." >&4
else
    val="$undef"
    echo "You do not have long double." >&4
fi
$rm_try
set d_longdbl
eval $setvar

: see if ldexpl exists
set ldexpl d_ldexpl
eval $inlibc

@if LONG_DOUBLESIZE || longdblsize
: check for length of long double
?X: Check only if d_longdbl and if longdblsize is not already set.
case "${d_longdbl}${longdblsize}" in
$define)
    echo " " >&4
    echo "Checking to see how big your long doubles are..." >&4
    $cat >try.c <<'EOCP'
#include <stdio.h>
int main()
{
    printf("%d\n", sizeof(long

```

```

double));
}
EOCP
set try
?X: Don't use compile_ok because some compilers warn you that they have
?X: 'long double' as just 'double'.
set try
if eval $compile; then
longdblsize=`$run ./try`
echo "Your long doubles are $longdblsize bytes long." >&4
else
dflt='8'
echo " " >&4
echo "(I can't seem to compile the test program. Guessing...)" >&4
rp="What is the size of a long double (in bytes)?"
./myread
longdblsize="$ans"
fi
if $test "X$doublesize" = "X$longdblsize"; then
echo "That isn't any different from an ordinary double." >&4
echo "I'll keep your setting anyway, but you may see some" >&4
echo "harmless compilation warnings." >&4
fi
;;
esac
$rm_try
@end

```

```

$echo "Checking the kind of long doubles you have..." >&4
case "$d_longdbl" in
define)
$cat <<EOP >try.c
#$i_stdlib I_STDLIB
#define LONGDBLSIZE $longdblsize
#define DOUBLESIZE $doublesize
#include <float.h>
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <stdio.h>
static const long double
d = -0.1L;
int main() {
unsigned const char* b = (unsigned const char*)&d;
#if DOUBLESIZE == LONGDBLSIZE
printf("0\n"); /* if it floats like double */
exit(0);
#endif

```

```

#if (LDBL_MANT_DIG == 113 || FLT128_MANT_DIG == 113) && LONGDBLSIZE == 16
if (b[0] == 0x9A && b[1] == 0x99 && b[15] == 0xBF) {
    /* IEEE 754 128-bit little-endian */
    printf("1\n");
    exit(0);
}
if (b[0] == 0xBF && b[14] == 0x99 && b[15] == 0x9A) {
    /* IEEE 128-bit big-endian, e.g. solaris sparc */
    printf("2\n");
    exit(0);
}
#endif

/* For alignment 32-bit platforms have the 80 bits in 12 bytes,
 * while 64-bit platforms have it in 16 bytes. The trailing bytes
 * cannot be trusted. */
#if LDBL_MANT_DIG == 64 && (LONGDBLSIZE == 16 || LONGDBLSIZE == 12)
if (b[0] == 0xCD && b[9] == 0xBF) {
    /* x86 80-bit little-endian, sizeof 12 (ILP32, Solaris x86)
     * or 16 (LP64, Linux and OS X), 4 or 6 bytes of padding.
     * Also known as "extended precision". */
    printf("3\n");
    exit(0);
}
if (b[0] == 0xBF && b[9] == 0xCD) {
    /* Is there ever big-endian 80-bit, really?
     *
     * The Motorola 68881 had another "extended precision" format:
     * sign:1 exp:15 zero:16 integer:1 mantissa:63
     * for total of 96 bits of bytes. The zero bits were unused.
     * See "M68000 FAMILY PROGRAMMER'S REFERENCE MANUAL" for more details.
     * If it ever becomes relevant, this format should be allocated a
     * new doublekind code since it is quite different from the Intel x87.
     */
    printf("4\n");
    exit(0);
}
#endif

#if (LDBL_MANT_DIG == 106 || LDBL_MANT_DIG == 107) && LONGDBLSIZE == 16
/* software "double double", the 106 is 53+53.
 * but irix thinks it is 107. */
if (b[0] == 0x9A && b[7] == 0x3C && b[8] == 0x9A && b[15] == 0xBF) {
    /* double double 128-bit fully little-endian,
     * little-endian doubles in little-endian order,
     * 9a 99 99 99 99 99 59 3c 9a 99 99 99 99 99 b9 bf */
    printf("5\n");
    exit(0);
}
if (b[0] == 0xBF && b[7]

```

```

== 0x9A && b[8] == 0x3C && b[15] == 0x9A) {
    /* double double 128-bit fully big-endian,
     * big-endian doubles in big-endian order,
     * e.g. PPC/Power and MIPS:
     * bf b9 99 99 99 99 99 9a 3c 59 99 99 99 99 99 9a */
    printf("6\n");
    exit(0);
}
if (b[0] == 0x9A && b[7] == 0xBF && b[8] == 0x9A && b[15] == 0x3C) {
    /* double double 128-bit mixed endian.
     * little-endian doubles in big-endian order,
     * e.g. ppc64el,
     * 9a 99 99 99 99 99 b9 bf 9a 99 99 99 99 59 3c */
    printf("7\n");
    exit(0);
}
if (b[0] == 0x3C && b[7] == 0x9A && b[8] == 0xBF && b[15] == 0x9A) {
    /* double double 128-bit mixed endian,
     * big-endian doubles in little-endian order,
     * 3c 59 99 99 99 99 9a bf b9 99 99 99 99 9a */
    printf("8\n");
    exit(0);
}
#endif
/* We are largely making this up because it may well be
 * that the VAX format H was never made available to C,
 * only to Fortran. */
#if LONGDBLSIZE == 16 && defined(__vax__)
if (b[0]
== 0xFD && b[15] == 0x99) {
    /* VAX format H, PDP-11 mixed endian. */
    printf("9\n");
    exit(0);
}
#endif
printf("-1\n"); /* unknown */
exit(0);
}
EOP
set try
if eval $compile; then
    longdblkind=`$run ./try`
else
    longdblkind=-1
fi
;;
*) longdblkind=0 ;;
esac

```

```

case "$longdblkind" in
0) echo "Your long doubles are doubles." >&4 ;;
1) echo "You have IEEE 754 128-bit little endian long doubles." >&4 ;;
2) echo "You have IEEE 754 128-bit big endian long doubles." >&4 ;;
3) echo "You have x86 80-bit little endian long doubles." >&4 ;;
4) echo "You have x86 80-bit big endian long doubles." >&4 ;;
5) echo "You have 128-bit fully little-endian double-double long doubles (64-bit LEs in LE)." >&4 ;;
6) echo "You have 128-bit fully big-endian double-double long doubles (64-bit BEs in BE)." >&4 ;;
7) echo "You have 128-bit mixed-endian double-double long doubles (64-bit LEs in BE)." >&4 ;;
8) echo "You have 128-bit mixed-endian double-double long doubles (64-bit BEs in LE)." >&4
;;
9) echo "You have 128-bit PDP-style mixed-endian long doubles (VAX format H)." >&4 ;;
*) echo "Cannot figure out your long double." >&4 ;;
esac
d_long_double_style_ieee=$undef
d_long_double_style_ieee_std=$undef
d_long_double_style_ieee_extended=$undef
d_long_double_style_ieee_doubledouble=$undef
d_long_double_style_vax=$undef
case "$longdblkind" in
1|2|3|4|5|6|7|8) d_long_double_style_ieee=$define ;;
esac
case "$longdblkind" in
1|2) d_long_double_style_ieee_std=$define ;;
esac
case "$longdblkind" in
3|4) d_long_double_style_ieee_extended=$define ;;
esac
case "$longdblkind" in
5|6|7|8) d_long_double_style_ieee_doubledouble=$define ;;
esac
case "$longdblkind" in
9) d_long_double_style_vax=$define ;;
esac
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_longdbl.U
```

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?RCS:

?MAKE:d\_localeconv\_1: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_localeconv\_1:  
?S: This variable conditionally defines the HAS\_LOCALECONV\_L symbol, which  
?S: indicates to the C program that the localeconv\_1() routine is available.  
?S:.  
?C:HAS\_LOCALECONV\_L:  
?C: This symbol, if defined, indicates that the localeconv\_1 routine is  
?C: available to query certain information about a locale.  
?C:.  
?H:#\$d\_localeconv\_1 HAS\_LOCALECONV\_L /\*\*/  
?H:.  
?LINT:set d\_localeconv\_1  
: see if localeconv\_1 exists  
set localeconv\_1 d\_localeconv\_1  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_localeconv\_1.U

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:fflushNULL fflushall: Compile cat rm rm\_try test osname run to from \

Oldconfig Myread Setvar echo targethost \

d\_sysconf i\_unistd d\_stdio\_stream\_array stdio\_stream\_array i\_stdlib

?MAKE: -pick add \$@ %<

?S:fflushNULL:

?S: This symbol, if defined, tells that fflush(NULL) correctly

?S: flushes all pending stdio output without side effects. In

?S: particular, on some platforms calling fflush(NULL) \*still\*

?S: corrupts STDIN if it is a pipe.

?S:.

?S:fflushall:

?S: This symbol, if defined, tells that to flush

?S: all

pending stdio output one must loop through all

?S: the stdio file handles stored in an array and fflush them.

?S: Note that if fflushNULL is defined, fflushall will not



?S: even be probed for and will be left undefined.

?S:.

?C:FFLUSH\_NULL:

?C: This symbol, if defined, tells that fflush(NULL) correctly

?C: flushes all pending stdio output without side effects. In

?C: particular, on some platforms calling fflush(NULL) \*still\*

?C: corrupts STDIN if it is a pipe.

?C:.

?C:FFLUSH\_ALL:

?C: This symbol, if defined, tells that to flush

?C: all pending stdio output one must loop through all

?C: the stdio file handles stored in an array and fflush them.

?C: Note that if fflushNULL is defined, fflushall will not

?C: even be probed for and will be left undefined.

?C:.

?H:#\$fflushNULL FFLUSH\_NULL /\*\*/

?H:#\$fflushall FFLUSH\_ALL /\*\*/

?H:.

?T:output code

?F:!try.out !try !tryp

: Check how to flush

echo " "

\$cat >&4 <<EOM

Checking how to flush all pending stdio output...

EOM

# I only know how to find

the first 32 possibly open files on SunOS.

# See also hints/sunos\_4\_1.sh and util.c --AD

case "\$osname" in

sunos) \$echo '#define PERL\_FFLUSH\_ALL\_FOPEN\_MAX 32' > try.c ;;

esac

\$cat >>try.c <<EOCP

#include <stdio.h>

#\$i\_stdlib I\_STDLIB

#ifdef I\_STDLIB

#include <stdlib.h>

#endif

#\$i\_unistd I\_UNISTD

#ifdef I\_UNISTD

# include <unistd.h>

#endif

#\$d\_sysconf HAS\_SYSCONF

#\$d\_stdio\_stream\_array HAS\_STDIO\_STREAM\_ARRAY

#ifdef HAS\_STDIO\_STREAM\_ARRAY

# define STDIO\_STREAM\_ARRAY \$stdio\_stream\_array

#endif

int main() {

FILE\* p;

```

unlink("try.out");
p = fopen("try.out", "w");
#ifdef TRY_FPUTC
    fputc('x', p);
#else
# ifdef TRY_FPRINTF
    fprintf(p, "x");
# endif
#endif
#ifdef TRY_FFLUSH_NULL
    fflush(NULL);
#endif
#ifdef TRY_FFLUSH_ALL
    {
        long open_max = -1;
# ifdef PERL_FFLUSH_ALL_FOPEN_MAX
        open_max = PERL_FFLUSH_ALL_FOPEN_MAX;
# else
# if defined(HAS_SYSCONF) && defined(_SC_OPEN_MAX)
        open_max = sysconf(_SC_OPEN_MAX);
# else
#  ifdef FOPEN_MAX
        open_max = FOPEN_MAX;
#  else
#
#   ifdef OPEN_MAX
        open_max = OPEN_MAX;
#   else
#    ifdef _NFILE
        open_max = _NFILE;
#    endif
#  endif
#  endif
#  endif
# endif
# endif
# endif
# endif
# ifdef HAS_STDIO_STREAM_ARRAY
    if (open_max > 0) {
        long i;
        for (i = 0; i < open_max; i++)
            if (STDIO_STREAM_ARRAY[i]._file >= 0 &&
                STDIO_STREAM_ARRAY[i]._file < open_max &&
                STDIO_STREAM_ARRAY[i]._flag)
                fflush(&STDIO_STREAM_ARRAY[i]);
    }
}
# endif
#endif
_exit(42);

```

```

}
EOCP
: first we have to find out how _not_ to flush
$to try.c
if $test "X$fflushNULL" = X -o "X$fflushall" = X; then
    output="
    set try -DTRY_FPUTC
    if eval $compile; then
        $run ./try 2>/dev/null
        code="$?"
        $from try.out
        if $test ! -s try.out -a "X$code" = X42; then
output=-DTRY_FPUTC
        fi
        fi
    case "$output" in
    ")
        set try -DTRY_FPRINTF
        if eval $compile; then
            $run ./try 2>/dev/null
            code="$?"
            $from try.out
            if $test ! -s try.out -a "X$code" = X42; then
output=-DTRY_FPRINTF

                fi
                fi
        ;;
        esac
    fi
: check for fflush NULL behavior
case "$fflushNULL" in
") set try -DTRY_FFLUSH_NULL $output
if eval $compile; then
$run ./try 2>/dev/null
code="$?"
$from try.out
if $test -s try.out -a "X$code" = X42; then
    fflushNULL="$cat try.out`"
else
    if $test "X$code" != X42; then
        $cat >&4 <<EOM
(If this test failed, don't worry, we'll try another method shortly.)
EOM
        fi
        fi
        fi
$rm -f core try.core core.try.*

```

```
case "$fflushNULL" in
```

```
x) $cat >&4 <<EOM
```

Your fflush(NULL) works okay for output streams.

Let's see if it clobbers input pipes...

```
EOM
```

```
# As of mid-March 2000 all versions of Solaris appear to have a stdio
```

```
# bug that improperly flushes the input end of pipes. So we avoid the
```

```
# autoflush on fork/system/exec support for now. :(
```

```
$cat >tryp.c <<EOCP
```

```
#include <stdio.h>
```

```
int
```

```
main(int argc, char **argv)
```

```
{
```

```
    char buf[1024];
```

```
    int i;
```

```
    char *bp = buf;
```

```
    while (1) {
```

```
while ((i = getc(stdin)) != -1
```

```
    && (*bp++ = i) != '\n'
```

```
    && bp < &buf[1024])
```

```
/* DO NOTHING */;
```

```
*bp = '\0';
```

```
fprintf(stdout, "%s", buf);
```

```
fflush(NULL);
```

```
if (i == -1)
```

```
    return 0;
```

```
bp = buf;
```

```
}
```

```
}
```

```
EOCP
```

```
fflushNULL="$define"
```

```
set tryp
```

```
if eval $compile; then
```

```
    $rm -f tryp.out
```

```
    # Copy the .c file to the remote host ($to is an ssh-alike if targethost is set)
```

```
    if $test "X$targethost" != X; then
```

```
    $to tryp.c
```

```
    $to tryp
```

```
    $run "cat tryp.c | ./tryp " 2>/dev/null > tryp.out
```

```
    else
```

```
    $cat tryp.c | $run ./tryp 2>/dev/null > tryp.out
```

```
    fi
```

```
    if cmp tryp.c tryp.out >/dev/null 2>&1; then
```

```
        $cat >&4 <<EOM
```

fflush(NULL) seems to behave okay with input streams.

```
EOM
```

```
fflushNULL="$define"
```

```

else
$cat >&4 <<EOM
Ouch, fflush(NULL) clobbers input pipes! We will not use it.
EOM
fflushNULL="$undef"
fi
fi
$rm -f core tryp.c tryp.core core.tryp.*
;;
") $cat >&4 <<EOM
Your fflush(NULL) isn't working (contrary to ANSI C).
EOM
fflushNULL="$undef"
;;
*) $cat >&4 <<EOM
Cannot figure out whether
your fflush(NULL) works or not.
I'm assuming it doesn't (contrary to ANSI C).
EOM
fflushNULL="$undef"
;;
esac
;;
$define|true|[yY]*)
fflushNULL="$define"
;;
*)
fflushNULL="$undef"
;;
esac
: check explicit looping only if NULL did not work, and if the pipe
: bug does not show up on an explicit flush too
case "$fflushNULL" in
"$undef")
$cat >tryp.c <<EOCP
#include <stdio.h>
int
main(int argc, char **argv)
{
char buf[1024];
int i;
char *bp = buf;
while (1) {
while ((i = getc(stdin)) != -1
&& (*bp++ = i) != '\n'
&& bp < &buf[1024])
/* DO NOTHING */;
*bp = '\0';

```

```

fprintf(stdout, "%s", buf);
fflush(stdin);
if (i == -1)
    return 0;
bp = buf;
}
}
EOCP
set tryp
if eval $compile; then
    $rm -f tryp.out
    if $test "X$targethost" != X; then
        $to tryp.c
        $to tryp
        $run "cat tryp.c | ./tryp " 2>/dev/null > tryp.out
        else
        $cat tryp.c | $run ./tryp 2>/dev/null > tryp.out
        fi
        if cmp tryp.c tryp.out >/dev/null 2>&1;
        then
            $cat >&4 <<EOM

```

Good, at least fflush(stdin) seems to behave okay when stdin is a pipe.

EOM

```

: now check for fflushall behaviour
case "$fflushall" in
") set try -DTRY_FFLUSH_ALL $output
if eval $compile; then
    $cat >&4 <<EOM

```

(Now testing the other method--but note that this also may fail.)

EOM

```

$run ./try 2>/dev/null
code=$?
$from try.out
if $test -s try.out -a "X$code" = X42; then
    fflushall=""`$cat try.out` "
fi
fi
$rm_try
case "$fflushall" in
x) $cat >&4 <<EOM

```

Whew. Flushing explicitly all the stdio streams works.

EOM

```

fflushall="$define"
;;
") $cat >&4 <<EOM

```

Sigh. Flushing explicitly all the stdio streams doesn't work.

EOM

```

fflushall="$undef"

```

```
;;
*) $cat >&4 <<EOM
Cannot figure out whether flushing stdio streams explicitly works or not.
I'm assuming it doesn't.
```

```
EOM
    fflushall="$undef"
;;
esac
;;
"$define"|true[[yY]*)
    fflushall="$define"
;;
*)
    fflushall="$undef"
;;
esac
```

```
else
    $cat >&4 <<EOM
All is futile. Even fflush(stdin) clobbers input pipes!
```

```
EOM
    fflushall="$undef"
    fi
else
    fflushall="$undef"
    fi
$rm -f core tryp.c tryp.core core.tryp.*
;;
*) fflushall="$undef"
;;
esac
```

```
case "$fflushNULL$fflushall" in
undefundef)
    $cat <<EOM
```

```
OK, I give up. I cannot figure out how to flush pending stdio output.
We won't be flushing handles at all before fork/exec/popen.
```

```
EOM
;;
esac
$rm_try tryp
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/fflushall.U
```

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: uidtype.U,v \$  
?RCS: Revision 3.0.1.3 1994/08/29 16:33:25 ram  
?RCS: patch32: now uses new Typedef unit to compute type information  
?RCS:  
?RCS: Revision 3.0.1.2 1994/06/20 07:09:36 ram  
?RCS: patch30: comment for uidtype referred to the obsoleted symbol  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/13 15:28:27 ram  
?RCS: patch27: made conform to its gidtype.U companion  
?RCS: patch27: question now explicitly mentions getuid()  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:56 ram  
?RCS: Baseline for dist  
3.0 netwide release.  
?RCS:  
?MAKE:uidtype: Myread Typedef Findhdr  
?MAKE: -pick add \$@ %<  
?S:uidtype:  
?S: This variable defines Uid\_t to be something like uid\_t, int,  
?S: ushort, or whatever type is used to declare user ids in the kernel.  
?S:.  
?C:Uid\_t (UIDTYPE):  
?C: This symbol holds the type used to declare user ids in the kernel.  
?C: It can be int, ushort, uid\_t, etc... It may be necessary to include  
?C: <sys/types.h> to get any typedef'ed information.  
?C:.  
?H:#define Uid\_t \$uidtype /\* UID type \*/  
?H:.  
?T:xxx  
: see what type uids are declared as in the kernel  
set uid\_t uidtype xxx stdio.h sys/types.h  
eval \$typedef  
case "\$uidtype" in  
xxx)  
xxx=`./findhdr sys/user.h`  
set `grep '\_ruid;' "\$xxx" 2>/dev/null` unsigned short  
case \$1 in  
unsigned) dflt="\$1 \$2" ;;  
\*) dflt="\$1" ;;



```
esac
;;
*) dflt="$uidtype";;
esac
echo " "
rp="What is the type for user ids returned by getuid()?"
./myread
uidtype="$ans"
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/uidtype.U
```

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?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_portable.U,v \$

?RCS: Revision 3.0.1.2 1995/01/11 15:28:52 ram

?RCS: patch45: executable path stripping moved to the end in Config\_sh.U

?RCS:

?RCS: Revision 3.0.1.1 1993/12/15 08:21:17 ram

?RCS: patch15: did not strip variables properly when needed

?RCS: patch15: now also strips down variables from trylist

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:48 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: The Loc unit is wanted to get the definition of all the locating variables.

?X:

?MAKE:d\_portable:

```
cat Loc Myread Oldconfig
```

?MAKE: -pick add \$@ %<

?S:d\_portable:

?S: This variable conditionally defines the PORTABLE symbol, which

?S: indicates to the C program that it should not assume that it is

?S: running on the machine it was compiled on.

?S:.

?C:PORTABLE:

?C: This symbol, if defined, indicates to the C program that it should

```

?C: not assume that it is running on the machine it was compiled on.
?C: The program should be prepared to look up the host name, translate
?C: generic filenames, use PATH, etc.
?C:.
?H:#$d_portable PORTABLE /**/
?H:.
?D:d_portable="
: decide how portable to be
case "$d_portable" in
"$define") dflt=y;;
*) dflt=n;;
esac
$cat <<'EOH'

```

I can set things up so that your shell scripts and binaries are more portable, at what may be a noticable cost in performance. In particular, if you ask to be portable, the following happens:

- 1) Shell scripts will rely on the PATH variable rather than using the paths derived above.
- 2) ~username interpretations will be done at run time rather than by Configure.  
@if PHOSTNAME
- 3) The system name will be determined at run time, if at all possible.  
@end

```

EOH
rp="Do you expect to run these scripts and binaries on multiple machines?"
./myread
case "$ans" in
y*) d_portable="$define"
?X:
?X: Paths will be stripped down (/usr/bin/vi -> vi) in Config_sh.U if needed.
?X:
;;
*) d_portable="$undef" ;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_portable.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1999 Jarkko Hietaniemi
?RCS:

```

?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_getmntent: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_getmntent:  
?S: This variable conditionally defines the HAS\_GETMNTENT symbol, which  
?S: indicates to the C program that the getmntent() routine is available  
?S: to iterate through mounted files to get their mount info.  
?S:.  
?C:HAS\_GETMNTENT:  
?C: This symbol, if defined, indicates that the getmntent routine is  
?C: available to iterate through mounted file systems to get their info.  
?C:.  
?H:#\$d\_getmntent HAS\_GETMNTENT /\*\*/  
?H:.  
?LINT:set d\_getmntent  
: see if getmntent exists  
set getmntent d\_getmntent  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_getmntent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: afs.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: afs.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 15:23:06 ram  
?RCS: patch61: can now explicitly tell Configure whether AFS is running  
?RCS:  
?RCS: Revision 3.0.1.1 1993/08/24 12:24:43 ram  
?RCS: patch3: created  
?RCS:  
?MAKE:afs afsroot: test  
?MAKE: -pick add \$@ %<  
?S:afs:  
?S: This variable is set to 'true' if AFS (Andrew File System) is used  
?S: on the system, 'false' otherwise. It is possible to override this

?S: with a hint value or command line option,  
but you'd better know  
?S: what you are doing.  
?S:.  
?S:afsroot:  
?S: This variable is by default set to '/afs'. In the unlikely case  
?S: this is not the correct root, it is possible to override this with  
?S: a hint value or command line option. This will be used in subsequent  
?S: tests for AFSness in the configure and test process.  
?S:.

```
: allow them to override the AFS root
case "$afsroot" in
") afsroot=/afs ;;
*) afsroot=$afsroot ;;
esac
```

```
: is AFS running?
echo " "
case "$afs" in
$define|true) afs=true ;;
$undef|false) afs=false ;;
*) if $test -d $afsroot; then
    afs=true
    else
    afs=false
    fi
;;
esac
if $afs; then
    echo "AFS may be running... I'll be extra cautious then..." >&4
else
    echo "AFS does not seem to be running..." >&4
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/afs.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: sunscanf.U,v 3.0 1993/08/18 12:09:54 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

```

?RCS:
?RCS: $Log: sunscanf.U,v $
?RCS: Revision 3.0 1993/08/18 12:09:54 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:sunscanf: cat rm Compile Myread test Setvar
?MAKE: -pick add $@ %<
?S:sunscanf:
?S: This variable is set if this system runs with the Sun version
?S: of scanf.
?S:.
?C:SUNSCANF:
?C: This variable is set if this system runs with the Sun version
?C: of scanf.
?C:.
?H:#$sunscanf SUNSCANF /**/
?H:.
?LINT:set sunscanf
?F:!scanf
: check to see what
kinda scanf your using.
echo " "
echo "Checking to see what flavor of scanf you have..." >&4
$cat >scanf.c <<'EOCP'
int main()
{
float value;

sscanf("4.5", "%g", &value);
printf("%d\n", value == 4.5);
}
EOCP
set scanf
if eval $compile_ok; then
if $test `./scanf` = 0; then
echo "Hmm.. seems you are not running the USG flavor.."
val="$undef"
else
echo "Uh... you are running the USG flavor of scanf."
val="$define"
fi
else
echo "(I can't seem to compile the test program... Guessing)"
val="$undef"
fi
set sunscanf
eval $setvar
$rm -f scanf*

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/sunscanf.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_unordered: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_unordered:

?S: This variable conditionally defines the HAS\_UNORDERED symbol, which

?S: indicates to the C program that the unordered() routine is available.

?S:.

?C:HAS\_UNORDERED:

?C: This symbol, if defined, indicates that the unordered routine is

?C: available to check whether two doubles are unordered

?C: (effectively: whether either of them is NaN)

?C:.

?H:#\$d\_unordered HAS\_UNORDERED /\*\*/

?H:.

?LINT:set d\_unordered

: see if unordered exists

set unordered d\_unordered

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_unordered.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: sunscanf.U,v \$

?RCS: Revision 3.0 1993/08/18 12:09:54 ram

```

?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:sunscanf: cat rm Myread +cc +ccflags test Setvar
?MAKE: -pick add $@ %<
?S:sunscanf:
?S: This variable is set if this system runs with the Sun version
?S: of scanf.
?S:.
?C:SUNSCANF:
?C: This variable is set if this system runs with the Sun version
?C: of scanf.
?C:.
?H:#$sunscanf SUNSCANF /**/
?H:.
?LINT:set sunscanf
: check to see what kinda scanf your using.
echo " "
echo "Checking
to see what flavor of scanf you have..." >&4
$cat >scanf.c <<'EOCP'
int main()
{
float value;

sscanf("4.5", "%g", &value);
printf("%d\n", value == 4.5);
}
EOCP
if $cc $ccflags -o scanf scanf.c >/dev/null 2>&1 ; then
if $test `scanf` = 0; then
echo "Hmm.. seems your not running the USG flavor.."
val="$undef"
else
echo "Uh... your running the USG flavor of scanf."
val="$define"
fi
else
echo "(I can't seem to compile the test program... Guessing)"
val="$undef"
fi
set sunscanf
eval $setvar
$rm -f scanf*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/sunscanf.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_SHM_MAC.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_SHM_MAC.U,v $
?RCS: Revision 3.0 1993/08/18 12:05:41 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_SHM_MAC d_SHM_PRM d_SHM_SEG d_SHM_IMMU: cat d_shm test rm +cc +ccflags
?MAKE: -pick add $@ %<
?S:d_SHM_MAC:
?S: Sometimes, the SHMLBA manifest needs sys/sysmacros.h, usually for
?S: the ctob() macro.
?S:.
?S:d_SHM_PRM:
?S: Sometimes, the SHMLBA manifest needs sys/param.h, usually for the
?S: NBPC constant.
?S:.
?S:d_SHM_SEG:
?S: Sometimes,
?S: the SHMLBA manifest needs sys/seg.h, usually for the
?S: SNUMSHFT constant.
?S:.
?S:d_SHM_IMMU:
?S: Sometimes, the SHMLBA manifest needs sys/immu.h, usually for the
?S: stob() macro.
?S:.
?C:SHMLBA_WANTS_SYSMACROS:
?C: This value tells us to include <sys/sysmacros.h> because SHMLBA
?C: needs something from there, probably the ctob() macro.
?C:.
?C:SHMLBA_WANTS_PARAM:
?C: This value tells us to include <sys/param.h> because SHMLBA needs
?C: something from there, probably the NBPC constant.
?C:.
?C:SHMLBA_WANTS_SEG:
?C: This value tells us to include <sys/seg.h> because SHMLBA needs
?C: something from there, probably the SNUMSHFT constant.
?C:.
?C:SHMLBA_WANTS_IMMU:
```



?C: This value tells us to include <sys/immu.h> because SHMLBA needs

?C: something from there, probably the stob() macro. (tower\_600 only?)

?C:.

?H:#\$d\_SHM\_MAC SHMLBA\_WANTS\_SYSMACROS /\* SHMLBA wants ctob()? \*/

?H:#\$d\_SHM\_PRM SHMLBA\_WANTS\_PARAM /\* SHMLBA wants NBPC? \*/

?H:#\$d\_SHM\_SEG SHMLBA\_WANTS\_SEG /\* SHMLBA wants

SNUMSHFT? \*/

?H:#\$d\_SHM\_IMMU SHMLBA\_WANTS\_IMMU /\* SHMLBA wants stob()? \*/

?H:.

?T:flags D\_sys\_immu D\_sys\_seg D\_sys\_sysmacros D\_sys\_param

: check for SHMLBA braindamage

d\_SHM\_MAC="\$undef"

d\_SHM\_PRM="\$undef"

d\_SHM\_SEG="\$undef"

d\_SHM\_IMMU="\$undef"

if \$test "\$d\_shm" = "\$define" ; then

echo " "

\$cat >&4 <<EOM

Checking to see if SHMLBA needs additional headers.

The headers I'll be checking are:

sys/macros.h (for the ctob() macro)

sys/param.h (for NBPC)

sys/seg.h (for SNUMSHFT)

sys/immu.h (for the stob() macro)

EOM

\$cat >shm\_mac.c <<'EOCP'

#include <sys/types.h>

#include <sys/ipc.h>

#include <sys/shm.h>

#ifdef I\_SYS\_IMMU

#include <sys/immu.h>

#endif

#ifdef I\_SYS\_SYSMACROS

#include <sys/sysmacros.h>

#endif

#ifdef I\_SYS\_PARAM

#include <sys/param.h>

#endif

#ifdef I\_SYS\_SEG

#include <sys/seg.h>

#endif

int main() {

int foo = SHMLBA ;

}

EOCP

```

flags='xxx'
for D_sys_immu in "-DI_SYS_IMMU"; do
for D_sys_seg in "-DI_SYS_SEG"; do
for D_sys_sysmacros in "-DI_SYS_SYSMACROS";
do
for D_sys_param in "-DI_SYS_PARAM"; do
case "$flags" in
'xxx')
case "$D_sys_immu$D_sys_param$D_sys_sysmacros$D_sys_seg" in
")
echo "Trying it normally..."
;;
*)
echo "Trying $D_sys_immu $D_sys_param $D_sys_sysmacros $D_sys_seg"
;;
esac
if $cc $ccflags \
$D_sys_immu $D_sys_param $D_sys_sysmacros $D_sys_seg \
-o shm_mac shm_mac.c >/dev/null 2>&1 ; then
set X $D_sys_immu $D_sys_param $D_sys_sysmacros $D_sys_seg
shift
flags="$*"
echo "Succeeded with $flags"
fi
;;
esac
done
done
done
done
case "$flags" in
xxx)
echo "I don't know how to keep SHMLBA happy. Good luck!"
;;
esac
case "$flags" in
*I_SYS_PARAM*) d_SHM_PRM="$define";;
esac
case "$flags" in
*I_SYS_SYSMACROS*) d_SHM_MAC="$define";;
esac
case "$flags" in
*I_SYS_SEG*) d_SHM_SEG="$define";;
esac
case "$flags" in
*I_SYS_IMMU*) d_SHM_IMMU="$define";;
esac
fi

```

\$rm -f shm\_mac\*

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_SHM\_MAC.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_arpainet.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: You may reuse parts of this distribution only within the terms of

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_arpainet.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:15 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_arpainet: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_arpainet:

?S: This variable conditionally defines the I\_ARPA\_INET symbol,

?S: and indicates whether a C program should include <arpa/inet.h>.

?S:.

?C:I\_ARPA\_INET:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <arpa/inet.h> to get inet\_addr and friends

declarations.

?C:.

?H:#\$i\_arpainet I\_ARPA\_INET /\*\*/

?H:.

?LINT:set i\_arpainet

: see if arpa/inet.h has to be included

set arpa/inet.h i\_arpainet

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_arpainet.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_random\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_random\_r random\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_stdlib extern\_C

?MAKE: -pick add \$@ %<

?S:d\_random\_r:

?S: This variable conditionally defines the HAS\_RANDOM\_R symbol,  
 ?S: which indicates to the C program that the random\_r()  
 ?S: routine is available.

?S:.

?S:random\_r\_proto:

?S: This variable encodes the prototype of random\_r.  
 ?S: It is zero if d\_random\_r is undef, and one of the  
 ?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_random\_r  
 ?S: is defined.

?S:.

?C:HAS\_RANDOM\_R:

?C: This symbol, if defined, indicates that the random\_r routine  
 ?C: is available to random re-entrantly.

?C:.

?C:RANDOM\_R\_PROTO:

?C: This  
 symbol encodes the prototype of random\_r.  
 ?C: It is zero if d\_random\_r is undef, and one of the  
 ?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_random\_r  
 ?C: is defined.

?C:.

?H:#\$d\_random\_r HAS\_RANDOM\_R /\*\*/  
 ?H:#define RANDOM\_R\_PROTO \$random\_r\_proto /\*\*/  
 ?H:.

?T:try hdrs d\_random\_r\_proto  
 : see if random\_r exists  
 set random\_r d\_random\_r  
 eval \$inlibc  
 case "\$d\_random\_r" in  
 "\$define")  
 hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_stdlib stdlib.h"  
 case "\$d\_random\_r\_proto:\$usethreads" in  
 ":define") d\_random\_r\_proto=define  
 set d\_random\_r\_proto random\_r \$hdrs  
 eval \$hasproto ;;  
 \*) ;;  
 esac  
 case "\$d\_random\_r\_proto" in  
 define)  
 case "\$random\_r\_proto" in

```

"|0) try='int random_r(int*, struct random_data*);'
./protochk "$extern_C $try" $hdrs && random_r_proto=I_iS ;;
esac
case "$random_r_proto" in
"|0) try='int random_r(long*, struct random_data*);'
./protochk "$extern_C $try" $hdrs && random_r_proto=I_lS ;;
esac
case "$random_r_proto" in
"|0)
try='int random_r(struct random_data*, int32_t*);'
./protochk "$extern_C $try" $hdrs && random_r_proto=I_St ;;
esac
case "$random_r_proto" in
"|0) d_random_r=undef
random_r_proto=0
echo "Disabling random_r, cannot determine prototype." >&4 ;;
*) case "$random_r_proto" in
REENTRANT_PROTO*) ;;
*) random_r_proto="REENTRANT_PROTO_$random_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susetthreads" in
define) echo "random_r has no prototype, not using it." >&4 ;;
esac
d_random_r=undef
random_r_proto=0
;;
esac
;;
*) random_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/threads/d_random_r.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2001 Jarkko Hietaniemi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_socketmarkproto: Hasproto d\_socket

?MAKE: -pick add \$@ %<

?S:d\_socketmarkproto:

?S: This variable conditionally defines the HAS\_SOCKETMARK\_PROTO symbol,

?S: which indicates to the C program that the system provides

?S: a prototype for the socketmark() function. Otherwise, it is

?S: up to the program to supply one.

?S:.

?C:HAS\_SOCKETMARK\_PROTO:

?C: This symbol, if defined, indicates that the system provides

?C: a prototype for the socketmark() function. Otherwise, it is up

?C: to the program to supply one. A good

guess is

?C: extern int socketmark(int);

?C:.

?H:#d\_socketmarkproto HAS\_SOCKETMARK\_PROTO /\*\*/

?H:.

?LINT:set d\_socketmarkproto

: see if prototype for socketmark is available

echo " "

set d\_socketmarkproto socketmark \$d\_socket sys/socket.h

eval \$hasproto

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_socketmarkproto.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS:

?RCS: \$Log: voidflags.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 16:27:58 ram

?RCS: patch61: don't prompt them if the void support is high enough for us

?RCS:

?RCS: Revision 3.0.1.1 1995/01/11 15:37:44 ram

?RCS: patch45: cosmetic change to avoid spurious blank lines when using -s

?RCS:

?RCS: Revision 3.0 1993/08/18 12:10:01 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:voidflags defvoidused: cat sed rm rm\_try contains +cc +ccflags package \  
 Oldconfig Myread

?MAKE: -pick add \$@ %<

?S:voidflags:

?S: This  
 variable contains the eventual value of the VOIDFLAGS symbol,

?S: which indicates how much support of the void type is given by this

?S: compiler. See VOIDFLAGS for more info.

?S:.

?S:defvoidused:

?S: This variable contains the default value of the VOIDUSED symbol (15).

?S:.

?X: Exceptionally, we have to explicitly alias the symbol name for  
 ?X: config\_h.SH, otherwise the comment would not appear.

?C:VOIDFLAGS ~ %<:

?C: This symbol indicates how much support of the void type is given by this

?C: compiler. What various bits mean:

?C:

?C: 1 = supports declaration of void

?C: 2 = supports arrays of pointers to functions returning void

?C: 4 = supports comparisons between pointers to void functions and  
 ?C: addresses of void functions

?C: 8 = supports declaration of generic void pointers

?C:

?C: The package designer should define VOIDUSED to indicate the requirements  
 ?C: of the package. This can be done either by #defining VOIDUSED before  
 ?C: including  
 config.h, or by defining defvoidused in Myinit.U. If the  
 ?C: latter approach is taken, only those flags will be tested. If the  
 ?C: level of void support necessary is not present, defines void to int.

?C:.

?H:%<:#ifndef VOIDUSED

?H:%<:#define VOIDUSED \$defvoidused

?H:%<:#endif

?H:%<:#define VOIDFLAGS \$voidflags

?H:%<:#if (VOIDFLAGS & VOIDUSED) != VOIDUSED

?H:%<:#define void int /\* is void to be avoided? \*/

?H:%<:#define M\_VOID /\* Xenix strikes again \*/

?H:%<:#endif

?H:.

?W:%<:void

?F:!out !try.c !flags

?LINT:usefile .out flags try.c

?INIT:: full support for void wanted by default

?INIT:defvoidused=15

?INIT:

```
?LINT:known void M_VOID VOIDUSED
: check for void type
echo " "
echo "Checking to see how well your C compiler groks the void type..." >&4
$cat >flags <<EOM
```

Support flag bits are:

- 1: basic void declarations.
- 2: arrays of pointers to functions returning void.
- 4: operations between pointers to and addresses of void functions.
- 8: generic void pointers.

EOM

```
case
"$voidflags" in
")
$cat >try.c <<'EOCP'
#if TRY & 1
void sub() {
#else
sub() {
#endif
extern void moo(); /* function returning void */
void (*goo)(); /* ptr to func returning void */
#if TRY & 8
void *hue; /* generic ptr */
#endif
#if TRY & 2
void (*foo[10])();
#endif

#if TRY & 4
if(goo == moo) {
    exit(0);
}
#endif
exit(0);
}
int main() { sub(); }
EOCP
?X: This unit used to use cc -S in those tests to try to speed up things, but
?X: unfortunately, AIX 3.2 does not support this option.
if $cc $ccflags -c -DTRY=$defvoidused try.c >.out 2>&1 ; then
voidflags=$defvoidused
echo "Good. It appears to support void to the level $package wants."
if $contains warning .out >/dev/null 2>&1; then
echo "However, you might get some warnings that look like this:"
$sed -e 's/^/' .out
```



```

fi
else
echo "Hmm, your compiler has some difficulty with void. Checking further..." >&4
$cat >&4 flags
$rm -f flags
if $cc $ccflags -c -DTRY=1 try.c >/dev/null 2>&1; then
echo
"It supports 1..."
if $cc $ccflags -c -DTRY=3 try.c >/dev/null 2>&1; then
echo "It also supports 2..."
if $cc $ccflags -c -DTRY=7 try.c >/dev/null 2>&1; then
voidflags=7
echo "And it supports 4 but not 8 definitely."
else
echo "It doesn't support 4..."
if $cc $ccflags -c -DTRY=11 try.c >/dev/null 2>&1; then
voidflags=11
echo "But it supports 8."
else
voidflags=3
echo "Neither does it support 8."
fi
fi
else
echo "It does not support 2..."
if $cc $ccflags -c -DTRY=13 try.c >/dev/null 2>&1; then
voidflags=13
echo "But it supports 4 and 8."
else
if $cc $ccflags -c -DTRY=5 try.c >/dev/null 2>&1; then
voidflags=5
echo "And it supports 4 but has not heard about 8."
else
echo "However it supports 8 but not 4."
fi
fi
fi
else
echo "There is no support at all for void."
voidflags=0
fi
fi
esac
?X: Only prompt user if support does not match the
level we want
case "$voidflags" in
"$defvoidused")
echo "Good. I already know it supports void to the level $package wants."

```

```
;;
*)
dflt="$voidflags";
test -f flags && $cat flags
rp="Your void support flags add up to what?"
. ./myread
voidflags="$ans"
;;
esac
$rm_try flags
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/voidflags.U
```

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?RCS:

?RCS: \$Log: Init.U,v \$

?RCS: Revision 3.0.1.1 1994/10/31 09:45:59 ram

?RCS: patch44: removed Options from MAKE to prevent Init overrides

?RCS: patch44: option processing now done after Myinit thanks to new Begin.U

?RCS: patch44: moved "Beginning of configuration questions" to Begin.U

?RCS: patch44: moved signal trapping instruction to Begin.U as well

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:02 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This file initializes certain default variables

used by Configure. They

?X: may be overridden or added to by definitions in Myinit.U.

?X:

?MAKE:Init eunicefix \_exe: Null

?MAKE:-pick add \$@ %<

?MAKE:-pick weed \$@ ./Init

?S:eunicefix:

?S: When running under Eunice this variable contains a command which will

?S: convert a shell script to the proper form of text file for it to be

?S: executable by the shell. On other systems it is a no-op.

?S:.

?S: \_exe (exe\_ext):

?S: This variable defines the extension used for executable files.

?S: For unix it is empty. Other possible values include '.exe'.

?S: DJGPP, Cygwin and OS/2 use '.exe'. Stratus VOS uses '.pm'.

?S: On operating systems which do not require a specific extension

?S: for executable files, this variable is empty.

?S:.

?V:define undef smallmach:rmlist

?X:

?X: Throughout the units, one may make use of \$define and \$undef to reference

?X: a defined symbol or an undefined one. There is no need to add them in

?X: the dependency line since this unit makes them visible via ?V:, and

?X:

everyone inherits from those symbols since by convention Init.U is the

?X: root dependency.

?X:

?T: DJGPP

: Initialize wide constants

define='define'

undef='undef'

smallmach='pdp11 i8086 z8000 i80286 iAPX286'

rmlist=""

: We must find out about Eunice early

eunicefix=':'

if test -f /etc/unixtovms; then

  eunicefix=/etc/unixtovms

fi

if test -f /etc/unixtovms.exe; then

  eunicefix=/etc/unixtovms.exe

fi

: Set executable suffix now -- needed before hints available

if test -f "/libs/version.library"; then

  : Amiga OS

  \_exe=""

elif test -f "/system/gnu\_library/bin/ar.pm"; then

  : Stratus VOS

  \_exe=".pm"

elif test -n "\$DJGPP"; then

  : DOS DJGPP

  \_exe=".exe"

elif test -d c:/.; then

  : OS/2 or cygwin

  \_exe=".exe"

else

  : All other UNIX systems

\_exe=""

fi

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Init.U

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?RCS: \$Id: sitebin.U,v \$

?RCS:

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?RCS:

?RCS: \$Log: sitebin.U,v \$

?RCS:

?MAKE:sitebin sitebinexp installsitebin : Getfile Oldconfig \

Setprefixvar siteprefix

?MAKE: -pick add \$@ %<

?Y:TOP

?D:sitebin="

?S:sitebin:

?S: This variable holds the name of the directory in which the user wants

?S: to put add-on publicly executable files for the package in question. It

?S: is most often a local directory such as /usr/local/bin. Programs using

?S: this variable must be prepared to deal with ~name substitution.

?S: The standard distribution will put nothing

in this directory.

?S: After perl has been installed, users may install their own local

?S: executables in this directory with

?S: MakeMaker Makefile.PL

?S: or equivalent. See INSTALL for details.

?S:.

?D:sitebinexp="

?S:sitebinexp:

?S: This is the same as the sitebin variable, but is filename expanded at

?S: configuration time, for use in your makefiles.

?S:.

?D:installsitebin="

?S:installsitebin:

?S: This variable is usually the same as sitebinexp, unless you are on

?S: a system running AFS, in which case they may differ slightly. You

?S: should always use this variable within your makefiles for portability.

?S:.

```

?LINT:change prefixvar
?LINT:set installsitebin
?LINT:set sitebin
?LINT:set sitebinexp
: determine where add-on public executables go
case "$sitebin" in
") dflt=$siteprefix/bin ;;
*) dflt=$sitebin ;;
esac
fn=d~
rp='Pathname where the add-on public executables should be installed?'
./getfile
prefixvar=sitebin
./setprefixvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/sitebin.U

```

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```

?RCS: $Id: charsize.U,v 3.0.1.1 1994/10/29 16:07:13 ram Exp $
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: charsize.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:07:13 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:34 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:charsize charbits: cat rm_try Myread Compile run
?MAKE: -pick add $@ %<
?S:charsize:
?S: This variable contains the value of the CHARSIZE symbol, which
?S: indicates to the C program how many bytes there are in a character.
?S:.
?S:charbits:
?S: This
variable contains the value of the CHARBITS symbol, which
?S: indicates to the C program how many bits there are in a character.
?S:.

```

?C:CHARSIZE:

?C: This symbol contains the size of a char, so that the C preprocessor

?C: can make decisions based on it.

?C:.

?C:CHARBITS:

?C: This symbol contains the size of a char, so that the C preprocessor

?C: can make decisions based on it.

?C:.

?H:#define CHARSIZE \$charsize /\*\*/

?H:#define CHARBITS \$charbits /\*\*/

?H:.

?F:!try

: length of character in bytes. Is always 1, otherwise it is not C

: This used to be a test using sizeof

charsize=1

: Check for the number of bits in a character

case "\$charbits" in

) echo "Checking how long a character is (in bits)..." >&4

\$cat >try.c <<EOCP

#include <stdio.h>

int main ()

{

int n;

unsigned char c;

for (c = 1, n = 0; c <= 1, n++);

printf ("%d\n", n);

return (0);

}

EOCP

set try

if eval \$compile\_ok; then

dflt=`\$run ./try`

else

dflt='8'

echo "(I

can't seem to compile the test program. Guessing...)"

fi

::

\*)

dflt="\$charbits"

::

esac

rp="What is the length of a character (in bits)?"

./myread

charbits="\$ans"

\$rm\_try

case "\$charbits" in

8) ;;

\*) cat >&4 << EOM

Your system has an unsigned character size of \$charbits bits, which is rather unusual (normally it is 8 bits). Perl likely will not work correctly on your system, with subtle bugs in various places.

EOM

```
rp='Do you really want to continue?'
dflt='n'
. ./myread
case "$ans" in
[yY]) echo >&4 "Okay, continuing." ;;
*) exit 1 ;;
esac
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/charsize.U
```

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?RCS: \$Id: d\_psignal.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS:

?RCS: \$Log: d\_psignal.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:49 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_psignal: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_psignal:

?S: This variable conditionally defines the HAS\_P SIGNAL symbol, which

?S: indicates that the psignal() routine exists. The psignal() routine

?S: prints a description of a signal on the standard error output.

?S:.

?C:H AS\_P SIGNAL (P SIGNAL):

?C: This symbol, if defined, indicates

that the psignal() routine exists.

?C:.

?H:#\$d\_psignal H AS\_P SIGNAL /\*\*/

?H:.

?LINT:set d\_psignal

```
: see if psignal exists
set psignal d_psignal
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_psignal.U
```

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```
?RCS: $Id: d_gethostbyname_r.U,v 0RCS:
```

```
?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.
```

```
?RCS:
```

```
?MAKE:d_gethostbyname_r gethostbyname_r_proto: Inlibc Protochk Hasproto \
i_systypes usethreads i_netdb extern_C
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_gethostbyname_r:
```

```
?S: This variable conditionally defines the HAS_GETHOSTBYNAME_R symbol,
```

```
?S: which indicates to the C program that the gethostbyname_r()
```

```
?S: routine is available.
```

```
?S:.
```

```
?S:gethostbyname_r_proto:
```

```
?S: This variable encodes the prototype of gethostbyname_r.
```

```
?S: It is zero if d_gethostbyname_r is undef, and one of the
```

```
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_gethostbyname_r
```

```
?S: is defined.
```

```
?S:.
```

```
?C:HAS_GETHOSTBYNAME_R:
```

```
?C: This symbol, if defined, indicates
```

```
that the gethostbyname_r routine
```

```
?C: is available to gethostbyname re-entrantly.
```

```
?C:.
```

```
?C:GETHOSTBYNAME_R_PROTO:
```

```
?C: This symbol encodes the prototype of gethostbyname_r.
```

```
?C: It is zero if d_gethostbyname_r is undef, and one of the
```

```
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_gethostbyname_r
```

```
?C: is defined.
```

```
?C:.
```

```
?H:#$d_gethostbyname_r HAS_GETHOSTBYNAME_R /**/
```

```
?H:#define GETHOSTBYNAME_R_PROTO $gethostbyname_r_proto /**/
```

```
?H:.
```

```
?T:try hdrs d_gethostbyname_r_proto
```

```
: see if gethostbyname_r exists
```

```
set gethostbyname_r d_gethostbyname_r
```



```

eval $inlibc
case "$d_gethostbyname_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_gethostbyname_r_proto:$usethreads" in
":define") d_gethostbyname_r_proto=define
set d_gethostbyname_r_proto gethostbyname_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_gethostbyname_r_proto" in
define)
case "$gethostbyname_r_proto" in
"|0) try='int gethostbyname_r(const char*, struct hostent*, char*, size_t, struct
hostent**, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyname_r_proto=I_CSBWRE ;;
esac
case "$gethostbyname_r_proto" in
"|0) try='struct hostent* gethostbyname_r(const char*, struct hostent*, char*, int, int*);'
./protochk "$extern_C $try" $hdrs && gethostbyname_r_proto=S_CSBIE ;;
esac
case "$gethostbyname_r_proto" in
"|0) try='int gethostbyname_r(const char*, struct hostent*, struct hostent_data*);'
./protochk "$extern_C $try" $hdrs && gethostbyname_r_proto=I_CSD ;;
esac
case "$gethostbyname_r_proto" in
"|0) d_gethostbyname_r=undef
gethostbyname_r_proto=0
echo "Disabling gethostbyname_r, cannot determine prototype." >&4 ;;
*) case "$gethostbyname_r_proto" in
REENTRANT_PROTO*) ;;
*) gethostbyname_r_proto="REENTRANT_PROTO_${gethostbyname_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "gethostbyname_r has no prototype, not using it." >&4 ;;
esac
d_gethostbyname_r=undef
gethostbyname_r_proto=0
;;
esac
;;
*) gethostbyname_r_proto=0
;;
esac

```

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_gethostbyname\_r.U

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?RCS:

?MAKE:fpostype: Myread Typedef fpostype Compile longsize run i\_stdlib

?MAKE: -pick add \$@ %<

?S:fpostype:

?S: This variable contains the size of a fpostype in bytes.

?S:.

?C:Fpos\_t\_size:

?C: This symbol holds the size of a Fpos\_t in bytes.

?C:.

?H:#define Fpos\_t\_size \$fpostype /\* FPOS size \*/

?H:.

?T:yyy zzz

?F:!try

: Check size for Fpos\_t

echo " "

case "\$fpostype" in

\*\_t) zzz="\$fpostype" ;;

\*) zzz="fpos\_t" ;;

esac

echo "Checking the size of \$zzz..." >&4

cat > try.c <<EOCP

#include <sys/types.h>

#include <stdio.h>

#\$i\_stdlib I\_STDLIB

#ifdef

  I\_STDLIB

#include <stdlib.h>

#endif

int main() {

  printf("%d\n", (int)sizeof(\$fpostype));

  exit(0);

}

EOCP

set try

```

if eval $compile_ok; then
  yyy=`$run ./try`
  case "$yyy" in
  ") fposszie=4
    echo "(I can't execute the test program--guessing $fposszie.)" >&4
    ;;
  *) fposszie=$yyy
    echo "Your $zzz is $fposszie bytes long."
    ;;
  esac
else
  dflt="$longsize"
  echo " " >&4
  echo "(I can't compile the test program.  Guessing...)" >&4
  rp="What is the size of your file positions (in bytes)?"
  ./myread
  fposszie="$ans"
fi

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/fposszie.U
```

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?RCS:

?X: This unit generates a \$hasfield string that is used internally

?X: by Configure to check if this system has a field for a

?X: particular struct (of if this system has a particular struct!)

?X:

?X: To use it, say something like:

?X: set d\_statblocks stat st\_blocks i\_sysstat sys/stat.h

?X: eval \$hasfield

?X: Or, for more complicated sets of headers, do something like

?X: hdrs="\$define sys/foo.h

?X: \$i\_sysbar sys/bar.h

?X: \$i\_syszot sys/zot.h

?X: \$i\_zappa zappa.h"

?X: set d\_statblocks stat st\_blocks \$hdrs

?X: eval \$hasfield

?X:

?MAKE:Hasfield: Setvar rm\_try test Compile

?MAKE: -pick add \$@ %<

```

?T:varname struct field
?V:hasfield
: Define hasfield macro for Configure internal use
hasfield='varname=$1;
struct=$2; field=$3; shift; shift; shift;
while $test $# -ge 2; do
case "$1" in
$define) echo "#include <$2>";;
esac ;
shift 2;
done > try.c;
echo "int main () { struct $struct foo; char* bar; bar = (char*)foo.$field; }" >> try.c;
set try;
if eval $compile; then
val="$define";
else
val="$undef";
fi;
set $varname;
eval $setvar;
$rm_try'

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/protos/Hasfield.U

```

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?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2008 H.Merijn Brand

?RCS:

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?RCS:

?MAKE:d\_ctime64 d\_localtime64 d\_gmtime64 d\_mktime64 d\_difftime64 d\_asctime64: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_ctime64:

?S: This variable conditionally defines the HAS\_CTIME64 symbol, which

?S: indicates to the C program that the ctime64 () routine is available.

?S:.

?S:d\_localtime64:

?S: This variable conditionally defines the HAS\_LOCALTIME64 symbol, which

?S: indicates to the C program that the localtime64 () routine is available.

?S:.

?S:d\_gmtime64:

?S: This variable conditionally defines the HAS\_GMTIME64 symbol, which

?S: indicates to the C program that the gmtime64 () routine is available.

?S:.

?S:d\_mktime64:  
 ?S: This variable conditionally defines the HAS\_MKTIME64 symbol, which  
 ?S: indicates to the  
 C program that the mktime64 () routine is available.  
 ?S:.

?S:d\_difftime64:  
 ?S: This variable conditionally defines the HAS\_DIFFTIME64 symbol, which  
 ?S: indicates to the C program that the difftime64 () routine is available.  
 ?S:.

?S:d\_asctime64:  
 ?S: This variable conditionally defines the HAS\_ASCTIME64 symbol, which  
 ?S: indicates to the C program that the asctime64 () routine is available.  
 ?S:.

?C:HAS\_CTIME64:  
 ?C: This symbol, if defined, indicates that the ctime64 () routine is  
 ?C: available to do the 64bit variant of ctime ()  
 ?C:.

?C:HAS\_LOCALTIME64:  
 ?C: This symbol, if defined, indicates that the localtime64 () routine is  
 ?C: available to do the 64bit variant of localtime ()  
 ?C:.

?C:HAS\_GMTIME64:  
 ?C: This symbol, if defined, indicates that the gmtime64 () routine is  
 ?C: available to do the 64bit variant of gmtime ()  
 ?C:.

?C:HAS\_MKTIME64:  
 ?C: This symbol, if defined, indicates that the mktime64 () routine is  
 ?C: available to do the 64bit variant of mktime ()  
 ?C:.

?C:HAS\_DIFFTIME64:  
 ?C: This  
 symbol, if defined, indicates that the difftime64 () routine is  
 ?C: available to do the 64bit variant of difftime ()  
 ?C:.

?C:HAS\_ASCTIME64:  
 ?C: This symbol, if defined, indicates that the asctime64 () routine is  
 ?C: available to do the 64bit variant of asctime ()  
 ?C:.

?H:#\$d\_ctime64 HAS\_CTIME64 /\*\*/  
 ?H:#\$d\_localtime64 HAS\_LOCALTIME64 /\*\*/  
 ?H:#\$d\_gmtime64 HAS\_GMTIME64 /\*\*/  
 ?H:#\$d\_mktime64 HAS\_MKTIME64 /\*\*/  
 ?H:#\$d\_difftime64 HAS\_DIFFTIME64 /\*\*/  
 ?H:#\$d\_asctime64 HAS\_ASCTIME64 /\*\*/  
 ?H:.

?LINT:set d\_ctime64 d\_localtime64 d\_gmtime64 d\_mktime64 d\_difftime64 d\_asctime64  
 : see if 64bit time functions exists

set ctime64 d\_ctime64

eval \$inlibc

set localtime64 d\_localtime64

eval \$inlibc

set gmtime64 d\_gmtime64

eval \$inlibc

set mktime64 d\_mkdir64

eval \$inlibc

set difftime64 d\_diff64

eval \$inlibc

set asctime64 d\_asctime64

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_timefuncs64.U

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?RCS:

?MAKE:usedefaultstrict: Setvar Myread

?MAKE: -pick add \$@ %<

?LINT:set usedefaultstrict

?S:usedefaultstrict:

?S: This setting provides a mechanism for perl developers to enable

?S: strict by default. These defaults do not apply when perl is run

?S: via -e or -E.

?S:.

?C:USE\_STRICT\_BY\_DEFAULT:

?C: This symbol, if defined, enables additional defaults.

?C: At this time it only enables implicit strict by default.

?C:.

?H:\$usedefaultstrict USE\_STRICT\_BY\_DEFAULT /\* use strict by default \*/

?H:.

: Ask about strict by default.

case "\$usedefaultstrict" in

\$define|true|[Yy]\*)

dflt="y"

;;

\*)

dflt="n"

;;

esac

cat <<EOM

EXPERIMENTAL: Perl can now be built with strict on by default when not invoked with -e or -E. This is a diagnostic tool for development.

Unless you are familiar with this feature, you should probably answer 'no'.

EOM

```
rp='Would you like to build perl with strict enabled by default?'
./myread
case "$ans" in
y|Y) val="$define" ;;
*) val="$undef" ;;
esac
set usedefaultstrict
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/usedefaultstrict.U
```

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?RCS:

?MAKE:d\_ftello: Inlibc longsize

?MAKE: -pick add \$@ %<

?S:d\_ftello:

?S: This variable conditionally defines the HAS\_FTELLO symbol, which

?S: indicates to the C program that the ftello() routine is available.

?S:.

?C:HAS\_FTELLO:

?C: This symbol, if defined, indicates that the ftello routine is

?C: available to ftell beyond 32 bits (useful for ILP32 hosts).

?C:.

?H:#\$d\_ftello HAS\_FTELLO /\*\*/

?H:.

?LINT:set d\_ftello

: see if ftello exists

set ftello d\_ftello

```
eval $inlibc
case "$longsize" in
8) echo "(Your long is 64 bits, so you could use ftell.)" ;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_ftello.U
```

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?RCS:

?RCS:

?MAKE:d\_dir\_dd\_fd: Compile cat rm\_try Setvar i\_dirent i\_stdlib

?MAKE: -pick add \$@ %<

?S:d\_dir\_dd\_fd (d\_dir\_dd\_fd.U):

?S: This variable conditionally defines the HAS\_DIR\_DD\_FD symbol, which

?S: indicates that the DIR directory stream type contains a member

?S: variable called dd\_fd.

?S:.

?C:HAS\_DIR\_DD\_FD:

?C: This symbol, if defined, indicates that the DIR\* dirstream

?C: structure contains a member variable named dd\_fd.

?C:.

?H:#\$d\_dir\_dd\_fd HAS\_DIR\_DD\_FD /\*\*/

?H:.

?LINT:set d\_dir\_dd\_fd

: Look for DIR.dd\_fd

case "\$i\_dirent" in

"\$define")

echo "Checking to see if DIR has a dd\_fd member variable" >&4

\$cat >try.c <<EOCP

#\$i\_stdlib I\_STDLIB

#ifdef I\_STDLIB

#include <stdlib.h>

#endif

#include <dirent.h>

int main() {

DIR dir;

dir.dd\_fd = 1;

return 0;



```

}
EOCP
val=$undef
set try
if eval $compile; then
    echo "Yes, it does."
    val="$define"
else
    echo "No, it does not."
    val="$undef"
fi
;;
*)
    echo "You don't have a <dirent.h>, so not checking for dd_fd." >&4
    val="$undef"
    ;;
esac
set d_dir_dd_fd
eval $setvar
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_dir_dd_fd.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getnetbyname\_r.U,v 0RCS:

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?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getnetbyname\_r getnetbyname\_r\_proto: Inlibc Protochk Hasproto \  
i\_systypes usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getnetbyname\_r:

?S: This variable conditionally defines the HAS\_GETNETBYNAME\_R symbol,

?S: which indicates to the C program that the getnetbyname\_r()

?S: routine is available.

?S:.

?S:getnetbyname\_r\_proto:

?S: This variable encodes the prototype of getnetbyname\_r.

?S: It is zero if d\_getnetbyname\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getnetbyname\_r

?S: is defined.

?S:.

?C:HAS\_GETNETBYNAME\_R:  
?C: This symbol, if defined, indicates that  
the getnetbyname\_r routine  
?C: is available to getnetbyname re-entrantly.  
?C:.

?C:GETNETBYNAME\_R\_PROTO:  
?C: This symbol encodes the prototype of getnetbyname\_r.  
?C: It is zero if d\_getnetbyname\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getnetbyname\_r  
?C: is defined.  
?C:.

?H:#\$d\_getnetbyname\_r HAS\_GETNETBYNAME\_R /\*\*/  
?H:#define GETNETBYNAME\_R\_PROTO \$getnetbyname\_r\_proto /\*\*/  
?H:.

?T:try hdrs d\_getnetbyname\_r\_proto  
: see if getnetbyname\_r exists  
set getnetbyname\_r d\_getnetbyname\_r  
eval \$inlibc  
case "\$d\_getnetbyname\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"  
case "\$d\_getnetbyname\_r\_proto:\$usethreads" in  
":define") d\_getnetbyname\_r\_proto=define  
set d\_getnetbyname\_r\_proto getnetbyname\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_getnetbyname\_r\_proto" in  
define)  
case "\$getnetbyname\_r\_proto" in  
"|0) try='int getnetbyname\_r(const char\*, struct netent\*, char\*, size\_t, struct netent\*\*, int\*);'  
./protochk "\$extern\_C  
\$try" \$hdrs && getnetbyname\_r\_proto=I\_CSBR ;;  
esac  
case "\$getnetbyname\_r\_proto" in  
"|0) try='int getnetbyname\_r(const char\*, struct netent\*, char\*, int);'  
./protochk "\$extern\_C \$try" \$hdrs && getnetbyname\_r\_proto=I\_CSBI ;;  
esac  
case "\$getnetbyname\_r\_proto" in  
"|0) try='struct netent\* getnetbyname\_r(const char\*, struct netent\*, char\*, int);'  
./protochk "\$extern\_C \$try" \$hdrs && getnetbyname\_r\_proto=S\_CSBI ;;  
esac  
case "\$getnetbyname\_r\_proto" in  
"|0) try='int getnetbyname\_r(const char\*, struct netent\*, struct netent\_data\*);'  
./protochk "\$extern\_C \$try" \$hdrs && getnetbyname\_r\_proto=I\_CSD ;;  
esac  
case "\$getnetbyname\_r\_proto" in  
"|0) d\_getnetbyname\_r=undef

```

getnetbyname_r_proto=0
echo "Disabling getnetbyname_r, cannot determine prototype." >&4 ;;
*) case "$getnetbyname_r_proto" in
REENTRANT_PROTO*) ;;
*) getnetbyname_r_proto="REENTRANT_PROTO_$getnetbyname_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo
"getnetbyname_r has no prototype, not using it." >&4 ;;
esac
d_getnetbyname_r=undef
getnetbyname_r_proto=0
;;
esac
;;
*) getnetbyname_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_getnetbyname_r.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_pathconf.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: d_pathconf.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:14:54 ram
?RCS: patch36: created by ADO
?RCS:
?MAKE:d_pathconf d_fpathconf: Inlibc
?MAKE: -pick add $@ %<
?S:d_pathconf:
?S: This variable conditionally defines the HAS_PATHCONF symbol, which
?S: indicates to the C program that the pathconf() routine is available

```

?S: to determine file-system related limits and options associated

?S: with a given filename.

?S:.

?S:d\_fpathconf:

?S: This variable conditionally defines the HAS\_FPATHCONF symbol, which

?S: indicates to the C program that the pathconf() routine is available

?S: to determine file-system related limits and options associated

?S: with a given open file descriptor.

?S:.

?C:HAS\_PATHCONF:

?C: This symbol, if defined, indicates that pathconf() is available

?C: to determine file-system related limits and options associated

?C: with a given filename.

?C:.

?C:HAS\_FPATHCONF:

?C: This symbol, if defined, indicates that pathconf() is available

?C: to determine file-system related limits and options associated

?C: with a given open file descriptor.

?C:.

?H:#\$d\_pathconf HAS\_PATHCONF /\*\*/  
 ?H:#\$d\_fpathconf HAS\_FPATHCONF /\*\*/  
 ?H:.

?LINT:set d\_pathconf  
 ?LINT:set d\_fpathconf  
 : see if pathconf exists  
 set pathconf d\_pathconf  
 eval \$inlibc

@if d\_fpathconf || HAS\_FPATHCONF  
 : see if fpathconf exists  
 set fpathconf d\_fpathconf  
 eval \$inlibc

@end

Found in path(s):  
 \*  
 /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_pathconf.U  
 No license file was found, but licenses were detected in source scan.

?RCS: \$Id: lseektype.U,v 3.0.1.1 1994/08/29 16:30:10 ram Exp \$  
 ?RCS:  
 ?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
 ?RCS:  
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```

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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: lseektype.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:30:10 ram
?RCS: patch32: now uses new Typedef unit to compute type information
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:08 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:lseektype lseeksize: Myread Typedef cat Compile rm_try longsize run
?MAKE: -pick add $@ %<
?S:lseektype:
?S: This variable defines lseektype to be something like off_t, long,
?S: or whatever type is used to declare
?S: lseek offset's type in the
?S: kernel (which also appears to be lseek's return type).
?S:.
?S:lseeksize:
?S: This variable defines lseektype to be something like off_t, long,
?S: or whatever type is used to declare lseek offset's type in the
?S: kernel (which also appears to be lseek's return type).
?S:.
?C:Off_t (LSEEKTYPE):
?C: This symbol holds the type used to declare offsets in the kernel.
?C: It can be int, long, off_t, etc... It may be necessary to include
?C: <sys/types.h> to get any typedef'ed information.
?C:.
?C:LSEEKSIZE:
?C: This symbol holds the number of bytes used by the Off_t.
?C:.
?C:Off_t_size:
?C: This symbol holds the number of bytes used by the Off_t.
?C:.
?H:#define Off_t $lseektype /* <offset> type */
?H:#define LSEEKSIZE $lseeksize /* <offset> size */
?H:#define Off_t_size $lseeksize /* <offset> size */
?H:.
?F:!try
?LINT:set lseektype
: see what type lseek is declared as in the kernel
rp="What is the type used for lseek's offset on this system?"
set off_t lseektype
long stdio.h sys/types.h
eval $typedef_ask

echo " "

```

```
echo "Checking to see how big your file offsets are..." >&4
```

```
$cat >try.c <<EOCP
```

```
#include <sys/types.h>
```

```
#include <stdio.h>
```

```
int main()
```

```
{
```

```
    printf("%d\n", (int)sizeof($lseektype));
```

```
    return(0);
```

```
}
```

```
EOCP
```

```
set try
```

```
if eval $compile_ok; then
```

```
lseeksize=`$run ./try`
```

```
echo "Your file offsets are $lseeksize bytes long."
```

```
else
```

```
dflt=$longsize
```

```
echo " "
```

```
echo "(I can't seem to compile the test program. Guessing...)"
```

```
rp="What is the size of your file offsets (in bytes)?"
```

```
. ./myread
```

```
lseeksize="$ans"
```

```
fi
```

```
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/lseektype.U
```

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?RCS:

?RCS: \$Log: d\_time.U,v \$

?RCS: Revision 3.0.1.2 1995/07/25 14:07:43 ram

?RCS: patch56: typo fix, sytem -> system

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:16:38 ram

?RCS: patch36: now uses new Typedef unit to compute type information (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:45 ram

?RCS: Baseline for dist 3.0 netwide release.

```

?RCS:
?X: Maybe <sys/types.h> should be included?
?X:INC: i_systypes
?MAKE:d_time timetype: Csym Setvar Findhdr Myread Typedef
?MAKE: -pick add $@ %<
?S:d_time:
?S: This
    variable conditionally defines the HAS_TIME symbol, which indicates
?S: that the time() routine exists. The time() routine is normally
?S: provided on UNIX systems.
?S:.
?S:timetype:
?S: This variable holds the type returned by time(). It can be long,
?S: or time_t on BSD sites (in which case <sys/types.h> should be
?S: included). Anyway, the type Time_t should be used.
?S:.
?C:HAS_TIME (TIMER):
?C: This symbol, if defined, indicates that the time() routine exists.
?C:.
?C:Time_t (TIMETYPE):
?C: This symbol holds the type returned by time(). It can be long,
?C: or time_t on BSD sites (in which case <sys/types.h> should be
?C: included).
?C:.
?H:#$d_time HAS_TIME /**/
?H:#define Time_t $timetype /* Time type */
?H:.
?LINT:set d_time
: see if time exists
echo " "
if set time val -f d_time; eval $csym; $val; then
echo 'time() found.' >&4
val="$define"
set time_t timetype long stdio.h sys/types.h
eval $typedef
dflt="$timetype"
echo " "
rp="What type is returned by time() on this
system?"
. ./myread
timetype="$ans"
else
echo 'time() not found, hope that will do.' >&4
val="$undef"
timetype='int';
fi
set d_time
eval $setvar

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_time.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Chk\_MANI.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Chk\_MANI.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 14:57:25 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0.1.1 1994/10/31 09:33:14 ram

?RCS: patch44: now lists Begin instead of Myinit in its dependencies

?RCS: patch44: leading comment now explains how this unit is included

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:45 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit checks the package by making sure

every file listed in MANIFEST

?X: is present. It is systematically "included" via the Finish unit (which

?X: is always present in every Configure script), although it may result in

?X: an empty inclusion when no MANIFEST is present.

?X:

?MAKE:Chk\_MANI: Begin c n rsrc

?MAKE: -pick wipe \$@ %<

?T:filelist ans tmppwd

?X: This check happens at metaconfig-time, so it's ok to hard-code the path.

```
@if {test -f ../MANIFEST}
```

```
: Now test for existence of everything in MANIFEST
```

```
echo " "
```

```
if test -f "$src/MANIFEST"; then
```

```
echo "First let's make sure your kit is complete. Checking..." >&4
```

?X:

?X: Files spelled uppercased and beginning with PACK are produced by the

?X: shell archive builder and may be removed by the user. Usually, they are

?X: not listed in the MANIFEST file, but you never know...

?X:



?X: "split -l" is the new way of running a split, but we also try the older way

?X:

```
awk ' $1 !~ /PACK[A-Z]+/ {print $1}' "$src/MANIFEST" |\
(split -l 50 2>/dev/null || split -50)
rm -f missing
tmppwd=`pwd`
for
filelist in x??; do
(cd "$src"; ls `cat "$tmppwd/$filelist" \
>/dev/null 2>>"$tmppwd/missing")
done
if test -s missing; then
cat missing >&4
cat >&4 <<'EOM'
```

THIS PACKAGE SEEMS TO BE INCOMPLETE.

You have the option of continuing the configuration process, despite the distinct possibility that your kit is damaged, by typing 'y'es. If you do, don't blame me if something goes wrong. I advise you to type 'n'o and contact the author (<MAINTLOC>).

EOM

?X: Can't use \$echo at this early stage

```
echo $n "Continue? [n] $c" >&4
read ans
case "$ans" in
y*)
echo "Continuing..." >&4
rm -f missing
;;
*)
```

?X:

?X: Use kill and not exit, so that the trap gets executed to clean up

?X:

```
echo "ABORTING..." >&4
kill $$
;;
esac
else
echo "Looks good..."
fi
else
echo "There is no MANIFEST file. I hope your kit is complete !"
fi
rm -f missing x??
```

@end

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Chk\_MANI.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_strtod\_l: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_strtod\_l:

?S: This variable conditionally defines the HAS\_STRTOD\_L symbol, which

?S: indicates to the C program that the strtod\_l() routine is available.

?S:.

?C:HAS\_STRTOD\_L:

?C: This symbol, if defined, indicates that the strtod\_l routine is

?C: available to convert strings to long doubles.

?C:.

?H:#\$d\_strtod\_l HAS\_STRTOD\_L /\*\*/

?H:.

?LINT:set d\_strtod\_l

: see if strtod\_l exists

set strtod\_l d\_strtod\_l

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_strtod\_l.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2017 Dagfinn Ilmari Mannsåker

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_strnlen: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_strnlen:

?S: This variable conditionally defines the HAS\_STRNLEN symbol, which

?S: indicates to the C program that the strnlen () routine is available.

?S:.

?C:HAS\_STRNLEN:  
?C: This symbol, if defined, indicates that the strlen () routine is  
?C: available to check the length of a string up to a maximum.  
?C:.  
?H:#\$d\_strlen HAS\_STRNLEN /\*\*/  
?H:.  
?LINT:set d\_strlen  
: see if strlen exists  
set strlen d\_strlen  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_strlen.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_lchown.U,v 3.0.1.1 1994/08/29 16:07:14 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_lchown.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:07:14 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_lchown: Compile Setvar cat echo i\_unistd rm\_try  
?MAKE: -pick add \$@ %<  
?S:d\_lchown:  
?S: This variable conditionally defines the HAS\_LCHOWN symbol, which  
?S: indicates to the C program that the lchown() routine is available  
?S: to operate on a symbolic link (instead of following  
the link).  
?S:.  
?C:HAS\_LCHOWN :  
?C: This symbol, if defined, indicates that the lchown routine is  
?C: available to operate on a symbolic link (instead of following the  
?C: link).  
?C:.  
?H:#\$d\_lchown HAS\_LCHOWN /\*\*/  
?H:.  
?F:!try

?LINT:set d\_lchown  
: see if lchown exists  
echo " "  
?X: Some functions (such as lchown()) are present in libc, but are  
?X: unimplemented. That is, they always fail and set errno=ENOSYS.  
?X:  
?X: Thomas Bushnell provided the following sample code and the explanation  
?X: that follows.  
?X:  
?X: The choice of <assert.h> is essentially arbitrary. The GNU libc  
?X: macros are found in <gnu/stubs.h>. You can include that file instead  
?X: of <assert.h> (which itself includes <gnu/stubs.h>) if you test for  
?X: its existence first. <assert.h> is assumed to exist on every system,  
?X: which is why it's used here. Any GNU libc header file will include  
?X: the stubs macros. If either \_\_stub\_NAME or \_\_stub\_\_NAME is defined,  
?X: then the function doesn't actually exist.

Tests using <assert.h> work  
?X: on every system around.  
?X:  
?X: The declaration of FOO is there to override builtin prototypes for  
?X: ANSI C functions.  
?X:  
?X: I really ought to enhance the inlibc test to check for this, but  
?X: I don't have time now. --A.D. 5/1998  
?X:  
?X: Unfortunately, this trick fails under clang++-7. Apparently to  
?X: cover both the stub issue and clang's requirements, we need to do  
?X: a compile and run test. -- A.D. 8/2019  
?X:

```
$cat > try.c <<EOCP
#include <pwd.h>
#include <stdio.h>
#include <stdlib.h>
#ifdef I_UNISTD
# include <unistd.h>
#endif
int main(int argc, char *argv[])
{
    if (lchown("./try.c", -1, getgid()) == -1) {
        exit(EXIT_FAILURE);
    }
    exit(EXIT_SUCCESS);
}
EOCP
set try
if eval $compile && ./try; then
    $echo "lchown() found." >&4
```

```
    val="$define"  
else  
    $echo "lchown() NOT found." >&4  
    val="$undef"  
fi  
set d_lchown  
eval $setvar  
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_lchown.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_stddef.U 1 2006-08-24 12:32:52Z rmanfredi $  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: $Log: i_stddef.U,v $  
?RCS: Revision 3.0 1993/08/18 12:08:27 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:i_stddef: Inhdr  
?MAKE: -pick add $@ %<  
?S:i_stddef:  
?S: This variable conditionally defines the I_STDDEF symbol, which  
?S: indicates to the C program that <stddef.h> exists and should  
?S: be included.  
?S:.  
?C:I_STDDEF:  
?C: This symbol, if defined, indicates that <stddef.h> exists and should  
?C: be included.  
?C:.  
?H:#$i_stddef I_STDDEF /**/  
?H:.  
?LINT:set  
i_stddef  
: see if stddef is available  
set stddef.h i_stddef  
eval $inhdr
```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_stddef.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_fd\_set.U,v 3.0.1.3 1997/02/28 15:33:16 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_fd\_set.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:33:16 ram

?RCS: patch61: added ?F: metalint hint

?RCS:

?RCS: Revision 3.0.1.2 1994/06/20 06:57:23 ram

?RCS: patch30: extended scope for fd\_set checks (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/01/24 14:06:27 ram

?RCS: patch16: comments for HAS\_FD\_\* symbols were not consistent

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:02 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_fd\_set d\_fd\_macros

d\_fds\_bits: Compile cat rm\_try Oldconfig \

d\_socket i\_systeme i\_sysselect i\_stdlib run

?MAKE: -pick add \$@ %<

?S:d\_fd\_set:

?S: This variable contains the eventual value of the HAS\_FD\_SET symbol,

?S: which indicates if your C compiler knows about the fd\_set typedef.

?S:.

?S:d\_fd\_macros:

?S: This variable contains the eventual value of the HAS\_FD\_MACROS symbol,

?S: which indicates if your C compiler knows about the macros which

?S: manipulate an fd\_set.

?S:.

?S:d\_fds\_bits:

?S: This variable contains the eventual value of the HAS\_FDS\_BITS symbol,

?S: which indicates if your fd\_set typedef contains the fds\_bits member.

?S: If you have an fd\_set typedef, but the dweebs who installed it did

?S: a half-fast job and neglected to provide the macros to manipulate

?S: an fd\_set, HAS\_FDS\_BITS will let us know how to fix the gaffe.

?S:.

?C:HAS\_FD\_SET:

?C: This symbol, when defined, indicates presence of the fd\_set typedef  
?C: in <sys/types.h>  
?C:.  
?C:HAS\_FD\_MACROS:  
?C: This symbol, when defined,  
indicates presence of the macros used to  
?C: manipulate an fd\_set.  
?C:.  
?C:HAS\_FDS\_BITS:  
?C: This symbol, when defined, indicates presence of the fds\_bits member in  
?C: fd\_set. This knowledge is useful if fd\_set is available but the macros  
?C: aren't.  
?C:.  
?H:#\$d\_fd\_set HAS\_FD\_SET /\*\*/  
?H:#\$d\_fd\_macros HAS\_FD\_MACROS /\*\*/  
?H:#\$d\_fds\_bits HAS\_FDS\_BITS /\*\*/  
?H:.  
?F:!try  
: check for fd\_set items  
\$cat <<EOM

Checking to see how well your C compiler handles fd\_set and friends ...

EOM

?X: The FD\_SET macros can be in strange places. On some SysV-based

?X: systems, they are in <sys/bsdtypes.h>, which is included (perhaps)

?X: by <sys/socket.h>. We won't force people to include

?X: <sys/bsdtypes.h> because it might introduce other

?X: incompatibilities.

\$cat >try.c <<EOCP

```
#$i_stdlib I_STDLIB
```

```
#ifdef I_STDLIB
```

```
#include <stdlib.h>
```

```
#endif
```

```
#$i_systime I_SYS_TIME
```

```
#$i_sysselect I_SYS_SELECT
```

```
#$d_socket HAS_SOCKET
```

```
#include <sys/types.h>
```

```
#ifdef HAS_SOCKET
```

```
#include <sys/socket.h> /* Might include <sys/bsdtypes.h>
```

```
*/
```

```
#endif
```

```
#ifdef I_SYS_TIME
```

```
#include <sys/time.h>
```

```
#endif
```

```
#ifdef I_SYS_SELECT
```

```
#include <sys/select.h>
```

```
#endif
```

```
int main() {
```

```

fd_set fds;

#ifdef TRYBITS
if(fds.fds_bits);
#endif

#if defined(FD_SET) && defined(FD_CLR) && defined(FD_ISSET) && defined(FD_ZERO)
exit(0);
#else
exit(1);
#endif
}
EOCP
set try -DTRYBITS
if eval $compile; then
d_fds_bits="$define"
d_fd_set="$define"
echo "Well, your system knows about the normal fd_set typedef..." >&4
if $run ./try; then
echo "and you have the normal fd_set macros (just as I'd expect)." >&4
d_fd_macros="$define"
else
$cat >&4 <<'EOM'
but not the normal fd_set macros! Gaaack! I'll have to cover for you.
EOM
d_fd_macros="$undef"
fi
else
$cat <<'EOM'
Hmm, your compiler has some difficulty with fd_set. Checking further...
EOM
set try
if eval $compile; then
d_fds_bits="$undef"
d_fd_set="$define"
echo "Well, your system has some sort of fd_set available..." >&4
if $run ./try; then
echo "and you have the normal
fd_set macros." >&4
d_fd_macros="$define"
else
$cat <<'EOM'
but not the normal fd_set macros! Gross! More work for me...
EOM
d_fd_macros="$undef"
fi
else
echo "Well, you got zip. That's OK, I can roll my own fd_set stuff." >&4

```



```
d_fd_set="$undef"  
d_fds_bits="$undef"  
d_fd_macros="$undef"  
fi  
fi  
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_fd_set.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_readdir64\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_readdir64\_r readdir64\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_dirent extern\_C

?MAKE: -pick add \$@ %<

?S:d\_readdir64\_r:

?S: This variable conditionally defines the HAS\_READDIR64\_R symbol,

?S: which indicates to the C program that the readdir64\_r()

?S: routine is available.

?S:.

?S:readdir64\_r\_proto:

?S: This variable encodes the prototype of readdir64\_r.

?S: It is zero if d\_readdir64\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_readdir64\_r

?S: is defined.

?S:.

?C:HAS\_READDIR64\_R:

?C: This symbol, if defined, indicates that the readdir64\_r routine

?C: is

available to readdir64 re-entrantly.

?C:.

?C:READDIR64\_R\_PROTO:

?C: This symbol encodes the prototype of readdir64\_r.

?C: It is zero if d\_readdir64\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_readdir64\_r

?C: is defined.

?C:.

?H:#d\_readdir64\_r HAS\_READDIR64\_R /\*\*/

?H:#define READDIR64\_R\_PROTO \$readdir64\_r\_proto /\*\*/

?H:.

```

?T:try hdrs d_readdir64_r_proto
: see if readdir64_r exists
set readdir64_r d_readdir64_r
eval $inlibc
case "$d_readdir64_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_dirent dirent.h"
case "$d_readdir64_r_proto:$usethreads" in
":define") d_readdir64_r_proto=define
set d_readdir64_r_proto readdir64_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_readdir64_r_proto" in
define)
case "$readdir64_r_proto" in
"|0) try='int readdir64_r(DIR*, struct dirent64*, struct dirent64**);'
./protochk "$extern_C $try" $hdrs && readdir64_r_proto=I_TSR ;;
esac
case "$readdir64_r_proto" in
"|0) try='int readdir64_r(DIR*,
struct dirent64*);'
./protochk "$extern_C $try" $hdrs && readdir64_r_proto=I_TS ;;
esac
case "$readdir64_r_proto" in
"|0) d_readdir64_r=undef
readdir64_r_proto=0
echo "Disabling readdir64_r, cannot determine prototype." >&4 ;;
* ) case "$readdir64_r_proto" in
REENTRANT_PROTO*) ;;
*) readdir64_r_proto="REENTRANT_PROTO_${readdir64_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "readdir64_r has no prototype, not using it." >&4 ;;
esac
d_readdir64_r=undef
readdir64_r_proto=0
;;
esac
;;
*) readdir64_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_readdir64\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_sigvec.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_sigvec.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:45:37 ram

?RCS: patch61: there is now a separate routine for sigaction()

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:24 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X: d\_sigvec.U, from d\_ftime.U 1.0

?X:

?MAKE:d\_sigvec d\_sigvectr d\_sigintrp: Csym Inlibc Setvar

?MAKE: -pick add \$@ %<

?S:d\_sigvec:

?S: This variable conditionally defines the HAS\_SIGVEC symbol, which indicates

?S: that BSD

reliable signals are supported.

?S:.

?S:d\_sigvectr:

?S: This variable conditionally defines the HAS\_SIGVECTOR symbol, which

?S: indicates that the sigvec() routine is called sigvector() instead, for

?S: reasons known only to Hewlett-Packard.

?S:.

?S:d\_sigintrp:

?S: This variable conditionally defines the HAS\_SIGINTRP symbol, which

?S: indicates that the siginterrupt() routine is available.

?S:.

?C:HAS\_SIGVEC (SIGVEC):

?C: This symbol, if defined, indicates that BSD reliable signals are

?C: supported.

?C:.

?C:HAS\_SIGVECTOR (SIGVECTOR):

?C: This symbol, if defined, indicates that the sigvec() routine is called

?C: sigvector() instead, and that sigspace() is provided instead of

?C: sigstack(). This is probably only true for HP-UX.

?C:.

```

?C:HAS_SIGINTRP (SIGINTRP):
?C: This symbol, if defined, indicates that the siginterrupt() routine
?C: is available.
?C:.
?H:#$d_sigvec HAS_SIGVEC /**/
?H:#$d_sigvectr HAS_SIGVECTOR /**/
?H:#$d_sigintrp HAS_SIGINTRP /**/
?H:.
?T:val
?LINT:set d_sigvec d_sigintrp
@if
  d_sigvectr || d_sigvec || HAS_SIGVEC || HAS_SIGVECTOR
: see if sigvector exists -- since sigvec will match the substring
echo " "
if set sigvector val -f d_sigvectr; eval $csym; $val; then
  echo 'sigvector() found--you must be running HP-UX.' >&4
  val="$define"; set d_sigvectr; eval $setvar
  val="$define"; set d_sigvec; eval $setvar
else
: try the original name
d_sigvectr="$undef"
if set sigvec val -f d_sigvec; eval $csym; $val; then
  echo 'sigvec() found.' >&4
  val="$define"; set d_sigvec; eval $setvar
else
  echo 'sigvec() not found--race conditions with signals may occur.' >&4
  val="$undef"; set d_sigvec; eval $setvar
fi
fi

@end
@if d_sigintrp || HAS_SIGINTRP
: see if we have siginterrupt
set siginterrupt d_sigintrp
eval $inlibc

@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_sigvec.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_seteuid.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_seteuid.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:08 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_seteuid: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_seteuid:  
?S: This variable conditionally defines the HAS\_SETEUID symbol, which  
?S: indicates to the C program that the seteuid() routine is available  
?S: to change the effective uid of the current program.  
?S:.  
?C:HAS\_SETEUID (SETEUID):  
?C: This symbol, if defined, indicates that the seteuid  
routine is available  
?C: to change the effective uid of the current program.  
?C:.  
?H:#\$d\_seteuid HAS\_SETEUID /\*\*/  
?H:.  
?LINT:set d\_seteuid  
: see if seteuid exists  
set seteuid d\_seteuid  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_seteuid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_rename.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_rename.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:54 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_rename: Inlibc

?MAKE: -pick add \$@ %<  
?S:d\_rename:  
?S: This variable conditionally defines the HAS\_RENAME symbol, which  
?S: indicates to the C program that the rename() routine is available  
?S: to rename files.  
?S:.  
?C:HAS\_RENAME (RENAME):  
?C: This symbol, if defined, indicates that the rename routine is available  
?C: to rename files.  
    Otherwise you should do the unlink(), link(), unlink()  
?C: trick.  
?C:.  
?H:#\$d\_rename HAS\_RENAME /\*\*/  
?H:.  
?LINT:set d\_rename  
: see if rename exists  
set rename d\_rename  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_rename.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: sbrktype.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: sbrktype.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:09:43 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:sbrktype: Myread Oldconfig Loc contains Findhdr  
?MAKE: -pick add \$@ %<  
?S:sbrktype:  
?S: This variable defines sbrktype to be something like caddr\_t, char \*,  
?S: or whatever type is used to declare sbrk() in the kernel.  
?S:.  
?C:Caddr\_t (SBRKTYPE):  
?C: This symbol holds the type of a core address. It is intended to be used  
?C: to safely

```

declare the return type of system calls like sbrk(). It might
?C: be necessary to include <sys/types.h> as well.
?C:.
?H:#define Caddr_t $sbrktype /* <core address> type */
?H:.
: see what type sbrk is declared as in the kernel
case "$sbrktype" in
")
if $contains 'caddr_t;' `./findhdr sys/types.h` >/dev/null 2>&1 ; then
dflt='caddr_t';
else
dflt='char *';
fi
;;
*) dflt="$sbrktype"
;;
esac
echo " "
rp="What is the return type of sbrk() on this system?"
./myread
sbrktype="$ans"

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/sbrktype.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: usenm.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:26:40 ram

?RCS: patch61: don't use nm with the GNU C library

?RCS: patch61: added support for Linux shared libs

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:57 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:usenm runnm nm\_opt nm\_so\_opt: cat test Myread Oldconfig grep \

d\_gnulibc nm egrep rsrc osname Guess

?MAKE: -pick add \$@ %<

?S:usenm:

?S: This variable contains 'true' or 'false' depending whether the

?S: nm extraction is wanted

or not.

?S:.

?S:runnm:

?S: This variable contains 'true' or 'false' depending whether the

?S: nm extraction should be performed or not, according to the value

?S: of usenm and the flags on the Configure command line.

?S:.

?S:nm\_opt:

?S: This variable holds the options that may be necessary for nm.

?S:.

?S:nm\_so\_opt:

?S: This variable holds the options that may be necessary for nm

?S: to work on a shared library but that can not be used on an

?S: archive library. Currently, this is only used by Linux, where

?S: nm --dynamic is \*required\* to get symbols from an ELF library which

?S: has been stripped, but nm --dynamic is \*fatal\* on an archive library.

?S: Maybe Linux should just always set usenm=false.

?S:.

: see if nm is to be used to determine whether a symbol is defined or not

?X: If there is enough inquiries, it might be worth to wait for the nm

?X: extraction. Otherwise, the C compilations might be a better deal.

?X:

?X: Don't bother if we're using GNU libc -- skimo

```
case "$usenm"
```

```
in
```

```
")
```

```
dflt="
```

```
case "$d_gnulibc" in
```

```
"$define")
```

```
echo " "
```

```
echo "$nm probably won't work on the GNU C Library." >&4
```

```
dflt=n
```

```
::
```

```
esac
```

```
case "$dflt" in
```

```
")
```

```
if $test "$osname" = aix -a ! -f /lib/syscalls.exp; then
```

```
echo " "
```

```
echo "Whoops! This is an AIX system without /lib/syscalls.exp!" >&4
```

```
echo "'nm' won't be sufficient on this system." >&4
```

```
dflt=n
```

```
fi
```

```
::
```

```
esac
```

```
case "$dflt" in
```



```

")
if ./gnu; then
  echo " "
  echo "Hmm... A GNU system without a GNU C Library? Weird..." >&4
  dflt=n
else
  dflt=`$egrep 'inlibc|csym' $src/Configure | wc -l 2>/dev/null`
  if $test $dflt -gt 20; then
    dflt=y
  else
    dflt=n
  fi
fi
;;
esac
;;
*)
case "$usenm" in
true|$define) dflt=y;;
*) dflt=n;;
esac
;;
esac
$cat <<EOM

```

I can use \$nm to extract the symbols from your C libraries. This is a time consuming task which may generate huge output on the disk (up to 3 megabytes) but that should make the symbols extraction faster. The alternative is to skip the 'nm' extraction part and to compile a small test program instead to determine whether each symbol is present. If you have a fast C compiler and/or if your 'nm' output cannot be parsed, this may be the best solution.

EOM

```

rp='Shall I use nm to extract C symbols from the libraries?'
./myread
case "$ans" in
[Nn]*) usenm=false;;
*) usenm=true;;
esac

```

?X: Name extraction is to be run if 'nm' usage is wanted and if no -r flag  
?X: was provided to configure (in which case we simply re-use the previous  
?X: values).

```

runnm=$usenm
case "$reusel" in
true) runnm=false;;

```

esac

: nm options which may be necessary

```
case "$nm_opt" in
") if $test -f /mach_boot; then
  nm_opt=" # Mach
elif $test -d /usr/ccs/lib; then
  nm_opt='-p' # Solaris (and SunOS?)
elif $test -f /dgux; then
  nm_opt='-p' # DG-UX
elif $test -f /lib64/rld; then
  nm_opt='-p' # 64-bit Irix
else
  nm_opt=""
fi;;
esac
```

?X: nm options which may be necessary for shared libraries but illegal

?X: for archive libraries. Thank you,

Linux.

```
case "$nm_so_opt" in
") case "$osname" in
*linux*)
  if $nm --help | $grep 'dynamic' > /dev/null 2>&1; then
    nm_so_opt='--dynamic'
  fi
  ;;
esac
;;
esac
```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/usenm.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getservprotos.U,v \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_getservprotos : Hasproto i\_netdb

?MAKE: -pick add \$@ %<

?S:d\_getservprotos:  
 ?S: This variable conditionally defines the HAS\_GETSERV\_PROTOS symbol,  
 ?S: which indicates to the C program that <netdb.h> supplies  
 ?S: prototypes for the various getserv\*() functions.  
 ?S: See also netdbtype.U for probing for various netdb types.  
 ?S:.  
 ?C:HAS\_GETSERV\_PROTOS:  
 ?C: This symbol, if defined, indicates that <netdb.h> includes  
 ?C: prototypes for getservent(), getservbyname(), and  
 ?C: getservbyaddr(). Otherwise,  
 it is up to the program to guess  
 ?C: them. See netdbtype.U for probing for various Netdb\_xxx\_t types.  
 ?C:.  
 ?H:#\$d\_getservprotos HAS\_GETSERV\_PROTOS /\*\*/  
 ?H:.  
 ?LINT:set d\_getservprotos  
 : see if prototypes for various getservxxx netdb.h functions are available  
 echo " "  
 set d\_getservprotos getservent \$i\_netdb netdb.h  
 eval \$hasproto

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/protos/d\_getservprotos.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_endhent.U,v 3.0 1993/08/18 12:06:09 ram Exp \$  
 ?RCS:  
 ?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
 ?RCS:  
 ?RCS: You may redistribute only under the terms of the Artistic License,  
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 ?RCS: that same Artistic License; a copy of which may be found at the root  
 ?RCS: of the source tree for dist 3.0.  
 ?RCS:  
 ?RCS: \$Log: d\_endhent.U,v \$  
 ?RCS: Revision 3.0 1993/08/18 12:06:09 ram  
 ?RCS: Baseline for dist 3.0 netwide release.  
 ?RCS:  
 ?MAKE:d\_endhent: Inlibc  
 ?MAKE: -pick add \$@ %<  
 ?S:d\_endhent:  
 ?S: This variable conditionally defines HAS\_ENDHOSTENT if endhostent() is  
 ?S: available to close whatever was being used for host queries.  
 ?S:.  
 ?C:HAS\_ENDHOSTENT:  
 ?C: This symbol, if defined, indicates that the endhostent() routine is

?C: available to close whatever was being used for host queries.

?C:.

?H:#\$d\_endhent HAS\_ENDHOSTENT /\*\*/

?H:.

?LINT:set d\_endhent

: see if endhostent exists

set endhostent d\_endhent

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_endhent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: modetype.U,v 3.0.1.1 1994/10/29 16:25:07 ram Exp \$

?RCS:

?RCS: Copyright (c) 1991-1993, Raphael Manfredi

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: modetype.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:25:07 ram

?RCS: patch36: created by ADO

?RCS:

?MAKE:modetype: Myread Typedef

?MAKE: -pick add \$@ %<

?S:modetype:

?S: This variable defines modetype to be something like mode\_t,

?S: int, unsigned short, or whatever type is used to declare file

?S: modes for system calls.

?S:.

?C:Mode\_t:

?C: This symbol holds the type used to declare file modes

?C: for systems calls. It is usually mode\_t, but may be

?C: int or unsigned short. It may be necessary to include <sys/types.h>

?C: to get any typedef'ed information.

?C:.

?H:#define Mode\_t \$modetype /\* file mode parameter for system calls \*/

?H:.

?LINT:set modetype

```
: see what type is used for mode_t
rp="What is the type used for file modes for system calls (e.g. fchmod())?"
set mode_t modetype int stdio.h sys/types.h
eval $stypedef_ask
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/modetype.U
```

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2017, Karl Williamson

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:d\_mbrtowc: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_mbrtowc:

?S: This variable conditionally defines the HAS\_MBRTOWC symbol if the

?S: mbrtowc() routine is available to be used to convert a multi-byte

?S: character into a wide character.

?S:.

?C:HAS\_MBRTOWC:

?C: This symbol, if defined, indicates that the mbrtowc routine is

?C: available to convert a multi-byte character into a wide character.

?C:.

?H:#\$d\_mbrtowc HAS\_MBRTOWC /\*\*/

?H:.

?LINT: set d\_mbrtowc

: see if mbrtowc exists

set mbrtowc d\_mbrtowc

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_mbrtowc.U
```

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2012-2012, H.Merijn Brand

?RCS:

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?RCS: of the source tree for dist 4.0.

```

?RCS:
?RCS: Original Author: H.Merijn Brand
?RCS:
?MAKE:d_isblank: cc cat ccflags ldflags rm libs Setvar
?MAKE: -pick add $@ %<
?S:d_isblank:
?S: This variable conditionally defines the HAS_ISBLANK constant,
?S: which indicates to the C program that isblank() is available.
?S:.
?C:HAS_ISBLANK:
?C: This manifest constant lets the C program know that isblank
?C: is available.
?C:.
?H:#$d_isblank HAS_ISBLANK /**/
?H:.
?LINT:set d_isblank
?X: Can't use Inlibc because isblank() might be a macro.
: Look for isblank
echo " "
$cat >isblank.c <<'EOCP'
#include
<stdio.h>
#include <ctype.h>
int main() {
int c = ' ';
if (isblank(c))
return 0 ;
else
return 1 ;
}
EOCP
if $cc $ccflags $ldflags -o isblank isblank.c $libs >/dev/null 2>&1 ; then
echo "isblank() found." >&4
val="$define"
else
echo "isblank() NOT found." >&4
val="$undef"
fi
set d_isblank
eval $setvar
$rm -f isblank*

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_isblank.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id$

```

?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
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?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Myinit.U,v \$  
?RCS: Revision 3.0.1.1 1994/10/31 09:47:29 ram  
?RCS: patch44: leading comment states this unit comes before option processing  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:07 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: If you want to initialize any default values, copy this unit to your  
?X: personal U directory and add the assignments to the end. This file  
?X: is included after variables are initialized but before any old  
?X: config.sh file is read in and before  
?X: any Configure switch processing.  
?X:  
?MAKE:Myinit: Init  
?MAKE: -pick add \$@ %<  
?LINT: nocomment

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Myinit.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_sighold.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_sighold.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:21 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_sighold: Inlibc  
?MAKE: -pick add \$@ %<

?S:d\_sighold:  
?S: This variable conditionally defines HAS\_SIGHOLD if sighold() is  
?S: available to hold signals.  
?S:.  
?C:HAS\_SIGHOLD:  
?C: This symbol, if defined, indicates that the sighold routine is  
?C: available to hold signals.  
?C:.  
?H:#\$d\_sighold HAS\_SIGHOLD /\*\*/  
?H:.  
?LINT:set d\_sighold  
:  
see if sighold exists  
set sighold d\_sighold  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_sighold.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Myread.U,v \$  
?RCS: Revision 3.0.1.6 1997/02/28 15:05:39 ram  
?RCS: patch61: myread script now starts with a "startsh"  
?RCS: patch61: miscellaneous fixes  
?RCS:  
?RCS: Revision 3.0.1.5 1995/01/11 15:14:22 ram  
?RCS: patch45: added & escape allowing user to turn on -d from the prompt  
?RCS:  
?RCS: Revision 3.0.1.4 1994/10/31 09:48:04 ram  
?RCS: patch44: added Options to the MAKE line since it's no longer in Init.U  
?RCS:  
?RCS: Revision 3.0.1.3 1994/10/29 15:56:20 ram  
?RCS: patch36: added ?F:  
line for metalint file checking  
?RCS:  
?RCS: Revision 3.0.1.2 1993/08/30 08:57:59 ram  
?RCS: patch8: added new visible 'nostick' symbol, mainly for Finish.U



?RCS:  
?RCS: Revision 3.0.1.1 1993/08/27 14:39:20 ram  
?RCS: patch7: now sticks to the question when no default and empty answer  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:08 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit produces a bit of shell code that must be dotted in in order  
?X: to do a read. It allows for shell escapes, default assignment and  
?X: parameter evaluation.  
?X:  
?X: To use this unit, \$rp and \$dflt must hold the question and the  
?X: default answer. The question will be printed by the script itself.  
?X: Neither \$rp nor \$dflt is altered by the script.  
?X:  
?X: The myread script will stick to the question if no default is proposed  
?X: and the user answer is empty, which prevents mistakes. However, at the  
?X: end of Configure, there is an exception to this rule (Finish.U) where we  
?X: set  
nostick to a non-empty value to allow the Return key to play its role!  
?X:  
?MAKE:Myread: Options startsh n c trnl  
?MAKE: -pick add \$@ %<  
?V:ans:dflt rp nostick  
?F:./myread  
?T:COLUMNS xxxm rp dflt answ aok myecho counter  
?LINT:change fastread  
?X: Some shells (Ultrix) do not understand \${COLUMNS:-80}, sigh!  
: compute the number of columns on the terminal for proper question formatting  
case "\$COLUMNS" in  
") COLUMNS='80';;  
esac  
  
: set up the echo used in my read  
?X:  
?X: This variable is intended to be eval'ed. It will echo the two  
?X: variables \$rp and \$dflt (provided this latter has a non null value).  
?X: It is mainly used by the myread script to echo the questions.  
?X:  
?X: The \$n and \$c below are substituted before Loc does its silly echo check  
?X: so don't put a \$ on the echo below so we get builtin, even if \$echo is  
?X: pointing to /bin/echo.  
?X:  
myecho="case \"\\$xxxm\" in  
") echo \$n \"\\$rp \$c\" >&4;;  
\*) case \"\\$rp\" in  
") echo \$n \"[\\$xxxm] \$c\";;

```

*)
if test `echo \`${$rp} [`${xxm}
\` | wc -c` -ge $COLUMNS; then
  echo \`${$rp}` >&4
  echo $n \`${$xxm} $c` >&4
else
  echo $n \`${$rp} [`${xxm} $c` >&4
fi
;;
esac;;
esac"

```

: now set up to do reads with possible shell escape and default assignment

```
cat <<EOESC >myread
```

```
$startsh
```

```
?X:
```

```
?X: Save value of default -- do not alter original in case of eval
```

```
?X:
```

```
xxm=${$dflt
```

```
$myecho
```

```
?X:
```

```
?X: If there is no default, then stop, regardless of the value in fastread.
```

```
?X: In silent mode, no new-line is to be echoed if the question is empty,
```

```
?X: since this is used to wait for the "return" key.
```

```
?X:
```

```
ans=''
```

```
counter=42
```

```
case "\$fastread" in
```

```
yes) case "\$dflt" in
```

```
) ;;
```

```
*) ans=";
```

```
case "\$silent-\$rp" in
```

```
true-) ;;
```

```
*) echo " " >&4;;
```

```
esac;;
```

```
esac;;
```

```
*) case "\$silent" in
```

```
true) case "\$rp" in
```

```
) ans=";;
```

```
esac;;
```

```
esac;;
```

```
esac
```

```
while expr "X\$ans" : "X!" >/dev/null; do
```

```
  read answ
```

```
?X:
```

```
?X: Run 'eval' on the answer, in order to do variable substitution, in case
```

```
?X: the user types $HOME or $WHATEVER. Variables must be evaluated
```

now.

?X: Typing '\$HOME' won't currently prevent from substitution -- use '\$HOME'

?X: The \$1 .. \$9 and \$\*, as well as \$@, are available to refer to the

?X: default value.

?X:

```
set x $xxxm
```

```
shift
```

```
aok="; eval "ans=\\\"$answ\\\" && aok=y
```

```
case \"$answ\" in
```

?X:

?X: Use "!" and not a plain ! because of a bug in BSD 4.4 shell

?X: (reported by Wayne Davison)

?X: We must handle the shell escapes before dealing with possible variable

?X: substitution, since the shell we're launching in that case will be able

?X: to do it as well as we can -- RAM, 15/03/96

?X

```
"!")
```

```
sh 1>&4
```

```
echo " "
```

```
$myecho
```

```
::
```

```
!*)
```

```
set x `expr "X$ans" : "X!(.*)\$" `
```

```
shift
```

```
sh 1>&4 -c \"$*"
```

```
echo " "
```

```
$myecho
```

```
::
```

```
\"$ans")
```

```
case \"$ans\" in
```

?X:

?X: Answers starting with & are hooks allowing to dynamically turn on/off

?X: some Configure options. That's for the future. -- RAM, 09/01/95

?X: Today, we only recognize '& -d' to mean 'go on as if Configure -d, which

?X: is a hardwired behaviour compatible with

our general scheme.

?X:

```
\\&*)
```

```
set x `expr "X$ans" : "X&(.*?)\$" `
```

```
shift
```

```
case \"$1\" in
```

```
-d)
```

```
fastread=yes
```

```
echo "(OK, I'll run with -d after this question.)" >&4
```

```
::
```

```
-*)
```

```
echo "*** Sorry, $1 not supported yet." >&4
```

```
::
```

```

esac
$myecho
ans=!
;;
esac;;
*)
case "\$aok" in
y)
echo "*** Substitution done -- please confirm."
xxxm="\$ans"
ans=\`echo $n "\$ans$c" | tr '$trnl' ' '\`
xxxm="\$ans"
ans=!
;;
*)
echo "*** Error -- try again."
ans=!
;;
esac
$myecho
;;
esac
?X: Stick in myread if no default answer and nothing was answered
case "\$ans\$xxxm\$nostick" in
")
ans=!
$myecho
;;
esac
counter=\`echo \$counter | awk '{ print --\${0} }'\`
if [ \$counter = 0 ]; then
echo >&4
echo >&4 Too many attempts asking the same question. Giving up.
exit 1
fi
done
case "\$ans" in
") ans="\$xxxm";;
esac
EOSC

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/Myread.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

```

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: gidtype.U,v $
?RCS: Revision 3.0.1.3 1994/08/29 16:21:44 ram
?RCS: patch32: now uses new Typedef unit to compute type information
?RCS: patch32: removed useless usage of Setvar (for now)
?RCS:
?RCS: Revision 3.0.1.2 1994/05/13 15:21:07 ram
?RCS: patch27: added lint hint
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 15:01:51 ram
?RCS: patch23: protected gidtype setting via setvar (ADO)
?RCS: patch23: made Gid_t comment more explicit (ADO)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:08:11 ram
?RCS:
Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:gidtype: Myread Typedef Findhdr
?MAKE: -pick add $@ %<
?S:gidtype:
?S: This variable defines Gid_t to be something like gid_t, int,
?S: ushort, or whatever type is used to declare the return type
?S: of getgid(). Typically, it is the type of group ids in the kernel.
?S:.
?C:Gid_t (GIDTYPE):
?C: This symbol holds the return type of getgid() and the type of
?C: argument to setrgid() and related functions. Typically,
?C: it is the type of group ids in the kernel. It can be int, ushort,
?C: uid_t, etc... It may be necessary to include <sys/types.h> to get
?C: any typedef'ed information.
?C:.
?H:#define Gid_t $gidtype /* Type for getgid(), etc... */
?H:.
?T:xxx
: see what type gids are declared as in the kernel
set gid_t gidtype xxx stdio.h sys/types.h
eval $typedef
case "$gidtype" in
xxx)
xxx=`./findhdr sys/user.h`
set `grep 'groups\[NGROUPS\];' "$xxx" 2>/dev/null` unsigned short

```

```

case $1 in
unsigned) dflt="$1 $2" ;;
*) dflt="$1"
;;
esac
;;
*) dflt="$gidtype";;
esac
echo " "
rp="What is the type for group ids returned by getgid()"
./myread
gidtype="$ans"

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/gidtype.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: privlib.U,v \$

?RCS: Revision 3.0.1.4 1995/09/25 09:17:09 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.3 1995/01/30 14:44:23 ram

?RCS: patch49: can now handle installation prefix changes (from WED)

?RCS:

?RCS: Revision 3.0.1.2 1994/08/29 16:31:52 ram

?RCS: patch32: now uses installation prefix

?RCS:

?RCS: Revision 3.0.1.1 1993/09/13 16:12:34 ram

?RCS: patch10: added support for /local/lib (WED)

?RCS: patch10: prompt phrasing made

more explicit (WED)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:35 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:privlib privlibexp installprivlib: afs package cat Getfile \

Oldconfig Prefixit test

```

?MAKE: -pick add $@ %<
?Y:TOP
?S:privlib:
?S: This variable contains the eventual value of the PRIVLIB symbol,
?S: which is the name of the private library for this package. It may
?S: have a ~ on the front. It is up to the makefile to eventually create
?S: this directory while performing installation (with ~ substitution).
?S:.
?S:privlibexp:
?S: This variable is the ~name expanded version of privlib, so that you
?S: may use it directly in Makefiles or shell scripts.
?S:.
?S:installprivlib:
?S: This variable is really the same as privlibexp but may differ on
?S: those systems using AFS. For extra portability, only this variable
?S: should be used in makefiles.
?S:.
?C:PRIVLIB:
?C: This symbol contains the name of the private library for this package.
?C: The library is
    private in the sense that it needn't be in anyone's
?C: execution path, but it should be accessible by the world. The program
?C: should be prepared to do ~ expansion.
?C:.
?C:PRIVLIB_EXP:
?C: This symbol contains the ~name expanded version of PRIVLIB, to be used
?C: in programs that are not prepared to deal with ~ expansion at run-time.
?C:.
?H:#define PRIVLIB "$privlib" /**/
?H:#define PRIVLIB_EXP "$privlibexp" /**/
?H:.
: determine where private executables go
set dflt privlib lib/$package
eval $prefixit
$cat <<EOM

```

There are some auxiliary files for \$package that need to be put into a private library directory that is accessible by everyone.

```

EOM
fn=d~+
rp='Pathname where the private library files will reside?'
./getfile
if $test "X$privlibexp" != "X$sansexp"; then
    installprivlib="
fi
privlib="$ans"
privlibexp="$sansexp"

```

```
if $afs; then
$cat <<EOM
```

Since you are running AFS, I need to distinguish the directory in which private files reside from the directory in which they are installed (and from which they are presumably copied to the former directory by occult means).

```
EOM
case "$installprivlib" in
") dflt=`echo $privlibexp | sed 's#^/afs/#/afs/.#`;;
*) dflt="$installprivlib";;
esac
fn=de~
rp='Where will private files be installed?'
./getfile
installprivlib="$ans"
else
installprivlib="$privlibexp"
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/privlib.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_getpgrp.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 15:34:28 ram

?RCS: patch61: new USE\_BSD\_GETPGRP to detect the getpgrp() flavour

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:15 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_getpgrp d\_bsdgetpgrp: Guess Inlibc Setvar cat rm \

+cc +ccflags +ldflags +libs i\_unistd

?MAKE: -pick add \$@ %<

?S:d\_getpgrp:

?S: This variable conditionally defines HAS\_GETPGRP if getpgrp() is



?S: available to get the current process group.  
 ?S:.  
 ?S:d\_bsdgetpgrp:  
 ?S: This  
 variable conditionally defines USE\_BSD\_GETPGRP if  
 ?S: getpgrp needs one arguments whereas USG one needs none.  
 ?S:.  
 ?C:HAS\_GETPGRP (GETPGRP):  
 ?C: This symbol, if defined, indicates that the getpgrp routine is  
 ?C: available to get the current process group.  
 ?C:.  
 ?C:USE\_BSD\_GETPGRP:  
 ?C: This symbol, if defined, indicates that getpgrp needs one  
 ?C: arguments whereas USG one needs none.  
 ?C:.  
 ?H:#\$d\_getpgrp HAS\_GETPGRP /\*\*/  
 ?H:#\$d\_bsdgetpgrp USE\_BSD\_GETPGRP /\*\*/  
 ?H:.  
 ?F:!set !set.c  
 ?T:xxx  
 ?LINT:set d\_getpgrp d\_bsdgetpgrp  
 : see if getpgrp exists  
 set getpgrp d\_getpgrp  
 eval \$inlibc

```
@if USE_BSD_GETPGRP || d_bsdgetpgrp
case "$d_getpgrp" in
"$define")
echo " "
echo "Checking to see which flavor of getpgrp is in use..."
$cat >set.c <<EOP
#i_unistd I_UNISTD
#include <sys/types.h>
#ifdef I_UNISTD
# include <unistd.h>
#endif
int main()
{
if (getuid() == 0) {
printf("(I see you are running Configure as super-user...)\n");
setuid(1);
}
#ifdef TRY_BSD_PGRP
if (getpgrp(1) ==
0)
exit(0);
#else
if (getpgrp() > 0)
```

```

    exit(0);
#endif
    exit(1);
}
EOP
if $cc -DTRY_BSD_PGRP $ccflags $ldflags -o set set.c $libs >/dev/null 2>&1
    && ./set
then
    echo "You have to use getpgrp(pid) instead of getpgrp()." >&4
    val="$define"
elif $cc $ccflags $ldflags -o set set.c $libs >/dev/null 2>&1 && ./set; then
    echo "You have to use getpgrp() instead of getpgrp(pid)." >&4
    val="$undef"
else
    echo "I can't seem to compile and run the test program."
    if ./usg; then
        xxx="a USG one, i.e. you use getpgrp()."
    else
        # SVR4 systems can appear rather BSD-ish.
        case "$i_unistd" in
            $undef)
                xxx="a BSD one, i.e. you use getpgrp(pid)."
                val="$define"
                ;;
            $define)
                xxx="probably a USG one, i.e. you use getpgrp()."
                val="$undef"
                ;;
        esac
    fi
    echo "Assuming your getpgrp is $xxx" >&4
fi
;;
*) val="$undef";;
esac
set d_bsdgetpgrp
eval $setvar
$rm -f set set.c
@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_getpgrp.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_raster.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

```

?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_raster.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:50 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_raster rasterlib: cat test Setvar Myread Oldconfig
?MAKE: -pick add $@ %<
?S:d_raster:
?S: Conditionally defines RASTER_TEK if this is a raster tech machine.
?S:.
?S:rasterlib (d_rasterlib):
?S: Set to the needed compile flag if this is a raster tech machine.
?S: It is up to the Makefile to use this variable.
?S:.
?C:RASTER_TEK:
?C: Defined
    if this is a rastertech machine.
?C:.
?H:#$d_raster RASTER_TEK /**/
?H:.
?LINT:set d_raster
: See if this is a raster tech machine.
val="$undef"
rasterlib="
if $test -r /dev/mirage; then
    $cat <<'EOM'

```

You seem to have a mirage device... this is normally associated with a raster technologies graphics workstation. If this is right, you may want to use raster tech in this program.

```

EOM
dflt=y
case "$d_raster" in
"$undef") dflt=n;;
esac
rp='Use raster tech?'
. ./myread
case "$ans" in
y*) val="$define";;
esac
fi

```

```
set d_raster
eval $setvar

case "$d_raster" in
"$define") rasterlib='-lphigs';;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_raster.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: locdist.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: locdist.U,v $
?RCS: Revision 3.0.1.1 1994/05/06 15:09:20 ram
?RCS: patch23: added support for multi-state regions (WED)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:06 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:locdist orgdist citydist statedist multistatedist cntrydist contdist: \
test newslibexp cat Myread Oldconfig
?MAKE: -pick add $@ %<
?S:locdist:
?S: This variable contains the eventual value of the LOCDIST symbol,
?S: which
is the local organization's distribution name for news.
?S:.
?S:orgdist:
?S: This variable contains the eventual value of the ORGDIST symbol,
?S: which is the organization's distribution name for news.
?S:.
?S:citydist:
?S: This variable contains the eventual value of the CITYDIST symbol,
?S: which is the city's distribution name for news.
?S:.
?S:statedist:
?S: This variable contains the eventual value of the STATEDIST symbol,
?S: which is the state's or province's distribution name for news.
```

?S:.  
?S:multistatedist:  
?S: This variable contains the eventual value of the MULTISTATEDIST symbol,  
?S: which is the news distribution code for multi-state region.  
?S:.  
?S:centrydist:  
?S: This variable contains the eventual value of the CNTRYDIST symbol,  
?S: which is the country's distribution name for news.  
?S:.  
?S:contdist:  
?S: This variable contains the eventual value of the CONTDIST symbol,  
?S: which is the continent's distribution name for news.  
?S:.  
?C:LOCDIST:  
?C: This symbol contains the  
distribution name for the news system that  
?C: restricts article distribution to the local organization.  
?C:.  
?C:ORGDIST:  
?C: This symbol contains the distribution name for the news system that  
?C: restricts article distribution to the organization.  
?C:.  
?C:CITYDIST:  
?C: This symbol contains the distribution name for the news system that  
?C: restricts article distribution to the city.  
?C:.  
?C:STATEDIST:  
?C: This symbol contains the distribution name for the news system that  
?C: restricts article distribution to the state or province.  
?C:.  
?C:MULTISTATEDIST:  
?C: This symbol contains the distribution name for the news system that  
?C: restricts article distribution to a multi-state region.  
?C:.  
?C:CNTRYDIST:  
?C: This symbol contains the distribution name for the news system that  
?C: restricts article distribution to the country.  
?C:.  
?C:CONTDIST:  
?C: This symbol contains the distribution name for the news system that  
?C: restricts article distribution to the continent.  
?C:.  
?H:#define LOCDIST  
"\$locdist" /\*\*/  
?H:#define ORGDIST "\$orgdist" /\*\*/  
?H:#define CITYDIST "\$citydist" /\*\*/  
?H:#define MULTISTATEDIST "\$multistatedist" /\*\*/  
?H:#define STATEDIST "\$statedist" /\*\*/

```
?H:#define CNTRYDIST "$cntrydist" /**/
?H:#define CONTDIST "$contdist" /**/
?H:
: get the local distributions
$cat <<'EOH'
```

Distribution groups are the things you use on the Distribution line to limit where an article will go to. You are likely to be a member of several distribution groups, such as organization, city, state, province, country, continent, etc. For example, Los Angeles has the distribution code "la", New Jersey has the code "nj", and Europe has the code "eunet".

The categories you will be asked are:

```
local organization (Could be just one machine or a cluster or an office)
organization att, dec, kgb, ...
city la, ny, mosc, ...
state/province ca, nj, bc, ...
multi-state region pnw, ne, ...
country usa, can, rok, whatever
continent na (North America), asia, etc.
```

```
EOH
if $test
-f $newslibexp/distributions; then
case "$silent" in
true) ;;
*) dflt='Hit return to continue'
rp="
./myread
;;
esac
echo "Here is your distributions file:" >&4
echo " " >&4
$cat >&4 $newslibexp/distributions
echo " " >&4
fi
echo "Use 'none' for any distributions you don't have."
echo " "
case "$locdist" in
") dflt="none";;
*) dflt="$locdist";;
esac
rp="What is the distribution code for your local organization?"
./myread
locdist="$ans"
case "$orgdist" in
") dflt="none";;
```

```

*) dflt="$orgdist";;
esac
rp="What is the distribution code for your organization?"
./myread
orgdist="$ans"
case "$citydist" in
") dflt="none";;
*) dflt="$citydist";;
esac
rp="What is the distribution code for your city?"
./myread
citydist="$ans"
case "$statedist" in
") dflt="none";;
*) dflt="$statedist";;
esac
rp="What is the distribution code for your state/province?"
./myread
statedist="$ans"
case "$multistatedist" in
") dflt="none";;
*) dflt="$multistatedist";;
esac
rp="What is the
distribution code for your multi-state region?"
./myread
multistatedist="$ans"
case "$cntrydist" in
") dflt="none";;
*) dflt="$cntrydist";;
esac
rp="What is the distribution code for your country?"
./myread
cntrydist="$ans"
case "$contdist" in
") dflt="none";;
*) dflt="$contdist";;
esac
rp="What is the distribution code for your continent?"
./myread
contdist="$ans"
$cat <<'EOM'

```

If you have any other distribution groups you will need to edit Pnews and newsetup to add them.

EOM

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/locdist.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: Magic_h.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic Licence,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
?RCS: You may reuse parts of this distribution only within the terms of
```

```
?RCS: that same Artistic Licence; a copy of which may be found at the root
```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: $Log: Magic_h.U,v $
```

```
?RCS: Revision 3.0.1.2 1993/11/10 17:32:58 ram
```

```
?RCS: patch14: forgot to mention Id in the dependencies
```

```
?RCS:
```

```
?RCS: Revision 3.0.1.1 1993/10/16 13:46:59 ram
```

```
?RCS: patch12: created for ?M: lines support (magic symbols)
```

```
?RCS:
```

```
?X:
```

```
?X: This file ends up producing the confmagic.h include, which is used to
```

```
?X: automagically remap some C symbols via cpp redefinitions.
```

```
?X:
```

```
?X: The file ./Magic_h below contains all the ?M: lines extracted out  
of all
```

```
?X: the units. Metaconfig itself adds the final #endif statement.
```

```
?X: Note that this code isn't included into Configure, but must be shipped with.
```

```
?X:
```

```
?MAKE:Magic_h: Id Config_h
```

```
?MAKE: -pick cm_h_weed $@ %<
```

```
?MAKE: -pick cm_h_weed $@ ./Magic_h
```

```
?LINT:nocomment
```

```
/*
```

```
* This file was produced by running metaconfig and is intended to be included
```

```
* after config.h and after all the other needed includes have been dealt with.
```

```
*
```

```
* This file may be empty, and should not be edited. Rerun metaconfig instead.
```

```
* If you wish to get rid of this magic, remove this file and rerun metaconfig
```

```
* without the -M option.
```

```
*
```

```
* $Id: Magic_h.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
*/
```

```
#ifndef _confmagic_h_
```

```
#define _confmagic_h_
```



Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Magic\_h.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_ffs.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_ffs.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:03 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_ffs: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_ffs:

?S: This variable conditionally defines the HAS\_FFS symbol, which

?S: indicates to the C program that the ffs() routine is available

?S: to find the first bit which is set in its integer argument.

?S:.

?C:HAS\_FFS:

?C: This symbol, if defined, indicates that the ffs routine is available

?C: to

find the first bit set in its argument. If it's not available,

?C: roll your own.

?C:.

?H:#\$d\_ffs HAS\_FFS /\*\*/

?H:.

?LINT:set d\_ffs

: see if ffs exists

set ffs d\_ffs

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_ffs.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_chown.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_chown.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:07:14 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_chown: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_chown:  
?S: This variable conditionally defines the HAS\_CHOWN symbol, which  
?S: indicates to the C program that the chown() routine is available.  
?S:.  
?C:HAS\_CHOWN :  
?C: This symbol, if defined, indicates that the chown routine is  
?C: available.  
?C:.  
?H:#\$d\_chown  
HAS\_CHOWN /\*\*/  
?H:.  
?LINT:set d\_chown  
: see if chown exists  
set chown d\_chown  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_chown.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_eofpipe.U,v 3.0.1.1 1994/10/29 16:12:40 ram Exp \$  
?RCS:  
?RCS: Copyright (c) 1991-1993, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.  
?RCS:  
?RCS: \$Log: d\_eofpipe.U,v \$  
?RCS: Revision 3.0.1.1 1994/10/29 16:12:40 ram  
?RCS: patch36: call ./bsd explicitly instead of relying on PATH

?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:57 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_eofpipe: Compile cat rm Oldconfig Guess echo n c  
?MAKE: -pick add \$@ %<  
?S:d\_eofpipe:  
?S: This variable conditionally defines the EOFPIPE symbol, which  
?S: indicates to the C program that select will correctly detect  
the EOF  
?S: condition when pipe is closed from the other end.  
?S:.  
?C:EOFPIPE:  
?C: This symbol, if defined, indicates that EOF condition will be detected  
?C: by the reader of the pipe when it is closed by the writing process.  
?C: That is, a select() call on that file descriptor will not block when  
?C: only an EOF remains (typical behavior for BSD systems).  
?C:.  
?H:#\$d\_eofpipe EOFPIPE /\*\*/  
?H:.  
?F:!mpipe  
: see if pipe correctly gives the EOF condition  
echo " "  
case "\$d\_eofpipe" in  
")  
echo "Let's see if your pipes return EOF to select() upon closing..." >&4  
\$cat >pipe.c <<'EOP'  
int main()  
{  
int pd[2];  
int mask;  
  
pipe(pd);  
if (0 == fork()) {  
close(pd[0]);  
close(pd[1]);  
exit(0);  
}  
  
close(pd[1]);  
mask = 1 << pd[0];  
alarm(2);  
select(32, &mask, (int \*) 0, (int \*) 0, (char \*) 0);  
if (0 == read(pd[0], &mask, 1))  
exit(0);  
  
exit(1);  
}

EOP

```
set pipe
if eval $compile_ok; then
?X: Use a script to avoid the possible 'alarm call' message
echo "./pipe || exit 1" > mpipe
chmod
+x mpipe
./mpipe >/dev/null 2>&1
case $? in
0) d_eofpipe="$define";;
*) d_eofpipe="$undef";;
esac
else
echo "(The test program did not compile correctly -- Guessing.)"
if ./bsd; then
d_eofpipe="$define"
else
d_eofpipe="$undef"
fi
fi
case "$d_eofpipe" in
"$define") echo "Yes, they do.";;
*) echo "No, they don't! (sigh)";;
esac
;;
*)
$echo $n "Your pipes $c"
case "$d_eofpipe" in
"$define") echo "allow select() to see EOF upon closing.";;
*) echo "won't let select() see EOF on closing.";;
esac
;;
esac
$rm -f *pipe* core
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/d_eofpipe.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getlogin\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

```

?MAKE:d_getlogin_r getlogin_r_proto: Inlibc Protochk Hasproto i_systypes \
  usethreads i_unistd extern_C
?MAKE: -pick add $@ %<
?S:d_getlogin_r:
?S: This variable conditionally defines the HAS_GETLOGIN_R symbol,
?S: which indicates to the C program that the getlogin_r()
?S: routine is available.
?S:.
?S:getlogin_r_proto:
?S: This variable encodes the prototype of getlogin_r.
?S: It is zero if d_getlogin_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getlogin_r
?S: is defined.
?S:.
?C:HAS_GETLOGIN_R:
?C: This symbol, if defined, indicates that the getlogin_r routine
?C: is available
?C: to getlogin re-entrantly.
?C:.
?C:GETLOGIN_R_PROTO:
?C: This symbol encodes the prototype of getlogin_r.
?C: It is zero if d_getlogin_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getlogin_r
?C: is defined.
?C:.
?H:#$d_getlogin_r HAS_GETLOGIN_R /**/
?H:#define GETLOGIN_R_PROTO $getlogin_r_proto /**/
?H:.
?T:try hdrs d_getlogin_r_proto
: see if getlogin_r exists
set getlogin_r d_getlogin_r
eval $inlibc
case "$d_getlogin_r" in
"$define")
  hdrs="$i_systypes sys/types.h define stdio.h $i_unistd unistd.h"
  case "$d_getlogin_r_proto:$usethreads" in
  ":define") d_getlogin_r_proto=define
    set d_getlogin_r_proto getlogin_r $hdrs
    eval $hasproto ;;
  *) ;;
  esac
  case "$d_getlogin_r_proto" in
  define)
    case "$getlogin_r_proto" in
    "|0) try='int getlogin_r(char*, size_t);'
    ./protochk "$extern_C $try" $hdrs && getlogin_r_proto=I_BW ;;
    esac
    case "$getlogin_r_proto" in

```

```

"|0) try='int getlogin_r(char*, int);'
./protochk "$extern_C $try" $hdrs && getlogin_r_proto=I_BI
;;
esac
case "$getlogin_r_proto" in
"|0) try='char* getlogin_r(char*, size_t);'
./protochk "$extern_C $try" $hdrs && getlogin_r_proto=B_BW ;;
esac
case "$getlogin_r_proto" in
"|0) try='char* getlogin_r(char*, int);'
./protochk "$extern_C $try" $hdrs && getlogin_r_proto=B_BI ;;
esac
case "$getlogin_r_proto" in
"|0) d_getlogin_r=undef
getlogin_r_proto=0
echo "Disabling getlogin_r, cannot determine prototype." >&4 ;;
*) case "$getlogin_r_proto" in
REENTRANT_PROTO*) ;;
*) getlogin_r_proto="REENTRANT_PROTO_$getlogin_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "getlogin_r has no prototype, not using it." >&4 ;;
esac
d_getlogin_r=undef
getlogin_r_proto=0
;;
esac
;;
*) getlogin_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_getlogin\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_tmpnam\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

```

?MAKE:d_tmpnam_r tmpnam_r_proto: Inlibc Protochk Hasproto i_systypes \
  usethreads extern_C
?MAKE: -pick add $@ %<
?S:d_tmpnam_r:
?S: This variable conditionally defines the HAS_TMPNAM_R symbol,
?S: which indicates to the C program that the tmpnam_r()
?S: routine is available.
?S:.
?S:tmpnam_r_proto:
?S: This variable encodes the prototype of tmpnam_r.
?S: It is zero if d_tmpnam_r is undef, and one of the
?S: REENTRANT_PROTO_T_ABC macros of reentr.h if d_tmpnam_r
?S: is defined.
?S:.
?C:HAS_TMPNAM_R:
?C: This symbol, if defined, indicates that the tmpnam_r routine
?C: is available to tmpnam re-entrantly.
?C:.
?C:TMPNAM_R_PROTO:
?C: This
  symbol encodes the prototype of tmpnam_r.
?C: It is zero if d_tmpnam_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_tmpnam_r
?C: is defined.
?C:.
?H:#$d_tmpnam_r HAS_TMPNAM_R /**/
?H:#define TMPNAM_R_PROTO $tmpnam_r_proto /**/
?H:.
?T:try hdrs d_tmpnam_r_proto
: see if tmpnam_r exists
set tmpnam_r d_tmpnam_r
eval $inlibc
case "$d_tmpnam_r" in
"$define")
  hdrs="$i_systypes sys/types.h define stdio.h "
  case "$d_tmpnam_r_proto:$usethreads" in
":define") d_tmpnam_r_proto=define
  set d_tmpnam_r_proto tmpnam_r $hdrs
  eval $hasproto ;;
*) ;;
esac
case "$d_tmpnam_r_proto" in
define)
  case "$tmpnam_r_proto" in
"|0) try='char* tmpnam_r(char*);'
./protochk "$extern_C $try" $hdrs && tmpnam_r_proto=B_B ;;
esac
case "$tmpnam_r_proto" in

```

```

"|0) d_tmpnam_r=undef
tmpnam_r_proto=0
echo "Disabling tmpnam_r, cannot determine prototype." >&4 ;;
* ) case "$tmpnam_r_proto" in
REENTRANT_PROTO*) ;;
*) tmpnam_r_proto="REENTRANT_PROTO_$tmpnam_r_proto"
;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usetthreads" in
define) echo "tmpnam_r has no prototype, not using it." >&4 ;;
esac
d_tmpnam_r=undef
tmpnam_r_proto=0
;;
esac
;;
*) tmpnam_r_proto=0
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_tmpnam_r.U

```

No license file was found, but licenses were detected in source scan.

```

/*
* $Id: setsid.C,v 3.0.1.1 1994/01/24 13:58:47 ram Exp ram $
*
* Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
*
* You may redistribute only under the terms of the Artistic Licence,
* as specified in the README file that comes with the distribution.
* You may reuse parts of this distribution only within the terms of
* that same Artistic Licence; a copy of which may be found at the root
* of the source tree for dist 4.0.
*
* $Log: setsid.C,v $
* Revision 3.0.1.1 1994/01/24 13:58:47 ram
* patch16: created
*
*/

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/lib/C/fake/setsid.C

```



No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_hidnet.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_hidnet.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:20 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_hidnet hiddennet: cat sed myhostname mydomain Myread Oldconfig
?MAKE: -pick add $@ %<
?S:d_hidnet:
?S: This variable conditionally defines the symbol HIDDEN_NET, which
?S: tells the C program that it should pretend it is on a different
?S: host for purposes of advertising a mailing address.
?S:.
?S:hiddennet:
?S: This variable contains
?S: the value eventually given to the symbol
?S: HIDDEN_NET, if d_hidnet defines it. If defined, it's the name
?S: of the host which serves as the mail server for a network that
?S: is invisible to the outside world.
?S:.
?C:HIDDEN_NET (HIDDENNET):
?C: This symbol, if defined, contains the host name that you want to
?C: advertise to the outside world. This name can be different from
?C: your actual host name, as long as the machine you specify knows
?C: how to forward mail to you.
?C:.
?H:#$d_hidnet HIDDEN_NET "$hiddennet" /**/
?H:.
: now get the host name to advertise as our mailing address
case "$hiddennet" in
") dflt=n;;
*) dflt=y;;
esac
$cat <<EOM
```

Some sites are on "hidden" networks, in the sense that the network appears to the outside world as a single machine. The advertised name of any host on this hidden network is the name of one machine on the local network which

knows how to forward mail to any other host on the hidden network.

Do you wish to advertise a different hostname  
to the world than the one your  
own host (\$myhostname\$mydomain) has?

EOM

```
rp="Use "hidden" network?"
./myread
case "$ans" in
n*) d_hidnet="$undef" hiddennet="";
*)
d_hidnet="$define"
echo " "
case "$hiddennet" in
") dflt=`echo $mydomain | $sed -e 's/^\./'`;
*) dflt="$hiddennet";
esac
rp='What hostname do you wish to advertise?'
./myread
hiddennet="$ans"
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_hidnet.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_strtoll: Inlibc d\_longlong Compile cat run

?MAKE: -pick add \$@ %<

?S:d\_strtoll:

?S: This variable conditionally defines the HAS\_STRTOLL symbol, which

?S: indicates to the C program that the strtoll() routine is available.

?S:.

?C:HAS\_STRTOLL:

?C: This symbol, if defined, indicates that the strtoll routine is

?C: available to convert strings to long longs.

?C:.

?H:#\$d\_strtoll HAS\_STRTOLL /\*\*/

?H:.

```

?T:yyy
?F:!try
: see if strtoll exists
set strtoll d_strtoll
eval $inlibc

case "$d_longlong-$d_strtoll" in
"$define-$define")
    $cat <<EOM
Checking whether your strtoll() works okay...
EOM
    $cat >try.c <<'EOCP'
#include <errno.h>
#ifdef __hpux
#define strtoll __strtoll
#endif
#ifdef __EMX__
#define strtoll
    __strtoll
#endif
#include <stdio.h>
#include <stdlib.h>
static int bad = 0;
void check(const char *s, long long ell, int een) {
    long long gll;
    errno = 0;
    gll = strtoll(s, 0, 10);
    if (!(gll == ell) && (errno == een))
        bad++;
}
int main() {
    check(" 1",          1LL, 0);
    check(" 0",          0LL, 0);
    check("-1",         -1LL, 0);
    check("-9223372036854775808", -9223372036854775808LL, 0);
    check("-9223372036854775808", -9223372036854775808LL, 0);
    check(" 9223372036854775807", 9223372036854775807LL, 0);
    check("-9223372036854775808", -9223372036854775808LL, 0);
    check(" 9223372036854775808", 9223372036854775807LL, ERANGE);
    check("-9223372036854775809", -9223372036854775808LL, ERANGE);
    if (!bad)
        printf("ok\n");
}
EOCP
set try
if eval $compile; then
    yyy=`$run ./try`
    case "$yyy" in

```

```

ok) echo "Your strtoll() seems to be working okay." ;;
*) cat <<EOM >&4
Your strtoll() doesn't seem
to be working okay.
EOM
    d_strtoll="$undef"
    ;;
esac
else
    echo "(I can't seem to compile the test program--assuming it doesn't)"
    d_strtoll="$undef"
fi
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_strtoll.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: filexp.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: filexp.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:08 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:filexp: privlib
?MAKE: -pick add $@ %<
?S:filexp:
?S: This symbol contains the full pathname of the filexp script, in case we
?S: are saving the script for posterity.
?S:.
: must not allow self reference
case "$privlib" in
/*)
filexp=$privlib/filexp
;;
*)
filexp=`pwd`/filexp
;;

```

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/filexp\_path.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: sh.U,v 3.0.1.1 1997/02/28 16:20:13 ram Exp \$

?RCS:

?RCS: Copyright (c) 1997, Chip Salzenberg

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?RCS:

?RCS: \$Log: sh.U,v \$

?RCS: Revision 3.0.1.1 1997/02/28 16:20:13 ram

?RCS: patch61: created

?RCS:

?MAKE:sh targetsh: Head

?MAKE: -pick wipe \$@ %<

?S:sh:

?S: This variable contains the full pathname of the shell used

?S: on this system to execute Bourne shell scripts. Usually, this will be

?S: /bin/sh, though it's possible that some systems will have /bin/ksh,

?S: /bin/pdksh, /bin/ash, /bin/bash, or even something such as

?S: D:/bin/sh.exe.

?S: This

unit comes before Options.U, so you can't set sh with a -D

?S: option, though you can override this (and startsh)

?S: with -O -Dsh=/bin/whatever -Dstartsh=whatever

?S:.

?S:targetsh:

?S: If cross-compiling, this variable contains the location of sh on the

?S: target system.

?S: If not, this will be the same as \$sh.

?S:.

?C:SH\_PATH:

?C: This symbol contains the full pathname to the shell used on this

?C: on this system to execute Bourne shell scripts. Usually, this will be

?C: /bin/sh, though it's possible that some systems will have /bin/ksh,

?C: /bin/pdksh, /bin/ash, /bin/bash, or even something such as

?C: D:/bin/sh.exe.

?C:.

?H:#define SH\_PATH "\$targetsh" /\*\*/

?H:

?T:xxx try pth p SYSTYPE

?LINT:extern maintloc maintname \_exe

?X:

?X: Be quiet unless something unusual happens because this gets

?X: loaded up even before options are processed.

?X: Can't use ./loc because that depends on startsh, which, in turn

?X: depends on this unit.

?X:

: Find the basic shell for

Bourne shell scripts

case "\$sh" in

")

?X: SYSTYPE is for some older MIPS systems.

?X: I do not know if it is still needed.

case "\$SYSTYPE" in

\*bsd\*|sys5\*) xxx="/\$SYSTYPE/bin/sh";;

\*) xxx="/bin/sh";;

esac

if test -f "\$xxx"; then

sh="\$xxx"

else

: Build up a list and do a single loop so we can 'break' out.

pth=`echo \$PATH | sed -e "s/\$p\_/ /g"`

for xxx in sh bash ksh pdksh ash; do

for p in \$pth; do

try="\$try \${p}/\${xxx}"

done

done

for xxx in \$try; do

if test -f "\$xxx"; then

sh="\$xxx";

break

elif test "X\$\_exe" != X -a -f "\$xxx\$\_exe"; then

sh="\$xxx";

break

elif test -f "\$xxx.exe"; then

sh="\$xxx";

break

fi

done

fi

::

esac

?X: fd 4 isn't open yet...

case "\$sh" in

") cat >&2 <<EOM

\$me: Fatal Error: I can't find a Bourne Shell anywhere.

Usually it's in /bin/sh. How did you even get this far?

Please report this issue at <\$maintloc>

and we'll try to straighten this all out.

EOM

exit 1

::

esac

: When cross-compiling we

need to separate the sh-to-run-Configure-with from the sh-to-use-in-Perl

: default both to the same thing, cross-compilers can then set targetsh differently if they like  
targetsh=\$sh

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/sh.U

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?RCS:

?RCS: \$Log: charsize.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 16:07:13 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:34 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:charsize: Assert Myread cat rm\_try +cc +ccflags echo n c

?MAKE: -pick add \$@ %<

?S:charsize:

?S: This variable contains the value of the CHARSIZE symbol, which

?S: indicates to the C program how many bytes there are in a character.

?S:.

?C:CHARSIZE:

?C: This symbol contains

the size of a char, so that the C preprocessor

?C: can make decisions based on it.

?C:.

```

?H:#define CHARSIZE $charsize
?H:.
?T:size s
: check for length of character
echo " "
$echo $n "Checking to see how big your characters are...$c" >&4
for size in 1 2 4 8 error; do
  $cat >try.c <<EOCP
#include "static_assert.h"
char foo;
int main()
{
  STATIC_ASSERT($size == sizeof(foo));
  return 0;
}
EOCP
if $cc -c $ccflags try.c >/dev/null 2>&1; then break; fi
done
case "$size" in
error)
  echo " cannot compute it." >&4
  dflt=1
  rp="What is the size of a character (in bytes)?"
  . ./myread
  charsize="$ans"
  ;;
*)
  case "$size" in
  1) s="";;
  *) s='s';;
  esac
  echo " $size byte$s." >&4
  charsize=$size
  ;;
esac
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/charsize.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Csym.U,v \$  
?RCS: Revision 3.0.1.4 1995/07/25 13:36:29 ram  
?RCS: patch56: re-arranged compile line to include ldflags before objects  
?RCS: patch56: added quotes for OS/2 support  
?RCS:  
?RCS: Revision 3.0.1.3 1995/05/12 12:00:33 ram  
?RCS: patch54: fixed C test program to bypass gcc builtin type checks (ADO)  
?RCS:  
?RCS: Revision 3.0.1.2 1994/10/31 09:34:13 ram  
?RCS: patch44: added Options to the MAKE line since it's no longer in Init.U  
?RCS:  
?RCS: Revision 3.0.1.1 1993/08/25 14:00:05 ram  
?RCS:  
patch6: added ldflags as a conditional dependency and to compile line  
?RCS: patch6: a final double quote was missing in csym variable after eval  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:04:50 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:Csym: Options contains libc libs runnm +cc +ccflags +ldflags rm  
?MAKE: -pick add \$@ %<  
?LINT:define csym  
?LINT:use libc  
?S:csym:  
?S: This shell variable is used internally by Configure to check  
?S: whether a given C symbol is defined or not. A typical use is:  
?S: set symbol result [-fva] [previous]  
?S: eval \$csym  
?S: That will set result to 'true' if the function [-f], variable [-v]  
?S: or array [-a] is defined, 'false' otherwise. If a previous value is  
?S: given and the -r flag was provided on the command line, that value  
?S: is reused without questioning.  
?S:.  
?V:csym  
?T:tval tx tlook tf tdc tc  
: is a C symbol defined?  
csym='tlook=\$1;  
case "\$3" in  
-v) tf=libc.tmp; tc=""; tdc="";;  
-a) tf=libc.tmp; tc="[0]"; tdc="[]";;  
\*) tlook="^\$1\\$";  
tf=libc.list; tc=""; tdc="()";;  
esac;  
tx=yes;

```

case "$reuseval-$4" in
true-) ;;
true-*) tx=no; eval "tval=\$$4"; case "$tval" in "") tx=yes;; esac;;
esac;
case "$tx" in
yes)
case "$runnm" in
true)
if $contains $tlook $tf >/dev/null 2>&1;
then tval=true;
else tval=false;
fi;;
*)
?X:
?X: We use 'char' instead of 'int' to try to circumvent overzealous
?X: optimizing compilers using built-in prototypes for commonly used
?X: routines to complain when seeing a different external declaration. For
?X: instance, gcc 2.6.3 fails if we use 'int' and we attempt a test against
?X: memcpy() on machines where sizeof(int) == sizeof(char *) (the usual return
?X: type), the compiler assuming it's a built-in declaration given that the
?X: returned size matches. At least with 'char' we are safe! -- RAM, for ADO
?X:
?X: Let's thank GNU cc for making our lives so easy! :-)
?X: (An alternative for the future would be to use our knowledge about gcc
?X: to force a -fno-builtin option in the
?X: compile test, in case the 'char'
?X: trick is obsoleted by future gcc releases). -- RAM
?X:
?X: Lastly, gcc 3.4 optimizes &missing == 0 away, so we use + 2 instead now.
?X: The GNU folks like to do weird things, don't they? -- RAM, 2004-06-05
?X:
echo "extern char $1$tdc; int main() { return &$1$tc + 2; }" > t.c;
if $cc $ccflags $ldflags -o t t.c $libs >/dev/null 2>&1;
then tval=true;
else tval=false;
fi;
$rm -f t t.c;;
esac;;
*)
case "$tval" in
$define) tval=true;;
*) tval=false;;
esac;;
esac;
eval "$2=$tval"

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/dist/U/Csym.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: inc\_version\_list.U,v \$

?RCS:

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?RCS:

?RCS: \$Log: inc\_version\_list.U,v \$

?RCS:

?MAKE:inc\_version\_list inc\_version\_list\_init d\_inc\_version\_list: cat sed \

Getfile perl5 version api\_versionstring rm Myread archname \

prefix sitelib\_stem exe\_ext

?MAKE: -pick add \$@ %<

?Y:TOP

?S:inc\_version\_list:

?S: This variable specifies the list of subdirectories in over

?S: which perl.c:incpush() and lib/lib.pm will automatically

?S: search when adding directories to @INC. The elements in

?S: the list are separated by spaces. This is only useful

?S: if

you have a perl library directory tree structured like the

?S: default one. See INSTALL for how this works. The versioned

?S: site\_perl directory was introduced in 5.005, so that is the

?S: lowest possible value.

?S:

?S: This list includes architecture-dependent directories back to

?S: version \$api\_versionstring (e.g. 5.5.640) and

?S: architecture-independent directories all the way back to

?S: 5.005.

?S:.

?S:inc\_version\_list\_init:

?S: This variable holds the same list as inc\_version\_list, but

?S: each item is enclosed in double quotes and separated by commas,

?S: suitable for use in the PERL\_INC\_VERSION\_LIST initialization.

?S:.

?S:d\_inc\_version\_list:

?S: This variable conditionally defines PERL\_INC\_VERSION\_LIST.

?S: It is set to undef when PERL\_INC\_VERSION\_LIST is empty.

?S:.

?C:PERL\_INC\_VERSION\_LIST:

?C: This variable specifies the list of subdirectories in over

?C: which perl.c:incpush() and lib/lib.pm will automatically

```

?C: search when adding directories to @INC, in a format suitable
?C: for
  a C initialization string. See the inc_version_list entry
?C: in Porting/Glossary for more details.
?C:.
?H:#$d_inc_version_list PERL_INC_VERSION_LIST $inc_version_list_init /**/
?H:.
?T:stem
: Determine list of previous versions to include in @INC
$cat > getverlist <<EOPL
#!/$perl5
use strict;
use warnings;
use File::Basename;
my \ $api_versionstring = "$api_versionstring";
my \ $version = "$version";
my \ $stem = "$sitelib_stem";
my \ $archname = "$archname";
EOPL
$cat >> getverlist <<'EOPL'
# The list found is stored twice for each entry: the original name, and
# the binary broken down version into pack "s>s>s>", so sorting is easy
# and unambiguous. This will work for all versions that have a maximum
# of three digit per group separate by '.'s or '_'s. Names are extended
# with ".0.0" to ensure at least three elements for the pack.
#
# -- H.Merijn Brand (m)'06 23-10-2006

my @inc_version_list;
my @candidates;
# XXX Redo to do opendir/readdir?
if
(-d $stem) {
  chdir($stem);
  ;@candidates = map {
[ $_, pack "s>s>s>", split m/[. _]/, "$_.0.0" ] } glob("5.*");
  ;@candidates = sort { $a->[1] cmp $b->[1]} @candidates;
}
else {
  ;@candidates = ();
}

my ($pversion, $aversion, $vsn5005) = map {
  pack "s>s>s>", split m/[. _]/, "$_.0.0" } $version, $api_versionstring, "5.005";
foreach my $d (@candidates) {
  if ($d->[1] lt $pversion) {
  if ($d->[1] ge $aversion) {
    unshift(@inc_version_list, grep { -d } $d->[0]."/$archname", $d->[0]);
  }
}
}

```

```

elseif ($d->[1] ge $vs5005) {
    unshift(@inc_version_list, grep { -d } $d->[0]);
}
}
else {
# Skip newer version. I.e. don't look in
# 5.7.0 if we're installing 5.6.1.
}
}

if (@inc_version_list) {
    print join(' ', @inc_version_list);
}
else {
    # Blank space to preserve value for next Configure run.
    print " ";
}
EOPL
chmod +x getverlist
case "$inc_version_list" in
") if test -x "$perl5$exe_ext"; then
    dflt=`$perl5 getverlist`
else
    dflt='none'
fi
;;
$undef)
    dflt='none' ;;
?X:  Configure -Dinc_version_list='5.6.0/$archname 5.6.0' ...
*) eval dflt=\"\$inc_version_list\" ;;
esac
case "$dflt" in
"|' ') dflt=none ;;
esac
case "$dflt" in
5.005) dflt=none ;;
esac
$cat <<EOM

```

In order to ease the process of upgrading, this version of perl can be configured to use modules built and installed with earlier versions of perl that were installed under \$prefix. Specify here the list of earlier versions that this version of perl should check. If Configure detected no earlier versions of perl installed under \$prefix, then the list will be empty. Answer 'none' to tell perl to not search earlier versions.

The default should almost always be sensible, so if you're not sure,

just accept the default.

EOM

```
rp='List of earlier versions to include in @INC?'
./myread
case "$sans" in
[Nn]one|"|" '$undef) inc_version_list=' ' ;;
*) inc_version_list="$sans" ;;
esac
case "$inc_version_list" in
"|" ')
inc_version_list_init='0'
d_inc_version_list="$undef"
;;
*) inc_version_list_init=`echo
$inc_version_list |
$sed -e 's/^"/' -e 's/"/','/g' -e 's/$/"0/'^
d_inc_version_list="$define"
;;
esac
$rm -f getverlist
```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/inc\_version\_list.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_volatile.U,v 3.0.1.2 1995/07/25 14:08:49 ram Exp $
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_volatile.U,v $
?RCS: Revision 3.0.1.2 1995/07/25 14:08:49 ram
?RCS: patch56: made cc and ccflags optional dependencies
?RCS:
?RCS: Revision 3.0.1.1 1993/09/09 11:49:51 ram
?RCS: patch9: volatile definition was swapped over with undef
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:57 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_volatile: cat +cc +ccflags rm_try Setvar
```

```

?MAKE: -pick add $@ %<
?S:d_volatile:
?S: This variable conditionally
    defines the HASVOLATILE symbol, which
?S: indicates to the C program that this C compiler knows about the
?S: volatile declaration.
?S:.
?C:HASVOLATILE ~ %<:
?C: This symbol, if defined, indicates that this C compiler knows about
?C: the volatile declaration.
?C:.
?H:?%<:#$d_volatile HASVOLATILE /**/
?H:?%<:#ifndef HASVOLATILE
?H:?%<:#define volatile
?H:?%<:#endif
?H:.
?LINT:set d_volatile
?LINT:known volatile
: check for volatile keyword
echo " "
echo 'Checking to see if your C compiler knows about "volatile"...' >&4
$cat >try.c <<'EOCP'
int main()
{
?X:
?X: The following seven lines added by Bill Campbell <billc@sierra.com>
?X: detect that MIPS compilers do not handle volatile in all situations.
?X:
typedef struct _goo_struct goo_struct;
goo_struct * volatile goo = ((goo_struct *)0);
struct _goo_struct {
    long long_int;
    int reg_int;
    char char_var;
};
typedef unsigned short foo_t;
char *volatile foo;
volatile int bar;
volatile foo_t blech;
foo = foo;
}
EOCP
if $cc
-c $ccflags try.c >/dev/null 2>&1 ; then
val="$define"
echo "Yup, it does."
else
val="$undef"

```

```
echo "Nope, it doesn't."  
fi  
set d_volatile  
eval $setvar  
$rm_try
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_volatile.U
```

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:gidsize: Myread Typedef gidtype Compile run i\_stdlib

?MAKE: -pick add \$@ %<

?S:gidsize:

?S: This variable contains the size of a gidtype in bytes.

?S:.

?C:Gid\_t\_size:

?C: This symbol holds the size of a Gid\_t in bytes.

?C:.

?H:#define Gid\_t\_size \$gidsize /\* GID size \*/

?H:.

?T:yyy zzz

?F:!try

: Check the size of GID

echo " "

case "\$gidtype" in

\*\_t) zzz="\$gidtype" ;;

\*) zzz="gid" ;;

esac

echo "Checking the size of \$zzz..." >&4

cat > try.c <<EOCP

#include <sys/types.h>

#include <stdio.h>

#\$i\_stdlib I\_STDLIB

#ifdef I\_STDLIB

#include

<stdlib.h>

#endif

int main() {



```

printf("%d\n", (int)sizeof($gidtype));
exit(0);
}
EOCP
set try
if eval $compile_ok; then
yyy=`$run ./try`
case "$yyy" in
") gidsize=4
echo "(I can't execute the test program--guessing $gidsize.)" >&4
;;
*) gidsize=$yyy
echo "Your $zzz is $gidsize bytes long."
;;
esac
else
gidsize=4
echo "(I can't compile the test program--guessing $gidsize.)" >&4
fi

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/gidsize.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getpent.U,v 3.0 1993/08/18 12:06:09 ram Exp \$

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: d\_getpent.U,v \$

?RCS: Revision 3.0 1993/08/18 12:06:09 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_getpent: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getpent:

?S: This variable conditionally defines HAS\_GETPROTOENT if getprotoent() is

?S: available to look up protocols in some data base or another.

?S:.

?C:HAS\_GETPROTOENT:

?C: This symbol, if defined, indicates that the getprotoent() routine is

?C: available to look up protocols in some data base

```
or another.
?C:.
?H:#$d_getpent HAS_GETPROTOENT /**/
?H:.
?LINT:set d_getpent
: see if getprotoent exists
set getprotoent d_getpent
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d_getpent.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_perlio.U,v $
?RCS:
?RCS: Copyright (c) 1998 Andy Dougherty
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: $Log: d_perlio.U,v $
?RCS:
?MAKE:useperlio: Myread Oldconfig Setvar
?MAKE:-pick add $@ %<
?Y:TOP
?S:useperlio:
?S: This variable conditionally defines the USE_PERLIO symbol,
?S: and indicates that the PerlIO abstraction should be
?S: used throughout.
?S:.
?C:USE_PERLIO:
?C: This symbol, if defined, indicates that the PerlIO abstraction should
?C: be used throughout. If not defined, stdio should be
?C: used in a fully backward compatible manner.
?C:.
?H:?%<:#ifndef USE_PERLIO
?H:?%<:#$useperlio USE_PERLIO /**/
?H:?%<:#endif
?H:.
: Check if we want perlio
useperlio="$define"
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/useperlio.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: bin.U,v 3.1 1999/07/09 18:20:13 doughera Exp doughera \$

?RCS:

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?RCS:

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?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: bin.U,v \$

?RCS: Revision 3.1 1999/07/09 18:20:13 doughera

?RCS: Updated for installprefix

?RCS:

?RCS: Revision 3.0.1.4 1995/09/25 09:15:32 ram

?RCS: patch59: unit is now forced to the top of Configure, if possible

?RCS:

?RCS: Revision 3.0.1.3 1995/01/30 14:32:40 ram

?RCS: patch49: can now handle installation prefix changes (from WED)

?RCS:

?RCS: Revision 3.0.1.2 1994/08/29 16:05:28 ram

?RCS: patch32: now uses installation prefix

?RCS:

?RCS:

Revision 3.0.1.1 1993/09/13 15:56:51 ram

?RCS: patch10: made prompting more explicit (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:26 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:bin binexp installbin userelocatableinc initialinstalllocation: \  
Myread Prefixit Getfile Setvar Setprefixvar Oldconfig \  
test prefix prefixexp

?MAKE: -pick add \$@ %<

?Y:TOP

?D:bin="

?S:bin:

?S: This variable holds the name of the directory in which the user wants  
?S: to put publicly executable images for the package in question. It  
?S: is most often a local directory such as /usr/local/bin. Programs using  
?S: this variable must be prepared to deal with ~name substitution.

?S:.

?D:binexp="

?S:binexp:

?S: This is the same as the bin variable, but is filename expanded at  
?S: configuration time, for use in your makefiles.

?S:.

?D:installbin="

?S:installbin:  
?S: This variable is the same as binexp unless AFS is running in which case  
?S: the user is explicitly prompted for it. This variable  
should always  
?S: be used in your makefiles for maximum portability.  
?S:.  
?D:userelocatableinc="  
?S:userelocatableinc:  
?S: This variable is set to true to indicate that perl should relocate  
?S: @INC entries at runtime based on the path to the perl binary.  
?S: Any @INC paths starting ".../" are relocated relative to the directory  
?S: containing the perl binary, and a logical cleanup of the path is then  
?S: made around the join point (removing "dir../" pairs)  
?S:.  
?S:initialinstalllocation:  
?S: When userelocatableinc is true, this variable holds the location  
?S: that make install should copy the perl binary to, with all the  
?S: run-time relocatable paths calculated from this at install time.  
?S: When used, it is initialized to the original value of binexp, and  
?S: then binexp is set to '.../', as the other binaries are found  
?S: relative to the perl binary.  
?S:.  
?C:BIN:  
?C: This symbol holds the path of the bin directory where the package will  
?C: be installed. Program must be  
prepared to deal with ~name substitution.  
?C:.  
?C:BIN\_EXP:  
?C: This symbol is the filename expanded version of the BIN symbol, for  
?C: programs that do not want to deal with that at run-time.  
?C:.  
?C:PERL\_RELOCATABLE\_INC:  
?C: This symbol, if defined, indicates that we'd like to relocate entries  
?C: in @INC at run time based on the location of the perl binary.  
?C:.  
?H:#define BIN "\$bin" /\*\*/  
?H:#define BIN\_EXP "\$binexp" /\*\*/  
?H:#define PERL\_RELOCATABLE\_INC "\$userelocatableinc" /\*\*/  
?H:.  
?D:bin='/usr/local/bin'  
?LINT:change prefix  
?LINT:change prefixexp  
?LINT:change prefixvar  
?LINT:change installprefixexp  
?LINT:set userelocatableinc  
: determine where public executables go  
echo " "  
set dflt bin bin

```

eval $prefixit
fn=d~
rp='Pathname where the public executables will reside?'
./getfile
if $test "X$sansexp" != "X$binexp"; then
installbin="
fi
prefixvar=bin
: XXX Bug? -- ignores Configure -Dinstallprefix setting.
: XXX If this is fixed, also fix the "start perl" hunk below, which relies on
:
    this via initialinstalllocation
./setprefixvar

case "$userrelocatableinc" in
$define|true|[yY]*) dflt='y' ;;
*) dflt='n' ;;
esac
cat <<EOM

```

Would you like to build Perl so that the installation is relocatable, so that library paths in @INC are determined relative to the path of the perl binary? This is not advised for system Perl installs, or if you need to run setid scripts or scripts under taint mode.

If this doesn't make any sense to you, just accept the default '\$dflt'.

```

EOM
rp='Use relocatable @INC?'
./myread
case "$ans" in
y|Y) val="$define" ;;
*) val="$undef" ;;
esac
set userrelocatableinc
eval $setvar

initialinstalllocation="$binexp"
: Default prefix is now "up one level from where the binaries are"
case "$userrelocatableinc" in
$define|true|[yY]*)
    bin="..."
    binexp="..."
    prefix="..."
    prefixexp="..."
    installprefixexp="..."
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/bin.U
```

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?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:uidformat: uidsize uidsign ivsize uvsize longsize intsize shortsize \  
ivdformat uvuformat test echo

?MAKE: -pick add \$@ %<

?S:uidformat:

?S: This variable contains the format string used for printing a Uid\_t.

?S:.

?C:Uid\_t\_f:

?C: This symbol defines the format string used for printing a Uid\_t.

?C:.

?H:#define Uid\_t\_f \$uidformat /\*\*/

?H:.

: Check format string for UID

echo " "

\$echo "Checking the format string to be used for uids..." >&4

case "\$uidsign" in

-1) if \$test X"\$uidsize" = X"\$ivsize"; then

uidformat="\$ivdformat"

else

if \$test X"\$uidsize" = X"\$longsize"; then

uidformat="ld"

else

if \$test X"\$uidsize" = X"\$intsize"; then

uidformat="d"

else

if \$test X"\$uidsize"

= X"\$shortsize"; then

uidformat="hd"

fi

fi

fi

fi

;;

\*) if \$test X"\$uidsize" = X"\$uvsize"; then

uidformat="\$uvuformat"

else

```

if $test X"$uidsize" = X"$longsize"; then
  uidformat="lu"
else
  if $test X"$uidsize" = X"$intsize"; then
    uidformat="u"
  else
    if $test X"$uidsize" = X"$shortsize"; then
      uidformat="hu"
    fi
  fi
fi
fi
fi
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/uidf.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Typedef.U,v 3.0.1.3 1995/07/25 13:42:07 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: Typedef.U,v $
?RCS: Revision 3.0.1.3 1995/07/25 13:42:07 ram
?RCS: patch56: added backslash escapes within evals to prevent space problems
?RCS:
?RCS: Revision 3.0.1.2 1994/10/29 16:01:16 ram
?RCS: patch36: don't clobber visible 'val' variable, use 'varval' instead
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:05:14 ram
?RCS: patch32: created
?RCS:
?X:
?X: This unit checks for the definition of a given typedef.
?X:
?X: To use it, say:
?X: set typedef
?X: val_t default [includes]
?X: eval $typedef
?X:

```

```

?MAKE:Typedef: cppstdin cppminus cppflags rm sed contains Oldconfig Myread
?MAKE: -pick add $@ %<
?LINT:define typedef
?LINT:define typedef_ask
?V:typedef typedef_ask
?S:typedef:
?S: This shell variable is used internally by Configure to check
?S: whether a given typedef is defined or not. A typical use is:
?S: set typedef val_t default [includes]
?S: eval $typedef
?S: That will return val_t set to default if the typedef was not found,
?S: to typedef otherwise. If no includes are specified, look in sys/types.h.
?S:.
?S:typedef_ask:
?S: This shell variable is used internally by Configure to check
?S: whether a given typedef is defined or not. If it is not defined,
?S: this will call the ./myread script to prompt for an answer.
?S: It is intended to be used to avoid unnecessary prompts.
?S: A typical use is
?S: rp="What is the type for file position used by fsetpos()?"
?S: set fpos_t fpostype long stdio.h sys/types.h
?S: eval $typedef_ask
?S: This
    will set fpostype=fpos_t, if fpos_t is available. Otherwise
?S: it will call myread with a default of 'long', and a prompt of $rp.
?S:.
?T:type var def inclist varval inc
?F:!temp.c
: define an is-a-typedef? function
typedef='type=$1; var=$2; def=$3; shift; shift; shift; inclist=$@;
case "$inclist" in
"" ) inclist="sys/types.h";;
esac;
eval "varval=\$$var";
case "$varval" in
"" )
    $rm -f temp.c;
    for inc in $inclist; do
        echo "#include <$inc>" >>temp.c;
    done;
?X: Maybe it's a #define instead of a typedef.
echo "#ifdef $type" >> temp.c;
echo "printf(\"We have $type\");" >> temp.c;
echo "#endif" >> temp.c;
$cppstdin $cppflags $cppminus < temp.c >temp.E 2>/dev/null;
if $contains $type temp.E >/dev/null 2>&1; then
    eval "$var=\$type";
else

```



```

eval "$var=\$def";
fi;
$rm -f temp.?;;
*) eval "$var=\$varval";;
esac'

```

?X: Originally, I eval'd \$typedef and then checked the results against

?X: \$type. Unfortunately, it then became complicated to check

?X: whether you are re-using

an old config.sh value, and the logic got

?X: so convoluted it became easier to just copy the function above

?X: and alter it slightly. A.D. 3/1998

: define an is-a-typedef? function that prompts if the type is not available.

```

typedef_ask='type=$1; var=$2; def=$3; shift; shift; shift; inclist=$@;

```

```

case "$inclist" in

```

```

"") inclist="sys/types.h";;

```

```

esac;

```

```

eval "varval=\$$var";

```

```

case "$varval" in

```

```

"")

```

```

$rm -f temp.c;

```

```

for inc in $inclist; do

```

```

echo "#include <$inc>" >>temp.c;

```

```

done;

```

?X: Maybe it's a #define instead of a typedef.

```

echo "#ifdef $type" >> temp.c;

```

```

echo "printf(\"We have $type\");" >> temp.c;

```

```

echo "#endif" >> temp.c;

```

```

$cpstdin $cppflags $cppminus < temp.c >temp.E 2>/dev/null;

```

```

echo " " ;

```

```

echo "$rp" | $sed -e "s/What is/Looking for/" -e "s/?.?.?/";

```

```

if $contains $type temp.E >/dev/null 2>&1; then

```

```

echo "$type found." >&4;

```

```

eval "$var=\$type";

```

```

else

```

```

echo "$type NOT found." >&4;

```

```

dflt="$def";

```

```

. ./myread ;

```

```

eval "$var=\$ans";

```

```

fi;

```

```

$rm -f temp.?;;

```

```

*) eval "$var=\$varval";;

```

```

esac'

```

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/typedefs/Typedef.U

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```
?RCS: $Id: d_gethname.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_gethname.U,v $
?RCS: Revision 3.0.1.1 1994/10/29 16:13:00 ram
?RCS: patch36: call ./xenix explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:11 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_gethname d_uname d_phostname ahostname: phostname cat \
myhostname package d_portable Loc echo n c +i_whoami +usrinc \
Myread Guess Oldconfig Csym
?MAKE: -pick add $@ %<
?S:d_gethname:
?S: This variable conditionally
defines the HAS_GETHOSTNAME symbol, which
?S: indicates to the C program that the gethostname() routine may be
?S: used to derive the host name.
?S:.
?S:d_uname:
?S: This variable conditionally defines the HAS_UNAME symbol, which
?S: indicates to the C program that the uname() routine may be
?S: used to derive the host name.
?S:.
?S:d_phostname:
?S: This variable conditionally defines the HAS_PHOSTNAME symbol, which
?S: contains the shell command which, when fed to popen(), may be
?S: used to derive the host name.
?S:.
?S:ahostname:
?S: This variable contains the command which can be used to compute the
?S: host name. The command is fully qualified by its absolute path, to make
?S: it safe when used by a process with super-user privileges.
?S:.
?C:HAS_GETHOSTNAME (GETHOSTNAME):
?C: This symbol, if defined, indicates that the C program may use the
?C: gethostname() routine to derive the host name. See also HAS_UNAME
?C: and PHOSTNAME.
```

?C:.

?C:HAS\_UNAME (UNAME):

?C: This symbol,  
if defined, indicates that the C program may use the  
?C: uname() routine to derive the host name. See also HAS\_GETHOSTNAME  
?C: and PHOSTNAME.

?C:.

?C:PHOSTNAME:

?C: This symbol, if defined, indicates the command to feed to the  
?C: popen() routine to derive the host name. See also HAS\_GETHOSTNAME  
?C: and HAS\_UNAME. Note that the command uses a fully qualified path,  
?C: so that it is safe even if used by a process with super-user  
?C: privileges.

?C:.

?C:HAS\_PHOSTNAME:

?C: This symbol, if defined, indicates that the C program may use the  
?C: contents of PHOSTNAME as a command to feed to the popen() routine  
?C: to derive the host name.

?C:.

```
?H:?%<:#$d_gethname HAS_GETHOSTNAME /**/
?H:?%<:#$d_uname HAS_UNAME /**/
?H:?%<:#$d_phostname HAS_PHOSTNAME /**/
?H:?%<:#ifdef HAS_PHOSTNAME
?H:?%<:#define PHOSTNAME "$aphostname" /* How to get the host name */
?H:?%<:#endif
?H:.
```

?T:file val call

?LINT:change i\_whoami

: see how we will look up host name

```
echo " "
call="
@if HAS_GETHOSTNAME
if
set gethostname val -f d_gethname; eval $csym; $val; then
echo 'gethostname() found.' >&4
d_gethname="$define"
call=gethostname
fi
@end
@if HAS_UNAME
if set uname val -f d_uname; eval $csym; $val; then
if ./xenix; then
$cat <<'EOM'
```

uname() was found, but you're running xenix, and older versions of xenix  
have a broken uname(). If you don't really know whether your xenix is old  
enough to have a broken system call, use the default answer.

EOM

```

dflt=y
case "$d_undef" in
"$define") dflt=n;;
esac
rp='Is your uname() broken?'
./myread
case "$ans" in
n*) d_undef="$define"; call=uname;;
esac
else
echo 'uname() found.' >&4
d_undef="$define"
case "$call" in
") call=uname ;;
esac
fi
fi
@end
case "$d_getname" in
") d_getname="$undef";;
esac
case "$d_undef" in
") d_undef="$undef";;
esac
@if PHOSTNAME || MYHOSTNAME
case "$d_undef$d_getname" in
*define*)
dflt=n
cat <<EOM

```

Every now and then someone has a \$call() that lies about the hostname but can't be fixed

for political or economic reasons. If you wish, I can

```
@if MYHOSTNAME && PHOSTNAME
```

pretend \$call() isn't there and maybe compile in the hostname or compute it from the '\$phostname' command at run-time.

```
@elsif MYHOSTNAME
```

pretend \$call() isn't there and maybe compile in the hostname.

```
@elsif PHOSTNAME
```

pretend \$call() isn't there and maybe compute hostname at run-time thanks to the '\$phostname' command.

```
@elsif WHOAMI
```

get the hostname from whomai.h (provided you have one).

```
@else
```

simply ignore your host name and use something like "noname" instead.

```
@end
```

```
EOM
```

```

rp="Shall I ignore $call() from now on?"
. /myread
case "$ans" in
y*) d_undef="$undef" d_gethname="$undef"; $echo $n "Okay...$c";
esac;;
esac
@end
@if PHOSTNAME || aphostname
?X: Compute the full path name for the command
case "$phostname" in
") aphostname="";;
*) case "$aphostname" in
/*) ;;
*) set X $phostname
shift
file=$1
shift
file=`./loc $file $file $pth`
aphostname=`echo $file $*`
;;
esac
;;
esac
@end
@if
PHOSTNAME && MYHOSTNAME
case "$d_undef$d_gethname" in
*define*) ;;
*)
case "$phostname" in
") ;;
*)
$cat <<EOT

```

There is no gethostname() or uname() on this system. You have two possibilities at this point:

- 1) You can have your host name (\$myhostname) compiled into \$package, which lets \$package start up faster, but makes your binaries non-portable, or
- 2) you can have \$package use a

```
popen("$aphostname","r")
```

which will start slower but be more portable.

```
@ if WHOAMI
```

Option 1 will give you the option of using whoami.h if you have one.

```
@ end
```

If you want option 2 but with a different command, you can edit config.sh at the end of this shell script.

EOT

```
case "$d_phostname" in
"$define") dflt=n;;
"$undef") dflt=y;;
")
case "$d_portable" in
"$define") dflt=n ;;
*) dflt=y ;;
esac;;
esac
rp="Do you want your host name compiled in?"
. ./myread
case "$ans" in
n*) d_phostname="$define" ;;
*) ahostname=""; d_phostname="$undef";;
esac;;
esac
case
"$shostname" in
")
@ if WHOAMI
case "$i_whoami" in
"$define")
dflt=y
$cat <<EOM
```

No hostname function--you can either use the whoami.h file, which has this line:

```
`grep sysname $usrinc/whoami.h`
```

or you can have the name we came up with earlier (\$myhostname) hardwired in.

EOM

```
rp="Use whoami.h to get hostname?"
. ./myread
case "$ans" in
n*) i_whoami="$undef";;
esac
;;
"$undef")
$cat <<EOM
```

No hostname function and no whoami.h -- hardwiring "\$myhostname".

EOM

```
;;
esac;;
@ else
```

```

    echo 'No hostname function -- hardwiring "$myhostname"! '>&4;;
@ end
esac;;
esac
@elsif PHOSTNAME
case "$d_underscore$d_underscorename" in
*define*);;
*)
case "$phostname" in
")
@ if WHOAMI
case "$i_underscorewhoami" in
"$define")
$cat <<EOM

```

No hostname function--we'll use the whoami.h file, which has this line:

```
`grep sysname $usrinc/whoami.h`
```

```

EOM
;;
*) echo "There will be no way for $package to get your hostname." >&4;;
esac;;
@ else
echo "There will be no way
for $package to get your hostname." >&4;;
@ end
*)
echo "I'll use 'popen(\"\"$aphostname\", \"r\")\" to get your hostname." >&4
;;
esac;;
esac
@elsif MYHOSTNAME
case "$d_underscore$d_underscorename" in
*define*);;
*)
@ if WHOAMI
case "$i_underscorewhoami" in
"$define")
dflt=y
$cat <<EOM

```

No hostname function--you can either use the whoami.h file, which has this line:

```
`grep sysname $usrinc/whoami.h`
```

or you can have the name we came up with earlier (\$myhostname) hardwired in.

EOM

```

rp="Use whoami.h to get hostname?"
./myread
case "$ans" in
n*) i_whoami="$undef";;
esac
;;
"$undef")
echo 'No whoami.h--hardwiring "$myhostname".' >&4;;
esac;;
@ else
echo 'Hardwiring "$myhostname".' >&4;;
@ end
esac
@end
case "$d_phostname" in
") d_phostname="$undef";;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_gethname.U

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?RCS:

?MAKE:i\_quadmath: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_quadmath:

?S: This variable conditionally defines I\_QUADMATH, which indicates

?S: to the C program that it should include <quadmath.h>.

?S:.

?C:I\_QUADMATH:

?C: This symbol, if defined, indicates that <quadmath.h> exists and

?C: should be included.

?C:.

?H:#\$i\_quadmath I\_QUADMATH /\*\*/

?H:.

?LINT:set i\_quadmath

: see if this is a quadmath.h system

set quadmath.h i\_quadmath

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i\_quadmath.U

No license file was found, but licenses were detected in source scan.



```

?RCS: $Id: d_perror.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_perror.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:11:38 ram
?RCS: patch32: always define HAS_PERROR even when not used in C code
?RCS:
?RCS: Revision 3.0 1993/08/18 12:06:45 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_perror: Inlibc
?MAKE:-pick add $@ %<
?S:d_perror:
?S: This variable conditionally remaps perror to a null action and
?S: defines the symbol HAS_PERROR, which indicates to the C program
?S: that the perror()
?S: routine is not available to print system
?S: error messages.
?S:.
?C:HAS_PERROR ~ %<:
?C: This symbol, if defined, indicates that the perror() routine is
?C: available to print system error messages. If not defined, you should
?C: use your own diagnostic routine...
?C:.
?C:perror ~ %<:
?C: This symbol is mapped to null if the perror() routine is not
?C: available to print system error messages.
?C:.
?H:%<:#$d_perror HAS_PERROR /**/
?H:%<:#ifndef HAS_PERROR
?H:%<:#define perror(s) ; /* mapped to a null statement */
?H:%<:#endif
?H:.
?LINT:set d_perror
: see if perror exists
set perror d_perror
eval $inlibc

Found in path(s):
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_perror.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: archname.U,v 3.0.1.3 1997/02/28 15:24:32 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: archname.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 15:24:32 ram
?RCS: patch61: changed the way the archname is mangled from unname
?RCS:
?RCS: Revision 3.0.1.2 1995/05/12 12:05:24 ram
?RCS: patch54: protect against spaces in "uname -m" output (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1995/02/15 14:14:21 ram
?RCS: patch51: created
?RCS:
?MAKE:archname myarchname useversionedarchname: sed Loc Myread Oldconfig \
osname test rm usethreads usemultiplicity use64bitint
use64bitall \
archname64 usealongdouble longdblsize doublesize targetarch Setvar \
api_versionstring usequadmath
?MAKE: -pick add $@ %<
?S:archname:
?S: This variable is a short name to characterize the current
?S: architecture. It is used mainly to construct the default archlib.
?S:.
?S:myarchname:
?S: This variable holds the architecture name computed by Configure in
?S: a previous run. It is not intended to be perused by any user and
?S: should never be set in a hint file.
?S:.
?S:useversionedarchname:
?S: This variable indicates whether to include the $api_versionstring
?S: as a component of the $archname.
?S:.
?C:ARCHNAME:
?C: This symbol holds a string representing the architecture name.
?C: It may be used to construct an architecture-dependant pathname
?C: where library files may be held under a private library, for
?C: instance.
?C:.
?H:#define ARCHNAME "$archname" /**/
```

```

?H:
?T:xxx tarch
?F:!archname.cbu
?INIT:archname=""
: determine the architecture name
echo " "
?X:
We always recompute archname in case osname changes. However, we need
?X: to be careful since, as ADO rightfully pointed out, some systems pick
?X: silly architecture names (0001307135000-aix on AIX or 9000/715-ux under
?X: HP-UX). Therefore, we allow hint files to supersede our guess and ask
?X: the user for confirmation.
if xxx=`./loc arch blurfl $pth`; $test -f "$xxx"; then
    tarch=`arch`-"-$osname"
elif xxx=`./loc uname blurfl $pth`; $test -f "$xxx" ; then
    if uname -m > tmparch 2>&1 ; then
        tarch=`$sed -e 's/ *$//' -e 's/ /_/g' \
            -e 's/$/"-$osname/"' tmparch`
    else
        tarch="$osname"
    fi
    $rm -f tmparch
else
    tarch="$osname"
fi
case "$myarchname" in
|"|$tarch") ;;
*)
    echo "(Your architecture name used to be $myarchname.)"
    archname=""
    ;;
esac
case "$targetarch" in
") ;;
?X: Very GCCian.
*) archname=`echo $targetarch|sed 's,^[^]*-,` ;;
esac
myarchname="$tarch"
case "$sarchname" in
") dflt="$tarch";;
*) dflt="$sarchname";;
esac
rp='What is your architecture name'
./myread
archname="$ans"

:

```

```

optionally add API version to the architecture for versioned archlibs
case "$useversionedarchname" in
$define|true|[yY]*) dflt='y';
*)          dflt='n';;
esac
rp='Add the Perl API version to your archname?'
./myread
case "$ans" in
y|Y) useversionedarchname="$define" ;;
*)   useversionedarchname="$undef" ;;
esac
case "$useversionedarchname" in
$define)
case "$archname" in
*-$api_versionstring)
echo "...and architecture name already has -$api_versionstring" >&4
;;
*)
archname="$archname-$api_versionstring"
echo "...setting architecture name to $archname." >&4
;;
esac
;;
esac

@if usethreads
case "$usethreads" in
$define)
echo "Threads selected." >&4
case "$archname" in
*-$thread*) echo "...and architecture name already has -$thread." >&4
;;
*)   archname="$archname-$thread"
echo "...setting architecture name to $archname." >&4
;;
esac
;;
esac
@end
@if usemultiplicity
case "$usemultiplicity" in
$define)
echo "Multiplicity selected."
>&4
case "$archname" in
*-$multi*) echo "...and architecture name already has -$multi." >&4
;;
*)   archname="$archname-$multi"

```

```

echo "...setting architecture name to $archname." >&4
;;
esac
;;
esac
@end
@if use64bitint
case "$use64bitint$use64bitall" in
*$define*)
case "$archname64" in
")
echo "This architecture is naturally 64-bit, not changing architecture name." >&4
;;
*)
case "$use64bitint" in
"$define") echo "64 bit integers selected." >&4 ;;
esac
case "$use64bitall" in
"$define") echo "Maximal 64 bitness selected." >&4 ;;
esac
case "$archname" in
*-$archname64*) echo "...and architecture name already has $archname64." >&4
;;
*) archname="$archname-$archname64"
echo "...setting architecture name to $archname." >&4
;;
esac
;;
esac
esac
@end
@if uselongdouble
case "$uselongdouble" in
$define)
echo "Long doubles selected." >&4
case "$longdblsize" in
$doublesize)
echo "...but long doubles are equal to doubles, not
changing architecture name." >&4
;;
*)
case "$archname" in
*-ld*) echo "...and architecture name already has -ld." >&4
;;
*) archname="$archname-ld"
echo "...setting architecture name to $archname." >&4
;;
esac

```

```

;;
esac
;;
esac
@end
@if usequadmath
case "$usequadmath" in
$define)
echo "quadmath selected." >&4
case "$archname" in
*-quadmath*) echo "...and architecture name already has -quadmath." >&4
;;
*) archname="$archname-quadmath"
echo "...setting architecture name to $archname." >&4
;;
esac
;;
esac
@end
if $test -f archname.cbu; then
echo "Your platform has some specific hints for architecture name, using them..."
. ./archname.cbu
fi

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/archname.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000, Jarkko Hietaniemi

?RCS:

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?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:need\_va\_copy: rm\_try cat Compile run

?MAKE: -pick add \$@ %<

?S:need\_va\_copy:

?S: This symbol, if defined, indicates that the system stores

?S: the variable argument list datatype, va\_list, in a format

?S: that cannot be copied by simple assignment, so that some

?S: other means must be used when copying is required.

?S: As such systems vary in their provision (or non-provision)

?S: of copying mechanisms, handy.h defines a platform-

?S: independent macro, Perl\_va\_copy(src, dst), to do the job.

?S:.

?C:NEED\_VA\_COPY:

?C: This

symbol, if defined, indicates that the system stores

?C: the variable argument list datatype, va\_list, in a format

?C: that cannot be copied by simple assignment, so that some

?C: other means must be used when copying is required.

?C: As such systems vary in their provision (or non-provision)

?C: of copying mechanisms, handy.h defines a platform-

?C: independent macro, Perl\_va\_copy(src, dst), to do the job.

?C:.

?H:#\$need\_va\_copy NEED\_VA\_COPY /\*\*/

?H:.

?T:okay

?F:!try

: see if we need va\_copy

echo " "

\$cat >try.c <<EOCP

#include <stdarg.h>

#include <stdio.h>

#include <stdlib.h>

#include <signal.h>

int

ivfprintf(FILE \*f, const char \*fmt, va\_list \*valp)

{

return vfprintf(f, fmt, \*valp);

}

int

myvfprintf(FILE \*f, const char \*fmt, va\_list val)

{

return ivfprintf(f, fmt, &val);

}

int

myprintf(char \*fmt, ...)

{

va\_list val;

va\_start(val, fmt);

return myvfprintf(stdout, fmt, val);

}

int

main(int ac, char \*\*av)

{

signal(SIGSEGV, exit);

```

#ifdef SIGBUS
    signal(SIGBUS,
        exit);
#endif

    myprintf("%s%s all right, then\n", "that", "");
    exit(0);
}
EOCP
set try
if eval $compile && $run ./try 2>&1 >/dev/null; then
case "$run ./try`" in
    "that's all right, then")
        okay=yes
        ;;
    esac
fi
case "$okay" in
yes) echo "It seems that you don't need va_copy()." >&4
    need_va_copy="$undef"
    ;;
*) echo "It seems that va_copy() or similar will be needed." >&4
    need_va_copy="$define"
    ;;
    esac
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/need_va_copy.U

```

No license file was found, but licenses were detected in source scan.

?RCS: Copyright (c) 2005-2007 H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_cplusplus: Compile Setvar run cat rm\_try

?MAKE: -pick add \$@ %<

?S:d\_cplusplus (d\_cplusplus.U):

?S: This variable conditionally defines the USE\_CPLUSPLUS symbol, which

?S: indicates that a C++ compiler was used to compiled Perl and will be

?S: used to compile extensions.

?S:.

?C:USE\_CPLUSPLUS:

?C: This symbol, if defined, indicates that a C++ compiler was

?C: used to compiled Perl and will be used to compile extensions.

?C:.



```

?H:#$d_cplusplus USE_CPLUSPLUS /**/
?H:.
?F:!try
?LINT:set d_cplusplus
: Check if we are using C++
echo " "
echo "Checking for C++..." >&4
$cat >try.c <<'EOCP'
#include <stdio.h>
int main(void)
{
#ifdef __cplusplus
    return 0;
#else
    return 1;
#endif
}
EOCP
set try
if eval $compile_ok
  && $run ./try; then
  val="$define"
  echo "You are using a C++ compiler."
else
  val="$undef"
  echo "You are not using a C++ compiler."
fi
$rm_try cplusplus$$
set d_cplusplus
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_cplusplus.U

```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_setpent.U,v 3.0 1993/08/18 12:06:09 ram Exp $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
```

```
?RCS:
```

```
?RCS: You may redistribute only under the terms of the Artistic License,
```

```
?RCS: as specified in the README file that comes with the distribution.
```

```
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```

```
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```

```
?RCS: of the source tree for dist 3.0.
```

```
?RCS:
```

```
?RCS: $Log: d_setpent.U,v $
```

```
?RCS: Revision 3.0 1993/08/18 12:06:09 ram
```

?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_setpent: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_setpent:  
?S: This variable conditionally defines HAS\_SETPROTOENT if setprotoent() is  
?S: available.  
?S:.  
?C:HAS\_SETPROTOENT:  
?C: This symbol, if defined, indicates that the setprotoent() routine is  
?C: available.  
?C:.  
?H:#\$d\_setpent HAS\_SETPROTOENT /\*\*/  
?H:.  
?LINT:set d\_setpent  
: see if setprotoent  
exists  
set setprotoent d\_setpent  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_setpent.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_isfinite: Inlibc cat Compile rm\_try Setvar  
?MAKE: -pick add \$@ %<  
?S:d\_isfinite:  
?S: This variable conditionally defines the HAS\_ISFINITE symbol, which  
?S: indicates to the C program that the isfinite() routine is available.  
?S:.  
?C:HAS\_ISFINITE:  
?C: This symbol, if defined, indicates that the isfinite routine is  
?C: available to check whether a double is finite (non-infinity non-NaN).  
?C:.  
?LINT:set d\_isfinite  
?H:#\$d\_isfinite HAS\_ISFINITE /\*\*/  
?H:.  
: check for isfinite  
echo "Checking to see if you have isfinite..." >&4  
\$cat >try.c <<EOCP

```

#include <math.h>
int main() { return isfinite(0.0); }
EOCP
set try
if eval $compile; then
  val="$define"
  echo "You have isfinite."
else
  val="$undef"
  echo
  "You do not have isfinite."
fi
$rm_try
set d_isfinite
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_isfinite.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_vfork.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_vfork.U,v \$

?RCS: Revision 3.0.1.1 1994/05/06 15:05:44 ram

?RCS: patch23: avoid inclusion of <vfork.h> if no vfork() used (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:08:50 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:i\_vfork: Inhdr d\_vfork

?MAKE: -pick add \$@ %<

?S:i\_vfork:

?S: This variable conditionally defines the I\_VFORK symbol, and indicates

?S: whether a C program should include vfork.h.

?S:.

?C:I\_VFORK:

?C: This symbol,

if defined, indicates to the C program that it should

?C: include vfork.h.

```
?C:
?H:#$i_vfork I_VFORK /**/
?H:
: see if this is a vfork system
case "$d_vfork" in
"$define")
set vfork.h i_vfork
eval $inhdr
;;
*)
i_vfork="$undef"
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i_vfork.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: selecttype.U,v 3.0.1.3 1997/02/28 16:20:09 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: selecttype.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 16:20:09 ram
?RCS: patch61: always include <sys/select.h> when available for test
?RCS:
?RCS: Revision 3.0.1.2 1995/07/25 14:14:06 ram
?RCS: patch56: removed harmful spaces in assignment
?RCS:
?RCS: Revision 3.0.1.1 1994/06/20 07:06:31 ram
?RCS: patch30: created by ADO
?RCS:
?MAKE:selecttype: Protochk Oldconfig Myread cat
\
d_fd_set d_select d_socket i_systime i_sysselect extern_C
?MAKE: -pick add $@ %<
?S:selecttype:
?S: This variable holds the type used for the 2nd, 3rd, and 4th
?S: arguments to select. Usually, this is 'fd_set *', if HAS_FD_SET
```

?S: is defined, and 'int \*' otherwise. This is only useful if you  
 ?S: have select(), naturally.

?S:.

?C:Select\_fd\_set\_t:

?C: This symbol holds the type used for the 2nd, 3rd, and 4th  
 ?C: arguments to select. Usually, this is 'fd\_set \*', if HAS\_FD\_SET  
 ?C: is defined, and 'int \*' otherwise. This is only useful if you  
 ?C: have select(), of course.

?C:.

?H:#define Select\_fd\_set\_t \$selecttype /\*\*/  
 ?H:.

?T:xxx nfd tmo try hdrs val  
 : check for type of arguments to select.  
 case "\$selecttype" in  
 ") case "\$d\_select" in  
 \$define)  
 echo " "  
 \$cat <<EOM

Checking to see what type of arguments are accepted by select().  
 EOM

```

hdrs="$define sys/types.h
$i_system sys/time.h
$i_sysselect sys/select.h
$d_socket sys/socket.h"
: The first arg can be int, unsigned,
or size_t
: The last arg may or may not be 'const'
val="
: void pointer has been seen but using that
: breaks the selectminbits test
for xxx in 'fd_set *' 'int *'; do
for nfd in 'int' 'size_t' 'unsigned long' 'unsigned' ; do
for tmo in 'struct timeval *' 'const struct timeval *'; do
case "$val" in
") try="$extern_C int select _(($nfd, $xxx, $xxx, $xxx, $tmo));"
if ./protochk "$try" $hdrs; then
echo "Your system accepts $xxx."
val="$xxx"
fi
;;
esac
done
done
done

```

?X: In the unlikely event that none of those worked, prompt the user.

```

case "$val" in
") rp='What is the type for the 2nd, 3rd, and 4th arguments to select?'
case "$d_fd_set" in

```

```

$define) dflt="fd_set *" ;;
*) dflt="int *" ;;
esac
. ./myread
val=$ans
;;
esac
selecttype="$sval"
;;
*) : no select, so pick a harmless default
selecttype='int *'
;;
esac
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/protos/selecttype.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: inc.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: inc.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:51 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:inc incexp: Loc Oldconfig Getfile usrine

?MAKE: -pick add \$@ %<

?S:inc:

?S: This variable holds the name of the directory in which the user wants

?S: to put public header files for the package in question. It is most

?S: often a local directory such as /usr/local/include.

?S:.

?S:incexp:

?S: This is the same as the inc variable, but is filename  
expanded

?S: at configuration time for convenient use in your makefiles.

?S:.

: determine where public header files go

```

case "$inc" in
")
dflt=`./loc . ." /usr/local/include /usr/include/local $usrinc`
;;
*) dflt="$inc"
;;
esac
fn=d~
rp='Where do you want to put the public header files?'
./getfile
inc="$ans"
incexp="$ansexp"

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/inc.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getservbyport\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_getservbyport\_r getservbyport\_r\_proto: Inlibc Protochk Hasproto \  
i\_systypes usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_getservbyport\_r:

?S: This variable conditionally defines the HAS\_GETSERVBYPORTR symbol,

?S: which indicates to the C program that the getservbyport\_r()

?S: routine is available.

?S:.

?S:getservbyport\_r\_proto:

?S: This variable encodes the prototype of getservbyport\_r.

?S: It is zero if d\_getservbyport\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_getservbyport\_r

?S: is defined.

?S:.

?C:HAS\_GETSERVBYPORTR:

?C: This symbol, if defined, indicates

that the getservbyport\_r routine

?C: is available to getservbyport re-entrantly.

?C:.

?C:GETSERVBYPORTR\_PROTO:

?C: This symbol encodes the prototype of getservbyport\_r.

?C: It is zero if d\_getservbyport\_r is undef, and one of the

```

?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_getservbyport_r
?C: is defined.
?C:.
?H:#$d_getservbyport_r HAS_GETSERVBYPORTR /**/
?H:#define GETSERVBYPORTR_PROTO $getservbyport_r_proto /**/
?H:.
?T:try hdrs d_getservbyport_r_proto
: see if getservbyport_r exists
set getservbyport_r d_getservbyport_r
eval $inlibc
case "$d_getservbyport_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_netdb netdb.h"
case "$d_getservbyport_r_proto:$usethreads" in
":define") d_getservbyport_r_proto=define
set d_getservbyport_r_proto getservbyport_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_getservbyport_r_proto" in
define)
case "$getservbyport_r_proto" in
"|0) try='int getservbyport_r(int, const char*, struct servent*, char*, size_t,
struct servent**);'
./protochk "$extern_C $try" $hdrs && getservbyport_r_proto=I_ICSBWR ;;
esac
case "$getservbyport_r_proto" in
"|0) try='struct servent* getservbyport_r(int, const char*, struct servent*, char*, int);'
./protochk "$extern_C $try" $hdrs && getservbyport_r_proto=S_ICSBW ;;
esac
case "$getservbyport_r_proto" in
"|0) try='int getservbyport_r(int, const char*, struct servent*, struct servent_data*);'
./protochk "$extern_C $try" $hdrs && getservbyport_r_proto=I_ICSD ;;
esac
case "$getservbyport_r_proto" in
"|0) d_getservbyport_r=undef
getservbyport_r_proto=0
echo "Disabling getservbyport_r, cannot determine prototype." >&4 ;;
* ) case "$getservbyport_r_proto" in
REENTRANT_PROTO*) ;;
*) getservbyport_r_proto="REENTRANT_PROTO_$getservbyport_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "getservbyport_r has no prototype, not using it." >&4 ;;
esac

```



```
d_getservbyport_r=undef
getservbyport_r_proto=0
;;
esac
;;
*) getservbyport_r_proto=0
;;
esac
```

#### Found

in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_getservbyport_r.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: i_stdlib.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_stdlib.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:27 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:i_stdlib: Nothing
?MAKE: -pick add $@ %<
?S:i_stdlib:
?S: This variable unconditionally defines the I_STDLIB symbol.
?S:.
?C:I_STDLIB:
?C: This symbol is always defined, indicating that <stdlib.h> exists
?C: and should be included.
?C:.
?H:#define I_STDLIB /**/
?H:.
: stub, used only to satisfy other units
i_stdlib='define'
```

#### Found in

path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/i_stdlib.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id$
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Whoa.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 15:21:21 ram
?RCS: patch61: whoa script now starts with leading "startsh"
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 16:02:01 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:05:19 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit produces a bit of shell code that must be dotted in in order
?X: to warn the user in case a change into a variable is noticed.
?X:
?X: To use this
    unit, $was must hold the old value that has changed. Upon
?X: exit, the two variables $td and $tu are set to the correct value for
?X: respectively defining or undefining a variable. For instance, if $vas was
?X: $undef, but now $var is $define, after calling . whoa, you should use
?X: eval "$var=\$tu" to finally set $var to the correct value. See unit Inlibc.
?X:
?MAKE:Whoa: Myread startsh hint
?MAKE: -pick add $@ %<
?F:./whoa
?T:var was
?LINT:change td tu
: set up the script used to warn in case of inconsistency
cat <<EOS >whoa
$startsh
EOS
cat <<'EOSC' >>whoa
dflt=y
echo " "
echo "*** WHOA THERE!!! ***" >&4
echo "  The $hint value for \$var on this machine was \"$was\!" >&4
rp="  Keep the $hint value?"
```

```
./myread
case "$ans" in
y) td=$was; tu=$was;;
esac
EOSC
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Whoa.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: vendorbin.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1999, Andy Dougherty

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: vendorbin.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?MAKE:d\_vendorbin vendorbin vendorbinexp installvendorbin: Getfile \

Setprefixvar Oldconfig Prefixit vendorprefix

?MAKE: -pick add \$@ %<

?Y:TOP

?S:vendorbin:

?S: This variable contains the eventual value of the VENDORBIN symbol.

?S: It may have a ~ on the front.

?S: The standard distribution will put nothing in this directory.

?S: Vendors who distribute perl

may wish to place additional

?S: binaries in this directory with

?S: MakeMaker Makefile.PL INSTALLDIRS=vendor

?S: or equivalent. See INSTALL for details.

?S:.

?S:vendorbinexp:

?S: This variable is the ~name expanded version of vendorbin, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?D:installvendorbin="

?S:installvendorbin:

?S: This variable is really the same as vendorbinexp but may differ on

?S: those systems using AFS. For extra portability, only this variable

?S: should be used in makefiles.

?S:.

?S:d\_vendorbin:

?S: This variable conditionally defines PERL\_VENDORBIN.

?S:.

?C:PERL\_VENDORBIN:

?C: If defined, this symbol contains the name of a directory

?C: for holding vendor-supplied executables.

?C: It may have a ~ on the front.

?C: The standard distribution will put nothing in this directory.

?C: Vendors who distribute perl may wish to place additional

?C: binaries in this directory with

?C: MakeMaker Makefile.PL INSTALLDIRS=vendor

?C: or equivalent.

See INSTALL for details.

?C:.

?C:PERL\_VENDORBIN\_EXP:

?C: This symbol contains the ~name expanded version of VENDORBIN, to be used

?C: in programs that are not prepared to deal with ~ expansion at run-time.

?C:.

?H:#\$d\_vendorbin PERL\_VENDORBIN "\$vendorbin" /\*\*/

?H:#\$d\_vendorbin PERL\_VENDORBIN\_EXP "\$vendorbinexp" /\*\*/

?H:.

?LINT:change prefixvar

?LINT:set installvendorbin

: Set the vendorbin variables

case "\$vendorprefix" in

) d\_vendorbin="\$undef"

vendorbin="

vendorbinexp="

::

\*) d\_vendorbin="\$define"

: determine where vendor-supplied executables go.

case "\$vendorbin" in

) dflt=\$vendorprefix/bin ;;

\*) dflt="\$vendorbin" ;;

esac

fn=d~+

rp='Pathname for the vendor-supplied executables directory?'

./getfile

vendorbin="\$ans"

vendorbinexp="\$ansexp"

::

esac

prefixvar=vendorbin

./installprefix

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/U/installdirs/vendorbin.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_sysmount.U,v \$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:i\_sysmount: Inhdr Hasfield

?MAKE: -pick add \$@ %<

?S:i\_sysmount:

?S: This variable conditionally defines the I\_SYSMOUNT symbol,

?S: and indicates whether a C program should include <sys/mount.h>.

?S:.

?C:I\_SYS\_MOUNT:

?C: This symbol, if defined, indicates that <sys/mount.h> exists and

?C: should be included.

?C:.

?H:#\$i\_sysmount I\_SYS\_MOUNT /\*\*/

?H:.

?LINT:set i\_sysmount

: see if this is a sys/mount.h system

set sys/mount.h i\_sysmount

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/U/perl/i\_sysmount.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_mktime.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_mktime.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:09:44 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_mktime: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_mktime:  
?S: This variable conditionally defines the HAS\_MKTIME symbol, which  
?S: indicates to the C program that the mktime() routine is available.  
?S:.  
?C:HAS\_MKTIME :  
?C: This symbol, if defined, indicates that the mktime routine  
is  
?C: available.  
?C:.  
?H:#\$d\_mktime HAS\_MKTIME /\*\*/  
?H:.  
?LINT:set d\_mktime  
: see if mktime exists  
set mktime d\_mktime  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_mktime.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_bcmp.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_bcmp.U,v \$  
?RCS: Revision 3.0.1.2 1993/10/16 13:47:52 ram  
?RCS: patch12: added magic support for bcmp()  
?RCS:  
?RCS: Revision 3.0.1.1 1993/09/13 16:00:44 ram  
?RCS: patch10: now only defines HAS\_BCMP, no macro remap on memcmp (WAD)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:05:42 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_bcmp: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_bcmp:  
?S: This variable conditionally defines the HAS\_BCMP symbol

```
if
?S: the bcmp() routine is available to compare strings.
?S:.
?C:HAS_BCMP:
?C: This symbol is defined if the bcmp() routine is available to
?C: compare blocks of memory.
?C:.
?H:#$d_bcmp HAS_BCMP /**/
?H:.
?M:bcmp: HAS_BCMP
?M:#ifndef HAS_BCMP
?M:#ifndef bcmp
?M:#define bcmp(s,d,l) memcmp((s),(d),(l))
?M:#endif
?M:#endif
?M:.
?LINT:set d_bcmp
: see if bcmp exists
set bcmp d_bcmp
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_bcmp.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: mailer.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: mailer.U,v $
?RCS: Revision 3.0.1.3 1995/01/11 15:32:11 ram
?RCS: patch45: can now use Loc variables since path stripping is deferred
?RCS:
?RCS: Revision 3.0.1.2 1994/05/06 15:10:04 ram
?RCS: patch23: ensure full path value is used for rmail also
?RCS:
?RCS: Revision 3.0.1.1 1994/01/24 14:14:18 ram
?RCS: patch16: now use _sendmail vars and friends for portability issues
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:10 ram
?RCS: Baseline for dist
```

3.0 netwide release.

?RCS:

?MAKE:mailer: test cat rmail mail smail sendmail Getfile Oldconfig

?MAKE: -pick add \$@ %<

?S:mailer:

?S: This variable contains the full pathname of a reasonable mailer.

?S: By reasonable, we mean some program which can understand internet

?S: addresses or at least forward them to some internet router. This

?S: mailer should be invoked as "mailer [options] recipients <mail".

?S:.

: determine the name of a reasonable mailer

case "\$mailer" in

")

if \$test -f "\$sendmail"; then

  dflt="\$sendmail"

elif \$test -f "\$smail"; then

  dflt="\$smail"

elif \$test -f "\$rmail"; then

  dflt="\$rmail"

elif \$test -f /bin/mail; then

  dflt=/bin/mail

else

  dflt=\$mail

fi

::

\*) dflt="\$mailer";;

esac

\$cat <<EOM

I need the full pathname of the program used to deliver mail on your system.

A typical answer would be /usr/lib/sendmail or /bin/rmail, but you may choose any other program, as long as it can be fed from standard input and will honour any user-supplied headers.

EOM

fn=f

rp=Mail

transport agent to be used?

./getfile

mailer="\$ans"

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/mailer.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Setvar.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:



?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Setvar.U,v \$

?RCS: Revision 3.0.1.1 1994/10/29 15:58:28 ram

?RCS: patch36: call ./whoa explicitly instead of relying on PATH

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:16 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a variable that is intended to be eval'ed in  
?X: order to define/undefine a symbol. A consistency check is made  
?X: regarding any previous value and a warning is issued if there  
?X: is any discrepancy.

?X:

?X:

To use it, say:

?X: val=<value>

?X: set d\_variable

?X: eval \$setvar

?X:

?MAKE:Setvar: Whoa

?MAKE: -pick add \$@ %<

?LINT:define setvar

?S:setvar:

?S: This shell variable is used internally by Configure to set a value  
?S: to a given symbol that is defined or not. A typical use is:

?S: val=<value computed>

?S: set d\_variable

?S: eval \$setvar

?S: That will print a message in case the \$val value is not the same  
?S: as the previous value of \$d\_variable.

?S:.

?V:setvar:val

?T:var was td tu

: function used to set '\$1' to '\$val'

setvar='var=\$1; eval "was=\\$1"; td=\$define; tu=\$undef;

case "\$val\$was" in

\$define\$undef) ./whoa; eval "\$var=\\$td";;

\$undef\$define) ./whoa; eval "\$var=\\$tu";;

\*) eval "\$var=\$val";;

esac'

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Setvar.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: perl5.U,v $
```

```
?RCS:
```

```
?RCS: Copyright (c) 2000 Andrew Dougherty
```

```
?RCS:
```

```
?RCS: You may distribute under the terms of either the GNU General Public
```

```
?RCS: License or the Artistic License, as specified in the README file.
```

```
?RCS:
```

```
?RCS: $Log: perl5.U,v $
```

```
?RCS:
```

```
?X:
```

```
?X: The purpose of this unit is to locate a previously installed
```

```
?X: version of perl5 suitable for running inc_version_list.U.
```

```
?X: We check for 5.005 and later because inc_version_list is
```

```
?X: irrelevant for earlier versions.
```

```
?X:
```

```
?MAKE:perl5: path_sep binexp test sed exe_ext
```

```
?MAKE: -pick add $@ %<
```

```
?Y:TOP
```

```
?S:perl5:
```

```
?S: This variable contains the full path (if any) to a previously
```

```
?S: installed perl5.005 or later suitable for running the script
```

```
?S: to determine inc_version_list.
```

```
?S:.
```

```
?T: tdir
```

```
: Find perl5.005 or later.
```

```
echo "Looking for a previously installed perl5.005 or later... "
```

```
case "$perl5" in
```

```
) for tdir in `echo "$binexp$path_sep$PATH" | $sed "s/$path_sep/  
/g"; do
```

```
 : Check if this perl is recent and can load a simple module
```

```
if $test -x $tdir/perl$exe_ext && $tdir/perl -Mless -e 'use 5.005;' >/dev/null 2>&1; then
```

```
 perl5=$tdir/perl
```

```
 break;
```

```
elif $test -x $tdir/perl5$exe_ext && $tdir/perl5 -Mless -e 'use 5.005;' >/dev/null 2>&1; then
```

```
 perl5=$tdir/perl5
```

```
 break;
```

```
 fi
```

```
done
```

```
::
```

```
*) perl5="$perl5"
```

```
::
```

```
esac
```

```
case "$perl5" in
") echo "None found. That's ok.";;
*) echo "Using $perl5." ;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/perl5.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

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?RCS:

?RCS: \$Log: mallocsrc.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 16:10:26 ram

?RCS: patch61: added support for Free\_t, the type of free()

?RCS: patch61: replaced .o with \$\_o all over the place

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 15:10:46 ram

?RCS: patch23: added support for MYMALLOC, mainly for perl5 (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:09:12 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:mallocsrc mallocobj usemymalloc malloctype d\_mymalloc \

freetype: Myread \

Oldconfig

package Guess Setvar rm cat +cc +ccflags Findhdr \

i\_malloc i\_stdlib sed libs \_o ptrsize

?MAKE: -pick add \$@ %<

?X: Put near top so that other tests don't erroneously include

?X: -lmalloc. --AD 22 June 1998

?Y:TOP

?S:usemymalloc:

?S: This variable contains y if the malloc that comes with this package

?S: is desired over the system's version of malloc. People often include

?S: special versions of malloc for efficiency, but such versions are often

?S: less portable. See also mallocsrc and mallocobj.

?S: If this is 'y', then -lmalloc is removed from \$libs.

?S:.

?S:mallocsrc:

?S: This variable contains the name of the malloc.c that comes with  
 ?S: the package, if that malloc.c is preferred over the system malloc.  
 ?S: Otherwise the value is null. This variable is intended for generating  
 ?S: Makefiles.  
 ?S:.  
 ?S:d\_mymalloc:  
 ?S: This variable conditionally defines MYMALLOC in case other parts  
 ?S: of the source want to take special action if MYMALLOC is used.  
 ?S: This may include different sorts  
 of profiling or error detection.  
 ?S:.  
 ?S:mallocobj:  
 ?S: This variable contains the name of the malloc.o that this package  
 ?S: generates, if that malloc.o is preferred over the system malloc.  
 ?S: Otherwise the value is null. This variable is intended for generating  
 ?S: Makefiles. See mallocsrc.  
 ?S:.  
 ?S:freetype:  
 ?S: This variable contains the return type of free(). It is usually  
 ?S: void, but occasionally int.  
 ?S:.  
 ?S:malloctype:  
 ?S: This variable contains the kind of ptr returned by malloc and realloc.  
 ?S:.  
 ?C:Free\_t:  
 ?C: This variable contains the return type of free(). It is usually  
 ?C: void, but occasionally int.  
 ?C:.  
 ?C:Malloc\_t (MALLOC\_PTRTYPE):  
 ?C: This symbol is the type of pointer returned by malloc and realloc.  
 ?C:.  
 ?H:#define Malloc\_t \$malloctype /\*\*/  
 ?H:#define Free\_t \$freetype /\*\*/  
 ?H:.  
 ?C:MYMALLOC:  
 ?C: This symbol, if defined, indicates that we're using our own malloc.  
 ?C:.  
 ?H:#\$d\_mymalloc MYMALLOC /\*\*/  
 ?H:.  
 ?LINT:change libs  
 ?X: Cannot test for mallocsrc; it  
 is the unit's name and there is a bug in  
 ?X: the interpreter which defines all the names, even though they are not used.  
 @if mallocobj  
 : determine which malloc to compile in  
 echo " "  
 case "\$usemymalloc" in  
 [yY]\*|true|\$define) dflt='y' ;;

```

[nN]*|false|$undef) dflt='n' ;;
*)
case "$ptrsize" in
4) dflt='y' ;;
*) dflt='n' ;;
esac
;;
esac
rp="Do you wish to attempt to use the malloc that comes with $package?"
./myread
usemymalloc="$sans"
case "$sans" in
y*(true)
usemymalloc='y'
mallosrc='malloc.c'
mallocobj="malloc$_o"
d_mymalloc="$define"
?X: Maybe libs.U should be dependent on mallosrc.U, but then
?X: most packages that use dist probably don't supply their own
?X: malloc, so this is probably an o.k. comprpromise
case "$libs" in
*-lmalloc*)
: Remove malloc from list of libraries to use
echo "Removing unneeded -lmalloc from library list" >&4
set `echo X $libs | $sed -e 's/-lmalloc //' -e 's/-lmalloc$/'`
shift
libs="$*"
echo "libs = $libs" >&4
;;
esac
;;
*)
usemymalloc='n'
mallosrc=""
mallocobj=""
d_mymalloc="$undef"
;;
esac

@end
@if
MALLOCPTRTYPE || Malloc_t || Free_t
: compute the return types of malloc and free
echo " "
$cat >malloc.c <<END
#$i_malloc I_MALLOC
#$i_stdlib I_STDLIB
#include <stdio.h>

```

```

#include <sys/types.h>
#ifdef I_MALLOC
#include <malloc.h>
#endif
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#ifdef TRY_MALLOC
void *malloc();
#endif
#ifdef TRY_FREE
void free();
#endif
END
@if MALLOCPTRTYPE || Malloc_t
case "$malloctype" in
")
if $cc $cflags -c -DTRY_MALLOC malloc.c >/dev/null 2>&1; then
malloctype='void *'
else
malloctype='char *'
fi
;;
esac
echo "Your system wants malloc to return '$malloctype', it would seem." >&4
@end

@if Free_t
case "$freetype" in
")
if $cc $cflags -c -DTRY_FREE malloc.c >/dev/null 2>&1; then
freetype='void'
else
freetype='int'
fi
;;
esac
echo "Your system uses $freetype free(), it would seem." >&4
@end
$rm -f malloc.[co]
@end

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/mallocsrc.U

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```

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?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:d_ldbl_dig: Myread contains cat rm Setvar \
  cppstdin cppflags cppminus
?MAKE: -pick add $@ %<
?S:d_ldbl_dig:
?S: This variable conditionally defines d_ldbl_dig if this system's
?S: header files provide LDBL_DIG, which is the number of significant
?S: digits in a long double precision number.
?S:.
?C:HAS_LDBL_DIG:
?C: This symbol, if defined, indicates that this system's <float.h>
?C: or <limits.h> defines the symbol LDBL_DIG, which is the number
?C: of significant digits in a long double precision number. Unlike
?C: for
  DBL_DIG, there's no good guess for LDBL_DIG if it is undefined.
?C:.
?H:#$d_ldbl_dig HAS_LDBL_DIG /* */
?H:.
?F:!ldbl_dig.c
?LINT:set d_ldbl_dig
: See if number of significant digits in a double precision number is known
echo " "
$cat >ldbl_dig.c <<EOM
#include <limits.h>
#include <float.h>
#ifdef LDBL_DIG
printf("Contains LDBL_DIG");
#endif
EOM
$cppstdin $cppflags $cppminus < ldbl_dig.c >ldbl_dig.E 2>/dev/null
if $contains 'LDBL_DIG' ldbl_dig.E >/dev/null 2>&1; then
  echo "LDBL_DIG found." >&4
  val="$define"
else
  echo "LDBL_DIG NOT found." >&4
  val="$undef"
fi
$rm -f ldbl_dig.?
set d_ldbl_dig
eval $setvar

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_ldbl\_dig.U

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?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_gconvert.U,v \$

?RCS: Revision 3.0.1.3 1997/02/28 15:33:38 ram

?RCS: patch61: integrated new unit from perl5

?RCS:

?RCS: Revision 3.0.1.2 1995/07/25 13:55:59 ram

?RCS: patch56: improved comments about the Gconvert macro (ADO)

?RCS: patch56: force compile-link test since it may exist but be unusable (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:12:51 ram

?RCS: patch36: created by ADO

?RCS:

?MAKE:d\_Gconvert:

cat cc cflags ldflags libs rm\_try \_o

?MAKE: -pick add \$@ %<

?S:d\_Gconvert:

?S: This variable holds what Gconvert is defined as to convert

?S: floating point numbers into strings. It could be 'gconvert'

?S: or a more complex macro emulating gconvert with gcvt() or sprintf.

?S:.

?C:Gconvert:

?C: This preprocessor macro is defined to convert a floating point

?C: number to a string without a trailing decimal point. This

?C: emulates the behavior of sprintf("%g"), but is sometimes much more

?C: efficient. If gconvert() is not available, but gcvt() drops the

?C: trailing decimal point, then gcvt() is used. If all else fails,

?C: a macro using sprintf("%g") is used. Arguments for the Gconvert

?C: macro are: value, number of digits, whether trailing zeros should

?C: be retained, and the output buffer.

?C: Possible values are:

?C: d\_Gconvert='gconvert((x),(n),(t),(b))'



```

?C: d_Gconvert='gcvrt((x),(n),(b))'
?C: d_Gconvert='sprintf((b),"%.*g",(n),(x))'
?C: The last two assume trailing zeros should
not be kept.
?C:.
?H:#define Gconvert(x,n,t,b) $d_Gconvert
?H:.
?T: xxx_list xxx_convert
?F:!try
?X:
: Check how to convert floats to strings.
echo " "
echo "Checking for an efficient way to convert floats to strings."
?X: We want to be sure to drop trailing decimal points (perl5
?X: needs this).
$cat >try.c <<'EOP'
#ifdef TRY_gconvert
#define Gconvert(x,n,t,b) gconvert((x),(n),(t),(b))
char *myname = "gconvert";
#endif
#ifdef TRY_gcvt
#define Gconvert(x,n,t,b) gcvrt((x),(n),(b))
char *myname = "gcvrt";
#endif
#ifdef TRY_sprintf
#define Gconvert(x,n,t,b) sprintf((b),"%.*g",(n),(x))
char *myname = "sprintf";
#endif

#include <stdio.h>

int
checkit(expect, got)
char *expect;
char *got;
{
    if (strcmp(expect, got) {
        printf("%s oddity: Expected %s, got %s\n",
            myname, expect, got);
        exit(1);
    }
}

int
int main()
{
    char buf[64];
    buf[63] = '\0';

```

```

/* This must be 1st test on (which?) platform */
/* Alan Burlison <AlanBurlsin@unn.unisys.com> */
Gconvert(0.1, 8, 0, buf);
checkit("0.1",
buf);

Gconvert(1.0, 8, 0, buf);
checkit("1", buf);

Gconvert(0.0, 8, 0, buf);
checkit("0", buf);

Gconvert(-1.0, 8, 0, buf);
checkit("-1", buf);

/* Some Linux gcvt's give 1.e+5 here. */
Gconvert(100000.0, 8, 0, buf);
checkit("100000", buf);

/* Some Linux gcvt's give -1.e+5 here. */
Gconvert(-100000.0, 8, 0, buf);
checkit("-100000", buf);

exit(0);
}
EOP
?X: List of order in which to search for functions.
?X: Usual order of efficiency is gconvert gcvt sprintf
?X: Respect a previous or hinted value.
case "$d_Gconvert" in
gconvert*) xxx_list='gconvert gcvt sprintf' ;;
gcvt*) xxx_list='gcvt gconvert sprintf' ;;
sprintf*) xxx_list='sprintf gconvert gcvt' ;;
*) xxx_list='gconvert gcvt sprintf' ;;
esac

for xxx_convert in $xxx_list; do
echo "Trying $xxx_convert"
$rm_try
if $cc $ccflags -DTRY_$xxx_convert $ldflags -o try \
try.c $libs > /dev/null 2>&1 ; then
echo "$xxx_convert" found. >&4
if ./try; then
echo "I'll use $xxx_convert to convert floats
into a string." >&4
break;
else

```

```
    echo "...But $xxx_convert didn't work as I expected."
fi
else
    echo "$xxx_convert NOT found." >&4
fi
done
```

```
case "$xxx_convert" in
gconvert) d_Gconvert='gconvert((x),(n),(t),(b))' ;;
gcvt) d_Gconvert='gcvt((x),(n),(b))' ;;
*) d_Gconvert='sprintf((b),"%.*g",(n),(x))' ;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_gconvert.U
```

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```
/*
* $Id: dup2.C,v 3.0.1.1 1994/01/24 13:58:37 ram Exp ram $
*
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* of the source tree for dist 4.0.
*
* Original Author: Larry Wall <lwall@netlabs.com>
*
* $Log: dup2.C,v $
* Revision 3.0.1.1 1994/01/24 13:58:37 ram
* patch16: created
*
*/
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/lib/C/fake/dup2.C
```

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```
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?RCS:  
?RCS: \$Log: archname.U,v \$  
?RCS: Revision 3.0.1.3 1997/02/28 15:24:32 ram  
?RCS: patch61: changed the way the archname is mangled from uname  
?RCS:  
?RCS: Revision 3.0.1.2 1995/05/12 12:05:24 ram  
?RCS: patch54: protect against spaces in "uname -m" output (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1995/02/15 14:14:21 ram  
?RCS: patch51: created  
?RCS:  
?MAKE:archname myarchname: sed Loc Myread Oldconfig osname test rm  
?MAKE: -pick add \$@ %<  
?S:archname:  
?S: This variable is a short name to characterize the current  
?S: architecture.  
It is used mainly to construct the default archlib.  
?S:.  
?S:myarchname:  
?S: This variable holds the architecture name computed by Configure in  
?S: a previous run. It is not intended to be perused by any user and  
?S: should never be set in a hint file.  
?S:.  
?C:ARCHNAME:  
?C: This symbol holds a string representing the architecture name.  
?C: It may be used to construct an architecture-dependant pathname  
?C: where library files may be held under a private library, for  
?C: instance.  
?C:.  
?H:#define ARCHNAME "\$archname" /\*\*/  
?H:.  
?T:xxx tarch  
: determine the architecture name  
echo " "  
?X: We always recompute archname in case osname changes. However, we need  
?X: to be careful since, as ADO rightfully pointed out, some systems pick  
?X: silly architecture names (0001307135000-aix on AIX or 9000/715-ux under  
?X: HP-UX). Therefore, we allow hint files to supersede our guess and ask  
?X: the user for confirmation.  
if xxx=`./loc arch blurfl \$pth`; \$test -f "\$xxx"; then  
tarch=`arch`-"-\$osname"  
elif  
xxx=`./loc uname blurfl \$pth`; \$test -f "\$xxx" ; then  
if uname -m > tmparch 2>&1 ; then  
tarch=`\$sed -e 's/ \*\$//' -e 's/ /\_/' \

```

    -e 's/"/"-.$osname/" tmparch`
else
    tarch="$osname"
fi
$rm -f tmparch
else
    tarch="$osname"
fi
case "$myarchname" in
|"|$tarch") ;;
*)
    echo "(Your architecture name used to be $myarchname.)"
    archname="
;;
esac
case "$sarchname" in
") dflt="$tarch";;
*) dflt="$sarchname";;
esac
rp='What is your architecture name'
./myread
archname="$ans"
myarchname="$tarch"

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/archname.U
```

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?RCS: \$Id: d\_gethostent\_r.U,v 0RCS:

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?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_gethostent\_r gethostent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
 usethreads i\_netdb extern\_C

?MAKE: -pick add \$@ %<

?S:d\_gethostent\_r:

?S: This variable conditionally defines the HAS\_GETHOSTENT\_R symbol,

?S: which indicates to the C program that the gethostent\_r()

?S: routine is available.

?S:.

?S:gethostent\_r\_proto:

?S: This variable encodes the prototype of gethostent\_r.

?S: It is zero if d\_gethostent\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_gethostent\_r  
?S: is defined.  
?S:.  
?C:HAS\_GETHOSTENT\_R:  
?C: This symbol, if defined, indicates that the gethostent\_r routine  
?C: is  
available to gethostent re-entrantly.  
?C:.  
?C:GETHOSTENT\_R\_PROTO:  
?C: This symbol encodes the prototype of gethostent\_r.  
?C: It is zero if d\_gethostent\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_gethostent\_r  
?C: is defined.  
?C:.  
?H:#\$d\_gethostent\_r HAS\_GETHOSTENT\_R /\*\*/  
?H:#define GETHOSTENT\_R\_PROTO \$gethostent\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_gethostent\_r\_proto  
: see if gethostent\_r exists  
set gethostent\_r d\_gethostent\_r  
eval \$inlibc  
case "\$d\_gethostent\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"  
case "\$d\_gethostent\_r\_proto:\$usetreads" in  
":define") d\_gethostent\_r\_proto=define  
set d\_gethostent\_r\_proto gethostent\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_gethostent\_r\_proto" in  
define)  
case "\$gethostent\_r\_proto" in  
"|0) try='int gethostent\_r(struct hostent\*, char\*, size\_t, struct hostent\*\*, int\*);'  
./protochk "\$extern\_C \$try" \$hdrs && gethostent\_r\_proto=I\_SBWRE ;;  
esac  
case "\$gethostent\_r\_proto"  
in  
"|0) try='int gethostent\_r(struct hostent\*, char\*, int, int\*);'  
./protochk "\$extern\_C \$try" \$hdrs && gethostent\_r\_proto=I\_SBIE ;;  
esac  
case "\$gethostent\_r\_proto" in  
"|0) try='struct hostent\* gethostent\_r(struct hostent\*, char\*, int, int\*);'  
./protochk "\$extern\_C \$try" \$hdrs && gethostent\_r\_proto=S\_SBIE ;;  
esac  
case "\$gethostent\_r\_proto" in  
"|0) try='struct hostent\* gethostent\_r(struct hostent\*, char\*, int);'  
./protochk "\$extern\_C \$try" \$hdrs && gethostent\_r\_proto=S\_SBI ;;

```

esac
case "$gethostent_r_proto" in
"|0) try='int gethostent_r(struct hostent*, char*, int);'
./protochk "$extern_C $try" $hdrs && gethostent_r_proto=I_SBI ;;
esac
case "$gethostent_r_proto" in
"|0) try='int gethostent_r(struct hostent*, struct hostent_data*);'
./protochk "$extern_C $try" $hdrs && gethostent_r_proto=I_SD ;;
esac
case "$gethostent_r_proto" in
"|0) d_gethostent_r=undef
gethostent_r_proto=0
echo "Disabling gethostent_r, cannot determine prototype." >&4 ;;
*) case
"$gethostent_r_proto" in
REENTRANT_PROTO*) ;;
*) gethostent_r_proto="REENTRANT_PROTO_${gethostent_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susetthreads" in
define) echo "gethostent_r has no prototype, not using it." >&4 ;;
esac
d_gethostent_r=undef
gethostent_r_proto=0
;;
esac
;;
*) gethostent_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_gethostent\_r.U

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\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/files/fixcpp

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/bindex

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/lib/errnolist.mk

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-

5.38.0/dist/makegloss

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?RCS:

?RCS: \$Log: d\_shmat.U,v \$

?RCS: Revision 3.0.1.3 1995/07/25 14:04:23 ram

?RCS: patch56: use findhdr to find <sys/shm.h>, to get the right one (ADO)

?RCS:

?RCS: Revision 3.0.1.2 1994/05/13 15:18:56 ram

?RCS: patch27: added new symbol HAS\_SHMAT\_PROTOTYPE (ADO)

?RCS:

?RCS: Revision 3.0.1.1 1994/05/06 14:54:18 ram

?RCS: patch23: new Shmat\_t symbol to declare return type of shmat()

?RCS:

?RCS: Revision 3.0 1993/08/18 12:07:18 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_shmat shmattype

d\_shmatprototype: Inlibc cat +cc +ccflags \

rm cppstdin cppflags cppminus Findhdr Setvar contains

?MAKE: -pick add \$@ %<

?S:d\_shmat:

?S: This variable conditionally defines the HAS\_SHMAT symbol, which

?S: indicates to the C program that the shmat() routine is available.

?S:.

?S:shmattype:

?S: This symbol contains the type of pointer returned by shmat().

?S: It can be 'void \*' or 'char \*'.

?S:.

?S:d\_shmatprototype:

?S: This variable conditionally defines the HAS\_SHMAT\_PROTOTYPE

?S: symbol, which indicates that sys/shm.h has a prototype for

?S: shmat.

?S:.

?C:HAS\_SHMAT:

?C: This symbol, if defined, indicates that the shmat() routine is

?C: available to attach a shared memory segment to the process space.

?C:.

?C:Shmat\_t:



?C: This symbol holds the return type of the shmat() system call.

?C: Usually set to 'void \*' or 'char \*'.

?C:.

?C:HAS\_SHMAT\_PROTOTYPE:

?C: This symbol, if defined, indicates that the sys/shm.h includes

?C: a prototype for shmat(). Otherwise, it is up to the program

to

?C: guess one. Shmat\_t shmat\_((int, Shmat\_t, int)) is a good guess,

?C: but not always right so it should be emitted by the program only

?C: when HAS\_SHMAT\_PROTOTYPE is not defined to avoid conflicting defs.

?C:.

?H:#\$d\_shmat HAS\_SHMAT /\*\*/

?H:#define Shmat\_t \$shmattype /\*\*/

?H:#\$d\_shmatprototype HAS\_SHMAT\_PROTOTYPE /\*\*/

?H:.

?LINT:set d\_shmat d\_shmatprototype

?T:xxx

: see if shmat exists

set shmat d\_shmat

eval \$inlibc

: see what shmat returns

case "\$d\_shmat" in

"\$define")

\$cat >shmat.c <<'END'

#include <sys/shm.h>

void \*shmat();

END

if \$cc \$ccflags -c shmat.c >/dev/null 2>&1; then

shmattype='void \*'

else

shmattype='char \*'

fi

echo "and it returns (\$shmattype)." >&4

: see if a prototype for shmat is available

xxx=`./findhdr sys/shm.h`

\$cppstdin \$cppflags \$cppminus < \$xxx > shmat.c 2>/dev/null

if \$contains 'shmat.\*(' shmat.c >/dev/null 2>&1; then

val="\$define"

else

val="\$undef"

fi

\$rm -f shmat.[co]

::

\*)

val="\$undef"

::

esac

set d\_shmatprototype

eval \$setvar

Found

in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_shmat.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: dlsrc.U,v\$

?RCS:

?RCS: Copyright (c) 1996-1998, Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: \$Log: dlex.t.U,v \$

?RCS:

?X: hpux support thanks to Jeff Okamoto <okamoto@hpcc101.corp.hp.com>

?X:

?X: To create a shared library, you must compile ALL source files in the

?X: library with +z (or possibly +Z if the library is whopping huge),

?X: then link the library with -b. Example:

?X: cc -c +z module\_a.c

?X: cc -c +z module\_b.c

?X: ld -b module\_a.o module\_b.o -o module.sl

?X:

?MAKE:dlex.t: \

Getfile Myread cat usedl so

?MAKE: -pick add \$@ %<

?Y:BOTTOM

?S:dlex.t:

?S: This variable contains the extension that is to be used for the

?S: dynamically loaded modules that perl generates.

?S:.

: Check what extension to use for shared libs

case "\$usedl" in

\$define|y|true)

\$cat <<

EOM

On a few systems, the dynamically loaded modules that perl generates and uses will need a different extension than shared libs. The default will probably be appropriate.

EOM

case "\$dlex.t" in

") dflt="\$so" ;;

\*) dflt="\$dlex.t" ;;

```
esac
rp='What is the extension of dynamically loaded modules'
./myread
dlext="$ans"
;;
*)
dlext="none"
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/dlext.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fchdir: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fchdir:

?S: This variable conditionally defines the HAS\_FCHDIR symbol, which

?S: indicates to the C program that the fchdir() routine is available.

?S:.

?C:HAS\_FCHDIR:

?C: This symbol, if defined, indicates that the fchdir routine is

?C: available to change directory using a file descriptor.

?C:.

?H:#\$d\_fchdir HAS\_FCHDIR /\*\*/

?H:.

?LINT:set d\_fchdir

: see if fchdir exists

set fchdir d\_fchdir

eval \$inlibc

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_fchdir.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_setpgrp.U,v \$  
?RCS: Revision 3.0.1.3 1997/02/28 15:44:16 ram  
?RCS: patch61: obsoleted USE\_BSDGRP in favor of USE\_BSD\_SETPGRP  
?RCS: patch61: another unit now also defines a USE\_BSD\_GETPGRP  
?RCS: patch61: fallback for test program failure improved  
?RCS:  
?RCS: Revision 3.0.1.2 1995/07/25 13:59:30 ram  
?RCS: patch56: re-arranged compile line to include ldflags before objects  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 16:15:37 ram  
?RCS: patch36: added 'ldflags' to the test compile line (ADO)  
?RCS:  
patch36: call ./usg explicitly instead of relying on PATH  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:07:09 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_setpgrp d\_bsdsetpgrp: cat rm +cc +libs +ccflags \  
+ldflags Inlibc Guess Setvar i\_unistd  
?MAKE: -pick add \$@ %<  
?S:d\_setpgrp:  
?S: This variable conditionally defines HAS\_SETPGRP if setpgrp() is  
?S: available to set the current process group.  
?S:.  
?S:d\_bsdsetpgrp (d\_bsdpggrp):  
?S: This variable conditionally defines USE\_BSD\_SETPGRP if  
?S: setpgrp needs two arguments whereas USG one needs none.  
?S: See also d\_setpgid for a POSIX interface.  
?S:.  
?C:HAS\_SETPGRP (SETPGRP):  
?C: This symbol, if defined, indicates that the setpgrp routine is  
?C: available to set the current process group.  
?C:.  
?C:USE\_BSD\_SETPGRP (USE\_BSDPGRP BSDPGRP):  
?C: This symbol, if defined, indicates that setpgrp needs two  
?C: arguments whereas USG one needs none. See also HAS\_SETPGID  
?C: for a POSIX interface.  
?C:.  
?H:#\$d\_setpgrp HAS\_SETPGRP /\*\*/  
?H:#\$d\_bsdsetpgrp  
USE\_BSD\_SETPGRP /\*\*/  
?H:.

```

?F:!set.c !set
?T:xxx
?LINT:set d_setpgrp d_bsdsetpgrp
: see if setpgrp exists
set setpgrp d_setpgrp
eval $inlibc

@if USE_BSD_SETPGRP || d_bsdsetpgrp
case "$d_setpgrp" in
"$define")
echo " "
echo "Checking to see which flavor of setpgrp is in use..."
$cat >set.c <<EOP
#i_unistd I_UNISTD
#include <sys/types.h>
#ifdef I_UNISTD
# include <unistd.h>
#endif
int main()
{
if (getuid() == 0) {
printf("(I see you are running Configure as super-user...)\n");
setuid(1);
}
#ifdef TRY_BSD_PGRP
if (-1 == setpgrp(1, 1))
exit(0);
#else
if (setpgrp() != -1)
exit(0);
#endif
exit(1);
}
EOP
if $cc -DTRY_BSD_PGRP $ccflags $ldflags -o set set.c $libs >/dev/null 2>&1 && ./set; then
echo 'You have to use setpgrp(pid,pgrp) instead of setpgrp().' >&4
val="$define"
elif $cc $ccflags $ldflags -o set set.c $libs >/dev/null 2>&1 && ./set; then
echo 'You have to use setpgrp() instead of setpgrp(pid,pgrp).' >&4
val="$undef"
else
echo "(I can't
seem to compile and run the test program.)"
if ./usg; then
xxx="a USG one, i.e. you use setpgrp()."
else
# SVR4 systems can appear rather BSD-ish.
case "$i_unistd" in

```

```

$undef)
xxx="a BSD one, i.e. you use setpgrp(pid,pgrp)."
val="$define"
;;
$define)
xxx="probably a USG one, i.e. you use setpgrp()."
val="$undef"
;;
esac
fi
echo "Assuming your setpgrp is $xxx" >&4
fi
;;
*) val="$undef";;
esac
set d_bsdsetpgrp
eval $setvar
$rm -f set set.c
@end

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_setpgrp.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_poll.U 15 2006-08-30 18:21:51Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_poll.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 15:38:17 ram
?RCS: patch61: mention that <poll.h> can be included if HAS_POLL defined
?RCS:
?RCS: Revision 3.0.1.1 1995/01/11 15:26:31 ram
?RCS: patch45: created
?RCS:
?MAKE:d_poll: Inlibc
?MAKE: -pick add $@ %<
?S:d_poll:
?S: This variable conditionally defines the HAS_POLL symbol, which
?S: indicates to the C program that the poll() routine is available
?S: to poll active file descriptors.

```

```
?S:.
?C:HAS_POLL
:
?C: This symbol, if defined, indicates that the poll routine is
?C: available to poll active file descriptors. Please check I_POLL and
?C: I_SYS_POLL to know which header should be included as well.
?C:.
?H:#$d_poll HAS_POLL /**/
?H:.
?LINT:set d_poll
: see if poll exists
set poll d_poll
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_poll.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: rcs_branch.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: rcs_branch.U,v $
?RCS: Revision 3.0 1993/08/18 12:09:40 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:rcs_branch: Myread contains Loc
?MAKE: -pick add $@ %<
?S:rcs_branch:
?S: This variable will hold "true" if rcs can take the -b<revision>
?S: option, which can make Life Easier on those folks who like to run
?S: rcsdiff manually.
?S:.
?T:xxx
: Tra la la la la
echo " "
echo "Checking to see if RCS understands the -b switch..." >&4
xxx=`./loc
rcs " $pth`
case "$xxx" in
")
```

```

rcs_branch=false
echo "Oh. You don't seem to have RCS here."
;;
*)
rcs > rcsbranch.out 2>&1
if $contains 'b\[rev\]' rcsbranch.out >/dev/null 2>&1 ; then
    rcs_branch=true
    echo "Nice! Your RCS is spiffy!"
else
    rcs_branch=false
    echo "Well, at least you have RCS. You know, a newer version is available."
fi
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/rcs_branch.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_setpgrp.U,v 3.0.1.3 1997/02/28 15:44:16 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: $Log: d_setpgrp.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 15:44:16 ram
?RCS: patch61: obsoleted USE_BSDGRP in favor of USE_BSD_SETPGRP
?RCS: patch61: another unit now also defines a USE_BSD_GETPGRP
?RCS: patch61: fallback for test program failure improved
?RCS:
?RCS: Revision 3.0.1.2 1995/07/25 13:59:30 ram
?RCS: patch56: re-arranged compile line to include ldflags before objects
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 16:15:37 ram
?RCS: patch36: added
?RCS: 'ldflags' to the test compile line (ADO)
?RCS: patch36: call ./usg explicitly instead of relying on PATH
?RCS:
?RCS: Revision 3.0 1993/08/18 12:07:09 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_setpgrp d_bsdsetpgrp: cat rm_try +cc +libs +ccflags \

```



```

+ldflags Inlibc Guess Setvar i_unistd i_stdlib run
?MAKE: -pick add $@ %<
?S:d_setpgrp:
?S: This variable conditionally defines HAS_SETPGRP if setpgrp() is
?S: available to set the current process group.
?S:.
?S:d_bsdsetpgrp (d_bsdpggrp):
?S: This variable conditionally defines USE_BSD_SETPGRP if
?S: setpgrp needs two arguments whereas USG one needs none.
?S: See also d_setpgid for a POSIX interface.
?S:.
?C:HAS_SETPGRP (SETPGRP):
?C: This symbol, if defined, indicates that the setpgrp routine is
?C: available to set the current process group.
?C:.
?C:USE_BSD_SETPGRP (USE_BSDPGRP BSDPGRP):
?C: This symbol, if defined, indicates that setpgrp needs two
?C: arguments whereas USG one needs none. See also HAS_SETPGID
?C: for
a POSIX interface.
?C:.
?H:#$d_setpgrp HAS_SETPGRP /**/
?H:#$d_bsdsetpgrp USE_BSD_SETPGRP /**/
?H:.
?T:xxx
?F:!try
?LINT:set d_setpgrp d_bsdsetpgrp
: see if setpgrp exists
set setpgrp d_setpgrp
eval $inlibc

@if USE_BSD_SETPGRP || d_bsdsetpgrp
case "$d_setpgrp" in
"$define")
echo " "
echo "Checking to see which flavor of setpgrp is in use..."
$cat >try.c <<EOP
#include <stdio.h>
#$i_unistd I_UNISTD
#include <sys/types.h>
#ifdef I_UNISTD
# include <unistd.h>
#endif
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
int main()

```

```

{
if (getuid() == 0) {
printf("(I see you are running Configure as super-user...)\n");
setuid(1);
}
#ifdef TRY_BSD_PGRP
if (-1 == setpgrp(1, 1))
exit(0);
#else
if (setpgrp() != -1)
exit(0);
#endif
exit(1);
}
EOP
if $cc -o try -DTRY_BSD_PGRP $ccflags $ldflags try.c $libs >/dev/null 2>&1 && $run ./try; then
echo 'You have to use setpgrp(pid,pgrp) instead of setpgrp().' >&4
val="$define"
elif $cc -o try $ccflags $ldflags try.c $libs
>/dev/null 2>&1 && $run ./try; then
echo 'You have to use setpgrp() instead of setpgrp(pid,pgrp).' >&4
val="$undef"
else
echo "(I can't seem to compile and run the test program.)"
if ./usg; then
xxx="a USG one, i.e. you use setpgrp()."
else
# SVR4 systems can appear rather BSD-ish.
case "$i_unistd" in
$undef)
xxx="a BSD one, i.e. you use setpgrp(pid,pgrp)."
val="$define"
;;
$define)
xxx="probably a USG one, i.e. you use setpgrp()."
val="$undef"
;;
esac
fi
echo "Assuming your setpgrp is $xxx" >&4
fi
;;
*) val="$undef";;
esac
set d_bsdsetpgrp
eval $setvar
$rm_try
@end

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/modified/d\_setpgrp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_systypes.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: i\_systypes.U,v \$

?RCS: Revision 3.0 1993/08/18 12:08:41 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: Look wether <sys/types.h> needs to be included.

?X:

?MAKE:i\_systypes: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_systypes:

?S: This variable conditionally defines the I\_SYS\_TYPES symbol,

?S: and indicates whether a C program should include <sys/types.h>.

?S:.

?C:I\_SYS\_TYPES (I\_SYSTYPES):

?C: This symbol, if defined, indicates to the C program  
that it should

?C: include <sys/types.h>.

?C:.

?H:#\$i\_systypes I\_SYS\_TYPES /\*\*/

?H:.

?LINT:set i\_systypes

: see if sys/types.h has to be included

set sys/types.h i\_systypes

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_systypes.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_setnetent\_r.U,v ORCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
?RCS:  
?MAKE:d\_setnetent\_r setnetent\_r\_proto: Inlibc Protochk Hasproto i\_systypes \  
usethreads i\_netdb extern\_C  
?MAKE: -pick add \$@ %<  
?S:d\_setnetent\_r:  
?S: This variable conditionally defines the HAS\_SETNETENT\_R symbol,  
?S: which indicates to the C program that the setnetent\_r()  
?S: routine is available.  
?S:.  
?S:setnetent\_r\_proto:  
?S: This variable encodes the prototype of setnetent\_r.  
?S: It is zero if d\_setnetent\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setnetent\_r  
?S: is defined.  
?S:.  
?C:HAS\_SETNETENT\_R:  
?C: This symbol, if defined, indicates that the setnetent\_r routine  
?C: is  
available to setnetent re-entrantly.  
?C:.  
?C:SETNETENT\_R\_PROTO:  
?C: This symbol encodes the prototype of setnetent\_r.  
?C: It is zero if d\_setnetent\_r is undef, and one of the  
?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_setnetent\_r  
?C: is defined.  
?C:.  
?H:#\$d\_setnetent\_r HAS\_SETNETENT\_R /\*\*/  
?H:#define SETNETENT\_R\_PROTO \$setnetent\_r\_proto /\*\*/  
?H:.  
?T:try hdrs d\_setnetent\_r\_proto  
: see if setnetent\_r exists  
set setnetent\_r d\_setnetent\_r  
eval \$inlibc  
case "\$d\_setnetent\_r" in  
"\$define")  
hdrs="\$i\_systypes sys/types.h define stdio.h \$i\_netdb netdb.h"  
case "\$d\_setnetent\_r\_proto:\$usethreads" in  
":define") d\_setnetent\_r\_proto=define  
set d\_setnetent\_r\_proto setnetent\_r \$hdrs  
eval \$hasproto ;;  
\*) ;;  
esac  
case "\$d\_setnetent\_r\_proto" in

```

define)
case "$setnetent_r_proto" in
"|0) try='int setnetent_r(int, struct netent_data*);'
./protochk "$extern_C $try" $hdrs && setnetent_r_proto=I_ID ;;
esac
case "$setnetent_r_proto" in
"|0) try='void setnetent_r(int, struct netent_data*);'
./protochk
"$extern_C $try" $hdrs && setnetent_r_proto=V_ID ;;
esac
case "$setnetent_r_proto" in
"|0) d_setnetent_r=undef
setnetent_r_proto=0
echo "Disabling setnetent_r, cannot determine prototype." >&4 ;;
*) case "$setnetent_r_proto" in
REENTRANT_PROTO*) ;;
*) setnetent_r_proto="REENTRANT_PROTO_${setnetent_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$susetthreads" in
define) echo "setnetent_r has no prototype, not using it." >&4 ;;
esac
d_setnetent_r=undef
setnetent_r_proto=0
;;
esac
;;
*) setnetent_r_proto=0
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_setnetent\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_shmdt.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic Licence,

?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic Licence; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_shmdt.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:07:19 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_shmdt: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_shmdt:  
?S: This variable conditionally defines the HAS\_SHMDT symbol, which  
?S: indicates to the C program that the shmdt() routine is available.  
?S:.  
?C:HAS\_SHMDT:  
?C: This symbol, if defined, indicates that the shmdt() routine is  
?C: available to detach a shared memory segment from the process  
space.  
?C:.  
?H:#\$d\_shmdt HAS\_SHMDT /\*\*/  
?H:.  
?LINT:set d\_shmdt  
: see if shmdt exists  
set shmdt d\_shmdt  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_shmdt.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic License,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: Tr.U,v \$  
?RCS: Revision 3.0.1.2 1994/10/29 18:00:54 ram  
?RCS: patch43: forgot to quote \$@ to protect against "evil" characters  
?RCS:  
?RCS: Revision 3.0.1.1 1994/10/29 15:58:35 ram  
?RCS: patch36: created  
?RCS:  
?X:  
?X: This unit produces a bit of shell code that must be dotted in in order  
?X: to do a character translation. It catches translations to uppercase or  
?X: to lowercase, and then invokes the real tr to perform the job.

```

?X:
?X: This unit is necessary on HP machines (HP strikes again!)
with non-ascii
?X: ROMAN8-charset, where normal letters are not arranged in a row, so a-z
?X: covers not the whole alphabet but lots of special chars. This was reported
?X: by Andreas Sahlbach <a.sahlbach@tu-bs.de>.
?X:
?X: Units performing a tr '[A-Z]' '[a-z]' or the other way round should include
?X: us in their dependency and use ./tr instead.
?X:
?MAKE:Tr: startsh tr eunicefix
?MAKE: -pick add $@ %<
?F:./tr
?T:up low LC_ALL
: see whether [:lower:] and [:upper:] are supported character classes
echo " "
case "`echo AbyZ | LC_ALL=C $tr '[:lower:]' '[:upper:]' 2>/dev/null`" in
ABYZ)
echo "Good, your tr supports [:lower:] and [:upper:] to convert case." >&4
up='[:upper:]'
low='[:lower:]'
;;
*) # There is a discontinuity in EBCDIC between 'I' and 'J'
# (0xc9 and 0xd1), therefore that is a nice testing point.
if test "X$up" = X -o "X$low" = X; then
case "`echo IJ | LC_ALL=C $tr '[I-J]' '[i-j]' 2>/dev/null`" in
ij) up='A-Z'
low='a-z'
;;
esac
fi
if test "X$up" = X -o "X$low" = X; then
case "`echo IJ | LC_ALL=C $tr I-J i-j 2>/dev/null`" in
ij) up='A-Z'
low='a-z'
;;
esac
fi
if test "X$up" = X -o "X$low" = X; then
case "`echo IJ | od -x 2>/dev/null`" in
*C9D1*|*c9d1*)
echo "Hey, this might be EBCDIC." >&4
if test "X$up" = X -o "X$low" = X; then
case "`echo IJ | \
LC_ALL=C $tr '[A-IJ-RS-Z]' '[a-ij-rs-z]' 2>/dev/null`" in
ij) up='[A-IJ-RS-Z]'
low='[a-ij-rs-z]'

```

```

;;
esac
fi
if test "X$up" = X -o "X$low" = X; then
  case "`echo IJ | LC_ALL=C $tr A-IJ-RS-Z a-ij-rs-z 2>/dev/null`" in
    ij) up='A-IJ-RS-Z'
        low='a-ij-rs-z'
        ;;
    esac
  fi
  ;;
  esac
fi
esac
case "`echo IJ | LC_ALL=C $tr \"$up\" \"$low\" 2>/dev/null`" in
ij)
  echo "Using $up and $low to convert case." >&4
  ;;
*)
  echo "I don't know how to translate letters from upper to lower case." >&4
  echo "Your tr is not acting any way I know of." >&4
  exit 1
  ;;
esac
: set up the translation script tr, must be called with ./tr of course
cat >tr <<EOSC
$startsh
case "$1$2" in
[A-Z][a-z]) LC_ALL=C exec $tr '$up' '$low';;
[a-z][A-Z]) LC_ALL=C exec $tr '$low' '$up';;
esac
LC_ALL=C exec $tr "$@"
EOSC
chmod +x tr
$unicefix tr

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Tr.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getenv\_thread.U,v 0RCS:

?RCS: Copyright (c) 2021 H.Merijn Brand, Karl Williamson

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_getenv\_preserves\_other\_thread: echo cat i\_stdlib i\_pthread run rm\_try \



Compile Setvar

?MAKE: -pick add \$@ %<

?S:d\_getenv\_preserves\_other\_thread:

?S: This variable conditionally defines the GETENV\_PRESERVES\_OTHER\_THREAD

?S: symbol, which indicates to the C program that the getenv() system call

?S: does not zap the static buffer in a different thread.

?S:.

?C:GETENV\_PRESERVES\_OTHER\_THREAD:

?C: This symbol, if defined, indicates that the getenv system call doesn't

?C: zap the static buffer of getenv() in a different thread.

?C:

?C: The typical getenv() implementation will return a pointer to the proper

?C: position in \*\*environ. But some may instead copy them to  
a static

?C: buffer in getenv(). If there is a per-thread instance of that buffer,

?C: or the return points to \*\*environ, then a many-reader/1-writer mutex

?C: will work; otherwise an exclusive locking mutex is required to prevent

?C: races.

?C:.

?H:#\$d\_getenv\_preserves\_other\_thread GETENV\_PRESERVES\_OTHER\_THREAD /\*\*/

?H:.

?T:rc

?F:!try

?LINT:set d\_getenv\_preserves\_other\_thread

: check for getenv behavior

case "\$d\_getenv\_preserves\_other\_thread" in

")

\$echo "Checking to see if getenv() preserves a different thread's results" >&4

\$cat >try.c <<EOCP

#\$i\_stdlib I\_STDLIB

#ifdef I\_STDLIB

# include <stdlib.h>

#endif

#include <stdio.h>

#include <string.h>

#\$i\_pthread I\_PTHREAD

#ifdef I\_PTHREAD

# include <pthread.h>

#endif

void \*

thread\_start(void \* arg)

{

return (void \*) getenv("HOME");

}

int main() {

char \* main\_buffer;

```

char save_main_buffer[1000];
pthread_t subthread;
pthread_attr_t attr;

main_buffer = getenv("PATH");

/* If too large for our generous allowance,
return we couldn't figure it
* out. */
if (strlen(main_buffer) >= sizeof(save_main_buffer)) {
    exit(2);
}

strcpy(save_main_buffer, main_buffer);

if (pthread_attr_init(&attr) != 0) {
    exit(2);
}

if (pthread_create(&subthread, &attr, thread_start, NULL) != 0) {
    exit(2);
}

if (pthread_join(subthread, NULL) != 0) {
    exit(2);
}

exit(! (strcmp(main_buffer, save_main_buffer) == 0));
}
EOCP
val=
set try
if eval $compile_ok; then
    $run ./try
    rc=$?
    case "$rc" in
0) echo "getenv() didn't destroy another thread's buffer" >&4
    val=$define
    ;;
1) echo "getenv() does destroy another thread's buffer" >&4
    val=$undef
    ;;
*) echo "Couldn't determine if getenv() destroys another thread's return value (code=$rc); assuming it does" >&4
    val=$undef
    ;;
esac
else
    echo "(I can't seem to compile the test program.)" >&4

```

```

    echo "Assuming that your C library's getenv destroys another thread's
return value." >&4
    val=$undef
fi
set d_getenv_preserves_other_thread
eval $setvar
$rm_try
;;
esac

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/threads/d_getenv_thread.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_readdir\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.

?RCS:

?MAKE:d\_readdir\_r readdir\_r\_proto: Inlibc Protochk Hasproto i\_systypes \
 usethreads i\_dirent extern\_C

?MAKE: -pick add \$@ %<

?S:d\_readdir\_r:

?S: This variable conditionally defines the HAS\_READDIR\_R symbol,

?S: which indicates to the C program that the readdir\_r()

?S: routine is available.

?S:.

?S:readdir\_r\_proto:

?S: This variable encodes the prototype of readdir\_r.

?S: It is zero if d\_readdir\_r is undef, and one of the

?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_readdir\_r

?S: is defined.

?S:.

?C:HAS\_READDIR\_R:

?C: This symbol, if defined, indicates that the readdir\_r routine

?C: is available to readdir re-entrantly.

?C:.

?C:READDIR\_R\_PROTO:

?C: This

symbol encodes the prototype of readdir\_r.

?C: It is zero if d\_readdir\_r is undef, and one of the

?C: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_readdir\_r

?C: is defined.

?C:.

```

?H:#$d_readdir_r HAS_READDIR_R /**/
?H:#define READDIR_R_PROTO $readdir_r_proto /**/
?H:
?T:try hdrs d_readdir_r_proto
: see if readdir_r exists
set readdir_r d_readdir_r
eval $inlibc
case "$d_readdir_r" in
"$define")
hdrs="$i_systypes sys/types.h define stdio.h $i_dirent dirent.h"
case "$d_readdir_r_proto:$usethreads" in
":define") d_readdir_r_proto=define
set d_readdir_r_proto readdir_r $hdrs
eval $hasproto ;;
*) ;;
esac
case "$d_readdir_r_proto" in
define)
case "$readdir_r_proto" in
"|0) try='int readdir_r(DIR*, struct dirent*, struct dirent**);'
./prochck "$extern_C $try" $hdrs && readdir_r_proto=I_TSR ;;
esac
case "$readdir_r_proto" in
"|0) try='int readdir_r(DIR*, struct dirent*);'
./prochck "$extern_C $try" $hdrs && readdir_r_proto=I_TS
;;
esac
case "$readdir_r_proto" in
"|0) d_readdir_r=undef
readdir_r_proto=0
echo "Disabling readdir_r, cannot determine prototype." >&4 ;;
* ) case "$readdir_r_proto" in
REENTRANT_PROTO*) ;;
*) readdir_r_proto="REENTRANT_PROTO_${readdir_r_proto}" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in
define) echo "readdir_r has no prototype, not using it." >&4 ;;
esac
d_readdir_r=undef
readdir_r_proto=0
;;
esac
;;
*) readdir_r_proto=0
;;

```

esac

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d\_readdir\_r.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1999 Jarkko Hietaniemi

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_PRIId64 d\_PRIi64 d\_PRIu64 d\_PRIo64 d\_PRIx64 d\_PRIXU64 \

sPRIId64 sPRIi64 sPRIu64 sPRIo64 sPRIx64 sPRIXU64: \

quadtype i\_inttypes test cat rm\_try Setvar Compile run

?MAKE: -pick add \$@ %<

?S:d\_PRIId64:

?S: This variable conditionally defines the PERL\_PRIId64 symbol, which

?S: indicates that stdio has a symbol to print 64-bit decimal numbers.

?S:.

?S:d\_PRIi64:

?S: This variable conditionally defines the PERL\_PRIi64 symbol, which

?S: indicates that stdio has a symbol to print 64-bit decimal numbers.

?S:.

?S:d\_PRIu64:

?S: This variable conditionally defines the PERL\_PRIu64 symbol, which

?S: indicates that stdio has a symbol to print 64-bit unsigned decimal

?S: numbers.

?S:.

?S:d\_PRIo64:

?S: This variable

conditionally defines the PERL\_PRIo64 symbol, which

?S: indicates that stdio has a symbol to print 64-bit octal numbers.

?S:.

?S:d\_PRIx64:

?S: This variable conditionally defines the PERL\_PRIx64 symbol, which

?S: indicates that stdio has a symbol to print 64-bit hexadecimal numbers.

?S:.

?S:d\_PRIXU64:

?S: This variable conditionally defines the PERL\_PRIXU64 symbol, which

?S: indicates that stdio has a symbol to print 64-bit hExADECimAl numbers.

?S: The 'U' in the name is to separate this from d\_PRIx64 so that even

?S: case-blind systems can see the difference.

?S:.

?S:sPRIId64:

?S: This variable, if defined, contains the string used by stdio to

?S: format 64-bit decimal numbers (format 'd') for output.  
?S:.  
?S:sPRIi64:  
?S: This variable, if defined, contains the string used by stdio to  
?S: format 64-bit decimal numbers (format 'i') for output.  
?S:.  
?S:sPRIu64:  
?S: This variable, if defined, contains the string used by stdio to  
?S: format 64-bit unsigned decimal numbers (format 'u')  
for output.  
?S:.  
?S:sPRIo64:  
?S: This variable, if defined, contains the string used by stdio to  
?S: format 64-bit octal numbers (format 'o') for output.  
?S:.  
?S:sPRIx64:  
?S: This variable, if defined, contains the string used by stdio to  
?S: format 64-bit hexadecimal numbers (format 'x') for output.  
?S:.  
?S:sPRIXU64:  
?S: This variable, if defined, contains the string used by stdio to  
?S: format 64-bit hExADECimAl numbers (format 'X') for output.  
?S: The 'U' in the name is to separate this from sPRIx64 so that even  
?S: case-blind systems can see the difference.  
?S:.  
?C:PERL\_PRIi64:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format 64-bit decimal numbers (format 'd') for output.  
?C:.  
?C:PERL\_PRIi64:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format 64-bit decimal numbers (format 'i') for output.  
?C:.  
?C:PERL\_PRIu64:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format 64-bit unsigned decimal numbers (format 'u')  
for output.  
?C:.  
?C:PERL\_PRIo64:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format 64-bit octal numbers (format 'o') for output.  
?C:.  
?C:PERL\_PRIx64:  
?C: This symbol, if defined, contains the string used by stdio to  
?C: format 64-bit hexadecimal numbers (format 'x') for output.  
?C:.  
?C:PERL\_PRIXU64:  
?C: This symbol, if defined, contains the string used by stdio to

?C: format 64-bit hexadecimal numbers (format 'X') for output.

?C:.

?H:#\$d\_PRIId64 PERL\_PRIId64 \$sPRIId64 /\*\*/

?H:#\$d\_PRIi64 PERL\_PRIi64 \$sPRIi64 /\*\*/

?H:#\$d\_PRIu64 PERL\_PRIu64 \$sPRIu64 /\*\*/

?H:#\$d\_PRIo64 PERL\_PRIo64 \$sPRIo64 /\*\*/

?H:#\$d\_PRIx64 PERL\_PRIx64 \$sPRIx64 /\*\*/

?H:#\$d\_PRIx64 PERL\_PRIx64 \$sPRIx64 /\*\*/

?H:.

?T:yyy

?F:!try

: Check 64bit sizes

echo " "

if \$test X"\$quadtype" != X; then

echo "Checking how to print 64-bit integers..." >&4

if \$test X"\$sPRIId64" = X -a X"\$quadtype" = Xint; then

\$cat >try.c <<'EOCP'

#include <sys/types.h>

#include <stdio.h>

int main() {

int q = 12345678901;

printf("%ld\n", q);

}

EOCP

set try

if eval \$compile; then

yyy=`\$run ./try`

case "\$yyy" in

12345678901)

sPRIId64="d"; sPRIi64="i"; sPRIu64="u";

sPRIo64="o"; sPRIx64="x"; sPRIx64="X";

echo "We will use %d."

;;

esac

fi

fi

if \$test X"\$sPRIId64" = X -a X"\$quadtype" = Xlong; then

\$cat >try.c <<'EOCP'

#include <sys/types.h>

#include <stdio.h>

int main() {

long q = 12345678901;

printf("%ld\n", q);

```

}
EOCP
set try
if eval $compile; then
yyy=`$run ./try`
case "$yyy" in
12345678901)
sPRId64="ld"; sPRIi64="li"; sPRIu64="lu";
sPRIo64="lo"; sPRIx64="lx"; sPRIXU64="IX";
echo "We will use %ld."
;;
esac
fi
fi

if $test X"$sPRId64" = X -a X"$i_inttypes" = X"$define" -a X"$quadtype" = Xint64_t; then
$cat >try.c <<'EOCP'
#include <sys/types.h>
#include <inttypes.h>
#include <stdio.h>
int main() {
int64_t q = 12345678901;
printf("%" PRId64 "\n", q);
}
EOCP
set try
if eval $compile; then
yyy=`$run ./try`
case "$yyy" in
12345678901)
sPRId64=PRId64;
sPRIi64=PRIi64; sPRIu64=PRIu64;
sPRIo64=PRIo64; sPRIx64=PRIx64; sPRIXU64=PRIX64;
echo "We will use the C9X style."
;;
esac
fi
fi

if $test X"$sPRId64" = X -a X"$quadtype" != X; then
$cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
$quadtype q = 12345678901;
printf("%Ld\n", q);
}
EOCP

```



```

set try
if eval $compile; then
yyy=`$run ./try`
case "$yyy" in
12345678901)
sPRId64="Ld"; sPRi64="Li"; sPRi64="Lu";
sPRIo64="Lo"; sPRIx64="Lx"; sPRIXU64="LX";
echo "We will use %Ld."
;;
esac
fi
fi

if $test X"$sPRId64" = X -a X"$quadtype" = X"long long"; then
$cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
long long q = 12345678901LL; /* AIX cc requires the LL suffix. */
printf("%lld\n", q);
}
EOCP
set try
if eval $compile; then
yyy=`$run ./try`
case "$yyy" in
12345678901)
sPRId64="lld"; sPRi64="lli"; sPRi64="llu";
sPRIo64="llo"; sPRIx64="llx";
sPRIXU64="llX";
echo "We will use the %lld style."
;;
esac
fi
fi

if $test X"$sPRId64" = X -a X"$quadtype" != X; then
$cat >try.c <<'EOCP'
#include <sys/types.h>
#include <stdio.h>
int main() {
$quadtype q = 12345678901;
printf("%qd\n", q);
}
EOCP
set try
if eval $compile; then
yyy=`$run ./try`

```

```

case "$yyy" in
12345678901)
sPRId64="qd"; sPRIi64="qi"; sPRIu64="qu";
sPRIo64="qo"; sPRIx64="qx"; sPRIXU64="qX";
echo "We will use %qd."
;;
esac
fi
fi

if $test X"$sPRId64" = X; then
echo "Cannot figure out how to print 64-bit integers." >&4
fi
$rm_try

fi

case "$sPRId64" in
*) d_PRId64="$undef"; d_PRIi64="$undef"; d_PRIu64="$undef";
d_PRIo64="$undef"; d_PRIx64="$undef"; d_PRIXU64="$undef";
;;
*) d_PRId64="$define"; d_PRIi64="$define"; d_PRIu64="$define";
d_PRIo64="$define"; d_PRIx64="$define"; d_PRIXU64="$define";
;;
esac

```

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/quadfio.U

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_sysparam.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: i_sysparam.U,v $
?RCS: Revision 3.0.1.1 1994/08/29 16:22:43 ram
?RCS: patch32: created
?RCS:
?MAKE:i_sysparam: Inhdr
?MAKE:-pick add $@ %<
?S:i_sysparam:

```

?S: This variable conditionally defines the I\_SYS\_PARAM symbol, and indicates

?S: whether a C program should include <sys/param.h>.

?S:.

?C:I\_SYS\_PARAM:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/param.h>.

?C:.

?H:#\$i\_sysparam I\_SYS\_PARAM /\*\*/

?H:.

?LINT:set

i\_sysparam

: see if this is a sys/param system

set sys/param.h i\_sysparam

eval \$inhdr

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_sysparam.U

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_lroundl: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lroundl:

?S: This variable conditionally defines the HAS\_LROUNDL symbol, which

?S: indicates to the C program that the lroundl() routine is available

?S: to return the integral value nearest to x away from zero.

?S:.

?C:HAS\_LROUNDL:

?C: This symbol, if defined, indicates that the lroundl routine is

?C: available to return the nearest integral value away from zero of

?C: the long double argument value.

?C:.

?H:#\$d\_lroundl HAS\_LROUNDL /\*\*/

?H:.

?LINT:set d\_lroundl

: see if lroundl exists

set lroundl d\_lroundl

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_lroundl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_locconv.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_loconv.U,v \$  
?RCS: Revision 3.0.1.1 1994/10/29 16:14:11 ram  
?RCS: patch36: created by ADO  
?RCS:  
?MAKE:d\_loconv: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_loconv:  
?S: This variable conditionally defines HAS\_LOCALECONV if localeconv() is  
?S: available for numeric and monetary formatting conventions.  
?S:.  
?C:HAS\_LOCALECONV:  
?C: This symbol, if defined, indicates that the localeconv  
routine is  
?C: available for numeric and monetary formatting conventions.  
?C:.  
?H:#\$d\_loconv HAS\_LOCALECONV /\*\*/  
?H:.  
?LINT:set d\_loconv  
: see if localeconv exists  
set localeconv d\_loconv  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_loconv.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_rmdir.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:

?RCS: \$Log: d\_rmdir.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:06:56 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:d\_rmdir: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_rmdir:  
?S: This variable conditionally defines HAS\_RMDIR if rmdir() is  
?S: available to remove directories.  
?S:.  
?C:HAS\_RMDIR (RMDIR):  
?C: This symbol, if defined, indicates that the rmdir routine is  
?C: available to remove directories. Otherwise you should fork off a  
?C: new process to exec  
/bin/rmdir.  
?C:.  
?H:#\$d\_rmdir HAS\_RMDIR /\*\*/  
?H:.  
?LINT:set d\_rmdir  
: see if rmdir exists  
set rmdir d\_rmdir  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_rmdir.U

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?RCS:

?MAKE:d\_lround: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_lround:

?S: This variable conditionally defines the HAS\_LROUND symbol, which

?S: indicates to the C program that the lround() routine is available

?S: to return the integral value nearest to x.

?S:.

?C:HAS\_LROUND:

?C: This symbol, if defined, indicates that the lround routine is

?C: available to return the nearest integral value.

?C:.

?H:#\$d\_lround HAS\_LROUND /\*\*/  
?H:.

?LINT:set d\_lround

: see if lround exists

set lround d\_lround

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d\_lround.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_memcmp.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_memcmp.U,v \$

?RCS: Revision 3.0.1.1 1993/09/13 16:02:35 ram

?RCS: patch10: removed text recommending bcmp over memcmp (WAD)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:06:33 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?MAKE:d\_memcmp: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_memcmp:

?S: This variable conditionally defines the HAS\_MEMCMP symbol, which

?S: indicates to the C program that the memcmp() routine is available

?S: to compare blocks of

memory.

?S:.

?C:HAS\_MEMCMP (MEMCMP):

?C: This symbol, if defined, indicates that the memcmp routine is available

?C: to compare blocks of memory.

?C:.

?H:#\$d\_memcmp HAS\_MEMCMP /\*\*/

?H:.

?LINT:set d\_memcmp

: see if memcmp exists

set memcmp d\_memcmp

eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_memcmp.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_localtime\_r.U,v 0RCS:

?RCS: Copyright (c) 2002,2003 Jarkko Hietaniemi  
?RCS: Copyright (c) 2006,2007 H.Merijn Brand  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?RCS: Generated by the reentr.pl from the Perl 5.8 distribution.  
?RCS:  
?MAKE:d\_localtime\_r d\_localtime\_r\_needs\_tzset localtime\_r\_proto: Inlibc \  
cat run Protochk Hasproto i\_systypes usethreads i\_time i\_systime \  
rm\_try Compile extern\_C i\_stdlib i\_unistd i\_malloc  
?MAKE: -pick add \$@ %<  
?S:d\_localtime\_r:  
?S: This variable conditionally defines the HAS\_LOCALTIME\_R symbol,  
?S: which indicates to the C program that the localtime\_r()  
?S: routine is available.  
?S:.  
?S:d\_localtime\_r\_needs\_tzset:  
?S: This variable conditionally defines the LOCALTIME\_R\_NEEDS\_TZSET  
?S: symbol, which makes us call tzset before localtime\_r()  
?S:.  
?S:localtime\_r\_proto:  
?S: This  
variable encodes the prototype of localtime\_r.  
?S: It is zero if d\_localtime\_r is undef, and one of the  
?S: REENTRANT\_PROTO\_T\_ABC macros of reentr.h if d\_localtime\_r  
?S: is defined.  
?S:.  
?C:HAS\_LOCALTIME\_R:  
?C: This symbol, if defined, indicates that the localtime\_r routine  
?C: is available to localtime re-entrantly.  
?C:.  
?C:LOCALTIME\_R\_NEEDS\_TZSET:  
?C: Many libc's localtime\_r implementations do not call tzset,  
?C: making them differ from localtime(), and making timezone  
?C: changes using \$ENV{TZ} without explicitly calling tzset  
?C: impossible. This symbol makes us call tzset before localtime\_r  
?C:.  
?H:%<:#\$d\_localtime\_r\_needs\_tzset LOCALTIME\_R\_NEEDS\_TZSET /\*\*/  
?H:%<:#ifdef LOCALTIME\_R\_NEEDS\_TZSET  
?H:%<:#define L\_R\_TZSET tzset(),  
?H:%<:#else  
?H:%<:#define L\_R\_TZSET  
?H:%<:#endif  
?H:.  
?W:%<:L\_R\_TZSET  
?C:L\_R\_TZSET:  
?C: If localtime\_r() needs tzset, it is defined in this define

```

?C:.
?C:LOCALTIME_R_PROTO:
?C: This symbol encodes the prototype of localtime_r.
?C: It is
    zero if d_localtime_r is undef, and one of the
?C: REENTRANT_PROTO_T_ABC macros of reentr.h if d_localtime_r
?C: is defined.
?C:.
?H:#$d_localtime_r HAS_LOCALTIME_R /**/
?H:#define LOCALTIME_R_PROTO $localtime_r_proto /**/
?H:.
?T:try hdrs d_localtime_r_proto
?F:!try
: see if localtime_r exists
set localtime_r d_localtime_r
eval $inlibc
case "$d_localtime_r" in
"$define")
    hdrs="$i_systypes sys/types.h define stdio.h $i_time time.h $i_systime sys/time.h"
    case "$d_localtime_r_proto:$usethreads" in
":define") d_localtime_r_proto=define
        set d_localtime_r_proto localtime_r $hdrs
        eval $hasproto ;;
*) ;;
esac
case "$d_localtime_r_proto" in
define)
    case "$localtime_r_proto" in
"|0) try='struct tm* localtime_r(const time_t*, struct tm*);'
./protochk "$extern_C $try" $hdrs && localtime_r_proto=S_TS ;;
esac
case "$localtime_r_proto" in
"|0) try='int localtime_r(const time_t*, struct tm*);'
./protochk "$extern_C $try" $hdrs && localtime_r_proto=I_TS ;;
esac
case "$localtime_r_proto"
in
"|0) d_localtime_r=undef
    localtime_r_proto=0
    echo "Disabling localtime_r, cannot determine prototype." >&4 ;;
* ) case "$localtime_r_proto" in
REENTRANT_PROTO*) ;;
*) localtime_r_proto="REENTRANT_PROTO_$localtime_r_proto" ;;
esac
echo "Prototype: $try" ;;
esac
;;
*) case "$usethreads" in

```



```

define) echo "localtime_r has no prototype, not using it." >&4 ;;
esac
d_localtime_r=undef
localtime_r_proto=0
;;
esac
;;
*) localtime_r_proto=0
;;
esac

```

: see if localtime\_r calls tzset

```

case "$localtime_r_proto" in
REENTRANT_PROTO*)

```

```

$cat >try.c <<EOCP

```

```

/* Does our libc's localtime_r call tzset ?

```

```

* return 0 if so, 1 otherwise.

```

```

*/

```

```

#$i_systypes I_SYS_TYPES

```

```

#$i_unistd I_UNISTD

```

```

#$i_time I_TIME

```

```

#$i_stdlib I_STDLIB

```

```

#$i_malloc I_MALLOC

```

```

#ifdef I_SYS_TYPES

```

```

# include <sys/types.h>

```

```

#endif

```

```

#ifdef I_UNISTD

```

```

# include <unistd.h>

```

```

#endif

```

```

#ifdef I_TIME

```

```

# include <time.h>

```

```

#endif

```

```

#ifdef I_STDLIB

```

```

#include <stdlib.h>

```

```

#endif

```

```

#include <string.h>

```

```

#ifdef I_MALLOC

```

```

# include <malloc.h>

```

```

#endif

```

```

int

```

```

main()

```

```

{

```

```

    int result = 0;

```

```

    time_t t = time(0L);

```

```

    char w_tz[]="TZ" "=GMT+5",

```

```

    e_tz[]="TZ" "=GMT-5",

```

```

    *tz_e = (char*)malloc(16),

```

```

    *tz_w = (char*)malloc(16);

```

```

struct tm tm_e, tm_w;
memset(&tm_e, '\0', sizeof(struct tm));
memset(&tm_w, '\0', sizeof(struct tm));
strcpy(tz_e, e_tz);
strcpy(tz_w, w_tz);

putenv(tz_e);
localtime_r(&t, &tm_e);

putenv(tz_w);
localtime_r(&t, &tm_w);

if( memcmp(&tm_e, &tm_w, sizeof(struct tm)) == 0 )
result = 1;

free(tz_e);free(tz_w);
return result;
}

```

EOCP

```

set try
if eval $compile; then
  if $run ./try; then
    d_localtime_r_needs_tzset=undef;
  else
    d_localtime_r_needs_tzset=define;
  fi;
else
  d_localtime_r_needs_tzset=undef;
fi;
;;
*)
  d_localtime_r_needs_tzset=undef;
;;
esac
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/threads/d_localtime_r.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_alarm.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>  
?RCS:  
?RCS: \$Log: d\_alarm.U,v \$  
?RCS: Revision 3.0.1.1 1994/08/29 16:06:58 ram  
?RCS: patch32: created by ADO  
?RCS:  
?MAKE:d\_alarm: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_alarm:  
?S: This variable conditionally defines the HAS\_ALARM symbol, which  
?S: indicates to the C program that the alarm() routine is available.  
?S:.  
?C:HAS\_ALARM :  
?C: This symbol, if defined, indicates that the alarm routine is  
?C: available.  
?C:.  
?H:#\$d\_alarm  
HAS\_ALARM /\*\*/  
?H:.  
?LINT:set d\_alarm  
: see if alarm exists  
set alarm d\_alarm  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_alarm.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$  
?RCS:  
?RCS: Copyright (c) 2000 Jarkko Hietaniemi  
?RCS:  
?RCS: You may distribute under the terms of either the GNU General Public  
?RCS: License or the Artistic License, as specified in the README file.  
?RCS:  
?MAKE:d\_getitimer: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_getitimer:  
?S: This variable conditionally defines the HAS\_GETITIMER symbol, which  
?S: indicates to the C program that the getitimer() routine is available.  
?S:.  
?C:HAS\_GETITIMER:  
?C: This symbol, if defined, indicates that the getitimer routine is  
?C: available to return interval timers.

```
?C:.
?H:#$d_getitimer HAS_GETITIMER /**/
?H:.
?LINT:set d_getitimer
: see if getitimer exists
set getitimer d_getitimer
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_getitimer.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: ebcdic.U,v 3.0.1.3 1994/05/06 15:11:49 doughera Exp $
?RCS:
?RCS: Copyright (c) 1998 Andy Dougherty
?RCS:
?RCS: You may distribute under the terms of either the GNU General Public
?RCS: License or the Artistic License, as specified in the README file.
?RCS:
?RCS: Original author Jarkko Hietaniemi <jhi@iki.fi>
?RCS: Merged into dist by Andy Dougherty July 13, 1998
?RCS:
?MAKE:ebcdic: Compile Setvar cat rm_try run
?MAKE: -pick add $@ %<
?S:ebcdic:
?S: This variable conditionally defines EBCDIC if this
?S: system uses EBCDIC encoding.
?S:.
?C:EBCDIC:
?C: This symbol, if defined, indicates that this system uses
?C: EBCDIC encoding.
?C:.
?H:#$ebcdic EBCDIC /**/
?H:.
?F:!try
?LINT:set ebcdic
: Determine if this is an EBCDIC system
echo " "
echo "Determining whether or not we are on an EBCDIC system...">&4
$cat >try.c <<'EOM'
int main()
{
if ('M'==0xd4) return 0;
return 1;
}
EOM
```

```

val=$undef
set try
if eval
$compile_ok; then
if $run ./try; then
echo "You seem to speak EBCDIC." >&4
val="$define"
else
echo "Nope, no EBCDIC, probably ASCII or some ISO Latin. Or UTF-8." >&4
fi
else
echo "I'm unable to compile the test program." >&4
echo "I'll assume ASCII or some ISO Latin. Or UTF8." >&4
fi
$rm_try
set ebcdic
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/ebcdic/ebcdic.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998 Andy Dougherty

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:uselongdouble: Myread Oldconfig Setvar cat test usemorebits

?MAKE: -pick add \$@ %<

?Y:TOP

?S:uselongdouble:

?S: This variable conditionally defines the USE\_LONG\_DOUBLE symbol,

?S: and indicates that long doubles should be used when available.

?S:.

?C:USE\_LONG\_DOUBLE:

?C: This symbol, if defined, indicates that long doubles should

?C: be used when available.

?C:.

?H:%<:#ifndef USE\_LONG\_DOUBLE

?H:%<:#\$uselongdouble USE\_LONG\_DOUBLE /\*\*/

?H:%<:#endif

?H:.

?LINT:extern ccflags

?LINT:use usemorebits

?F:!uselongdouble.cbu

```

: Check for uselongdouble support
case "$scflags" in
*-DUSE_LONG_DOUBLE*|*-DUSE_MORE_BITS*) uselongdouble="$define" ;;
esac

case "$uselongdouble" in
$define|true|[yY]*) dflt='y';;
*)
dflt='n';;
esac
cat <<EOM

```

Perl can be built to take advantage of long doubles which (if available) may give more accuracy and range for floating point numbers.

If this doesn't make any sense to you, just accept the default '\$dflt'.

```

EOM
rp="Try to use long doubles if available?"
./myread
case "$ans" in
y|Y) val="$define" ;;
*) val="$undef" ;;
esac
set uselongdouble
eval $setvar

```

```

case "$uselongdouble" in
true|[yY]*) uselongdouble="$define" ;;
esac

```

```

: Look for a hint-file generated 'call-back-unit'. If the
: user has specified that long doubles should be used,
: we may need to set or change some other defaults.
if $test -f uselongdouble.cbu; then
    echo "Your platform has some specific hints regarding long doubles, using them..."
    ./uselongdouble.cbu
else
    case "$uselongdouble" in
$define)
$cat <<EOM
(Your platform does not have any specific hints for long doubles.)
EOM
;;
esac
fi

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
```

5.38.0/U/perl/uselongdbl.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Extract.U,v \$

?RCS: Revision 3.0.1.2 1997/02/28 14:58:52 ram

?RCS: patch61: added support for src.U

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 15:51:46 ram

?RCS: patch36: added ?F: line for metalint file checking

?RCS:

?RCS: Revision 3.0 1993/08/18 12:04:52 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: This unit produces a shell script which can be doted in order to extract

?X: .SH files with variable substitutions.

?X:

?X: When running Configure from a remote directory (\$src  
is not !),

?X: then the files will be created in that directory, so beware!

?X:

?MAKE:Extract: Mkdirp src

?MAKE: -pick add \$@ %<

?F:./extract

?T:CONFIG SRC dir file

: script used to extract .SH files with variable substitutions

cat >extract <<EOS

CONFIG=true

SRC="\$src"

EOS

cat >>extract <<'EOS'

echo "Doing variable substitutions on .SH files..."

if test -f "\$SRC/MANIFEST"; then

set x `awk '{print \$1}' <\$SRC/MANIFEST | grep '\.SH`

else

echo "(Looking for .SH files under the source directory.)"

set x `(cd "\$SRC"; find . -name "\*.SH" -print)`

fi

```

shift
case $# in
0) set x `(cd "$SRC"; echo *.SH)`; shift;;
esac
if test ! -f "$SRC/$1"; then
  shift
fi
for file in $*; do
  case "$SRC" in
  ".")
  case "$file" in
  */*)
  dir=`expr X$file : 'X\(.*)/'`
  file=`expr X$file : 'X.*^\(.*)'`
  (cd $dir && . ./file)
  ;;
  *)
  . ./file
  ;;
  esac
  ;;
  *)
  ?X:
  ?X: When running Configure remotely ($src is not '.'), we cannot source
  ?X: the files directly, since that would wrongly cause
  ?X: the extraction
  ?X: where the source lie instead of withing the current directory. Therefore,
  ?X: we need to 'sh <file' then, which is okay since they will source the
  ?X: existing config.sh file. It's not possible to use:
  ?X: ../src/Configure -S -O -Dsomething
  ?X: unfortunately since no new config.sh with the -Dsomething override
  ?X: will be created before running the .SH files. A minor buglet.
  ?X:
  ?X: Note that we must create the directory hierarchy ourselves if it does
  ?X: not exist already, and that is done through a shell emulation of the
  ?X: 'mkdir -p' command. We don't want to use the $installdir metaconfig
  ?X: symbol here since that would require too much to be configured for
  ?X: this simple extraction task that may happen quickly with 'Configure -S'.
  ?X: -- RAM, 18/03/96
  ?X:
  case "$file" in
  */*)
  dir=`expr X$file : 'X\(.*)/'`
  file=`expr X$file : 'X.*^\(.*)'`
  ./mkdirp $dir
  sh <"$SRC/$dir/$file"
  ;;
  *)

```



```

sh <"$SRC/$file"
;;
esac
;;
esac
done
if
test -f "$SRC/config_h.SH"; then
if test ! -f config.h; then
?X: oops, they left it out of MANIFEST, probably, so do it anyway.
sh <"$SRC/config_h.SH"
fi
fi
EOS

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Extract.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: d_xdrs.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_xdrs.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:04 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_xdrs: cat Csym Setvar
?MAKE: -pick add $@ %<
?S:d_xdrs:
?S: This symbol conditionally defines HAS_XDRS which indicates to the C
?S: program that XDR serialization routines are available.
?S:.
?C:HAS_XDRS (XDRS):
?C: This symbol if defined indicates to the C program that the XDR
?C: serialization routines are available to transfer data
across
?C: various architectures.
?C:.
?H:#$d_xdrs HAS_XDRS /**/
?H:.

```

```

?LINT:set d_xdrs
: see if XDR is available
echo " "
if set xdr_int val -f d_xdrs; eval $csym; $val; then
echo "Ahh! You have XDR routines for network communications." >&4
val="$define"
else
$cat >&4 <<EOM
Sigh! You do not have XDR routines -- Network communications may be hazardous.
EOM
val="$undef"
fi
set d_xdrs
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_xdrs.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: etc.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: etc.U,v $
?RCS: Revision 3.0 1993/08/18 12:08:07 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:etc etcexp: Getfile Loc Oldconfig
?MAKE: -pick add $@ %<
?S:etc:
?S: This variable holds the name of the directory in which the user wants
?S: to put "administrative" executable images for the package in question.
?S: It is most often a local directory such as /usr/local/etc. Programs
?S: relying on this variable must be prepared to deal with
~name
?S: substitutions.
?S:.
?S:etcexp:
?S: This is the same as the etc variable, but is filename expanded at
?S: configuration time, for convenient use in makefiles.
?S:.

```

```

: determine where administrative executables go
case "$etc" in
")
dflt=`./loc . /local/etc /usr/local/etc /local/etc /usr/etc /etc`
;;
*)
dflt="$etc"
;;
esac
fn=d~
rp='Where should the administrative executables go?'
./getfile
etc="$ans"
etcexp="$ansexp"

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/etc.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: i_db.U,v 3.0.1.3 1995/07/25 14:10:22 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic License,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
?RCS:
?RCS: $Log: i_db.U,v $
?RCS: Revision 3.0.1.3 1995/07/25 14:10:22 ram
?RCS: patch56: conditionally use const in test programs (ADO)
?RCS:
?RCS: Revision 3.0.1.2 1995/05/12 12:14:42 ram
?RCS: patch54: extended for more intimate DB probing (ADO)
?RCS:
?RCS: Revision 3.0.1.1 1994/08/29 16:21:50 ram
?RCS: patch32: created by ADO
?RCS:
?MAKE:i_db db_hashtype db_prefixtype \
db_version_major
db_version_minor db_version_patch : \
Inhdr +cc +ccflags rm_try compiler_warning cat \
Compile libs sed run i_stdlib
?MAKE: -pick add $@ %<

```

?S:i\_db:

?S: This variable conditionally defines the I\_DB symbol, and indicates  
?S: whether a C program may include Berkeley's DB include file <db.h>.  
?S:.

?S:db\_hashtype:

?S: This variable contains the type of the hash structure element  
?S: in the <db.h> header file. In older versions of DB, it was  
?S: int, while in newer ones it is u\_int32\_t.  
?S:.

?S:db\_prefixtype:

?S: This variable contains the type of the prefix structure element  
?S: in the <db.h> header file. In older versions of DB, it was  
?S: int, while in newer ones it is size\_t.  
?S:.

?S:db\_version\_major:

?S: This variable contains the major version number of  
?S: Berkeley DB found in the <db.h> header file.  
?S:.

?S:db\_version\_minor:

?S: This variable contains the minor version number of  
?S: Berkeley DB found in the <db.h> header file.  
?S: For DB version 1 this is always 0.  
?S:.

?S:db\_version\_patch:

?S: This  
variable contains the patch version number of  
?S: Berkeley DB found in the <db.h> header file.  
?S: For DB version 1 this is always 0.  
?S:.

?S:.

?C:I\_DB:

?C: This symbol, if defined, indicates to the C program that it should  
?C: include Berkeley's DB include file <db.h>.  
?C:.

?C:DB\_Prefix\_t:

?C: This symbol contains the type of the prefix structure element  
?C: in the <db.h> header file. In older versions of DB, it was  
?C: int, while in newer ones it is u\_int32\_t.  
?C:.

?C:DB\_Hash\_t:

?C: This symbol contains the type of the prefix structure element  
?C: in the <db.h> header file. In older versions of DB, it was  
?C: int, while in newer ones it is size\_t.  
?C:.

?C:DB\_VERSION\_MAJOR\_CFG:

?C: This symbol, if defined, defines the major version number of  
?C: Berkeley DB found in the <db.h> header when Perl was configured.  
?C:.

?C:DB\_VERSION\_MINOR\_CFG:

```

?C: This symbol, if defined, defines the minor version number of
?C: Berkeley DB found in the <db.h> header when Perl was configured.
?C: For
DB version 1 this is always 0.
?C:.
?C:DB_VERSION_PATCH_CFG:
?C: This symbol, if defined, defines the patch version number of
?C: Berkeley DB found in the <db.h> header when Perl was configured.
?C: For DB version 1 this is always 0.
?C:.
?H:#$i_db I_DB /**/
?H:#define DB_Hash_t $db_hashtype /**/
?H:#define DB_Prefix_t $db_prefixtype /**/
?H:#define DB_VERSION_MAJOR_CFG $db_version_major /**/
?H:#define DB_VERSION_MINOR_CFG $db_version_minor /**/
?H:#define DB_VERSION_PATCH_CFG $db_version_patch /**/
?H:.
?F:!try
?LINT:change libs
: see if this is a db.h system
set db.h i_db
eval $inhdr

case "$i_db" in
$define)
: Check db version.
echo " "
echo "Checking Berkeley DB version ..." >&4
$cat >try.c <<EOCP
#include <sys/types.h>
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB
#include <stdlib.h>
#endif
#include <db.h>
int main(int argc, char *argv[])
{
#ifdef DB_VERSION_MAJOR /* DB version >= 2 */
int Major, Minor, Patch ;
unsigned long Version ;
(void)db_version(&Major,
&Minor, &Patch) ;
if (argc == 2) {
printf("%d %d %d %d %d %d\n",
DB_VERSION_MAJOR, DB_VERSION_MINOR, DB_VERSION_PATCH,
Major, Minor, Patch);
exit(0);

```

```

}
printf("You have Berkeley DB Version 2 or greater.\n");

printf("db.h is from Berkeley DB Version %d.%d.%d\n",
DB_VERSION_MAJOR, DB_VERSION_MINOR, DB_VERSION_PATCH);
printf("libdb is from Berkeley DB Version %d.%d.%d\n",
Major, Minor, Patch) ;

/* check that db.h & libdb are compatible */
if (DB_VERSION_MAJOR != Major || DB_VERSION_MINOR != Minor || DB_VERSION_PATCH != Patch) {
printf("db.h and libdb are incompatible.\n") ;
    exit(3);
}

printf("db.h and libdb are compatible.\n") ;

Version = DB_VERSION_MAJOR * 1000000 + DB_VERSION_MINOR * 1000
+ DB_VERSION_PATCH ;

/* needs to be >= 2.3.4 */
if (Version < 2003004) {
/* if (DB_VERSION_MAJOR == 2 && DB_VERSION_MINOR == 0 && DB_VERSION_PATCH < 5) { */
printf("Perl
needs Berkeley DB 2.3.4 or greater.\n") ;
    exit(2);
}

    exit(0);
#else
#if defined(_DB_H_) && defined(BTREEMAGIC) && defined(HASHMAGIC)
    if (argc == 2) {
        printf("1 0 0\n");
        exit(0);
    }
    printf("You have Berkeley DB Version 1.\n");
    exit(0); /* DB version < 2: the coast is clear. */
#else
    exit(1); /* <db.h> not Berkeley DB? */
#endif
#endif
}
EOCP
set try
if eval $compile_ok && $run ./try; then
echo 'Looks OK.' >&4
set ` $run ./try 1 `
db_version_major=$1
db_version_minor=$2

```

```

db_version_patch=$3
else
echo "I can't use Berkeley DB with your <db.h>. I'll disable Berkeley DB." >&4
i_db=$undef
case " $libs " in
*" -ldb "*)
: Remove db from list of libraries to use
echo "Removing unusable -ldb from library list" >&4
set `echo X $libs | $sed -e 's/-ldb / /' -e 's/-ldb$//'`
shift
libs="$*"
echo "libs = $libs" >&4
;;
esac
fi
$rm_try
;;
esac

@if DB_Hash_t
case "$i_db" in
define)
: Check the return
type needed for hash
echo " "
echo "Checking return type needed for hash for Berkeley DB ..." >&4
$cat >try.c <<EOCP
#include <sys/types.h>
#include <db.h>

#ifdef DB_VERSION_MAJOR
u_int32_t hash_cb (const void* ptr, size_t size)
{
return 0;
}
HASHINFO info;
int main()
{
info.hash = hash_cb;
}
#endif
EOCP
if $cc $ccflags -c try.c >try.out 2>&1 ; then
if $compiler_warning try.out >>/dev/null 2>&1 ; then
db_hashtype='int'
else
db_hashtype='u_int32_t'
fi

```

```

else
: XXX Maybe we should just give up here.
db_hashtype=u_int32_t
$cat try.out >&4
echo "Help: I can't seem to compile the db test program." >&4
echo "Something's wrong, but I'll assume you use $db_hashtype." >&4
fi
$rm_try
echo "Your version of Berkeley DB uses $db_hashtype for hash."
;;
*) db_hashtype=u_int32_t
;;
esac
@end
@if DB_Prefix_t
case "$i_db" in
define)
: Check the return type needed for prefix
echo " "
echo "Checking return type needed for prefix for Berkeley DB ..." >&4
cat >try.c <<EOCP
#include
<sys/types.h>
#include <db.h>

#ifdef DB_VERSION_MAJOR
size_t prefix_cb (const DBT *key1, const DBT *key2)
{
return 0;
}
BTREEINFO info;
int main()
{
info.prefix = prefix_cb;
}
#endif
EOCP
if $cc $ccflags -c try.c >try.out 2>&1 ; then
if $compiler_warning try.out >>/dev/null 2>&1 ; then
db_prefixtype='int'
else
db_prefixtype='size_t'
fi
else
db_prefixtype='size_t'
: XXX Maybe we should just give up here.
$cat try.out >&4
echo "Help: I can't seem to compile the db test program." >&4

```



```

echo "Something's wrong, but I'll assume you use $db_prefixtype." >&4
fi
$rm_try
echo "Your version of Berkeley DB uses $db_prefixtype for prefix."
;;
*) db_prefixtype='size_t'
;;
esac
@end

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/i_db.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1998, Jarkko Hietaniemi

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?RCS: as specified in the README file that comes with the distribution.

?RCS: You may reuse parts of this distribution only within the terms of

?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 3.0.

?RCS:

?MAKE:i\_syssecre: Inhdr

?MAKE: -pick add \$@ %<

?S:i\_syssecre:

?S: This variable conditionally defines the I\_SYS\_SECURITY symbol,

?S: and indicates whether a C program should include <sys/security.h>.

?S:.

?C:I\_SYS\_SECURITY:

?C: This symbol, if defined, indicates to the C program that it should

?C: include <sys/security.h>.

?C:.

?H:#\$i\_syssecre I\_SYS\_SECURITY /\*\*/

?H:.

?LINT:set i\_syssecre

: see if sys/security.h is available

set sys/security.h i\_syssecre

eval \$inhdr

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/acl/i_syssecre.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: mboxchar.U 1 2006-08-24 12:32:52Z rmanfredi \$

```

?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: mboxchar.U,v $
?RCS: Revision 3.0.1.2 1995/07/25 14:13:12 ram
?RCS: patch56: ensure ctrl-A characters are visible in prompt (WED)
?RCS:
?RCS: Revision 3.0.1.1 1994/05/06 15:11:22 ram
?RCS: patch23: added support for MMDF mailboxes (WED)
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:15 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:mboxchar: cat package shsharp Myread Oldconfig
?MAKE: -pick add $@ %<
?S:mboxchar:
?S: This variable
contains the eventual value of the MBOXCHAR symbol,
?S: which is how a C program can identify a file as a mailbox.
?S:.
?C:MBOXCHAR:
?C: This symbol contains a character which will match the beginning
?C: of a mailbox file.
?C:.
?H:#define MBOXCHAR '$mboxchar' /**/
?H:.
?T:CTRLA
?INIT:CTRLA=`echo a | tr a '\001`
: determine how to determine when a file is a mailbox
case "$mboxchar" in
") dflt=F;;
?X: The following ^A is two-chars to ensure it will print out -- WED
"$CTRLA") dflt='^A';;
*) dflt="$mboxchar";;
esac
$cat <<EOM

```

In saving articles, \$package wants to differentiate between saving to mailbox format files and normal files. It does this by examining the first character of the file in question. On most systems the first line starts with "From ...", so the first character is an F. Other systems use magic cookies like control codes between articles, so one of those

would be first. For example, MMDF messages are separated with lines of four control-A's (you may specify one as ^A, i.e. caret A).

EOM

```
rp="What's the first character of a mailbox file?"
./myread
mboxchar="$ans"
case "$mboxchar" in
'F') ;;
"$CTRLA") ;;
'^A|^a') mboxchar="$CTRLA";;
*) cat <<'EOM'
```

You will need to edit the shell script mbox.saver to properly append an article to a mailbox. The arguments to the script are documented in

EOM

```
case "$shsharp" in
false) echo "comments in mbox.saver.std.";
true) echo "comments in the shell script itself.";
esac
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/mboxchar.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2000 Jarkko Hietaniemi

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_futimes: Compile cat rm\_try run

?MAKE: -pick add \$@ %<

?S:d\_futimes:

?S: This variable conditionally defines the HAS\_FUTIMES symbol, which

?S: indicates to the C program that the futimes() routine is available.

?S:.

?C:HAS\_FUTIMES:

?C: This symbol, if defined, indicates that the futimes routine is

?C: available to change file descriptor time stamps with struct timevals.

?C:.

?H:#\$d\_futimes HAS\_FUTIMES /\*\*/

?H:.

?T:rc

```

?F:!try
: check for a working futimes
d_futimes="$undef"
echo " "
echo "Checking if you have a working futimes()" >&4
$cat >try.c <<EOCP
#include <stdio.h>
#include <stdlib.h>
#include <sys/time.h>
#include <errno.h>
#include <fcntl.h>
#include <stdlib.h>

int main ()
{
    int fd,
    rv;
    fd = open ("try.c", O_RDWR);
    if (-1 == fd) exit (1);
    rv = futimes (fd, NULL);
    exit (rv == -1 ? errno : 0);
}
EOCP
set try
if eval $compile; then
    ` $run ./try `
    rc=$?
    case "$rc" in
    0) echo "Yes, you have" >&4
        d_futimes="$define"
        ;;
    *) echo "No, you have futimes, but it isn't working ($rc) (probably harmless)" >&4
        ;;
    esac
else
    echo "No, it does not (probably harmless)" >&4
fi
$rm_try

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_futimes.U

```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 2015 Jarkko Hietaniemi, H.Merijn Brand

?RCS:

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:longdblmanbits doublemanbits nvmantbits: Inlibc cat Compile run \

rm\_try Setvar echo i\_sunmath usequadmath \

d\_longdbl longdblkind nvsiz doublesize longdblsize

?MAKE: -pick add \$@ %<

?S:doublemanbits:

?S: This symbol, if defined, tells how many mantissa bits

?S: there are in double precision floating point format.

?S: Note that this is usually DBL\_MANT\_DIG minus one, since

?S: with the standard IEEE 754 formats DBL\_MANT\_DIG includes

?S: the implicit bit which doesn't really exist.

?S:.

?S:longdblmanbits:

?S: This symbol, if defined, tells how many mantissa bits

?S: there are in long double precision floating point format.

?S: Note that this can be LDBL\_MANT\_DIG minus one,

?S: since

LDBL\_MANT\_DIG can include the IEEE 754 implicit bit.

?S: The common x86-style 80-bit long double does not have

?S: an implicit bit.

?S:.

?S:nvmantbits:

?S: This variable tells how many bits the mantissa of a Perl NV has,

?S: not including the possible implicit bit.

?S:.

?C:DOUBLEMANTBITS:

?C: This symbol, if defined, tells how many mantissa bits

?C: there are in double precision floating point format.

?C: Note that this is usually DBL\_MANT\_DIG minus one, since

?C: with the standard IEEE 754 formats DBL\_MANT\_DIG includes

?C: the implicit bit, which doesn't really exist.

?C:.

?C:LONGDBLMANTBITS:

?C: This symbol, if defined, tells how many mantissa bits

?C: there are in long double precision floating point format.

?C: Note that this can be LDBL\_MANT\_DIG minus one,

?C: since LDBL\_MANT\_DIG can include the IEEE 754 implicit bit.

?C: The common x86-style 80-bit long double does not have

?C: an implicit bit.

?C:.

?C:NVMANTBITS:

?C: This symbol, if defined, tells how many mantissa bits

?C: (not

including implicit bit) there are in a Perl NV.

?C: This depends on which floating point type was chosen.

?C:.

```

?H:#define DOUBLEMANTBITS $doublemantbits
?H:#define LONGDBLMANTBITS $longdblmanbits
?H:#define NVMANTBITS $nvmantbits
?H:.
?F:!try
: Check the length of the double mantissa
$echo "Checking how many mantissa bits your doubles have..." >&4
$cat >try.c <<EOP
#$i_sunmath I_SUNMATH
#include <float.h>
#ifdef I_SUNMATH
# include <sunmath.h>
#endif
#ifdef DBL_MANT_DIG
# define BITS (DBL_MANT_DIG - 1) /* the implicit bit does not count */
#endif
#include <stdio.h>
int main(int argc, char *argv[]) {
#ifdef BITS
printf("%d\n", BITS);
#endif
return 0;
}
EOP
set try
if eval $compile; then
doublemantbits=`$run ./try`
else
doublemantbits="$undef"
fi
$rm_try

: Check the length of the longdouble mantissa
$echo "Checking how many mantissa bits your long doubles have..." >&4
$cat >try.c <<EOP
#$i_sunmath I_SUNMATH
#include <float.h>
#ifdef I_SUNMATH
# include <sunmath.h>
#endif
#$d_longdbl
HAS_LONG_DOUBLE
#if defined(HAS_LONG_DOUBLE) && defined(LDBL_MANT_DIG)
# if ($longdblkind == 3) || ($longdblkind == 4) /* 80-bit extended precision */
/* This format has no implicit bit. Beware, however, that for
* this format the bare LDBL_MANT_DIG is misleading for inf/nan:
* the top three bits are used for inf (100) / qnan (11x) / snan (101),
* and the top bit must have been one since 387, zero is plain invalid.

```

```

* For normal fp values, the LDBL_MANT_DIG is fine, though. */
# define BITS LDBL_MANT_DIG
# elif ($longdblkind == 5 || $longdblkind == 6 || $longdblkind == 7 || $longdblkind == 8) /* double double */
/* LDBL_MANT_DIG of 106 (twice 53) would be logical, but for some
* reason e.g. Irix thinks 107. But in any case, we want only
* the number of real bits, the implicit bits are of no interest. */
# define BITS 2 * (DBL_MANT_DIG - 1)
# else
# define BITS (LDBL_MANT_DIG - 1) /* the implicit bit does not count */
# endif
#endif
#include <stdio.h>
int
main(int argc, char *argv[]) {
#ifdef BITS
printf("%d\n", BITS);
#endif
return 0;
}
EOP
set try
if eval $compile; then
longdblmantbits=`$run ./try`
else
longdblmantbits="$undef"
fi
$rm_try

: Check the length of the NV mantissa
$echo "Checking how many mantissa bits your NVs have..." >&4
if test "X$susequadmath" = "X$define"; then
nvmantbits=112 # 128-1-15
else
if test "X$nvsize" = "X$doublesize"; then
nvmantbits="$doublemantbits"
else
if test "X$nvsize" = "X$longdblsize"; then
nvmantbits="$longdblmantbits"
else
nvmantbits="$undef"
fi
fi
fi

Found in path(s):
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/mantbits.U

```

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```
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?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
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?RCS: You may redistribute only under the terms of the Artistic License,
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?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_getpwent.U,v $
?RCS: Revision 3.0 1993/08/18 12:06:17 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_getpwent: Csym Setvar
?MAKE: -pick add $@ %<
?S:d_getpwent:
?S: This variable conditionally defines the HAS_GETPWENT symbol, which
?S: indicates to the C program that it should use the getpwent()
?S: routine instead of the getpw() routine.
?S:.
?C:HAS_GETPWENT (GETPWENT):
?C: This symbol, if defined, indicates that the getpwent() routine
?C: should be used instead of the getpw()
routine.
?C:.
?H:#$d_getpwent HAS_GETPWENT /**/
?H:.
?LINT:set d_getpwent
: see if there is a getpwent
echo " "
if set getpwent val -f d_getpwent; eval $csym; $val; then
echo "getpwent() found." >&4
val="$define"
else
echo "No getpwent() found -- will use getpw() instead." >&4
val="$undef"
fi
set d_getpwent
eval $setvar
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_getpwent.U
```

No license file was found, but licenses were detected in source scan.



```

?RCS: Copyright (c) 2006-2007, H.Merijn Brand
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?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:
?MAKE:d_snprintf d_vsnprintf : Inlibc Compile cat run rm_try
?MAKE: -pick add $@ %<
?S:d_snprintf:
?S: This variable conditionally defines the HAS_SNPRINTF symbol, which
?S: indicates to the C program that the snprintf () library function
?S: is available.
?S:.
?S:d_vsnprintf:
?S: This variable conditionally defines the HAS_VSNPRINTF symbol, which
?S: indicates to the C program that the vsnprintf () library function
?S: is available.
?S:.
?C:HAS_SNPRINTF:
?C: This symbol, if defined, indicates that the snprintf () library
?C: function
?C: is available for use.
?C:.
?C:HAS_VSNPRINTF:
?C: This symbol, if defined, indicates that the vsnprintf () library
?C: function is available for use.
?C:.
?H:#$d_snprintf HAS_SNPRINTF /**/
?H:#$d_vsnprintf HAS_VSNPRINTF /**/
?H:.
?F:!try
: see if snprintf exists
set snprintf d_snprintf
eval $inlibc

: see if vsnprintf exists
set vsnprintf d_vsnprintf
eval $inlibc

case "$d_snprintf-$d_vsnprintf" in
"$define-$define")
    $cat <<EOM
Checking whether your snprintf() and vsnprintf() work okay...
EOM
    $cat >try.c <<'EOCP'
/* v?snprintf testing logic courtesy of Russ Allbery.

```

```

* According to C99:
* - if the buffer is too short it still must be \0-terminated
* - if the buffer is too short the potentially required length
*   must be returned and not -1
* - if the buffer is NULL the potentially required length
*   must be returned and not -1 or core dump
*/
#include <stdio.h>
#include <stdarg.h>

char buf[2];

int test (char *format, ...)
{
    va_list args;
    int count;

    va_start
    (args, format);
    count = vsnprintf (buf, sizeof buf, format, args);
    va_end (args);
    return count;
}

int main ()
{
    return ((test ("%s", "abcd") == 4 && buf[0] == 'a' && buf[1] == '\0'
        && snprintf (NULL, 0, "%s", "abcd") == 4) ? 0 : 1);
}
EOCP
set -x
if eval $compile; then
`$run ./try`
case "$?" in
0) echo "Your snprintf() and vsnprintf() seem to be working okay." ;;
*) cat <<EOM >&&4
Your snprintf() and vsnprintf() don't seem to be working okay.
EOM
    d_snprintf="$undef"
    d_vsnprintf="$undef"
    ;;
esac
else
echo "(I can't seem to compile the test program--assuming they don't)"
d_snprintf="$undef"
d_vsnprintf="$undef"
fi
$rm_try

```

```
;;
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_sprintf.U
```

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_getlogin.U 1 2006-08-24 12:32:52Z rmanfredi $
```

```
?RCS:
```

```
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
```

```
?RCS:
```

```
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```

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```

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```

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```

```
?RCS: of the source tree for dist 4.0.
```

```
?RCS:
```

```
?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>
```

```
?RCS:
```

```
?RCS: $Log: d_getlogin.U,v $
```

```
?RCS: Revision 3.0.1.1 1994/08/29 16:07:41 ram
```

```
?RCS: patch32: created by ADO
```

```
?RCS:
```

```
?MAKE:d_getlogin: Inlibc
```

```
?MAKE: -pick add $@ %<
```

```
?S:d_getlogin:
```

```
?S: This variable conditionally defines the HAS_GETLOGIN symbol, which
```

```
?S: indicates to the C program that the getlogin() routine is available
```

```
?S: to get the login name.
```

```
?S:.
```

```
?C:HAS_GETLOGIN :
```

```
?C: This symbol,
```

```
if defined, indicates that the getlogin routine is
```

```
?C: available to get the login name.
```

```
?C:.
```

```
?H:#$d_getlogin HAS_GETLOGIN /**/
```

```
?H:.
```

```
?LINT:set d_getlogin
```

```
: see if getlogin exists
```

```
set getlogin d_getlogin
```

```
eval $inlibc
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_getlogin.U
```

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```

?RCS: $Id: Config_sh.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Config_sh.U,v $
?RCS: Revision 3.0.1.3 1997/02/28 14:57:53 ram
?RCS: patch61: added support for src.U
?RCS:
?RCS: Revision 3.0.1.2 1995/01/11 14:53:31 ram
?RCS: patch45: moved path stripping from d_portable.U to end of Configure
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 15:50:37 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:48 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X:
This unit ends up producing the config.sh script, which contains all the
?X: definitions figured out by Configure. The add.Config_sh command knows
?X: which variables need to be remembered. It also adds the EOT (ends the
?X: here document redirection with variable substitution).
?X:
?MAKE:Config_sh: cf_time cf_by test spitshell startsh myuname Myread \
End Obsol_sh Loc +d_portable package src cat
?MAKE: -pick add.Config_sh $@ %<
?MAKE: -pick add $@ ./Obsol_sh
?MAKE: -pick close.Config_sh $@ %<
?F:!config.over !config.arch
?T:file temp
?LINT:unclosed EOT
: back to where it started
if test -d ../UU; then
cd ..
fi

: configuration may be unconditionally patched via a 'config.arch' file
if $test -f config.arch; then
echo "I see a config.arch file, loading it." >&4
./config.arch
fi

```

```

: configuration may be patched via a 'config.over' file
if $test -f config.over; then
echo " "
dflt=y
rp='I see a config.over file. Do you wish to load it?'
. UU/myread
case "$ans" in
n*) echo
"OK, I'll ignore it.";;
*) . ./config.over
echo "Configuration override changes have been loaded."
;;
esac
fi

```

@if d\_portable

: in case they want portability, strip down executable paths

?X:

?X: Strip down paths in located executables. For each file, e.g. vi, there

?X: is a \$vi variable whose value is for instance '/usr/bin/vi'. By resetting

?X: \$vi to 'vi', we rely on the PATH variable to locate the executable...

?X:

```
case "$d_portable" in
```

```
"$define")
```

```
echo " "
```

```
echo "Stripping down executable paths..." >&4
```

?X:

?X: Previously, we used to do eval \$file="\$file" but in order

?X: to handle things like sh Configure -Dmake=gmake, we can't do

?X: that. What we \*really\* want is to strip away the absolute path

?X: and rely on the end user's \$PATH to correctly find the executable.

?X: This method assumes there is a "basename" command available. If

?X: not, replace it with the following expr-based command:

```
?X: expr $temp : '.*\(.*\)' \| $temp
```

?X: Since this preserves the actual

command name, we can now drop the

?X: OS/2 specific code.

?X: --Andy Dougherty August 1999

?X:

?X: On OS/2, a special \$ar command not even named 'ar' is required,

?X: so we don't strip that name.

?X: Also, on DOS-ish systems, there might not be a ln command, but we

?X: might have ln='cp'.

?X: However, we can't set d\_portable=undef on such systems since

?X: Unix-ish tools don't have standard locations there. Thus we

?X: MUST rely on the user's \$PATH.

?X: --Andy Dougherty 4/1998

```

?X:
for file in $loclist $trylist; do
    eval temp=\${$file}
    eval $file=`basename $temp`
done
;;
esac

@end
: create config.sh file
echo " "
echo "Creating config.sh..." >&4
$spitshell <<EOT >config.sh
$startsh
#
# This file was produced by running the Configure script. It holds all the
# definitions figured out by Configure. Should you modify one of these values,
# do not forget to propagate your changes by running "Configure -der". You may
# instead choose to run each of the .SH files by yourself, or "Configure
-S".
#

# Package name    : $package
# Source directory : $src
# Configuration time: $cf_time
# Configured by   : $cf_by
# Target system   : $myuname

EOT
?X: Command line options are saved by the Options.U unit in the
?X: temporary file UU/cmdline.opt
: Add in command line options if available
$test -f UU/cmdline.opt && $cat UU/cmdline.opt >> config.sh

$spitshell <<EOT >>config.sh

Found in path(s):
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-
5.38.0/U/modified/Config_sh.U
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```

?RCS: that same Artistic License; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: usrinc.U,v \$  
?RCS: Revision 3.0.1.3 1997/02/28 16:27:12 ram  
?RCS: patch61: don't ask for the include path unless they are on a MIPS  
?RCS:  
?RCS: Revision 3.0.1.2 1995/05/12 12:24:36 ram  
?RCS: patch54: ensure that ./mips always exists (ADO)  
?RCS:  
?RCS: Revision 3.0.1.1 1994/05/06 15:18:31 ram  
?RCS: patch23: ensure usrinc value is preserved across sessions (WED)  
?RCS:  
?RCS: Revision 3.0 1993/08/18 12:09:58 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?MAKE:usrinc incpath mips\_type:  
test cat echo n c Getfile Guess \  
Oldconfig eunicefix contains rm  
?MAKE: -pick add \$@ %<  
?S:usrinc:  
?S: This variable holds the path of the include files, which is  
?S: usually /usr/include. It is mainly used by other Configure units.  
?S:.  
?S:incpath:  
?S: This variable must precede the normal include path to get the  
?S: right one, as in "\$incpath/usr/include" or "\$incpath/usr/lib".  
?S: Value can be "" or "/bsd43" on mips.  
?S:.  
?S:mips\_type:  
?S: This variable holds the environment type for the mips system.  
?S: Possible values are "BSD 4.3" and "System V".  
?S:.  
?D:usrinc='/usr/include'  
?LINT:create mips  
?T:xxx\_prompt  
?F:./mips  
: What should the include directory be ?  
echo " "  
\$echo \$n "Hmm... \$c"  
dflt='/usr/include'  
incpath=""  
?X: mips\_type is used later, to add -DSYSTYPE\_BSD43 to cppflags if needed.  
mips\_type=""  
?X:  
?X: Cannot put the following in Guess, or we get a circular dependency.  
?X:  
if \$test -f /bin/mips && /bin/mips; then

```

echo "Looks like a MIPS system..."
$cat >usr.c
<<'EOCP'
#ifdef SYSTYPE_BSD43
/bsd43
#endif
EOCP
if cc -E usr.c > usr.out && $contains / usr.out >/dev/null 2>&1; then
dflt='/bsd43/usr/include'
incpath='/bsd43'
mips_type='BSD 4.3'
else
mips_type='System V'
fi
$rm -f usr.c usr.out
echo "and you're compiling with the $mips_type compiler and libraries."
xxx_prompt=y
echo "exit 0" >mips
else
echo "Doesn't look like a MIPS system."
xxx_prompt=n
echo "exit 1" >mips
fi
chmod +x mips
$unicefix mips
case "$usrinc" in
") ;;
*) dflt="$usrinc";;
esac
case "$xxx_prompt" in
y) fn=d/
echo " "
rp='Where are the include files you want to use?'
./getfile
usrinc="$ans"
;;
*) usrinc="$dflt"
;;
esac

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/usrinc.U
```

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?RCS: \$Id\$

?RCS:

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?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_signbit: nvtype Compile Setvar cat run rm\_try echo n c i\_sunmath

?MAKE: -pick add \$@ %<

?S:d\_signbit:

?S: This variable conditionally defines the HAS\_SIGNBIT symbol, which

?S: indicates to the C program that the signbit() routine is available

?S: and safe to use with perl's intern NV type.

?S:.

?C:HAS\_SIGNBIT:

?C: This symbol, if defined, indicates that the signbit routine is

?C: available to check if the given number has the sign bit set.

?C: This should include correct testing of -0.0. This will only be set

?C: if the signbit() routine is safe to use with the NV type used internally

?C: in perl. Users should call Perl\_signbit(), which will be #defined to

?C: the system's signbit() function or macro if this symbol is defined.

?C:.

?H:#\$d\_signbit

```
HAS_SIGNBIT /**/
```

?H:.

?F:!try

?LINT:set d\_signbit

: see if signbit exists

```
$echo $n "Checking to see if you have signbit() available to work on $nvtype... $c" >&4
```

```
$cat >try.c <<EOCP
```

```
#$i_sunmath I_SUNMATH
```

```
#include <math.h>
```

```
#ifdef I_SUNMATH /* Solaris special math library */
```

```
# include <sunmath.h>
```

```
#endif
```

```
#define NV $nvtype
```

```
int main(int argc, char **argv)
```

```
{
```

```
    NV x = 0.0;
```

```
    NV y = -1.0;
```

```
    if ((signbit(x) == 0) && (signbit(y) != 0))
```

```
return 0;
```

```
    else
```

```
return 1;
```

```
}
```

```
EOCP
```

```
val="$undef"
```

```
set try
```

```
if eval $compile; then
```

```
    if $run ./try; then
```

```
        $echo "Yes." >&4
```

```
val="$define"
```

```
    else
```

```
$echo "Signbit seems to be available, but doesn't work as I expected."
$echo "I won't use it." >&4
val="$undef"
fi
else
$echo "Nope." >&4
dflt="$undef"
fi
set d_signbit
eval $setvar
$rm_try
```

Found in path(s):

```
*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_signbit.U
```

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```
?RCS: $Id: d_su_chown.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
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?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_su_chown.U,v $
?RCS: Revision 3.0 1993/08/18 12:07:40 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:d_su_chown: Csym Setvar
?MAKE: -pick add $@ %<
?S:d_su_chown (d_rootchown):
?S: This variable conditionally defines the SU_CHOWN symbol, which
?S: indicates to the C program that only root can chown() the owner
?S: of a file.
?S:.
?C:SU_CHOWN (ROOT_CHOWN):
?C: This symbol, if defined, indicates that the system allows only root
?C: can
?C: change the owner of a file with chown().
?C:.
?H:#$d_su_chown SU_CHOWN /**/
?H:.
?LINT:set d_su_chown
: see if 'chown()' is restricted.
: but not too hard, as it is late and I am tired. -- HMS
```

```

echo " "
if set setreuid val -f d_su_chown; eval $csym; $val; then
echo 'It looks like only root can chown() the owner of a file.' >&4
val="$define"
else
echo 'It looks like root or the owner can chown() a file away.' >&4
val="$undef"
fi
set d_su_chown
eval $setvar

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_su_chown.U

```

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```

?RCS: $Id: libnm.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
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?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: libnm.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 16:08:26 ram
?RCS: patch61: replaced .a with $_a all over the place
?RCS:
?RCS: Revision 3.0 1993/08/18 12:09:01 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?MAKE:libnm: test Loc libpth _a
?MAKE: -pick add $@ %<
?S:libnm:
?S: This variable contains the argument to pass to the loader in order
?S: to get the new math library routines. If there is no new math
?S: library, it is null.
?S:.
?T:ans
?O:
use libswanted='-lnm' instead (see libs.U).
: see if we should include -lnm
echo " "
if $test -r /usr/lib/libnm$_a || $test -r /usr/local/lib/libnm$_a ; then
echo "New math library found." >&4
libnm='-lnm'

```

```

else
ans=`./loc libnm$_a x $libpth`
case "$ans" in
x)
echo "No nm library found--the normal math library will have to do." >&4
libnm=""
;;
*)
echo "New math library found in $ans." >&4
libnm="$ans"
;;
esac
fi

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/libnm.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

?RCS: You may redistribute only under the terms of the Artistic License,

?RCS: as specified in the README file that comes with the distribution.

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?RCS: that same Artistic License; a copy of which may be found at the root

?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: d\_castneg.U,v \$

?RCS: Revision 3.0.1.2 1995/05/12 12:11:21 ram

?RCS: patch54: made sure cc and ccflags are conditional dependencies

?RCS: patch54: added improved test case for Interactive Unix

?RCS:

?RCS: Revision 3.0.1.1 1994/10/29 16:10:50 ram

?RCS: patch36: don't forget to tell user about compilation failures (ADO)

?RCS: patch36: declare signal handler correctly using 'signal\_t' (ADO)

?RCS:

?RCS: Revision 3.0 1993/08/18 12:05:47 ram

?RCS: Baseline for dist 3.0 netwide release.

?RCS:

?X:

?X: Can

the compiler cast negative / odd floats to unsigned values.

?X:

?MAKE:d\_castneg castflags: cat +cc +ccflags rm\_try Setvar signal\_t

?MAKE: -pick add \$@ %<

?S:d\_castneg:

?S: This variable conditionally defines CASTNEG, which indicates  
?S: whether the C compiler can cast negative float to unsigned.  
?S:.  
?S:castflags:  
?S: This variable contains a flag that precise difficulties the  
?S: compiler has casting odd floating values to unsigned long:  
?S: 0 = ok  
?S: 1 = couldn't cast < 0  
?S: 2 = couldn't cast >= 0x80000000  
?S: 4 = couldn't cast in argument expression list  
?S:.  
?C:CASTNEGFLOAT:  
?C: This symbol is defined if the C compiler can cast negative  
?C: numbers to unsigned longs, ints and shorts.  
?C:.  
?C:CASTFLAGS:  
?C: This symbol contains flags that say what difficulties the compiler  
?C: has casting odd floating values to unsigned long:  
?C: 0 = ok  
?C: 1 = couldn't cast < 0  
?C: 2 = couldn't cast >= 0x80000000  
?C: 4 = couldn't cast in argument expression list  
?C:.  
?H:#\$d\_castneg CASTNEGFLOAT /\*\*/  
?H:#define  
CASTFLAGS \$castflags /\*\*/  
?H:.  
?F:!try  
?LINT:set d\_castneg  
: check for ability to cast negative floats to unsigned  
echo " "  
echo 'Checking whether your C compiler can cast negative float to unsigned.' >&4  
\$cat >try.c <<EOCP  
#include <sys/types.h>  
#include <signal.h>  
\$signal\_t blech() { exit(7); }  
\$signal\_t blech\_in\_list() { exit(4); }  
unsigned long dummy\_long(p) unsigned long p; { return p; }  
unsigned int dummy\_int(p) unsigned int p; { return p; }  
unsigned short dummy\_short(p) unsigned short p; { return p; }  
int main()  
{  
double f = -123.;  
unsigned long along;  
unsigned int aint;  
unsigned short ashort;  
int result = 0;

```

signal(SIGFPE, blech);
along = (unsigned long)f;
aint = (unsigned int)f;
ashort = (unsigned short)f;
if (along != (unsigned long)-123)
    result |= 1;
if (aint != (unsigned int)-123)
    result |= 1;
if (ashort != (unsigned short)-123)
    result |= 1;
f = (double)0x40000000;
f = f + f;
along = 0;
along = (unsigned long)f;
if
(along != 0x80000000)
    result |= 2;
f -= 1.;
along = 0;
along = (unsigned long)f;
if (along != 0x7fffffff)
    result |= 1;
f += 2.;
along = 0;
along = (unsigned long)f;
if (along != 0x80000001)
    result |= 2;
if (result)
    exit(result);

```

?X:

?X: The following is a test for Interactive Unix Version 4.1, which

?X: has an 'improved' compiler which can correctly cast negative

?X: floats in expression lists, but apparently not in argument lists.

?X: Contributed by Winfried Koenig <win@incom.rhein-main.de>

?X:

```

signal(SIGFPE, blech_in_list);
f = 123.;
along = dummy_long((unsigned long)f);
aint = dummy_int((unsigned int)f);
ashort = dummy_short((unsigned short)f);
if (along != (unsigned long)123)
    result |= 4;
if (aint != (unsigned int)123)
    result |= 4;
if (ashort != (unsigned short)123)
    result |= 4;
exit(result);

```

```

}
EOCP
if $cc $ccflags -o try try.c >/dev/null 2>&1; then
./try
castflags=$?
else
echo "(I can't seem to compile the test program--assuming it can't)"
castflags=7
fi
case
"$scastflags" in
0) val="$define"
echo "Yup, it can."
;;
*) val="$undef"
echo "Nope, it can't."
;;
esac
set d_castneg
eval $setvar
$rm_try

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_castneg.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_getppid.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Original Author: Andy Dougherty <doughera@lafcol.lafayette.edu>

?RCS:

?RCS: \$Log: d\_getppid.U,v \$

?RCS: Revision 3.0.1.1 1994/08/29 16:07:45 ram

?RCS: patch32: created by ADO

?RCS:

?MAKE:d\_getppid: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_getppid:

?S: This variable conditionally defines the HAS\_GETPPID symbol, which

?S: indicates to the C program that the getppid() routine is available

?S: to get the parent process ID.  
?S:.  
?C:HAS\_GETPPID :  
?C: This symbol,  
if defined, indicates that the getppid routine is  
?C: available to get the parent process ID.  
?C:.  
?H:#\$d\_getppid HAS\_GETPPID /\*\*/  
?H:.  
?LINT:set d\_getppid  
: see if getppid exists  
set getppid d\_getppid  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_getppid.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: i\_syspoll.U 15 2006-08-30 18:21:51Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
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?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?MAKE:i\_syspoll: Inhdr  
?MAKE:-pick add \$@ %<  
?S:i\_syspoll:  
?S: This variable conditionally defines the I\_SYS\_POLL symbol, which  
?S: indicates to the C program that it should include <sys/poll.h>.  
?S:.  
?C:I\_SYS\_POLL:  
?C: This symbol, if defined, indicates that the program may include  
?C: <sys/poll.h>. When I\_POLL is also defined, it's probably safest  
?C: to only include <poll.h>.  
?C:.  
?H:#\$i\_syspoll I\_SYS\_POLL /\*\*/  
?H:.  
?LINT:set i\_syspoll  
: see if there is  
a sys/poll.h file  
set sys/poll.h i\_syspoll  
eval \$inhdr



Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/i\_syspoll.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: vendorarch.U,v 1.1 1999/07/08 18:32:57 doughera Exp doughera \$

?RCS:

?RCS: Copyright (c) 1999, Andy Dougherty

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?RCS: of the source tree for dist 3.0.

?RCS:

?RCS: \$Log: vendorarch.U,v \$

?RCS: Revision 1.1 1999/07/08 18:32:57 doughera

?RCS: Initial revision

?RCS:

?MAKE:d\_vendorarch vendorarch vendorarchexp installvendorarch: sed Getfile \  
Setprefixvar Oldconfig Prefixit archname vendorlib vendorprefix test

?MAKE: -pick add \$@ %<

?Y:TOP

?S:vendorarch:

?S: This variable contains the value of the PERL\_VENDORARCH symbol.

?S: It may have a ~ on the front.

?S: The standard distribution will put nothing in this directory.

?S: Vendors

who distribute perl may wish to place their own

?S: architecture-dependent modules and extensions in this directory with

?S: MakeMaker Makefile.PL INSTALLDIRS=vendor

?S: or equivalent. See INSTALL for details.

?S:.

?S:vendorarchexp:

?S: This variable is the ~name expanded version of vendorarch, so that you

?S: may use it directly in Makefiles or shell scripts.

?S:.

?D:installvendorarch="

?S:installvendorarch:

?S: This variable is really the same as vendorarchexp but may differ on

?S: those systems using AFS. For extra portability, only this variable

?S: should be used in makefiles.

?S:.

?S:d\_vendorarch:

?S: This variable conditionally defined PERL\_VENDORARCH.

?S:.

?C:PERL\_VENDORARCH:

?C: If defined, this symbol contains the name of a private library.

?C: The library is private in the sense that it needn't be in anyone's  
?C: execution path, but it should be accessible by the world.  
?C: It may have a ~ on the front.  
?C: The standard distribution will put nothing in this  
directory.  
?C: Vendors who distribute perl may wish to place their own  
?C: architecture-dependent modules and extensions in this directory with  
?C: MakeMaker Makefile.PL INSTALLDIRS=vendor  
?C: or equivalent. See INSTALL for details.  
?C:.  
?C:PERL\_VENDORARCH\_EXP:  
?C: This symbol contains the ~name expanded version of PERL\_VENDORARCH, to be used  
?C: in programs that are not prepared to deal with ~ expansion at run-time.  
?C:.  
?H:#\$d\_vendorarch PERL\_VENDORARCH "\$vendorarch" /\*\*/  
?H:#\$d\_vendorarch PERL\_VENDORARCH\_EXP "\$vendorarchexp" /\*\*/  
?H:.  
?LINT:change prefixvar  
?LINT:set installvendorarch  
: Set the vendorarch variables  
case "\$vendorprefix" in  
") d\_vendorarch="\$undef"  
vendorarch="  
vendorarchexp="  
;;  
\*) d\_vendorarch="\$define"  
: determine where vendor-supplied architecture-dependent libraries go.  
: vendorlib default is /usr/local/lib/perl5/vendor\_perl/\$version  
: vendorarch default is /usr/local/lib/perl5/vendor\_perl/\$version/\$archname  
: vendorlib may have an optional trailing  
/share.  
case "\$vendorarch" in  
") dflt=`echo \$vendorlib | \$sed 's,/share\$,,'`  
dflt="\$dflt/\$archname"  
;;  
\*) dflt="\$vendorarch" ;;  
esac  
fn=d~+  
rp='Pathname for vendor-supplied architecture-dependent files?'  
. ./getfile  
vendorarch="\$ans"  
vendorarchexp="\$ansexp"  
;;  
esac  
prefixvar=vendorarch  
. ./installprefix  
if \$test X"\$vendorarch" = X"\$vendorlib"; then  
d\_vendorarch="\$undef"

```
else
d_vendorarch="$define"
fi
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/installdirs/vendorarch.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id\$

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: Copyright (c) 2000, Jarkko Hietaniemi

?RCS:

?MAKE:gccversion gccosandvers: cat cpp rm +cc \

Myread Guess Options Oldconfig Loc osname osvers grep run ccname

?MAKE: -pick add \$@ %<

?S:gccversion:

?S: If GNU cc (gcc) is used, this variable holds '1' or '3' (for instance)

?S: to indicate whether the compiler is version 1 or 3. This is used in

?S: setting some of the default cflags. It is set to " if not gcc.

?S:.

?S:gccosandvers:

?S: If GNU cc (gcc) is used, this variable the operating system and

?S: version

used to compile the gcc. It is set to " if not gcc,

?S: or if nothing useful can be parsed as the os version.

?S:.

?T:gccshortvers incdir d

?F:!try.c !try

?LINT:extern locincpth ccflags ldflags

?LINT:change locincpth ccname cpp

: Check whether they have gcc in any guise.

echo " "

echo "Checking for GNU cc in disguise and/or its version number..." >&4

\$cat >try.c <<EOM

#include <stdio.h>

int main() {

#ifdef \_\_GNUC\_\_

#ifdef \_\_VERSION\_\_

printf("%s\n", \_\_VERSION\_\_);

```

#else
printf("%s\n", "1");
#endif
#endif
exit(0);
}
EOM
if $cc -o try $ccflags $ldflags try.c >/dev/null 2>&1; then
gccversion=`$run ./try`
case "$gccversion" in
") echo "You are not using GNU cc." ;;
*) echo "You are using GNU cc $gccversion."
ccname=gcc
;;
esac
else
echo " "
echo "*** WHOA THERE!!! ***" >&4
echo " Your C compiler \"$cc\" doesn't seem to be working!" >&4
?X: using -K will prevent aborting--maybe they're cross compiling?
case "$knowitall" in
")
echo " You'd better
start hunting for one and let me know about it." >&4
exit 1
;;
esac
fi
$rm -f try try.*
case "$gccversion" in
1*) cpp=`./loc gcc-cpp $cpp $pth` ;;
esac
case "$gccversion" in
") gccosandvers=" ;;
*) gccshortvers=`echo "$gccversion"|sed 's/ .*//`
gccosandvers=`$cc -v 2>&1 | \
$grep '/specs$'|sed "s!.*/[^-]*-[^-/*-([^-/*-)]/$gccshortvers/specs!|1!"`
gccshortvers="
case "$gccosandvers" in
$name) gccosandvers=" ;; # linux gccs seem to have no linux osvers, grr
$name$osvers) ;; # looking good
$name*) cat <<EOM >&4

*** WHOA THERE!!! ***

Your gcc has not been compiled for the exact release of
your operating system ($gccosandvers versus $osname$osvers).

```

In general it is a good idea to keep gcc synchronized with the operating system because otherwise serious problems may ensue when trying to compile software, like Perl.

I'm trying to be optimistic here, though, and will continue. If later during the configuration and build icky compilation problems appear (headerfile conflicts being the most common manifestation), I suggest reinstalling the gcc to match your operating system release.

EOM

```
;;
*) gccosandvers=" ;; # failed to parse, better be silent
esac
;;
esac
case "$ccname" in
") ccname="$cc" ;;
esac

: gcc 3.1 complains about adding -Idirectories that it already knows about,
: so we will take those off from locincpth.
case "$gccversion" in
3*)
    echo "main(){}">try.c
    for indir in `gcc -v -c try.c 2>&1 | \
        sed '1,/^\#include <\\.\\.\\.>/d;/^End of search list,$d;s/^ //'` ; do
        locincpth=`echo $locincpth | sed s!$indir!!`
    done
    $rm -f try try.*
esac
```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/gccvers.U
```

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: Null.U 1 2006-08-24 12:32:52Z rmanfredi \$

?RCS:

?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi

?RCS:

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?RCS: of the source tree for dist 4.0.

?RCS:

?RCS: \$Log: Null.U,v \$  
?RCS: Revision 3.0 1993/08/18 12:05:10 ram  
?RCS: Baseline for dist 3.0 netwide release.  
?RCS:  
?X:  
?X: This unit ends up producing shell code to set all variables to ". This  
?X: probably isn't necessary, but I'm paranoid. About certain things.  
?X:  
?MAKE:Null: Head  
?MAKE: -pick add.Null \$@ %<

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Null.U

No license file was found, but licenses were detected in source scan.

?RCS: \$Id: d\_pwritev.U 1 2006-08-24 12:32:52Z rmanfredi \$  
?RCS:  
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi  
?RCS:  
?RCS: You may redistribute only under the terms of the Artistic Licence,  
?RCS: as specified in the README file that comes with the distribution.  
?RCS: You may reuse parts of this distribution only within the terms of  
?RCS: that same Artistic Licence; a copy of which may be found at the root  
?RCS: of the source tree for dist 4.0.  
?RCS:  
?RCS: \$Log: d\_pwritev.U,v \$  
?RCS:  
?MAKE:d\_pwritev: Inlibc  
?MAKE: -pick add \$@ %<  
?S:d\_pwritev:  
?S: This variable conditionally defines the HAS\_PWRITEV symbol, which  
?S: indicates to the C program that the pwritev() routine is available.  
?S:.  
?C:HAS\_PWRITEV :  
?C: This symbol, if defined, indicates that the pwritev routine is  
?C: available to perform vectored writes on a file descriptor at a  
?C: given offset.  
?C:.  
?H:#\$d\_pwritev HAS\_PWRITEV /\*\*/  
?H:.  
?LINT:set  
d\_pwritev  
: see if pwritev exists  
set pwritev d\_pwritev  
eval \$inlibc

Found in path(s):

\* /opt/cola/permits/2097687669\_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d\_pwritev.U

No license file was found, but licenses were detected in source scan.

```
?RCS: $Id: d_brokstat.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: d_brokstat.U,v $
?RCS: Revision 3.0.1.1 1997/02/28 15:30:53 ram
?RCS: patch61: created
?RCS:
?MAKE:d_brokstat: cat contains cppstdin cppminus +cppflags rm Setvar
?MAKE: -pick add $@ %<
?S:d_brokstat:
?S: This variable conditionally defines STAT_MACROS_BROKEN if some
?S: of the S_IS*() macros from <sys/stat.h> give false positive on
?S: regular files.
?S:
?C:STAT_MACROS_BROKEN:
?C: This symbol, if defined, indicates that the S_IS*() stat macros
?C: such
?C: as S_ISBLK() give false positive and are thus unusable.
?C: Your best bet is then to supply your own set.
?C:
?H:#$d_brokstat STAT_MACROS_BROKEN /**/
?H:
?F:!try.c !try
?LINT:set d_brokstat
?LINT:usefile try
?X: This test inspired by autoconf -- RAM, 28/02/97
: are stat macros sane?
echo " "
echo "Checking whether your stat() macros are broken..."
$cat >try.c <<'EOC'
#include <sys/types.h>
#include <sys/stat.h>

#if defined(S_ISBLK) && defined(S_IFDIR)
#if S_ISBLK(S_IFDIR)
Broken
#endif
```

```

#endif

#if defined(S_ISBLK) && defined(S_IFCHR)
#if S_ISBLK(S_IFCHR)
Broken
#endif
#endif

#if defined(S_ISLNK) && defined(S_IFREG)
#if S_ISLNK(S_IFREG)
Broken.
#endif
#endif

#if defined(S_ISSOCK) && defined(S_IFREG)
#if S_ISSOCK(S_IFREG)
Broken.
#endif
#endif
EOC
$cpptest $cpptestflags $cpptestminus <try.c 2>/dev/null >try
if $contains Broken try >/dev/null 2>&1; then
echo "Alas, they are. I'll use my own macro set then." >&4
val="$define"
else
echo "Nope, working just fine." >&4
val="$undef"
fi
$rm
-f try try.c
set d_brokstat
eval $setvar

```

Found in path(s):

```
* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/d_brokstat.U
```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: nblock_io.U,v 3.0.1.2 1997/02/28 16:17:14 ram Exp $
?RCS:
?RCS: Copyright (c) 1991-1993, Raphael Manfredi
?RCS:
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?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic License; a copy of which may be found at the root
?RCS: of the source tree for dist 3.0.
?RCS:

```



?RCS: \$Log: nblock\_io.U,v \$  
?RCS: Revision 3.0.1.2 1997/02/28 16:17:14 ram  
?RCS: patch61: simplify here document for shells that can't handle them well  
?RCS: patch61: force use of "startsh" at the head of the generated script  
?RCS: patch61: added new files to the ?F: metalint hint  
?RCS:  
?RCS: Revision 3.0.1.1 1995/07/25 14:13:22 ram  
?RCS: patch56: created  
?RCS:  
?X:  
?X: Simplify here document for shells that can't handle them well.  
?X: (Problem reported on FreeBSD;  
it's unclear if this helps.) --AD  
?X:  
?MAKE:o\_nonblock eagain rd\_nodata d\_eofnblk: cat rm\_try Compile run \  
d\_open3 h\_sysfile h\_fcntl signal\_t hint Oldconfig Setvar \  
startsh i\_unistd i\_fcntl i\_stdlib d\_fork d\_pipe d\_alarm  
?MAKE: -pick add \$@ %<  
?S:o\_nonblock:  
?S: This variable bears the symbol value to be used during open() or fcntl()  
?S: to turn on non-blocking I/O for a file descriptor. If you wish to switch  
?S: between blocking and non-blocking, you may try ioctl(FIOSNBIO) instead,  
?S: but that is only supported by some devices.  
?S:.  
?S:eagain:  
?S: This variable bears the symbolic errno code set by read() when no  
?S: data is present on the file and non-blocking I/O was enabled (otherwise,  
?S: read() blocks naturally).  
?S:.  
?S:rd\_nodata:  
?S: This variable holds the return code from read() when no data is  
?S: present. It should be -1, but some systems return 0 when O\_NDELAY is  
?S: used, which is a shame because you cannot make the difference between  
?S: no data and an EOF.. Sigh!  
?S:.  
?S:d\_eofnblk:  
?S: This  
variable conditionally defines EOF\_NONBLOCK if EOF can be seen  
?S: when reading from a non-blocking I/O source.  
?S:.  
?C:VAL\_O\_NONBLOCK:  
?C: This symbol is to be used during open() or fcntl(F\_SETFL) to turn on  
?C: non-blocking I/O for the file descriptor. Note that there is no way  
?C: back, i.e. you cannot turn it blocking again this way. If you wish to  
?C: alternatively switch between blocking and non-blocking, use the  
?C: ioctl(FIOSNBIO) call instead, but that is not supported by all devices.  
?C:.  
?C:VAL\_EAGAIN:

?C: This symbol holds the errno error code set by read() when no data was

?C: present on the non-blocking file descriptor.

?C:.

?C:RD\_NODATA:

?C: This symbol holds the return code from read() when no data is present

?C: on the non-blocking file descriptor. Be careful! If EOF\_NONBLOCK is

?C: not defined, then you can't distinguish between no data and EOF by

?C: issuing a read(). You'll have to find another way to tell for sure!

?C:.

?C:EOF\_NONBLOCK:

?C: This

symbol, if defined, indicates to the C program that a read() on

?C: a non-blocking file descriptor will return 0 on EOF, and not the value

?C: held in RD\_NODATA (-1 usually, in that case!).

?C:.

?H:#define VAL\_O\_NONBLOCK \$o\_nonblock

?H:#define VAL\_EAGAIN \$eagain

?H:#define RD\_NODATA \$rd\_nodata

?H:#\$d\_eofnblk EOF\_NONBLOCK

?H:.

?T:status

?F:!try.out !try.ret !try.err !try !mtry

?LINT:use d\_open3

: check for non-blocking I/O stuff

case "\$h\_sysfile" in

true) echo "#include <sys/file.h>" > head.c;;

\*)

case "\$h\_fcntl" in

true) echo "#include <fcntl.h>" > head.c;;

\*) echo "#include <sys/fcntl.h>" > head.c;;

esac

::

esac

echo " "

echo "Figuring out the flag used by open() for non-blocking I/O..." >&4

case "\$o\_nonblock" in

")

\$cat head.c > try.c

\$cat >>try.c <<EOCP

#include <stdio.h>

#\$i\_stdlib I\_STDLIB

#ifdef I\_STDLIB

#include <stdlib.h>

#endif

#\$i\_fcntl I\_FCNTL

#ifdef I\_FCNTL

#include <fcntl.h>

#endif

```

int main() {
#ifdef O_NONBLOCK
printf("O_NONBLOCK\n");
exit(0);
#endif
#ifdef
O_NDELAY
printf("O_NDELAY\n");
exit(0);
#endif
?X: Stevens "Advanced Programming in the UNIX Environment" page 364 mentions
?X: the FNDELAY symbol, used in 4.3BSD (source: Paul Marquess).
#ifdef FNDELAY
printf("FNDELAY\n");
exit(0);
#endif
exit(0);
}
EOCP
set try
if eval $compile_ok; then
o_nonblock=`$run ./try`
case "$o_nonblock" in
") echo "I can't figure it out, assuming O_NONBLOCK will do.";;
*) echo "Seems like we can use $o_nonblock.";;
esac
else
echo "(I can't compile the test program; pray O_NONBLOCK is right!)"
fi
;;
*) echo "Using $hint value $o_nonblock.";;
esac
$rm_try

echo " "
echo "Let's see what value errno gets from read() on a $o_nonblock file..." >&4
case "$$again" in
")
case "$d_fork:$d_pipe:$d_alarm" in
define:define:define)
$cat head.c > try.c
$cat >>try.c <<EOCP
#include <errno.h>
#include <sys/types.h>
#include <signal.h>
#include <stdio.h>
#$i_stdlib I_STDLIB
#ifdef I_STDLIB

```

```

#include <stdlib.h>
#endif
#$i_fcntl
I_FCNTL
#ifdef I_FCNTL
#include <fcntl.h>
#endif
#define MY_O_NONBLOCK $o_nonblock
#ifndef errno /* XXX need better Configure test */
extern int errno;
#endif
#$i_unistd I_UNISTD
#ifdef I_UNISTD
#include <unistd.h>
#endif
#include <string.h>
$signal_t blech(int x) { exit(3); }
EOCP
$cat >> try.c <<'EOCP'
int main()
{
int pd[2];
int pu[2];
char buf[1];
char string[100];
int ret;

ret = pipe(pd); /* Down: child -> parent */
if (ret != 0)
exit(3);
ret = pipe(pu); /* Up: parent -> child */
if (ret != 0)
exit(3);
if (0 != fork()) {
close(pd[1]); /* Parent reads from pd[0] */
close(pu[0]); /* Parent writes (blocking) to pu[1] */
#ifdef F_SETFL
if (-1 == fcntl(pd[0], F_SETFL, MY_O_NONBLOCK))
exit(1);
#else
exit(4);
#endif
signal(SIGALRM, blech);
alarm(5);
if ((ret = read(pd[0], buf, 1)) > 0) /* Nothing to read! */
exit(2);
sprintf(string, "%d\n", ret);
ret = write(2, string, strlen(string));

```

```

if (ret != strlen(string))
    exit(3);
alarm(0);
#ifdef
EAGAIN
if (errno == EAGAIN) {
    printf("EAGAIN\n");
    goto ok;
}
#endif
#ifdef EWOULDBLOCK
if (errno == EWOULDBLOCK)
    printf("EWOULDBLOCK\n");
#endif
ok:
ret = write(pu[1], buf, 1); /* Unblocks child, tell it to close our pipe */
if (ret != 1)
    exit(3);
sleep(2); /* Give it time to close our pipe */
alarm(5);
ret = read(pd[0], buf, 1); /* Should read EOF */
alarm(0);
sprintf(string, "%d\n", ret);
ret = write(4, string, strlen(string));
if (ret != strlen(string))
    exit(3);
exit(0);
}

close(pd[0]); /* We write to pd[1] */
close(pu[1]); /* We read from pu[0] */
ret = read(pu[0], buf, 1); /* Wait for parent to signal us we may continue */
if (ret != 1)
    exit(3);
close(pd[1]); /* Pipe pd is now fully closed! */
exit(0); /* Bye bye, thank you for playing! */
}
EOCP
set try
if eval $compile_ok; then
?X: Use script to avoid the possible 'alarm call' message
echo "$startsh" >mtry
echo "$run ./try >try.out 2>try.ret 4>try.err
|| exit 4" >>mtry
chmod +x mtry
$run ./mtry >/dev/null 2>&1
case $? in
0) eagain=`$cat try.out`;

```

```

1) echo "Could not perform non-blocking setting!";;
2) echo "I did a successful read() for something that was not there!";;
3) echo "Hmm... non-blocking I/O does not seem to be working!";;
4) echo "Could not find F_SETFL!";;
*) echo "Something terribly wrong happened during testing.";;
esac
rd_nodata=`$cat try.ret`
echo "A read() system call with no data present returns $rd_nodata."
case "$rd_nodata" in
0|-1) ;;
*)
echo "(That's peculiar, fixing that to be -1.)"
rd_nodata=-1
;;
esac
case "$eagain" in
")
echo "Forcing errno EAGAIN on read() with no data available."
eagain=EAGAIN
;;
*)
echo "Your read() sets errno to $eagain when no data is available."
;;
esac
status=`$cat try.err`
case "$status" in
0) echo "And it correctly returns 0 to signal EOF.";;
-1) echo "But it also returns -1 to signal EOF, so be careful!";;
*)
echo "However, your read() returns '$status' on EOF??";;
esac
val="$define"
if test "$status" = "$rd_nodata"; then
echo "WARNING: you can't distinguish between EOF and no data!"
val="$undef"
fi
else
echo "I can't compile the test program--assuming errno EAGAIN will do."
eagain=EAGAIN
fi
;;
*) echo "Can't figure out how to test this--assuming errno EAGAIN will do."
eagain=EAGAIN
val="$define"
;;
esac
set d_eofnblk
eval $setvar

```

```

;;
*)
echo "Using $hint value $again."
echo "Your read() returns $rd_nodata when no data is present."
case "$d_eofnblk" in
"$define") echo "And you can see EOF because read() returns 0.";;
"$undef") echo "But you can't see EOF status from read() returned value.";;
*)
?X: Should not happen, but if it does, assume the worst!
echo "(Assuming you can't see EOF status from read anyway.)"
d_eofnblk=$undef
;;
esac
;;
esac
$rm_try head.c mtry

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/compline/nblock_io.U

```

No license file was found, but licenses were detected in source scan.

```

?RCS: $Id: Mkdirp.U 1 2006-08-24 12:32:52Z rmanfredi $
?RCS:
?RCS: Copyright (c) 1991-1997, 2004-2006, Raphael Manfredi
?RCS:
?RCS: You may redistribute only under the terms of the Artistic Licence,
?RCS: as specified in the README file that comes with the distribution.
?RCS: You may reuse parts of this distribution only within the terms of
?RCS: that same Artistic Licence; a copy of which may be found at the root
?RCS: of the source tree for dist 4.0.
?RCS:
?RCS: $Log: Extract.U,v $
?RCS: Revision 3.0.1.2 1997/02/28 14:58:52 ram
?RCS: patch61: added support for src.U
?RCS:
?RCS: Revision 3.0.1.1 1994/10/29 15:51:46 ram
?RCS: patch36: added ?F: line for metalint file checking
?RCS:
?RCS: Revision 3.0 1993/08/18 12:04:52 ram
?RCS: Baseline for dist 3.0 netwide release.
?RCS:
?X:
?X: This unit produces a shell script which can launched to create a
?X: directory path like "mkdir -p" would do.
?X:
?MAKE:Mkdirp:

```

```

eunicefix startsh
?MAKE: -pick add $@ %<
?F:./mkdirp
?T:name create file
: script used to emulate mkdir -p
cat >mkdirp <<EOS
$startsh
EOS
cat >>mkdirp <<'EOS'
name=$1;
create="";
while test $name; do
if test ! -d "$name"; then
create="$name $create"
name=`echo $name | sed -e "s|^[^]*$||"`
name=`echo $name | sed -e "s|(.*).*/.*|1|"`
else
name=""
fi
done
for file in $create; do
mkdir $file
done
EOS
chmod +x mkdirp
$eunicefix mkdirp

```

Found in path(s):

```

* /opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/dist/U/Mkdirp.U

```

No license file was found, but licenses were detected in source scan.

?RCS: You may distribute under the terms of either the GNU General Public

?RCS: License or the Artistic License, as specified in the README file.

?RCS:

?MAKE:d\_fpgetround: Inlibc

?MAKE: -pick add \$@ %<

?S:d\_fpgetround:

?S: This variable conditionally defines HAS\_FPGETROUND if fpgetround()

?S: is available to get the floating point rounding mode.

?S:.

?C:HAS\_FPGETROUND:

?C: This symbol, if defined, indicates that the fpgetround routine is

?C: available to get the floating point rounding mode.

?C:.

?H:#\$d\_fpgetround HAS\_FPGETROUND /\*\*/

?H:.

?LINT:set d\_fpgetround



```
: see if fpgetround exists
set fpgetround d_fpgetround
eval $inlibc
```

Found in path(s):

```
*/opt/cola/permits/2097687669_1721037131.3497503/0/perl-5-38-2-orig-regen-configure-1-tar-xz/metaconfig-5.38.0/U/perl/d_fpgetround.U
```

## 1.30 iconv 2.39

### 1.30.1 Available under license :

```
@c The GNU Lesser General Public License.
@center Version 2.1, February 1999
```

```
@c This file is intended to be included within another document,
@c hence no sectioning command or @node.
```

```
@display
```

```
Copyright @copyright{ } 1991, 1999 Free Software Foundation, Inc.
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA
```

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[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

```
@end display
```

```
@subheading Preamble
```

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This license, the Lesser General Public License, applies to some specially designated software---typically

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We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

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Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

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When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative

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For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a ``work based on the library" and a ``work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

@subheading TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

@enumerate 0

@item

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A ``library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

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``Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

@item

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@item

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distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

@enumerate a

@item

The modified work must itself be a software library.

@item

You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

@item

You must

cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

@item

If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

@end enumerate

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@item

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This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

@item

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If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

@item

A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a ``work that uses the Library''. Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a ``work that uses the Library'' with the Library

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

@item

As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

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@enumerate a

@item

Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under

Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable ``work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

@item

Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

@item

Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

@item

If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

@item

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## 1.31 libcap-ng 0.8.4-2build2

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```
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```

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```
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```

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```
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`Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

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Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

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ASM: a very small and fast Java bytecode manipulation framework

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```
# COPYING.other                -*- org -*-
#+TITLE: List of code with permissive licenses as used by GnuPG.
#+STARTUP: showall
```

\* DNS resolver (dirmngr/dns.c)

dns.c - Recursive, Reentrant DNS Resolver.

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\* Regular  
expression support

regexp/jimregexp.[ch]:

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Subsequently modified by:



1986 John Gilmore hoptoad!gnu  
1987 James A. Woods ames!jaw  
1993 Christopher Seiwald seiwald@vix.com  
2000, 2002 Christopher Seiwald <seiwald@perforce.com>  
2010 Steve Bennett <steveb@workware.net.au>  
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regex/utf8.[ch] (see regex/LICENSE):

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# 1.36 libgpg-error 1.47-3build2

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## 1.37 brotli 1.1.0-2build2

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## 1.38 cdebconf 0.271ubuntu3

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Comment: CDebConf includes ideas and code from:

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hostname -- set the host name or show the host/domain name

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## 1.46 findutils 4.9.0-5build1

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## 1.47 gzip 1.12-1ubuntu3

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## 1.51 diffutils 3.10-1build1

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## 1.54 coreutils 9.4-3ubuntu6

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## 1.61 grep 3.11-4build1

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-- \$Id: COPYING,v 1.13 2024/01/05 21:13:17 tom Exp \$

## 1.66 bash 5.2.21-2ubuntu4

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- cipher/sha256-avx-amd64.S
- cipher/sha256-avx2-bmi2-amd64.S
- cipher/sha256-ssse3-amd64.S
- cipher/sha512-avx-amd64.S
- cipher/sha512-avx2-bmi2-amd64.S
- cipher/sha512-ssse3-amd64.S
- cipher/sha512-ssse3-i386.c

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- random/jitterentropy-gcd.c
- random/jitterentropy-gcd.h
- random/jitterentropy-health.c
- random/jitterentropy-health.h
- random/jitterentropy-noise.c
- random/jitterentropy-noise.h
- random/jitterentropy-sha3.c
- random/jitterentropy-sha3.h
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## 1.68 selinux 3.5-2ubuntu2

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We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many



libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

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"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

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This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

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Otherwise, if the work is a derivative of the Library, you may distribute the

object code for the work under the terms of Section 6.

Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany

the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

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ready to extend this provision to those domains in future versions of the GPL, as needed to protect the freedom of users.

Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

The precise terms and conditions for copying, distribution and modification follow.

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The

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Julian Seward, jseward@bzip.org  
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## 1.76 pcre 10.42-4ubuntu2

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# 1.77 libxcrypt 4.4.36-4build1

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Version 3, 29 June 2007

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## END OF TERMS AND CONDITIONS

### Appendix: How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>  
Copyright (C) 19yy <name of author>
```

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Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
Gnomovision version 69, Copyright (C) 19yy name of author  
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.  
This is free software, and you are welcome to redistribute it  
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

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<signature of Ty Coon>, 1 April 1989  
Ty Coon, President of Vice

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[This is the first released version of the library GPL. It is numbered 2 because it goes with version 2 of the ordinary GPL.]

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Because of this blurred distinction, using the ordinary General Public License for libraries did not effectively promote software sharing, because most developers did not use the libraries. We concluded that weaker conditions might promote sharing better.

However, unrestricted linking of non-free programs would deprive the users of those programs of all benefit from the free status of the libraries themselves. This Library General Public License is intended to permit developers of non-free programs to use free libraries, while preserving your freedom as a user of such programs to change the free libraries that are incorporated in them. (We have not seen how to achieve this as regards changes in header files, but we have achieved it as regards changes in the actual functions of the Library.) The hope is that this will lead to faster development of free libraries.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, while the latter only works together with the library.

Note that it is possible for a library to be covered by the ordinary General Public License rather than by this special one.

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

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This option is useful when you wish to copy part of the code of the Library into a program that is not a library.



4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also compile or

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```
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<name of author>
```

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```
<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice
```

That's all there is to it!

```
/*
```

```
* Marko Kiiskila carnil@cs.tut.fi
```

```
*
```

```
* Tampere University of Technology - Telecommunications Laboratory
```

```
*
```

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## 1.84 elfutils 0.190-1.1build4

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```
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Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute
it
under certain conditions; type `show c' for details.
```

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```
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```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

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## 1.91 cron 3.0pl1-184ubuntu2

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```
* /opt/cola/permits/2134359468_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/Makefile
```

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# * Paul Vixie <paul@vix.com> uunet!decwrl!vixie!paul
# */
```

Vixie Cron V3.0  
December 27, 1993

[V2.2 was some time in 1992]

[V2.1 was May 29, 1991]

[V2.0 was July 5, 1990]

[V2.0-beta

was December 9, 1988]

[V1.0 was May 6, 1987]

Paul Vixie

This is a version of 'cron' that is known to run on BSD 4.[23] systems. It is functionally based on the SysV cron, which means that each user can have their own crontab file (all crontab files are stored in a read-protected directory, usually /var/cron/tabs). No direct support is provided for 'at'; you can continue to run 'atrun' from the crontab as you have been doing. If you don't have atrun (i.e., System V) you are in trouble.

A messages is logged each time a command is executed; also, the files "allow" and "deny" in /var/cron can be used to control access to the "crontab" command (which installs crontabs). It hasn't been tested on SysV, although some effort has gone into making the port an easy one.

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To use this: Sorry, folks, there is no cutesy 'Configure' script. You'll have to go edit a couple of files... So, here's the checklist:

Read all the FEATURES, INSTALL, and CONVERSION files

Edit config.h

Edit Makefile

(both of these files have instructions inside; note that some things in config.h are definable in Makefile and are therefore surrounded by #ifndef...#endif)

'make'

'su' and 'make install'

(you may have to install the man pages by hand)

kill your existing cron process

(actually you can run your existing cron if you want, but why?)

build new crontabs using /usr/lib/{crontab,crontab.local}

(either put them all in "root"'s crontab, or divide it up and rip out all the 'su' commands, collapse the lengthy lists into

ranges with steps -- basically, this step is

as much work as you want to make it)

start up the new cron  
(must be done as root)  
watch it. test it with 'crontab -r' and watch the daemon track your  
changes.  
if you like it, change your /etc/{rc,rc.local} to use it instead of  
the old one.

\$Id: README,v 2.3 1993/12/28 08:34:43 vixie Exp \$

Found in path(s):

\* /opt/cola/permits/2134359468\_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/README  
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\* /opt/cola/permits/2134359468\_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/crontab.5  
\* /opt/cola/permits/2134359468\_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/cron.8  
\* /opt/cola/permits/2134359468\_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/crontab.1  
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\*/

Found in path(s):

\* /opt/cola/permits/2134359468\_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/crontab.c  
\*  
/opt/cola/permits/2134359468\_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/cron.c  
\* /opt/cola/permits/2134359468\_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/misc.c  
\* /opt/cola/permits/2134359468\_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/entry.c  
\* /opt/cola/permits/2134359468\_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/job.c  
\* /opt/cola/permits/2134359468\_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/env.c  
\* /opt/cola/permits/2134359468\_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/cron.h

```
* /opt/cola/permits/2134359468_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/database.c
* /opt/cola/permits/2134359468_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/do_command.c
* /opt/cola/permits/2134359468_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/compat.c
* /opt/cola/permits/2134359468_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/user.c
*
/opt/cola/permits/2134359468_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/config.h
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```

Found in path(s):

```
* /opt/cola/permits/2134359468_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/bitstring.3
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```

```
/*
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*
*/
```

Found in path(s):

```
* /opt/cola/permits/2134359468_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/popen.c
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```

```
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*
* Send bug reports, bug fixes, enhancements, requests, flames, etc., and
* I'll try to keep a version up to date. I can be reached as follows:
* Paul Vixie <paul@vix.com> uunet!decwrl!vixie!paul
*/
```

\$Id: INSTALL,v 2.5 1994/01/15 20:43:43 vixie Exp \$

Read the comments at the top of the Makefile, then edit the area marked 'configurable stuff'.

Edit config.h. The stuff I expect you to change is down a bit from the top of the file, but it's clearly marked. Also look at pathnames.h.

You don't have to create the /var/cron or /var/cron/tabs directories, since both the daemon and the `crontab' program will do this the first time they run if they don't exist. You do need to have a /var, though -- just "mkdir /var" if you don't have one, or you can "mkdir /usr/var; ln -s /usr/var /var" if you expect your /var to have a lot of stuff in it.

You will also need /usr/local/etc and /usr/local/bin directories unless you change the Makefile. These will have to be created by hand, but if you are a long-time Usenet user you probably have them already. /usr/local/man is where I keep my man pages, but I have the source for `man' and you probably do not. Therefore you may have to put the man pages into /usr/man/man1, which will be hard since there will be name collisions. (Note that the man command was originally written by Bill Joy before he left Berkeley, and it contains no AT&T code, so it is in UUNET's archive of freely-distributable BSD code.)

LINUX note: /usr/include/paths.h on some linux systems shows \_PATH\_SENDMAIL to be /usr/bin/sendmail even though sendmail is installed in /usr/lib. you should check this out.

say:

make all

su and say:

make install

Note that if I can get you to "su and say" something just by asking, you have a very serious security problem on your system and you should look into it.

Edit your /usr/lib/crontab file into little pieces -- see the CONVERSION file for help on this.

Use the `crontab' command to install all the little pieces you just created. Some examples (see below before trying any of these!)

```
crontab -u uucp -r /usr/lib/uucp/crontab.src
crontab -u news -r /usr/lib/news/crontab.src
crontab -u root -r /usr/adm/crontab.src
```

Notes on above examples: (1) the .src files are copied at the time the command is issued; changing the source files later will have no effect until they are reinstalled with another `crontab -r' command. (2) The crontab command will affect the crontab of the person using the command unless `USER' is given; `-u' only works for root. When using most `su' commands under most BSD's, `crontab' will still think of you as yourself even though you may think of yourself as root -- so use `-u' liberally. (3) the `-r' option stands for `replace'; check the man page for crontab(1) for other possibilities.

Kill your existing cron daemon -- do `ps aux' and look for /etc/cron.

Edit your /etc/rc or /etc/rc.local, looking for the line that starts up /etc/cron. Comment it out and add a line to start the new cron daemon -- usually /usr/local/etc/cron, unless you changed it in the Makefile.

Start up this cron daemon yourself as root. Just type /usr/local/etc/cron (or whatever); no '&' is needed since the daemon forks itself and the process you executed returns immediately.

ATT notes: for those people unfortunate enough to be stuck on a AT&T UNIX, you will need the public-domain "libndir", found in the B News source and in any comp.sources.unix archive. You will also need to hack the code some.

Found in path(s):

```
* /opt/cola/permits/2134359468_1722972136.795163/0/cron-3-0p11-orig-1-tar-gz/cron-3.0p11.orig/INSTALL
```

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*
* Send bug reports, bug fixes, enhancements, requests, flames, etc., and
* I'll try to keep a version up to date. I can be reached as follows:
* Paul Vixie <paul@vix.com> uunet!decwrl!vixie!paul
*/
```

Found in path(s):

```
*/opt/cola/permits/2134359468_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/compat.h
*/opt/cola/permits/2134359468_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/externs.h
*/
/opt/cola/permits/2134359468_1722972136.795163/0/cron-3-0pl1-orig-1-tar-gz/cron-3.0pl1.orig/pathnames.h
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```

```
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*
* @(#)bitstring.h 5.2
(Berkeley) 4/4/90
*/
```

Found in path(s):

## 1.92 netifaces 0.11.0-2build3

### 1.92.1 Available under license :

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## 1.93 efivar 38-3.1build1

### 1.93.1 Available under license :

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Version 2.1, February 1999

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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Section 6 states terms for distribution of such executables.

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Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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## 1.94 ssh-import-id 5.11-0ubuntu2

### 1.94.1 Available under license :

Format: <http://www.debian.org/doc/packaging-manuals/copyright-format/1.0/>

Upstream-Name: ssh-import-id

Source: <http://launchpad.net/ssh-import-id>

Upstream-Contact: Dustin Kirkland <[kirkland@ubuntu.com](mailto:kirkland@ubuntu.com)>

Files: \*

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Allbery, Russ  
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Andrew, Nick  
Andric, Dimitry  
Barron, Danny  
Bates, Tom  
Behan, Zdenk  
Bellis, Ray  
Benali, Elias  
Beverly, Jamie  
Boardman, Spider

Bos, Sander  
Bostley, P.J.  
Bowes, Keith  
Boyce, Keith Garry  
Brantley, Michael  
Braun, Rob  
Bezina, Pavel  
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Burton, Ross  
Bussjaeger, Andreas  
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ek, Vtzslav  
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Earickson, Jeff  
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Edgington, Ben  
Esipovich, Marc  
Espie, Marc  
Faigon,  
Ariel  
Farrell, Brian  
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Frysinger, Mike  
G., Daniel Richard  
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Gelman, Stephen  
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Hayman, Randy M.  
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Hideaki, Yoshifuji  
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Hoover, Adam  
Hunter, Michael T.  
Hutchings, Ben  
Irrgang, Eric  
Jackson, Brian

Jackson, John R.  
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Kadow, Kevin  
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Kienenberger, Mike  
King, Dale  
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Knox, Tim  
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Kondrashov, Nikolai  
Kopeek, Daniel  
Kranenburg, Paul  
Krause, David  
Lakin, Eric  
Larsen, Case  
Levin, Dmitry V.  
Libby, Kendall  
Lobbes, Phillip E.  
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MacKenzie, David J.  
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Morris, Charles  
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The following people have worked to translate sudo into other languages as part of the Translation Project, see <https://translationproject.org> for more details.

Albuquerque, Pedro  
Blttermann, Mario  
Bogusz, Jakub  
Buo-ren, Lin

Casagrande, Milo  
Castro, Felipe  
Cho, Seong-ho  
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Fontenelle, Rafael  
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Hamming, Peter  
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Jerovek, Damir  
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## 1.97 libxcb 1.15-1ubuntu2

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```
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it
under certain conditions; type `show c' for details.
```

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necessary. Here is a sample; alter the names:

```
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```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

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# 1.99 liblocale-gettext-perl 1.07-6ubuntu5

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Locale::gettext  
version 1.07

This is a perl5 module quickly written to gain access to the C library functions for internationalization. They work just like the C versions.

As of version 1.04, an object oriented interface more suitable to native Perl programs is available.

Locale::gettext is Copyright 1996..2005 by Kim Vandry <vandry@TZoNE.ORG>. All rights reserved.

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Changes

-----

1.07 Fix test failures caused by \$LANGUAGE being set

1.06 Bugfix: #104667 Makefile.PL libraries need to be listed after .o files  
Bugfix: #104668 ensure availability of locale API, correct typo in documentation  
Add META.yml (Fixes #91921)

1.05 Bugfix: [cpan #13042] useless #ifdef should be #if  
Bugfix: [cpan #13044] make test fails when using POSIX locale

1.04 Add several  
functions provided by the GNU gettext library  
Create object oriented interface

1.03 Fix error in README file

1.02 Include a License

1.01 Changed from "gettext" to "Locale::gettext" (i.e. moved under Locale::) on the advice of several people

Small "lint" fix from schwern@starmedia.net

1.00 Initial version

TODO

----

A TIEHASH interface

Here's a quick tutorial.

-----

Note that your vendor's implementation of these functions may be a bit different, but I think that in general these are quite standard POSIX functions.

Kim Vandry <vandry@TZoNE.ORG>  
Mlink Internet <<http://www.Mlink.NET>>  
July 1996

## INTERNATIONALIZING YOUR PROGRAM

Step 1

-----

If you've already written your code, you need to wrap the `gettext()` function around all of the text strings. Needless to say, this is much easier if you do it while you write.

```
# create object for oo interface
my $d = Locale::gettext->domain("my_program");

print "Welcome to my program\n";

# oo
print $d->get("Welcome
to my program"), "\n";

# traditional
print gettext("Welcome to my program"), "\n";
```

Note that you probably don't want to include that newline in the `gettext()` call, nor any formatting codes such as HTML tags. The argument to `gettext()` is the text string in the default language or locale. This is known as the C locale and should probably be usually English.

Step 2

-----

Do the appropriate initializations at the beginning of your program:

```
#
use POSIX; # for setlocale()
use Locale::gettext;
#
# The following statement initializes the locale handling
# code in the C library. Normally, it causes it to read
# in the environment variables that determine the current
# locale.
#
# The first parameter is the category you would
# like to initialize locale information for. You can use
# LC_ALL for this, which will set locale information for
# all categories, including LC_CTYPE, LC_TIME, LC_NUMERIC,
# etc..
#
# I recommend that you set only LC_MESSAGES (text strings)
# or LC_CTYPE (character
sets) and LC_TIME (time
# conventions) too at most. You may find that if you set
# LC_NUMERIC or some other categories, you will start
# outputting decimal numbers with strange thousand separators
# and decimal points and they will be unparseable in
# other countries.
#
# The second parameter is the locale name. If it is an
# empty string, then this information will be fetched from
# environment variables.
#
# Note that setlocale() will cause every part of your
# program to start operating in the new, non default (C)
# locale, including C library functions. So don't be
# surprised if POSIX::ctime returns "Montag, 22. Juli 1996,
# 12:08:25 Uhr EDT" instead of "Mon Jul 22 12:08:25 EDT 1996"
# If you set LC_TIME or LC_ALL using setlocale().
#
setlocale(LC_MESSAGES, "");
#
# Decide on a unique identifier that will distinguish your
# program's text strings in the LC_MESSAGES database. This
# would usually be the name of your program
#
# By default, locale information is found in OS dependant
#
```

```
system directories such as /usr/lib/locale, or any directory
# found in the $PATH-like environment variable $NLSPATH.
# I recommend that you do _not_ install files in /usr. If
# your program is installed in a directory tree such as
# /opt/my_package_name/{bin,man,lib,etc}, then you could
# use /opt/my_package_name/locale to store locale information
# specific to your program, or you could put in somewhere
# in /usr/local/lib.
#
# Wherever you put it, if it is not one of the default
# directories, you will need to call bindtextdomain() to
# tell the library where to find your files. The first
# parameter is your database's identifier that you chose
# above.
#
# oo interface:
```

```
my $d = Locale::gettext->domain("my_domain");
$d->dir("/opt/my_package_name/locale");
```

```
# traditional interface:
bindtextdomain("my_domain", "/opt/my_package_name/locale");
textdomain("my_domain");
```

```
# That's it for the initializations
```

Step 3

-----

Test to see if your program still works after all these  
mods :-)

Step 4

-----

TRANSLATE!

Read msgfmt(1) for details on this. Basically, for each locale  
other than the default, you need to create a file like this:  
(Note: I do not speak German, I'm making an attempt here :-)  
Call this file with the .po extension.

```
--BEGIN
```

```
domain "my_domain"
```

```
msgid "Welcome to my program"
```

```
msgstr "Willkommen in mein Program"
```

```
msgid "Help"
msgstr "Hilfe"
--END
```

The "msgid" parameter must match exactly the argument to the gettext() function, and "msgstr" is the corresponding translation.

You can use the xgettext(1) utility to initially construct this file from all of the gettext() calls in your source code. It was designed for C but it works OK with perl.

#### Step 5

-----

Compile the .po file

```
$ msgfmt my_file.po
```

This will create a file called my\_domain.mo (default messages.mo) which you should place in the <locale>/LC\_MESSAGES/my\_domain.mo subdirectory of either a system default directory, a directory in \$NLSPATH, or the directory argument to bindtextdomain().

Replace

<locale> with the name of the locale for which this file is created.

For example:

```
$ mkdir -p /opt/my_package/locale/de/LC_MESSAGES
$ mkdir -p /opt/my_package/locale/fr/LC_MESSAGES
$ cd /path/to/my/source/code
$ cd de
$ msgfmt my_domain.po
$ mv my_domain.mo /opt/my_package/locale/de/LC_MESSAGES
$ cd ../fr
$ msgfmt my_domain.po
$ mv my_domain.mo /opt/my_package/locale/fr/LC_MESSAGES
```

#### Step 6

-----

Test it out

```
$ my_program
Welcome to my program
$ LANG=fr my_program
Bienvenue à mon programme
$ LANG=de my_program
```

Willkommen in mein Program

(Or, set only the messages category instead of the whole locale)

```
$ LC_MESSAGES=fr
$ export LC_MESSAGES
$ my_program
Bienvenue à mon programme
```

Found in path(s):

```
* /opt/cola/permits/2134359543_1722972696.6335032/0/liblocale-gettext-perl-1-07-orig-1-tar-gz/Locale-gettext-1.07/README
```

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---

abstract: 'Perl bindings for POSIX i18n gettext functions'

author:

- 'Kim Vandry <vandry.ORG>'

build\_requires:

ExtUtils::MakeMaker: 0

configure\_requires:

ExtUtils::MakeMaker: 0

dynamic\_config: 1

generated\_by: 'ExtUtils::MakeMaker version 6.66, CPAN::Meta::Converter version 2.120921'

license: perl

meta-spec:

url: <http://module-build.sourceforge.net/META-spec-v1.4.html>

version: 1.4

name: Locale-gettext

no\_index:

directory:

- t

- inc

requires: {}

resources:

license: <http://dev.perl.org/licenses/>

repository: <https://github.com/vandry/Perl-Locale-gettext>

version: 1.07

Found in path(s):

```
* /opt/cola/permits/2134359543_1722972696.6335032/0/liblocale-gettext-perl-1-07-orig-1-tar-gz/Locale-gettext-1.07/META.yml
```

# 1.100 distro-info-data 0.60ubuntu0.1



## 1.100.1 Available under license :

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Upstream-Name: distro-info-data

Upstream-Contact: Benjamin Drung <bdrung@debian.org>

Files: \*

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# 1.101 markupsafe 2.1.5-1build2

## 1.101.1 Available under license :

No license file was found, but licenses were detected in source scan.

Metadata-Version: 2.1

Name: MarkupSafe

Version: 2.1.5

Summary: Safely add untrusted strings to HTML/XML markup.

Home-page: <https://palletsprojects.com/p/markupsafe/>

Maintainer: Pallets

Maintainer-email: [contact@palletsprojects.com](mailto:contact@palletsprojects.com)

License: BSD-3-Clause

Project-URL: Donate, <https://palletsprojects.com/donate>

Project-URL: Documentation, <https://markupsafe.palletsprojects.com/>

Project-URL: Changes, <https://markupsafe.palletsprojects.com/changes/>

Project-URL: Source Code, <https://github.com/pallets/markupsafe/>

Project-URL: Issue Tracker, <https://github.com/pallets/markupsafe/issues/>

Project-URL: Chat, <https://discord.gg/pallets>

Classifier: Development Status :: 5 - Production/Stable

Classifier: Environment :: Web Environment

Classifier: Intended Audience :: Developers

Classifier: License :: OSI Approved :: BSD License

Classifier: Operating System :: OS Independent

Classifier: Programming Language :: Python

Classifier: Topic

:: Internet :: WWW/HTTP :: Dynamic Content  
Classifier: Topic :: Text Processing :: Markup :: HTML  
Requires-Python: >=3.7  
Description-Content-Type: text/x-rst  
License-File: LICENSE.rst

## MarkupSafe

=====

MarkupSafe implements a text object that escapes characters so it is safe to use in HTML and XML. Characters that have special meanings are replaced so that they display as the actual characters. This mitigates injection attacks, meaning untrusted user input can safely be displayed on a page.

## Installing

-----

Install and update using `pip`\_:

.. code-block:: text

```
pip install -U MarkupSafe
```

.. \_pip: <https://pip.pypa.io/en/stable/getting-started/>

## Examples

-----

.. code-block:: pycon

```
>>> from markupsafe import Markup, escape
```

```
>>> # escape replaces special characters and wraps in Markup
```

```
>>> escape("<script>alert(document.cookie);</script>")
```

```
Markup('&lt;script&gt;alert(document.cookie);&lt;/script&gt;')
```

```
>>> # wrap in Markup to mark text "safe"
```

and prevent escaping

```
>>> Markup("<strong>Hello</strong>")
```

```
Markup('<strong>hello</strong>')
```

```
>>> escape(Markup("<strong>Hello</strong>"))
```

```
Markup('<strong>hello</strong>')
```

```
>>> # Markup is a str subclass
```

```
>>> # methods and operators escape their arguments
>>> template = Markup("Hello <em>{name}</em>")
>>> template.format(name="World")
Markup('Hello <em>&#34;World&#34;</em>')
```

## Donate

-----

The Pallets organization develops and supports MarkupSafe and other popular packages. In order to grow the community of contributors and users, and allow the maintainers to devote more time to the projects, `please donate today`\_.

.. \_please donate today: <https://palletsprojects.com/donate>

## Links

-----

- Documentation: <https://markupsafe.palletsprojects.com/>
- Changes: <https://markupsafe.palletsprojects.com/changes/>
- PyPI Releases: <https://pypi.org/project/MarkupSafe/>
- Source Code: <https://github.com/pallets/markupsafe/>
- Issue Tracker: <https://github.com/pallets/markupsafe/issues/>
- 
- Chat: <https://discord.gg/pallets>

Found in path(s):

```
* /opt/cola/permits/2134360165_1722973081.976578/0/markupsafe-2-1-5-orig-tar-gz/MarkupSafe-2.1.5/src/MarkupSafe.egg-info/PKG-INFO
```

```
* /opt/cola/permits/2134360165_1722973081.976578/0/markupsafe-2-1-5-orig-tar-gz/MarkupSafe-2.1.5/PKG-INFO
```

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[metadata]

name = MarkupSafe

version = attr: markupsafe.\_\_version\_\_

url = <https://palletsprojects.com/p/markupsafe/>

project\_urls =

Donate = <https://palletsprojects.com/donate>

Documentation = <https://markupsafe.palletsprojects.com/>

Changes = <https://markupsafe.palletsprojects.com/changes/>

Source Code = <https://github.com/pallets/markupsafe/>

Issue Tracker = <https://github.com/pallets/markupsafe/issues/>

Chat = <https://discord.gg/pallets>

license = BSD-3-Clause

license\_files = LICENSE.rst

```
maintainer = Pallets
maintainer_email = contact@palletsprojects.com
description = Safely add untrusted strings to HTML/XML markup.
long_description = file: README.rst
long_description_content_type = text/x-rst
classifiers =
  Development Status :: 5 - Production/Stable
  Environment :: Web Environment
  Intended Audience :: Developers
  License :: OSI Approved :: BSD License
  Operating System :: OS Independent
  Programming Language ::
  Python
  Topic :: Internet :: WWW/HTTP :: Dynamic Content
  Topic :: Text Processing :: Markup :: HTML
```

```
[options]
```

```
packages = find:
package_dir = = src
include_package_data = True
python_requires = >= 3.7
```

```
[options.packages.find]
```

```
where = src
```

```
[tool:pytest]
```

```
testpaths = tests
filterwarnings =
  error
```

```
[coverage:run]
```

```
branch = True
source =
  markupsafe
  tests
```

```
[coverage:paths]
```

```
source =
  src
  */site-packages
```

```
[flake8]
```

```
select = B, E, F, W, B9, ISC
ignore =
  E203
  E501
  E722
  W503
```

B905

max-line-length = 80

[mypy]

files = src/markupsafe

python\_version = 3.7

show\_error\_codes = True

disallow\_subclassing\_any = True

disallow\_untyped\_calls = True

disallow\_untyped\_defs = True

disallow\_incomplete\_defs = True

no\_implicit\_optional = True

local\_partial\_types = True

no\_implicit\_reexport = True

strict\_equality = True

warn\_redundant\_casts = True

warn\_unused\_configs = True

warn\_unused\_ignores = True

warn\_return\_any = True

warn\_unreachable = True

[egg\_info]

tag\_build =

tag\_date = 0

Found in path(s):

\*

/opt/cola/permits/2134360165\_1722973081.976578/0/markupsafe-2-1-5-orig-tar-gz/MarkupSafe-2.1.5/setup.cfg

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Found in path(s):

\* /opt/cola/permits/2134360165\_1722973081.976578/0/markupsafe-2-1-5-orig-tar-gz/MarkupSafe-2.1.5/LICENSE.rst

# 1.102 python-requests 2.31.0+dfsg-1ubuntu1

## 1.102.1 Available under license :

Requests

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Version 2.0, January 2004

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## 1.103 gawk 5.2.1-2build3

### 1.103.1 Available under license :

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Version 2, June 1991

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## 1.104 rsync 3.2.7-1ubuntu1

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# 1.105 Im-sensors 3.6.0-9build1

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- \* Frodo Looijaard  
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- \* Merlin Hughes  
Original author of sensord.
- \* Bob Schlaermann  
Dynamic chip feature detection (a.k.a. generic chip support) in libsensors and sensors.
- \* Mark M. Hoffman

Many improvements to the libsensors configuration file scanner.  
\* Jean Delvare  
New libsensors API, and migration of sensors and sensor there to.  
Many optimizations in libsensors and sensors.  
Configuration file converter.  
Rewrite of sensors-detect.  
Support for multiple configuration files in libsensors.

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# 1.110 jansson 2.14-2build2

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This software embodiment is an implementation of

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Assignee: Esri.

Assignors/Inventors: Maurer, Thomas (Redlands, CA); Gao, Peng (Redlands, CA); Becker, Peter (Redlands, CA).

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# 1.115 less 590-2ubuntu2.1

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# 1.118 grub2 2.12-1ubuntu7

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Finally, every program is threatened constantly by software patents. States should not allow patents to restrict development and use of software on general-purpose computers, but in those that do, we wish to avoid the special danger that patents applied to a free program could make it effectively proprietary. To prevent this, the GPL assures that patents cannot be used to render the program non-free.

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fontconfig/fc-case/CaseFolding.txt

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/\*

\* Mutex operations. Originally copied from HarfBuzz.

\*

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fontconfig/src/fcfoundry.h

/\*

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\*/

-----  
fontconfig/src/cmd5.h

/\*

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\* The algorithm is due to Ron Rivest. This code was  
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\*  
\* Equivalent code is available from RSA Data Security, Inc.  
\* This code has been tested against that, and is equivalent,  
\* except that you don't need to include two pages of legalese  
\* with every copy.  
\*  
\* To compute the message digest of a chunk of bytes, declare an  
\* MD5Context structure, pass it to MD5Init, call MD5Update  
\* as  
\* needed on buffers full of bytes, and then call MD5Final, which  
\* will fill a supplied 16-byte array with the digest.  
\*/

-----  
fontconfig/src/fcmutex.h

/\*

\* Atomic int and pointer operations. Originally copied from HarfBuzz.  
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-----  
fontconfig/src/ftglue.[ch]

/\* ftglue.c: Glue code for compiling the OpenType code from

\* FreeType 1 using only the public API of FreeType 2

\*

\* By David Turner, The FreeType Project (www.freetype.org)

\*

\* This code is explicitly put in the public domain

\*

\* =====

\*

\* the OpenType

parser codes was originally written as an extension to

\* FreeType 1.x. As such, its source code was embedded within the library,

\* and used many internal FreeType functions to deal with memory and

\* stream i/o.

\*

\* When it was 'salvaged' for Pango and Qt, the code was "ported" to FreeType 2,

\* which basically means that some macro tricks were performed in order to

\* directly access FT2 \_internal\_ functions.

\*

\* these functions were never part of FT2 public API, and `_did_` change between  
\* various releases. This created chaos for many users: when they upgraded the  
\* FreeType library on their system, they couldn't run Gnome anymore since  
\* Pango refused to link.  
\*  
\* Very fortunately, it's possible to completely avoid this problem because  
\* the `FT_StreamRec` and `FT_MemoryRec` structure types, which describe how  
\* memory and stream implementations interface with the rest of the font  
\* library, have always been part of the public API, and never changed.  
\*  
\* What we do  
\* thus is re-implement, within the OpenType parser, the few  
\* functions that depend on them. This only adds one or two kilobytes of  
\* code, and ensures that the parser can work with `_any_` version  
\* of FreeType installed on your system. How sweet... !  
\*  
\* Note that we assume that Pango doesn't use any other internal functions  
\* from FreeType. It used to in old versions, but this should no longer  
\* be the case. (crossing my fingers).  
\*  
\* - David Turner  
\* - The FreeType Project ([www.freetype.org](http://www.freetype.org))  
\*  
\* PS: This "glue" code is explicitly put in the public domain  
\*/

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## 1.121 libdrm 2.4.120-2build1

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*   Gareth Hughes <gareth@valinux.com>
*   Keith Whitwell <keith@tungstengraphics.com>
*/
```

Found in path(s):

```
*/opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/include/drm/radeon_drm.h
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2.4.120/omap/omap\_drm.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/omap/omap\_drm.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/omap/omap\_drmif.h

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2.4.120/freedreno/freedreno\_bo\_cache.c

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\* Authors: Ben Skeggs  
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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/nouveau/bufctx.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/nouveau/pushbuf.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/nouveau/abi16.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/nouveau/nouveau.c

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2.4.120/radeon/radeon\_cs.h

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2.4.120/include/drm/sis\_drm.h

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```
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/vc4/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/meson_options.txt
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/tests/amdgpu/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/tests/tegra/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/etnaviv/meson.build
*
/opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/nouveau/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/man/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/tests/modetest/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/tests/vbltest/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/amdgpu/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/data/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/intel/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/tests/radeon/meson.build
*
/opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/omap/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/tests/etnaviv/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/tegra/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/tests/nouveau/meson.build
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
```

2.4.120/tests/modeprint/meson.build  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/util/meson.build  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/meson.build  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/exynos/meson.build  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/exynos/meson.build  
\*  
/opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/proptest/meson.build  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/freedreno/meson.build  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/meson.build  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
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2.4.120/include/drm/drm\_mode.h

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```
/* mga_drm.h -- Public header for the Matrox g200/g400 driver -*- linux-c -*-
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*/opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
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2.4.120/etnaviv/etnaviv\_perfmom.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/amdgpu/handle\_table.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/etnaviv/etnaviv\_bo\_cache.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/etnaviv/etnaviv\_bo.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tmtest/src/xf86dri.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tmtest/src/xf86dri.h

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/etnaviv/state.xml.h

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/amdgpu/frame.h

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/amdgpu/vce\_ib.h

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/\* xf86drmHash.c -- Small hash table support for integer -> integer mapping

\* Created: Sun Apr 18 09:35:45 1999 by faith@precisioninsight.com

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\*  
\* Authors: Rickard E. (Rik) Faith <faith@valinux.com>  
\*  
\* DESCRIPTION  
\*  
\* This file contains a straightforward implementation of a fixed-sized  
\* hash table using self-organizing linked lists [Knuth73, pp. 398-399] for  
\* collision resolution. There are two potentially interesting things  
\* about this implementation:  
\*  
\* 1) The table is power-of-two sized. Prime sized tables are more  
\* traditional, but do not have a significant advantage over power-of-two  
\* sized table, especially when double hashing is not used for collision  
\* resolution.  
\*  
\* 2) The hash computation  
uses a table of random integers [Hanson97,  
\* pp. 39-41].  
\*  
\* FUTURE ENHANCEMENTS  
\*  
\* With a table size of 512, the current implementation is sufficient for a  
\* few hundred keys. Since this is well above the expected size of the  
\* tables for which this implementation was designed, the implementation of  
\* dynamic hash tables was postponed until the need arises. A common (and  
\* naive) approach to dynamic hash table implementation simply creates a  
\* new hash table when necessary, rehashes all the data into the new table,  
\* and destroys the old table. The approach in [Larson88] is superior in  
\* two ways: 1) only a portion of the table is expanded when needed,  
\* distributing the expansion cost over several insertions, and 2) portions  
\* of the table can be locked, enabling a scalable thread-safe  
\* implementation.  
\*  
\* REFERENCES

\*  
\* [Hanson97] David R. Hanson. C Interfaces and Implementations:  
\* Techniques for Creating Reusable Software. Reading, Massachusetts:  
\* Addison-Wesley, 1997.  
\*  
\* [Knuth73] Donald E. Knuth. The Art of Computer Programming. Volume 3:  
\* Sorting and Searching. Reading, Massachusetts: Addison-Wesley, 1973.  
\*  
\* [Larson88] Per-Ake Larson. "Dynamic Hash Tables". CACM 31(4), April  
\* 1988, pp. 446-457.  
\*  
\*/

Found in path(s):

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/xf86drmHash.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/hash.c  
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/\* exynos\_drm.h

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\* Authors:

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\* Joonyoung Shim <jy0922.shim@samsung.com>

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/amdgpu/amdgpu\_gpu\_info.c

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2.4.120/amdgpu/amdgpu.h

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/amdgpu/amdgpu\_cs.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/amdgpu/amdgpu\_vamgr.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/amdgpu/amdgpu\_device.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
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```
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*
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*
* Authors: Rickard E. (Rik) Faith <faith@valinux.com>
*
* DESCRIPTION
*
* This file contains a simple, straightforward implementation of the Park
* & Miller "Minimal Standard" PRNG [PM88, PMS93], which is a Lehmer
* multiplicative linear congruential generator (MLCG) with a period of
*  $2^{31}-1$ .
*
* This implementation is intended to provide a reliable, portable PRNG
* that is suitable for testing a hash table implementation and for
* implementing skip lists.
*
* FUTURE ENHANCEMENTS
*
* If initial seeds are not selected randomly, two instances of the PRNG
* can be correlated.
* [Knuth81, pp. 32-33] describes a shuffling technique
* that can eliminate this problem.
*
```

\* If PRNGs are used for simulation, the period of the current  
\* implementation may be too short. [LE88] discusses methods of combining  
\* MLCGs to produce much longer periods, and suggests some alternative  
\* values for A and M. [LE90 and Sch92] also provide information on  
\* long-period PRNGs.

\*

#### \* REFERENCES

\*

\* [Knuth81] Donald E. Knuth. The Art of Computer Programming. Volume 2:  
\* Seminumerical Algorithms. Reading, Massachusetts: Addison-Wesley, 1981.

\*

\* [LE88] Pierre L'Ecuyer. "Efficient and Portable Combined Random Number  
\* Generators". CACM 31(6), June 1988, pp. 742-774.

\*

\* [LE90] Pierre L'Ecuyer. "Random Numbers for Simulation". CACM 33(10,  
\* October 1990, pp. 85-97.

\*

\* [PM88] Stephen K. Park and Keith W. Miller. "Random Number Generators:  
\* Good Ones are Hard to Find". CACM 31(10), October 1988, pp. 1192-1201.

\*

\* [Sch92] Bruce Schneier. "Pseudo-Ransom Sequence  
\* Generator for 32-Bit

\* CPUs". Dr. Dobbs's Journal 17(2), February 1992, pp. 34, 37-38, 40.

\*

\* [PMS93] Stephen K. Park, Keith W. Miller, and Paul K. Stockmeyer. In  
\* "Technical Correspondence: Remarks on Choosing and Implementing Random  
\* Number Generators". CACM 36(7), July 1993, pp. 105-110.

\*

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/xf86drmRandom.c

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2.4.120/tests/amdgpu/basic\_tests.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/amdgpu/amdgpu\_test.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/amdgpu/bo\_tests.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/amdgpu/cs\_tests.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/util\_math.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/amdgpu/amdgpu\_test.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/etnaviv/etnaviv\_priv.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/etnaviv/etnaviv\_2d\_test.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/etnaviv/etnaviv\_cmd\_stream.c  
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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/amdgpu/syncobj\_tests.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-



2.4.120/tests/amdgpu/uvd\_enc\_tests.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-

2.4.120/tests/amdgpu/vm\_tests.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-

2.4.120/tests/amdgpu/uve\_ib.h

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-

2.4.120/tests/amdgpu/ras\_tests.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-

2.4.120/tests/amdgpu/vcn\_tests.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-

2.4.120/tests/amdgpu/deadlock\_tests.c

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2.4.120/include/drm/nouveau\_drm.h

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2.4.120/amdgpu/amdgpu\_asic\_id.c

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/\* xf86drmSL.c -- Skip list support

\* Created: Mon May 10 09:28:13 1999 by faith@precisioninsight.com

\*

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\*

\* Authors: Rickard E. (Rik) Faith <faith@valinux.com>

\*

\* DESCRIPTION

\*

\* This file contains a straightforward skip list implementation.n

\*

\* FUTURE ENHANCEMENTS

\*

\* REFERENCES

\*

\* [Pugh90] William Pugh. Skip Lists: A Probabilistic Alternative to

\* Balanced Trees. CACM 33(6), June 1990, pp. 668-676.

\*

\*/

Found in path(s):

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/xf86drmSL.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-

2.4.120/intel/intel\_decode.c

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\* DRM based mode setting test program

\* Copyright (C) 2013 Red Hat

\* Author: Rob Clark <robdclark@gmail.com>

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2.4.120/tests/modetest/cursor.c

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\* sync abstraction

\* Copyright 2015-2016 Collabora Ltd.

\*

\* Based on the implementation from the Android Open Source Project,

\*

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/vic-flip.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/vic41.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/host1x.h

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/vic.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/vic.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/vic41.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/vic30.c  
\*  
/opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/vic42.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/syncpt-timeout.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/syncpt-wait.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/vic30.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/vic-clear.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/vic40.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/vic42.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/vic-blit.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/etnaviv/write\_bmp.h

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tegra/private.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tegra/job.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tegra/tegra.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tegra/pushbuf.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/exynos/exynos\_fimg2d\_event.c

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\* Arm Framebuffer Compression (AFBC) modifiers

\*

\* AFBC is a proprietary lossless image compression protocol and format.  
\* It provides fine-grained random access and minimizes the amount of data  
\* transferred between IP blocks.

\*

\* AFBC has several features which may be supported and/or used, which are  
\* represented using bits in the modifier. Not all combinations are valid,  
\* and different devices or use-cases may support different combinations.

\*

\* Further information on the use of AFBC modifiers can be found in  
\* Documentation/gpu/afbc.rst

\*/

/\*

\* Arm Fixed-Rate Compression (AFRC) modifiers

\*

\* AFRC is a proprietary fixed rate image compression protocol and format,  
\* designed to provide guaranteed bandwidth and memory footprint

\* reductions  
in graphics and media use-cases.

\*

\* AFRC buffers consist of one or more planes, with the same components  
and meaning as an uncompressed buffer using the same pixel format.

\*

\* Within each plane, the pixel/luma/chroma values are grouped into  
"coding unit" blocks which are individually compressed to a  
fixed size (in bytes). All coding units within a given plane of a buffer  
store the same number of values, and have the same compressed size.

\*

\* The coding unit size is configurable, allowing different rates of compression.

\*

\* The start of each AFRC buffer plane must be aligned to an alignment granule which  
depends on the coding unit size.

\*

\* Coding Unit Size    Plane Alignment  
\* -----    -----  
\* 16 bytes            1024 bytes  
\* 24 bytes            512 bytes  
\* 32 bytes            2048 bytes

\*

\* Coding units are grouped into paging tiles. AFRC buffer dimensions must be aligned  
to a multiple of the paging tile dimensions.

\* The dimensions  
of each paging tile depend on whether the buffer is optimised for  
scanline (SCAN layout) or rotated (ROT layout) access.

\*

\* Layout    Paging Tile Width    Paging Tile Height  
\* -----    -----    -----  
\* SCAN    16 coding units    4 coding units  
\* ROT    8 coding units    8 coding units

\*

\* The dimensions of each coding unit depend on the number of components  
in the compressed plane and whether the buffer is optimised for  
scanline (SCAN layout) or rotated (ROT layout) access.

\*

\* Number of Components in Plane    Layout    Coding Unit Width    Coding Unit Height  
\* -----    -----    -----    -----  
\* 1                                    SCAN    16 samples    4 samples  
\* Example: 16x4 luma samples in a 'Y' plane  
\*            16x4 chroma 'V' values, in the 'V' plane of a fully-planar YUV buffer

\* -----    -----    -----    -----  
\* 1  
\*                                    ROT    8 samples    8 samples  
\* Example: 8x8 luma samples in a 'Y' plane  
\*            8x8 chroma 'V' values, in the 'V' plane of a fully-planar YUV buffer  
\* -----    -----    -----    -----

```

* 2          DONT CARE  8 samples    4 samples
* Example: 8x4 chroma pairs in the 'UV' plane of a semi-planar YUV buffer
* -----
* 3          DONT CARE  4 samples    4 samples
* Example: 4x4 pixels in an RGB buffer without alpha
* -----
* 4          DONT CARE  4 samples    4 samples
* Example: 4x4 pixels in an RGB buffer with alpha
*/
/*
* Amlogic Video Framebuffer Compression modifiers
*
* Amlogic uses a proprietary lossless image compression protocol and format
* for their hardware video codec accelerators, either video decoders or
* video input encoders.
*
* It considerably reduces memory bandwidth while writing and reading
* frames in memory.
*
* The underlying storage is considered to be 3 components, 8bit or 10-bit
* per component YCbCr 420, single plane :
* - DRM_FORMAT_YUV420_8BIT
* - DRM_FORMAT_YUV420_10BIT
*
* The first 8 bits of the mode defines the layout, then the following 8 bits
* defines the options changing the layout.
*
* Not all combinations are valid, and different SoCs may support different
* combinations of layout and options.
*/
/*
* 64K_S is the same for GFX9/GFX10/GFX10_RBPLUS and hence has GFX9 as canonical
* version.
*/

```

Found in path(s):

```

* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-
2.4.120/include/drm/drm_fourcc.h

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\* Christian Gmeiner <christian.gmeiner@gmail.com>  
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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/etnaviv/etnaviv\_cmd\_stream\_test.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/etnaviv/etnaviv\_gpu.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/freedreno/msm/msm\_bo.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/freedreno/kgsl/kgsl\_priv.h

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/freedreno/kgsl/kgsl\_pipe.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/freedreno/msm/msm\_pipe.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/freedreno/kgsl/kgsl\_ringbuffer.c

\*

/opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/freedreno/kgsl/kgsl\_device.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/freedreno/msm/msm\_device.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/freedreno/kgsl/kgsl\_bo.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/freedreno/msm/msm\_ringbuffer.c

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2.4.120/tests/amdgpu/shader\_code\_gfx9.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/amdgpu/shader\_code\_hang.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/amdgpu/shader\_code.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/amdgpu/cp\_dma\_tests.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/amdgpu/shader\_code\_gfx11.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/amdgpu/shader\_code\_gfx10.h  
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 2.4.120/radeon/radeon\_bo.h  
 \* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
 2.4.120/radeon/radeon\_cs\_gem.c

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Contributing to libdrm

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Submitting Patches

-----

Patches should be sent to dri-devel@lists.freedesktop.org, using git  
 send-email. For patches only touching driver specific code one of the driver  
 mailing lists (like amd-gfx@lists.freedesktop.org) is also appropriate. See git  
 documentation for help:

<http://git-scm.com/documentation>

Since dri-devel is a very busy mailing list please use --subject-prefix="PATCH  
 libdrm" to make it easier to find libdrm patches. This is best done by running

git config --local format.subjectprefix "PATCH libdrm"



The first line of a commit message should contain a prefix indicating what part is affected by the patch followed by one sentence that describes the change. For examples:

```
amdgpu: Use uint32_t i in amdgpu_find_bo_by_cpu_mapping
```

The body of the commit message should describe what the patch changes and why, and also note any particular side effects. For a recommended reading on writing commit messages, see:

<http://who-t.blogspot.de/2009/12/on-commit-messages.html>

Your patches should also include a Signed-off-by line with your name and email address. If you're not the patch's original author, you should also gather S-o-b's by them (and/or whomever gave the patch to you.) The significance of this is that it certifies that you created the patch, that it was created under an appropriate open source license, or provided to you under those terms. This lets us indicate a chain of responsibility for the copyright status of the code. For more details:

<https://developercertificate.org/>

We won't reject patches that lack S-o-b, but it is strongly recommended.

#### Review and Merging

-----

Patches should have at least one positive review (Reviewed-by: tag) or indication of approval (Aked-by: tag) before merging. For any code shared between drivers this is mandatory.

Please note that kernel/userspace API header files have special rules, see [include/drm/README](#).

Coding style in the project loosely follows the CodingStyle of the linux kernel:

<https://www.kernel.org/doc/html/latest/process/coding-style.html?highlight=coding%20style>

#### Commit Rights

-----

Commit rights will be granted to anyone who requests them and fulfills the below criteria:

- Submitted a few (5-10 as a rule of thumb) non-trivial (not just simple

spelling fixes and whitespace adjustment) patches that have been merged already. Since libdrm is just a glue library between the kernel and userspace drivers, merged patches to those components also count towards the commit criteria.

- Are actively participating on discussions about their work (on the mailing list or IRC). This should not be interpreted as a requirement to review other peoples patches but just make sure that patch submission isn't one-way communication. Cross-review is still highly encouraged.

- Will be regularly contributing further patches. This includes regular contributors to other parts of the open source graphics stack who only do the oddball rare patch within libdrm itself.

- Agrees to use their commit rights in accordance with the documented merge criteria, tools, and processes.

To apply for commit rights ("Developer" role in gitlab) send a mail to [dri-devel@lists.freedesktop.org](mailto:dri-devel@lists.freedesktop.org) and please ping the maintainers if your request is stuck.

Committers are encouraged to request their commit rights get removed when they no longer contribute to the project. Commit rights will be reinstated when they come back to the project.

Maintainers and committers should encourage contributors to request commit rights, as especially junior contributors tend to underestimate their skills.

#### Code of Conduct

-----

Please be aware the fd.o Code of Conduct also applies to libdrm:

<https://www.freedesktop.org/wiki/CodeOfConduct/>

See the gitlab project owners for contact details of the libdrm maintainers.

#### Abuse of commit

rights, like engaging in commit fights or willfully pushing patches that violate the documented merge criteria, will also be handled through the Code of Conduct enforcement process.

Happy hacking!

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2.4.120/android/gralloc\_handle.h

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\* Authors:

\* Paulo Zandoni <paulo.r.zandoni@intel.com>

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-

2.4.120/tests/util/format.h

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-

2.4.120/tests/util/pattern.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-

2.4.120/tests/util/format.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-

2.4.120/tests/util/pattern.h

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/opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-

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2.4.120/tests/vbltest/vbltest.c

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The release criteria for libdrm is essentially "if you need a release, make one". There is no designated release engineer or maintainer. Anybody is free to make a release if there's a certain feature or bug fix they need in a released version of libdrm.

When new ioctl definitions are merged into drm-next, we will add support to libdrm, at which point we typically create a new release. However, this is up to whoever is driving the feature in question.

Follow these steps to release a new version of libdrm:

- 1) Bump the version number in meson.build. We seem to have settled for 2.4.x as the versioning scheme for libdrm, so just bump the micro version.
- 2) Run `ninja -C builddir/ dist` to generate the tarballs.



Make sure that the version number of the tarball name in builddir/meson-dist/ matches the number you bumped to. Move that tarball to the libdrm repo root for the release script to pick up.

3) Push the updated main branch with the bumped version number:

```
git push origin main
```

assuming the remote for the upstream libdrm repo is called origin.

4) Use the release.sh script from the xorg/util/modular repo to upload the tarballs to the freedesktop.org download area and create an announce email template. The script takes one argument: the path to the libdrm checkout. So, if a checkout of modular is at the same level than the libdrm repo:

```
./modular/release.sh libdrm
```

This copies the two tarballs to freedesktop.org and creates libdrm-2.4.16.announce which has a detailed summary of the changes, links to the tarballs, MD5 and SHA1 sums and pre-filled out email headers. Fill out the blank between the email headers and the list of changes with a brief message of what changed or what prompted this release. Send out the email and you're done!

Found in path(s):

```
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/RELEASING
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2.4.120/tests/amdgpu/decode\_messages.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/amdgpu/jpeg\_tests.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/amdgpu/amdgpu\_vm.c

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2.4.120/radeon/radeon\_cs\_gem.h

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2.4.120/include/drm/r128\_drm.h

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/\* amdgpu\_drm.h -- Public header for the amdgpu driver \*- linux-c \*-

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/radeon/radeon\_bo.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/radeon/radeon\_bo\_gem.c

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\* Leif Delgass <ldelgass@retinalburn.net>

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
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2.4.120/tests/radeon/rbo.h

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
2.4.120/tests/radeon/radeon\_ttm.c

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
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2.4.120/xf86drmMode.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/drm-test.c  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/drm-test-tegra.c  
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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/libdrm\_macros.h  
\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/tegra/openclose.c  
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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/amdgpu/security\_tests.c

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/\* drmsl.c -- Skip list test

\* Created: Mon May 10 09:28:13 1999 by faith@precisioninsight.com

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\* Authors: Rickard E. (Rik) Faith <faith@valinux.com>  
\*  
\* DESCRIPTION  
\*  
\* This file contains a straightforward skip list implementation.n  
\*  
\* FUTURE ENHANCEMENTS  
\*  
\* REFERENCES  
\*  
\* [Pugh90] William Pugh. Skip Lists: A Probabilistic Alternative to  
\* Balanced Trees. CACM 33(6), June 1990, pp. 668-676.  
\*  
\*/

Found in path(s):

\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/drmsl.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/amdgpu/hotunplug\_tests.c

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\* /opt/cola/permits/2134361152\_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-  
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2.4.120/include/drm/virtgpu\_drm.h

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2.4.120/xf86drmRandom.h

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* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/modetest/modetest.c
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/tests/modetest/buffers.h
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```

```
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```

```
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/exynos/fimg2d_reg.h
```

```
* /opt/cola/permits/2134361152_1722972231.1114697/0/libdrm-2-4-120-orig-tar-xz/libdrm-2.4.120/exynos/exynos_fimg2d.c
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```
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it
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```
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```

```
<signature of Ty Coon>, 1 April 1989
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```
# -*- perl -*-
```

```
$testlist = [  
  # This specific test fails on OpenBSD because the .pcap file uses DLT_RAW,  
  # which OpenBSD treats as DLT_LOOP.  
  {  
    config_unset => 'IS_OPENBSD',  
    name => 'heap-overflow-1',  
    input => 'heap-overflow-1.pcap',  
    output => 'heap-overflow-1.out',  
    args => '-v'  
  },  
];  
  
1;
```

# 1.126 libxdmcp 1.1.3-0ubuntu6

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```
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[2227][2244]<i>CANAL DE NOTICIAS</i>

[2253][2291]<i>La semana pasada,|Steven Johnson, de 28 aos...</i>

[2291][2318]<i>y Stephanie Tramer, de 30 aos...</i>

[2318][2335]<i>fueron encontrados apaleados|en un bosque local.</i>

[2338][2376]El principal sospechoso y residente|local de Dunwich, Jack Cain,

[2376][2408]a quien la Policia arrest 24 horas|despus del descubrimiento...

[2408][2434]de los cuerpos, se encuentra|actualmente en la Corte.

[2434][2465]Asistiendo a una audiencia de|preparacin para el juicio.

[2465][2482]<i>S espera que la audiencia...</i>

[2482][2498]<i>que sea una especie de formalidad...</i>

[2498][2517]<i>donde se presentaran los hechos clave...</i>

[2517][2541]<i>y el acusado se declarar culpable.</i>

[2543][2573]<i>En caso de que esa declaracin|no sea culpable, como se espera,</i>

[2573][2596]<i>se fijar una fecha para el juicio.</i>

[2609][2656]De ests 16 pualadas,|5 por s solas...

[2656][2674]hubieran sido fatales.

[2683][2697]Steve Johnson...

[2704][2749]recibi 13 pualadas,|principalmente  
en el pecho.

[2759][2793]Sin embargo, hubo varias abrasiones|en las palmas...

[2793][2845]de sus manos...|Lo que sugiere heridas defensivas.

[2854][2895]El golpe fatal fue una|pualada en la aorta,

[2896][2931]el vaso sanguneo grande|que sale del corazn.

[2948][2954]Su Seora...

[2962][2994]debido a la naturaleza|atroz de este crimen,

[3003][3046]y las pruebas circunstanciales|contra el seor Cain...

[3053][3079]y su falta de coartada,

[3087][3123]hay suficientes|pruebas para enjuiciar.

[3129][3145]Algo ms que aadir?

[3149][3171]No, eso es todo, Su Seora.

[3242][3254]Seor Cain.

[3265][3302]Antes de proceder, debo informarle...

[3304][3345]por segunda vez que,|dados los gravsimos cargos...

[3345][3387]lo mejor para usted es|contratar a un asesor legal...

[3387][3399]en este asunto.

[3426][3441]Me representar a m mismo,|Su Seora.

[3441][3455]No tengo nada que ocultar.

[3468][3480]Como desee.

[3492][3513]Antes de que pasemos|a una declaracin...

[3532][3557]tiene alguna  
prueba|que desee presentar?

[3561][3601]Qu contradiga lo que la|Fiscala ha presentado?

[3718][3731]No en este momento.

[3741][3765]Me gustara declararme inocente.

[3796][3808]Como desee.

[3919][3956]Podran ambos abogados|acercarse al estrado, por favor?

[4111][4148]La gravedad de este|crimen es evidente.

[4182][4206]Toda la evidencia recolectada...  
[4206][4268]en contra del seor Cain se obtuvo|despus de un arresto ilegal.  
[4312][4325]Orden en la sala!  
[4359][4394]No tengo ms remedio que pedir|que se desestime el caso.  
[4404][4433]Su Seora,|no puede dejar ir a este hombre.  
[4439][4456]Es un peligro para todos nosotros.  
[4461][4488]Entonces, quizs la Polica|debera haberle ledo sus derechos...  
[4488][4503]cuando lo arrestaron.  
[4525][4563]El registro del auto del seor Cain,|su casa, las entrevistas,  
[4568][4601]todo esto es ahora|inadmisible como prueba.  
[4604][4623]Este caso est desestimado.  
[4624][4641]- Culpable!|- Ordeno que el acusado...  
[4642][4656]sea liberado de forma inmediata.  
[4656][4675]Asesino!  
Asesinaste a mi hijo!  
[4815][4837]No le leste sus derechos.  
[4838][4857]Qu cojones es esto,|la hora del aficionado?  
[4857][4886]Lo persegu.|Tenamos a la Polica armada afuera.  
[4888][4924]En toda la conmocin slo|comet un error, de acuerdo?  
[4925][4945]Claro que cometiste un error.  
[4952][4989]Y mi hijo y la hermana de este|pobre chico no vern justicia.  
[4991][5022]Escoria como Cain no mantendr|su nariz limpia por mucho tiempo.  
[5022][5055]Cuando se pase de la raya,|yo estar ah para derribarlo.  
[5062][5079]Crees que volver a matar?  
[5087][5116]No lo s, pero es capaz de hacerlo.  
[5119][5136]Bueno,|ahora todos estamos en peligro.  
[5145][5163]Miren,|mantendr esta ciudad a salvo.  
[5174][5184]S.  
[5188][5209]Como el buen trabajo que|hiciste la primera vez.  
[5209][5232]- Ahora vete a la mierda, Joe.|- Escucha!  
[5235][5276]Si esa basura lastima a|alguien ms, rodarn cabezas.  
[5276][5292]- Mira hombre...|- Cometiste...  
[5292][5319]el mayor error de tu carrera aqu,|simple y llanamente.  
[5319][5342]-  
Quieres mi renuncia?|- La ofreces?  
[5342][5371]- Tengo otra opcin?|- Siempre hay opciones, Frank.  
[5374][5395]Hacer tu trabajo es una opcin.  
[5408][5431]Cul es tu trabajo, Frank?|Puedes decirme eso?  
[5451][5473]Respetar la ley,|mantener la ciudad a salvo.  
[5473][5497]Mantn esta ciudad a salvo,|precisamente.  
[5503][5524]Todos queremos|justicia en este caso.  
[5524][5542]La ley no nos ha dado eso.  
[5546][5575]Significa eso que el|deber de proteger a Dunwich...  
[5575][5591]se va por la ventana?  
[5601][5613]No.  
[5625][5654]Johnny, dime hijo,|qu significa la justicia para ti?  
[5685][5724]Quiero ver a Cain sufrir por|lo que le hizo a mi hermana.  
[5739][5752]Qu hay de ti, Joe?

[5752][5787]Ningn padre debera|enterrar a su propio hijo.  
[5797][5809]No es natural.  
[5813][5847]Y ese pedazo de mierda merece|morir por lo que ha hecho!  
[5871][5883]Estoy de acuerdo.  
[5934][5948]Qu ests diciendo, hombre?  
[5949][5977]Bueno, todos nosotros nos conocemos|desde hace mucho tiempo, Frank.  
[5978][6008]Podr  
ser el Alcalde de esta ciudad,|pero tambien soy tu amigo.  
[6012][6032]Los amigos deberan ayudarse|mutuamente, no crees?  
[6061][6072]Si.  
[6084][6116]As que, voy a ayudarte a|salvar tu trabajo, Frank.  
[6124][6141]Joe, Johnny...  
[6159][6173]vamos a conseguirles justicia.  
[6203][6228]Y cmo te propones hacer eso?  
[6303][6315]<i>Zombis.</i>  
[6331][6343]<i>S.</i>  
[6347][6363]<i>Son mis sirvientes.</i>  
[6394][6419]<i>Este asesino del alma|se lleva a los hombres...</i>  
[6419][6434]<i>de sus tumbas...</i>  
[6444][6462]<i>para ser sus esclavos.</i>  
[6512][6536]<i>Son instrumentos de terror...</i>  
[6536][6558]<i>y ahora este demonio conspira...</i>  
[6559][6579]<i>para poseer a una mujer.</i>  
[6639][6652]<i>S, amo?</i>  
[6687][6711]<i>Este asesino del alma|se lleva a los hombres...</i>  
[6711][6759]<i>de sus tumbas...|Para ser sus esclavos...</i>  
[6838][6869]<i>y ahora este demonio conspira|para poseer a una mujer.</i>  
[6913][6927]<i>Qu bestial.</i>  
[7233][7255]Qu cojones es esto,|una  
fiesta de Noche de Brujas?  
[7268][7288]Es hora de pagar por|lo que hiciste, Cain.  
[7323][7336]Tienes algo que decir?  
[7355][7393]Despreciame y vers a un tonto.  
[7398][7423]Resptame y vers a un Dios.  
[7423][7461]Mrame directamente y|te vers a ti mismo.  
[7483][7495]No soy como t.  
[7503][7516]Ninguno de nosotros lo es.  
[7521][7539]Aprieta el gatillo y|te vuelves culpable...  
[7539][7554]de lo que me acusas.  
[7559][7583]La pregunta que|tienen que hacerse es,  
[7587][7609]pueden vivir con quitar una vida?  
[7622][7637]No slo vivir con ello,  
[7643][7671]me despertar sonriendo|todos los malditos das...  
[7671][7683]sabiendo que te has ido.  
[7691][7707]Eso traer a tu hijo de vuelta?  
[7718][7723]Vete a la mierda!  
[7882][7903]Tratan de humillarme?  
[7922][7934]No.



[7944][7957]Estoy tratando de matarte.  
[8003][8032]Hazlo, Johnny.|Hazlo por tu hermana.  
[8038][8056]Hazlo!  
[8337][8356]Traigan las palas.  
[8554][8583]Esto no hace falta decirlo,|pero lo voy a decir de todos modos.  
[8591][8619]Nunca hablaremos  
de esto con nadie,|nunca.  
[8632][8661]Si alguien pregunta,|Cain se fue de la ciudad.  
[8670][8685]Todos estamos de acuerdo en eso?  
[8702][8714]Si.  
[8721][8733]Johnny?  
[8774][8786]Qu?  
[8809][8834]Nunca hablaremos de esto...  
[8839][8858]a nadie en la vida.  
[8868][8888]De acuerdo?  
[8944][8956]De acuerdo.  
[9034][9051]Has estado muy callado, Frank.  
[9097][9127]Promteme que nunca le|dirs a nadie sobre esto.  
[9133][9147]Mientras vivas.  
[9165][9179]Quiero orte decirlo.  
[9265][9277]Bien.  
[9281][9296]Prometo no decirle a nadie...  
[9296][9325]sobre esto,|durante el resto de mi vida.  
[9471][9518]<i>UN AO MS TARDE</i>  
[9699][9717]Ya hemos pasado un|minuto de la medianoche.  
[9717][9736]Y es oficialmente el|da en que el velo...  
[9736][9763]entre los vivos y los muertos|est en su punto ms bajo.  
[9766][9801]Aqu WKB Dunwich y yo soy|Jennifer Hollister despidindose,  
[9801][9822]queridos oyentes,|con esta clsica.  
[9831][9845]Feliz Noche de Brujas.  
[10493][10506]Cabrn.  
[10522][10536]Maldito cabrn.  
[10584][10605]Mentiste,  
pedazo de mierda.  
[10634][10653]No pude vivir con ello.  
[11177][11225]La vida es slo un|sueo para los muertos.  
[11348][11372]- Hola, pap.- Buenos das.  
[11373][11385]Te ves como el demonio.  
[11394][11404]Gracias, lo necesitaba.  
[11412][11444]- Te cuesta dormir?|- S, qu hay de nuevo?  
[11448][11466]Quieres que te|prepare algo de comer?  
[11472][11498]No, estar bien.|Tomar algo de camino al trabajo.  
[11505][11512]Comida rpida?  
[11518][11537]Vamos, pap, te preparar unos huevos.  
[11549][11568]Eres demasiado buena conmigo,|lo sabas?  
[11586][11594]Pens que lo habas dejado.  
[11597][11609]Lo estoy intentando.  
[11612][11639]No muy en serio|por lo que parece.

[11644][11666]Supongo va de la mano con|el estrs del trabajo.  
[11678][11704]Vas a ir a la fiesta|de Noche de Brujas esta noche?  
[11713][11727]No creo.  
[11731][11742]Tal vez deberas hacerlo.  
[11751][11769]Podra ayudarte a|desestresarte un poco.  
[11775][11784]Trabajars esta noche?  
[11794][11806]Estoy libre.  
[11814][11833]Estaba  
pensando que|podra ir a la fiesta.  
[11844][11856]Podra ser divertido.  
[11863][11875]Recuerdas esa palabra?  
[11891][11903]Diversin?  
[11906][11931]Supongo que no he tenido mucho|tiempo para eso ltimamente.  
[12037][12049]Hollister.  
[12052][12064]Sip.  
[12072][12086]Cristo.  
[12093][12107]Voy enseguida.  
[12125][12141]Lo siento, cario, tengo que irme.  
[12146][12162]Trabajo.  
[12354][12379]<i>POLICA - NO CRUZAR</i>  
[12436][12478]- Qu ha pasado?|- Johnny Tramer, suicidio.  
[12478][12496]- Jess.|- Disparo en la cabeza.  
[12531][12545]Qu est pasando all?  
[12559][12575]Es algo realmente extrao.  
[12585][12599]Cav el hoyo?  
[12603][12616]No haba seales de|una pala alrededor.  
[12616][12646]As que si lo hizo,|no estoy seguro de cmo.  
[12645][12663]- Sus manos?|- Lo he comprobado.  
[12666][12687]Las uas estn limpias.  
[12681][12704]- Extrao.|- Se vuelve an ms extrao.  
[12713][12723]Qu quieres decir?  
[12727][12743]Mira las huellas de las manos.  
[12746][12771]No parece que alguien|fue enterrado vivo aqu...  
[12771][12782]y  
cavara para salir?  
[12788][12819]Entrando en el espritu|de Noche de Brujas, Brodie?  
[12818][12828]No!  
[12829][12855]Es slo, slo lo que parece.  
[12863][12889]Me parece que alguien acaba|de cavar un hoyo en un campo.  
[12889][12905]Por qu, no lo s.  
[12917][12938]Parece que hubo algo de|lluvia aqu, sin embargo.  
[12939][12961]Manos grandes tambn,|definitivamente un hombre.  
[12965][12993]Puso sus manos sobre el|lodo para salir de all.  
[12997][13026]Entonces, Johnny se meti en|el hoyo para seguir cavando...  
[13026][13045]luego, cuando termin,|se sac a s mismo.  
[13045][13062]No...|Vers, eso pens.  
[13063][13094]Pero tengo a mis hombres midiendo la|enpolladura de las manos de Johnny,  
[13095][13117]y son la mitad del tamao|de esas huellas de manos.

[13125][13153]Entonces, qu ests diciendo, que alguien|ms estuvo aqu tambn?  
[13156][13191]Bueno, no hay seales de una pala,|dos juegos de huellas de manos.  
[13202][13223]Tal vez alguien lo mat y tena|la intencin de enterrar el cuerpo...  
[13223][13247]pero,  
lo interrumpieron y huyo.  
[13263][13294]Tendremos que ver qu dice el informe|de balstica. Llamaste al forense?  
[13296][13323]S, va a tener mucho trabajo|que hacer en este caso.  
[13333][13355]- Qu quieres decir?|- Mira el cuerpo.  
[13417][13442]Dios! Cunto tiempo lleva aqu?  
[13454][13471]Bueno, estuvo en el trabajo ayer.  
[13471][13494]As que no ms de 24 horas.  
[13504][13522]Nunca he visto un|cuerpo descomponerse...  
[13522][13535]en tan poco tiempo.  
[13612][13624]Frank?  
[13645][13657]Frank.  
[13661][13673]Qu?  
[13681][13705]- Ests bien?|- S, estoy bien.  
[13717][13743]Ser mejor que vaya a|ver a Edie Tramer. Dios!  
[13747][13767]Primero su hija el ao pasado|y ahora su hijo.  
[13778][13805]- Vas a estar bien aqu?|- S, djamelo a m.  
[14021][14035]Hola.  
[14042][14054]Ellie.  
[14059][14071]Esto se ve muy bien.  
[14079][14096]Si que se han superado este ao.  
[14096][14108]Gracias.  
[14124][14159]As que, vas a ayudar o slo|vas a estar dando vueltas...  
[14159][14178]hasta que traigamos  
la ponchera?  
[14196][14208]Disclpame un momento.  
[14287][14306]Cmo te va, Joe?  
[14304][14316]No es bueno.  
[14317][14338]Johnny Tramer se suicid anoche.  
[14354][14378]Dios! Qu ha pasado?  
[14381][14406]Fue al lugar, ya sabes...  
[14407][14424]dnde est el paquete.  
[14432][14457]De todos modos,|el chico se dispar en la cabeza.  
[14462][14472]l est muerto.  
[14481][14493]Buen Dios.  
[14498][14511]Esto est jodido.  
[14512][14534]Si la Polica empieza|a husmear en esa zona,  
[14534][14556]van a encontrar ms|de lo que esperaban.  
[14563][14573]- Muy bien.- Por qu ese dbil...  
[14573][14586]mierdecilla tuvo que hacerlo all?  
[14586][14613]Tranquilo, hablar con Frank.|Lo arreglaremos.  
[14713][14742]S que este es un momento|desgarrador para ti, Edie...  
[14755][14791]pero, hay algo que Johnny|haya dicho o hecho...  
[14804][14822]para indicar que era un suicida?  
[14835][14858]No ha sido el mismo desde|que Stephanie fue asesinada.

[14866][14881]Ninguno de nosotros lo ha hecho.  
[14893][14918]Dijo algo sobre  
todo ese asunto,  
[14918][14937]ya sabes, Jack Cain?  
[14956][14971]Saba que lo quera muerto.  
[14982][14994]Todos lo queremos.  
[15004][15029]Tus hombres estn ms cerca|de encontrar a esa basura?  
[15052][15065]En realidad, no.  
[15074][15103]Se fue de la ciudad el ao pasado.|Pudo haber ido a cualquier parte.  
[15108][15124]Maldito seas por dejarlo ir.  
[15127][15157]No lo dej ir, comet un error.  
[15173][15191]Tengo que vivir con|ello todos los das.  
[15206][15221]Pobre de ti.  
[15236][15261]Tengo que vivir con perder|a Stephanie todos los das.  
[15268][15284]Y ahora a mi hijo tambn.  
[15297][15309]Tienes razn.  
[15313][15329]No quise ser insensible.  
[15342][15358]Necesito volver a la estacin.  
[15358][15379]Va a venir alguien?  
[15379][15398]Puedo enviar a alguien|a ofrecer apoyo.  
[15398][15413]Slo quiero que me dejen en paz.  
[15436][15449]Entiendo.  
[15461][15474]Lo siento, Edie.  
[15484][15496]De verdad que lo hago.  
[15739][15759]- Hola?|- Hola, mejillas dulces.  
[15765][15788]<i>Ya sabes, los aos  
'50 llamaron.</i>  
[15789][15797]<i>Quieren que le devuelvas|el nombre de su mascota.</i>  
[15797][15814]Slo trato de ser cariioso.  
[15815][15833]Lo s, slo estoy bromeando.  
[15839][15851]Cmo van las cosas?  
[15851][15872]Bueno, encontramos a|Johnny Tramer esta maana.  
[15872][15884]Se suicid.  
[15894][15911]Dios, eso es horrible.  
[15927][15951]Su hermana tambn muri el ao pasado.|Su madre debe estar hecha pedazos.  
[15951][15968]S, tu padre est all ahora mismo.  
[15968][15984]Contndole las noticias.  
[15993][16007]Dios, eso es horrible.  
[16023][16036]No los conoca tan bien.  
[16036][16064]Pero pap sola salir|con su padre hace aos.  
[16082][16101]Hablando de tu padre, no le dijiste...  
[16101][16117]sobre nosotros, verdad?  
[16117][16137]<i>Brodie, eres un marica,|lo sabas?</i>  
[16137][16156]- No soy un marica.|- Lo eres.  
[16171][16192]Por qu demonios ests|tan asustado de mi padre?  
[16203][16221]Es el tipo ms dulce del mundo.  
[16222][16252]S, en casa tal vez,|pero en el trabajo es mi jefe.  
[16252][16277]Y

sabes lo incmodo que es que|te atrapen con la hija del jefe?  
[16277][16294]Vamos, admte lo.  
[16297][16318]El riesgo es parte de la emoci3n.  
[16335][16371]Entonces, dime. Qu llevas puesto?  
[16381][16406]Un jersey de lana grueso y|una redecilla para el cabello.  
[16409][16427]Vamos Jen, en serio?  
[16427][16454]- De verdad quieres hacer esto ahora?|- S, slo un minuto.  
[16459][16479]Llama a uno de esos programas|de chicas de la tele...  
[16479][16502]donde las chicas mueven|el culo arriba y abajo.  
[16504][16528]S, cuestan cinco dlares|el minuto, esto es gratis.  
[16534][16558]Eres una mierda tan descarada,|lo sabas?  
[16584][16599]Vamos, dime. Qu llevas puesto?  
[16609][16622]Con quin ests hablando?  
[16636][16654]No es nadie.  
[16661][16674]<i>Hablando solo?</i>  
[16678][16695]<i>Es una chica que conozco.</i>  
[16702][16718]<i>De acuerdo, bueno, no tardes mucho.</i>  
[16718][16744]Tenemos cosas ms importantes|de las que ocuparnos hoy.  
[16748][16765]Estar en mi oficina.  
[16767][16779]Seor.  
[16827][16848]-  
Hola?|- Marica.  
[16965][16979]- Dios mo!|- Qu?  
[16979][16999]Bien, bien, mira esto.  
[17007][17033]- Joder, qu diablos es eso?|- Es muy divertido.  
[17037][17061]Una verdadera falta de estndares,|los de tu generaci3n.  
[17063][17086]Dios mo, tenemos un chorreador.  
[17087][17111]Muy bien, apgalo. Este es un lugar de negocios.  
[17119][17131]Muy bien.  
[17131][17146]Tranquilo, abuelo.  
[17149][17164]Sabes, cuando tena tu edad...  
[17164][17183]no tenemos acceso a nada de eso.  
[17188][17219]Lo que tenemos eran revistas. Ni siquiera podamos costarnoslas.  
[17227][17239]Pero siempre encontrbamos, cmo, grandes montones de ellas...  
[17239][17253]en el bosque por alguna razn.  
[17258][17286]Esto aade un nuevo significado|al trmino naturista.  
[17289][17304]Entonces, cul es el maldito problema?  
[17304][17323]Es lo que hacen los chicos.  
[17326][17339]Lo es?  
[17339][17358]Dios, no me estoy perdiendo mucho.  
[17358][17378]S, todo se trata de las bromas.  
[17382][17407]Escucho esa palabra todo el tiempo, |bromas.  
[17413][17425]Qu  
significa eso?  
[17426][17448]Bueno, es slo que, ya sabes, nos necesitamos el uno al otro.  
[17448][17461]Para divertirse y eso.  
[17464][17489]Y t siempre ests bromeando|con tus amiguitos, no?  
[17489][17504]S, s, lo hacemos.

[17513][17553]Aunque s,la veces puede ir demasiado lejos.  
[17551][17568]- S?- S.  
[17578][17606]Mira, alguna vez te he hablado|de mis vacaciones de la escuela...  
[17606][17623]donde unos amigos y yo|nos fuimos a Mxico?  
[17623][17635]No.  
[17641][17652]Cierto.  
[17658][17687]As que hay un chico llamado James,|ya sabes,  
[17687][17728]y es muy credo,|demasiado confiado, arrogante.  
[17722][17754]As que una noche|sale y se emborracha.  
[17754][17783]Luego regresa a la villa|y se desmaya en el sof.  
[17788][17805]As que tengo una idea, ya sabes,  
[17810][17827]voy a bajarle los humos.  
[17833][17858]As que lo que hago es|tomar un condn y lo pongo...  
[17858][17877]al final de un lpiz y...  
[17886][17914]se lo pongo en el chocolate|mientras est desmayado.  
[17926][17941]Cmo  
chocolate?  
[17945][17972]S, el nudo de tu globo.  
[18008][18032]Tu bolso de prisin,|tu estrella de mar de chocolate.  
[18049][18062]Raja del culo.  
[18063][18081]Entonces, por qu no|dijiste eso para empezar?  
[18081][18106]De acuerdo, me asegurar|de mantener mi lenguaje...  
[18106][18127]ms adecuado para los|pensionados en el futuro.  
[18131][18156]De todos modos,|James se despierta al da siguiente...  
[18156][18179]y no tiene recuerdos|de la noche anterior.  
[18181][18198]Estaba tan borracho.  
[18198][18218]Todo lo que sabe es que|ahora tiene un condn...  
[18218][18235]colgando de su culo.  
[18237][18266]Y nos pregunta: "Qu pas anoche?"  
[18268][18281]Y as que se lo decimos.  
[18287][18317]Yo digo: "Bueno, amigo, te vimos|charlando con este chico...  
[18317][18351]en el bar y lo siguiente que|sabemos es que te has ido con l".  
[18356][18385]As que James,|empez a enloquecer porque piensa...  
[18385][18413]que la espada de cerdo de|un extrao se lo ha clavado.  
[18432][18458]- La espada  
de cerdo significa polla.- S, s, lo s.  
[18458][18477]La descripcin me dio un poco|de informacin sobre eso.  
[18478][18523]Est bien, est bien. James,|est llorando y llama a su novia,  
[18526][18552]y confiesa su primera|experiencia gay...  
[18552][18577]y toma el siguiente|vuelo de vuelta a casa.  
[18577][18611]Y no le dije la verdad|hasta seis meses despus.  
[18641][18688]As que tcnicamente el nico|que hizo algo gay fuiste t.  
[18694][18707]Por qu dices eso?  
[18709][18742]- Le metiste un lpiz en el culo.- S, pero eso no es gay.  
[18759][18777]- Es un poco gay.- Bueno, no, cllate.  
[18783][18803]S, tienes razn,|las bromas son divertidas.  
[18817][18834]De todos modos,|tengo trabajo que hacer.  
[18843][18859]Muy bien, vuelvo en cinco minutos.

[18869][18885]Tengo que ir a echar una cagada.  
[18914][18956]<i>ESTACIN DE POLICA</i>  
[18966][18993]Entonces, el chico,|por qu lo hizo?  
[19003][19017]Bueno, considerando dnde lo hizo.  
[19017][19038]Supongo que no poda|vivir con lo que pas.  
[19049][19078]-  
Hablaste con su madre?|- Est destrozada.  
[19087][19114]Le dijo lo que le pas a Cain?  
[19115][19134]No creo que ella sepa nada.  
[19154][19166]De acuerdo.  
[19172][19193]Bueno, djame preguntarte|a ti, Frank.  
[19199][19211]Qu hay de ti?  
[19222][19234]Qu hay de m?  
[19236][19271]Ya no te veo en ninguna|de estas noches sociales.  
[19275][19298]Se siente como si nos|estuvieras evitando estos das.  
[19298][19323]Realmente pensaste que las cosas|seguiran igual entre nosotros?  
[19323][19355]Mierda como esa cambia a la gente.|Ciertamente me cambi a m.  
[19369][19395]Piensas demasiado en todo,|ese es tu problema.  
[19396][19428]Hicimos lo correcto.|Se hizo justicia.  
[19436][19452]Lo que t digas, Milton.  
[19461][19474]Ahora, si no te importa,  
[19474][19492]tengo mucho papeleo que hacer.  
[19753][19769]Mike, tienes la llave inglesa?  
[19796][19802]Mike.  
[19811][19826]Ests sordo o qu?  
[20202][20214]Qu opinas?  
[20255][20267]No lo s.  
[20285][20304]No he visto nada como esto|desde los asesinatos de Cain.  
[20325][20338]Cmo  
quieres manejarlo?  
[20372][20397]Esta es una semiautomtica.  
[20415][20446]Slo amartilla el martillo,|inserta el cartucho...  
[20446][20479]en la cmara y la|pistola estar lista...  
[20479][20491]para su prximo disparo.  
[20507][20531]Los cartuchos se alimentan a|travs de un cargador...  
[20532][20556]que se introduce en el mango.  
[20562][20584]Si quieres esta, te puedo dar...  
[20584][20603]cinco cajas de cargadores,|que tienen 15 cartuchos.  
[20603][20619]Que vienen en doble columna.  
[20623][20652]Es una mquina muy, muy poderosa.  
[20654][20672]Rpida y fcil de recargar tambin.  
[20702][20749]Este es el revolver .38.  
[20752][20772]El cilindro tiene capacidad|para siete cargas.  
[20776][20799]Tanto las semiautomticas|como los revlveres,  
[20803][20821]tienen dos estilos de|accin principales.  
[20834][20846]Accin simple y doble.  
[20857][20878]Esta perrita, es doble.  
[20886][20918]Es pequea, lo que la hace|perfecta para ocultarla.

[20929][20952]Pero an as tiene un gran golpe.  
[20972][20984]Maldita  
pistola ingeniosa.  
[20988][21019]Este hijo de puta es mi favorito.  
[21052][21099]Esta fina arma goza|de la reputacin...  
[21099][21124]de ser el estndar de oro|de la potencia de frenado.  
[21141][21183]Es un tapn de un slo|disparo extremadamente fiable.  
[21183][21219]No es buena para ocultar,|pero puedes hacer un agujero...  
[21219][21246]a travs de un maldito oso,|con una de estas cosas.  
[21257][21273]Me encanta esta pistola.  
[21296][21315]De acuerdo.  
[21325][21333]A algunos cerditos...  
[21344][21359]les gusta ir al mercado.  
[21361][21379]Algunos cerditos se quedan en casa.  
[21387][21418]A algunos les gusta comer|mucho carne asada...  
[21436][21452]pero t, cerdito...  
[21456][21474]has venido a comprar|algunas armas dudosas.  
[21474][21487]Entonces, cul vas a escoger?  
[21494][21507]Vamos,|no tengo todo el maldito da.  
[21531][21543]Todas ellas.  
[21584][21605]Eres un cerdito codicioso, no?  
[21616][21648]Siento mucho lo de Johnny.  
[21649][21661]Cuando me enter,|tena que venir a  
verte.  
[21668][21682]Gracias.  
[21691][21712]Tienes a alguien aqu|que pueda ayudarte?  
[21723][21746]Mi hermano llega esta noche.  
[21756][21764]Es todo lo que me queda ahora.  
[21797][21808]S que esto es difcil para ti,|Edie,  
[21808][21824]pero tengo que preguntar,  
[21831][21858]Johnny te dijo algo|sobre Jack Cain?  
[21863][21899]- Cmo dnde desapareci?|- No me dijo nada.  
[21913][21925]De acuerdo.  
[22079][22111]No quiero ser molesto,|pero, tienes galletas?  
[22135][22147]Galletas?  
[22154][22166]Si.  
[22198][22209]S, creo que s.  
[22216][22228]En la cocina.  
[22246][22272]- Ir a buscarlas.|- Me encantara.  
[22275][22288]Gracias.  
[23496][23527]Muere, maldita puta!  
[23553][23565]Muere!  
[23652][23662]Joder.  
[23691][23704]Dnde estn las galletas?  
[23943][23963]Amigo, un dulce por Noche de Brujas.  
[24214][24225]Hola, querido.  
[24229][24241]Qu ests haciendo?  
[24245][24264]Slo estoy haciendo|todas las decoraciones.



[24269][24288]Pero deberan haberse|hecho esta maana.  
[24296][24313]Bueno, yo he...  
[24319][24342]He  
estado muy ocupada con|todos los pasteles tambien.  
[24345][24372]Algunos de ellos estn un|poco quemados, as que...  
[24375][24388]Qu quieres decir?  
[24391][24413]Bueno...  
[24428][24435]No has terminado la decoracin,  
[24435][24462]has quemado la comida.|Qu has estado haciendo?  
[24467][24479]Hazlos de nuevo!  
[24484][24501]- Qu, ahora?|- S, hazlo!  
[24505][24519]De acuerdo.  
[24732][24749]Siempre tiene que ser as?  
[24756][24778]Mira, me disculpo por|perder los estribos,  
[24778][24793]pero esto tiene que hacerse.  
[24819][24831]De acuerdo.  
[25099][25154]<i>Slo una pequea cantidad|en una copa de vino.</i>  
[25166][25182]<i>O quizs una flor.</i>  
[25223][25239]<i>Quedese con l, Monsieur.</i>  
[25284][25297]<i>Quedeselo.</i>  
[25312][25338]<i>Puede cambiar de opinin.</i>  
[25342][25357]<i>No est muerta?</i>  
[25367][25379]<i>Ests loco?</i>  
[25387][25394]<i>La v morir.</i>  
[25397][25416]<i>El doctor firm el certificado.</i>  
[25416][25428]<i>Los v enterrarla.</i>  
[25441][25456]<i>Cautiva en el lmite...</i>  
[25456][25478]<i>entre  
la vida y la muerte.</i>  
[25489][25518]<i>Su cerebro se despoj|de la chispa de la vida.</i>  
[25545][25591]<i>El zombi blanco obedece|las rdenes impas...</i>  
[25591][25609]<i>de su amo demonio.</i>  
[25711][25748]<i>Como criaturas sin sentido llevan|a cabo su maldita sea a voluntad...</i>  
[25808][25821]<i>Zombis!</i>  
[26387][26402]<i>Emergencia, emergencia.</i>  
[26928][26949]Adelante, Frank. Adelante.  
[26987][26993]<i>Si?</i>  
[26994][27012]Ven a la casa de los|Boggs en la calle Oak.  
[27024][27038]Es malo, Frank.  
[27044][27058]Es realmente jodidamente malo.  
[27583][27614]<i>NOCHE DE BRUJAS</i>  
[28094][28128]Parece que tenemos a un|maniaco suelto.  
[28189][28201]Ests bien, Frank?  
[28223][28232]Frank?  
[28249][28273]S, s.  
[28307][28315]Te voy a decir algo...  
[28323][28343]que nunca se lo he contado a nadie.  
[28347][28367]S,|algo que he estado llevando conmigo...

[28367][28384]desde hace un ao.  
[28401][28413]De acuerdo.  
[28417][28429]Jack Cain.  
[28447][28459]Hace  
un ao,  
[28467][28495]yo, Boggs...  
[28501][28516]Joe, y Johnny...  
[28526][28542]fuimos a su cabaa.  
[28557][28573]Lo llevamos al campo,  
[28577][28601]el mismo en el que Johnny|fue encontrado esta maana...  
[28621][28634]y lo matamos.  
[28649][28667]Le disparamos a quemarropa...  
[28679][28692]y luego lo enterramos.  
[28711][28724]Hablas en serio, Frank?  
[28731][28752]Sent que era lo correcto.  
[28766][28795]Pero, me ha perseguido|desde entonces.  
[28862][28893]As que estos asesinatos,|ahora hay un vnculo claro...  
[28893][28906]entre las vctimas.  
[28922][28953]Todo hombre involucrado en el asesinato|de Jack Cain est ahora muerto.  
[28966][28987]Todos menos uno.  
[28992][29018]Sabes lo que eso significa,|verdad?  
[29028][29048]- Eres el siguiente.|- As es.  
[29071][29091]Hay algo ms que deberas saber,|tambin.  
[29094][29106]Qu sera eso?  
[29129][29142]Hay un tipo...  
[29151][29173]en la penitenciera de Edenfield,  
[29175][29189]alguien llamado Charlie Edgar.  
[29199][29226]Est cumpliendo cadena perpetua|por  
el asesinato de una joven.  
[29236][29252]Hace unos meses me lleg la noticia...  
[29253][29276]del psiquiatra, que Edgar...  
[29276][29296]haba confesado los|asesinatos de Cain.  
[29303][29314]Lo entrevistaste?  
[29321][29333]Lo hice, s.  
[29347][29386]Y tengo que decirte, cuando|Edgar me cont cmo fue todo,  
[29391][29403]le cre.  
[29412][29429]Saba muchos detalles|sobre los asesinatos...  
[29429][29447]que mantuvimos fuera|de los peridicos.  
[29452][29465]Entonces, qu hiciste?  
[29486][29499]Escrib un informe.  
[29527][29541]Y luego lo enterr.  
[29555][29571]Nunca se lo ense a nadie.  
[29577][29601]Ya fue bastante difcil|lidiar con la idea...  
[29601][29618]de matar a un supuesto culpable.  
[29627][29634]Cielos, Frank.  
[29642][29667]Me avergenzo de lo que he hecho.  
[29687][29724]Alguien ms sabe...|Que mataste a Cain?  
[29742][29768]Es posible que uno|de los otros tipos...

[29768][29783]haya hablado con alguien,|de acuerdo.  
[29784][29813]Pero por qu alguien|se estara vengando...  
[29813][29828]en  
nombre de Jack Cain?  
[29828][29845]Toda la ciudad viva|con miedo de l.  
[29845][29859]Todos lo queran muerto.  
[29863][29887]Podra ser un amigo de Cain,|alguien vinculado a l.  
[29889][29907]S, esa es la explicacin racional.  
[29915][29929]Pero hay otra teora.  
[29942][29957]No es tan racional.  
[29962][29974]Y esa es?  
[29979][29997]Jack Cain ha vuelto de la muerte.  
[30021][30032]Te sientes bien?  
[30036][30061]Sabes, este es un momento|estresante y todo eso, Frank.  
[30061][30081]- Ya sabes, pero...|- Y ese agujero en el suelo,  
[30086][30125]dijiste que parecia que alguien haba|sacado las manos y se haba impulsado.  
[30123][30135]Si.  
[30143][30167]Ah es exactamente|donde enterramos a Cain.  
[30176][30193]Su cuerpo ha desaparecido.  
[30203][30221]Tal vez alguien que|sabe lo que pas...  
[30221][30246]lo rob y quiere que pienses|que ha vuelto de la muerte.  
[30248][30269]Hay un montn de cosas que|estn pasando ahora mismo...  
[30269][30286]que no se pueden|explicar fcilmente.  
[30289][30307]Tenemos que  
ser abiertos de mente.  
[30326][30346]Entonces, cul es nuestro|prximo movimiento?  
[30358][30379]Tengo una llamada|importante en la estacin.  
[30386][30406]Mi hija est en el Ayuntamiento...  
[30406][30421]en la fiesta de Noche de Brujas.  
[30427][30461]Ve a buscarla y|treala a la estacin.  
[30472][30509]Bien, ya que estamos en ese tema...  
[30519][30544]dado que me dijiste la verdad,|creo que es lo correcto...  
[30544][30570]que yo tambn te diga la verdad.  
[30615][30622]Qu es?  
[30672][30684]Jennifer,  
[30694][30704]nos hemos estado viendo.  
[30714][30733]- Por cunto tiempo?|- Cuatro meses.  
[30733][30751]Mira, siento no haber dicho nada,  
[30752][30775]es slo que no quera|decir demasiado...  
[30771][30787]antes de que las cosas se desarrollaran,|de lo contrario,  
[30787][30798]las cosas se habran puesto incmodas.  
[30798][30818]- Vas en serio con ella?|- Mucho.  
[30823][30857]La amo y...|Creo que ella tambn me ama a m.  
[30983][30995]Toma esto...  
[31005][31032]para proteccin,|y ve a buscar a Jennifer...  
[31047][31062]y  
llvala a la estacin.  
[31066][31078]Lo tengo.

[31242][31267]As que acordamos encontrarnos|en este bar al principio,  
[31275][31302]y tom como siete gin tonics...  
[31302][31321]en el espacio de una hora.  
[31322][31336]El bar tender me avis...  
[31336][31352]mientras el tipo estaba en el bao.  
[31357][31384]Pero an as termin|yendo a otro bar con l.  
[31387][31416]Pidi guacamole y se neg|a compartirlo connmigo,  
[31422][31437]mientras afirmaba que iba a...  
[31438][31462]lanzar a todos los|hpsters a la calle.  
[31468][31484]Qu idiota.  
[31496][31522]Al final fuimos a esta|cafetera toda la noche,  
[31524][31551]en parte para que se pusiera sobrio,|y en parte porque...  
[31551][31573]haba olvidado su nombre, y pens...  
[31573][31588]que lo escribiran en su vaso.  
[31597][31622]As que supongo que no hubo|una segunda cita, entonces.  
[31622][31634]No.  
[31638][31663]Creo que le dar un descanso|a las citas por un tiempo.  
[31676][31692]Cmo van las cosas con Brodie?  
[31709][31725]Todava no se  
lo he|dicho a mi padre.  
[31726][31742]No estoy segura de|cmo reaccionar.  
[31751][31766]Estoy segura de que estar bien.  
[31772][31783]No contratara a Brodie...  
[31783][31803]si no creyera que es|un tipo responsable.  
[31814][31826]Cierto.  
[31843][31877]Le has dicho a Brodie|que ests embarazada?  
[31885][31897]Qu?  
[31907][31927]Cmo lo supiste?  
[31925][31952]Estamos en una fiesta|y t bebes agua.  
[31953][31972]Esa no es la Jennifer que conozco.  
[31974][31993]Me hice la prueba hoy mismo.  
[32001][32014]Enhorabuena.  
[32021][32039]- Cmo te sientes?|- Slo...  
[32049][32063]nerviosa, ahora mismo.  
[32066][32081]No s si estoy lista.  
[32081][32112]No tengo ni idea de|cmo se sentir Brodie.  
[32114][32132]Es un gran paso.  
[32141][32163]No te preocupes, te adora.  
[32168][32181]Estar encantado.  
[32181][32203]Va a ser un golpe|doble para mi padre.  
[32205][32233]Descubrir que estoy viendo a|alguien que trabaja para l...  
[32233][32245]y va a ser abuelo?  
[32257][32269]Ya est bastante estresado.  
[32269][32298]Oye,|no  
hay nada de qu preocuparse.  
[32309][32335]Una vez que el polvo se asiente,|estar contento.  
[32356][32375]S lo difcil que fue para los dos...  
[32375][32398]cuando tu madre muri.

[32406][32439]No hay otra manera de ver esto|que como un evento feliz.  
[32457][32471]Gracias, Ellie.  
[32522][32543]John, ese nmero de telefono,  
[32548][32571]al que Cain llam cuando fue|arrestado por primera vez.  
[32574][32589]Ya tienes una direccin?  
[32657][32669]Si.  
[32691][32702]Si.  
[32728][32745]Gracias, John.  
[33277][33291]Buenas noches.  
[33307][33337]Sabe, un hombre que lleva un arma|no me parece tan seguro de s.  
[33343][33381]De hecho,|veo a un hombre asustado ante m.  
[33382][33396]Vincent Crowley?  
[33401][33414]Quin quiere saber?  
[33431][33443]Me llamo Hollister.  
[33451][33465]Soy un Oficial de Polica.  
[33469][33487]Quiero hablarte de Jack Cain.  
[33505][33522]Siempre estoy abierto a conversar.  
[33531][33547]Pero encuentro que es|mucho ms agradable...  
[33547][33563]sin un arma apuntndome.  
[33663][33675]Sintate.  
[33787][33812]Qu  
es lo que le gustara|saber sobre Jack Cain?  
[33837][33853]Cuando fue arrestado,  
[33854][33876]fuiste la primera persona|a la que llam. Por qu?  
[33891][33903]Soy su amigo.  
[33915][33927]Jack no tena muchos.  
[33989][34011]Veo que compartes un|inters por lo oculto.  
[34032][34054]Tomo lo "oculto",|como usted lo llama...  
[34054][34079]como lo que es percibido negativamente|en su mundo.  
[34093][34109]Si se usa para hacer|dao a la gente.  
[34136][34159]Lo oculto es simplemente un|estudio de lo desconocido.  
[34164][34191]Explora los lmites de|nuestras percepciones,  
[34192][34215]nuestras verdades,|nuestros potenciales.  
[34221][34237]No es ni bueno, ni malo.  
[34261][34285]Por lo que encontramos en su casa,  
[34292][34308]s que Jack Cain lo estaba usando.  
[34326][34351]Jack siempre estuvo interesado|en explorar los lmites...  
[34351][34375]entre la vida y la muerte.  
[34374][34388]Consider la posibilidad de...  
[34388][34408]que el mundo|que se nos presenta...  
[34408][34426]puede  
que no sea todo lo que hay.  
[34436][34448]Es eso un crimen?  
[34452][34464]No.  
[34471][34486]Pero asesinar a dos|personas s lo es.  
[34521][34548]- Crees que el asesinato es gracioso?|- No, seor Hollister.  
[34548][34573]Lo que me divierte es cmo una mentira|contada durante el tiempo suficiente...  
[34573][34597]puede convertirse en una verdad en|las mentes de los hombres comunes.

[34597][34609]Crees que es inocente?  
[34618][34646]La noche que esos chicos fueron|asesinados, Jack estaba conmigo.  
[34649][34669]Fuimos bienvenidos en|el solsticio de verano...  
[34669][34695]en Sacramento Bay con|un grupo de amigos.  
[34711][34731]No volvimos a casa|hasta despues de que...  
[34731][34747]esos cuerpos fueran descubiertos.  
[34753][34773]T y esos amigos que mencionas...  
[34790][34811]por qu no hicieron una|declaracin en su defensa?  
[34816][34842]No era necesario, como sabe.  
[34852][34877]Pero considere esto, seor Hollister.  
[34877][34897]Su sistema realmente|habra aceptado la palabra...  
[34897][34905]de  
gente como nosotros?  
[34922][34947]Somos los parias de su sociedad.  
[34952][34977]Somos los perros que dejan|a un lado de la carretera.  
[34977][34997]No encajamos en sus convenciones,  
[34997][35027]por lo tanto somos|excluidos y perseguidos.  
[35042][35063]Bueno, no quiero entrar|en un debate sobre esto.  
[35075][35089]Slo quiero saber una cosa.  
[35095][35107]Estas...  
[35118][35133]prcticas.  
[35152][35166]Pueden hacer que|una persona sea capaz...  
[35166][35196]de desafiar las leyes de, no s...  
[35206][35218]la fsica?  
[35226][35243]Una pregunta intrigante.  
[35258][35274]Parece que su mente|se est abriendo...  
[35274][35318]a las posibilidades ms all del|pensamiento convencional terrenal.  
[35331][35348]Slo dime en qu crea Jack Cain.  
[35361][35373]Aydame a entender.  
[35389][35408]Qu es lo que quiere entender,|seor Hollister?  
[35417][35448]Qu pas antes de que lo mataran,|lo despues?  
[35481][35526]No soy una amenaza para usted,|seor Hollister. Por favor, reljese.  
[35621][35649]A lo  
nico que le teme|un hombre, es a la verdad.  
[35663][35681]As que si voy a|ofrecerle la verdad,  
[35691][35718]- est listo para aceptarla?|- S.  
[35767][35788]La ocupacin romana de|Gran Bretaa dur entre...  
[35788][35816]el ao 43 d.C. y|alrededor del ao 400 d.C.  
[35823][35857]Antes de que los Romanos invadieran,|el sacerdocio Druida...  
[35851][35874]eran el poder|indiscutible de la tierra.  
[35881][35904]La historia est escrita|por los vencedores.  
[35918][35933]Cuando los Romanos|conquistaron a los Celtas...  
[35933][35963]dieron descripciones poco|halagadoras de los Druidas.  
[35972][36001]Algunos los describieron como|brbaros sedientos de sangre.  
[36001][36022]Que ofrecen sacrificios humanos.  
[36036][36076]Otros sostienen que los Druidas|eran gentiles y pacficos.  
[36087][36128]Y mantuvieron su autoridad al estar|en contacto con la naturaleza.  
[36149][36174]La verdad est en|algn punto intermedio.

[36183][36214]Los Druidas si hicieron|sacrificios humanos,  
[36214][36237]pero eran autosacrificios.  
[36252][36291]Durante  
el Samhain,|especialmente el 31,  
[36301][36324]cuando el velo entre|los vivos y los muertos...  
[36324][36357]estaba en su punto ms delgado,|algunos de los Druidas...  
[36359][36386]sacrificaron sus|vidas voluntariamente.  
[36406][36422]Crean que su sangre de sacrificio...  
[36423][36456]filtrada por el suelo podra|incluso tener el poder...  
[36457][36474]de... Levantar a los muertos.  
[36519][36525]Jack Cain lo crea?  
[36549][36562]Su mente estaba abierta.  
[36568][36584]- Y la suya?|- Qu quieres decir?  
[36607][36625]Se cometi una injusticia.  
[36635][36658]El pueblo se volvi|contra un hombre inocente...  
[36658][36665]y fue ejecutado,  
[36669][36689]y ahora ha vuelto para vengarse.  
[36692][36726]Y con cada alma que l...|Absorbe...  
[36726][36762]se vuelve ms y ms poderoso.  
[36772][36796]Por supuesto que hay otra|explicacin para todo esto.  
[36798][36825]- Cul es?|- T eres el que ha vuelto para vengarse.  
[36841][36857]Ay, seor Hollister!  
[36864][36901]Se acerc tanto a una|forma  
superior de comprensin.  
[36909][36925]Pero se asust...  
[36932][36967]as que ha vuelto a su|perspectiva convencional terrenal.  
[36971][37003]En el trabajo policial normalmente|la explicacin ms simple...  
[37003][37015]suele ser la correcta.  
[37019][37042]Y ahora qu? Me arrestar?  
[37043][37063]Parece el siguiente paso lgico.  
[37073][37085]No, seor Hollister.  
[37086][37106]El siguiente paso lgico|sera pasar pgina...  
[37106][37132]del libro de los Druidas|y hacer un autosacrificio...  
[37132][37144]para salvar a su ciudad.  
[37155][37178]Jack Cain ya no es humano.  
[37181][37204]Se est volviendo ms que humano.  
[37208][37238]l es su Dios ahora,|y es un Dios vengativo.  
[37238][37263]Buscando castigar a los|que lo persiguieron.  
[37269][37294]Slo un autosacrificio|lo apaciguar.  
[37675][37701]- Es el verdadero McCoy.|- S.  
[37763][37777]El padre de tu beb est aqu.  
[37777][37799]Dios mo, odio esa expresin.  
[37801][37834]Mejor que te acostumbres. |Tengo que ir al bao.  
[37837][37854]Los dejo solos.  
[37886][37907]Puedo  
hablar contigo|en privado un momento?  
[37987][37999]Qu sucede?  
[38011][38041]- Mi padre est bien?|- Est bien, ms o menos.

[38043][38055]Qu quieres decir?  
[38056][38075]Me ha pedido que te lleve a la estacin.  
[38075][38086]Por qu?  
[38087][38103]Sabes que mencion que Johnny Tramer se suicid?  
[38106][38118]- S?|- Encontramos otros cuatro cuerpos.  
[38127][38132]- Dios mo!|- Joe Johnson,  
[38134][38153]Mike Anderson, Milton Boggs y Vernica.  
[38153][38179]- Qu pas?|- Todos asesinados.  
[38186][38206]Dios mo! Han averiguado quin lo hizo?  
[38206][38218]No, todava no.  
[38218][38239]Tenemos a nuestros chicos patrullando las calles.  
[38241][38257]Tu padre me ha pedido que venga a buscarte.  
[38257][38272]No deberamos quedarnos aqu?  
[38272][38291]Quiero decir, hay mucha gente alrededor.  
[38297][38324]Quiquiera que haya matado a esa gente, no va a venir aqu.  
[39737][39755]Qu es lo que pasa?  
[39774][39794]Dulce o truco.  
[39983][39999]Vayan por ah, vayan por ah.  
[40051][40063]Aljense  
de !  
[40124][40155]No, por favor, no. Qu cojones eres?  
[40427][40441]Aljate de m!  
[40626][40638]Oye, t!  
[40678][40693]Ven y toma un poco de esto.  
[40714][40726]Vamos.  
[41041][41061]- No, no lo hagas.|- Est bien.  
[41242][41252]No hay pulso.  
[41294][41306]No est respirando.  
[41404][41418]Ayuda!  
[41544][41556]Ven aqu.  
[41559][41571]Qu est pasando?  
[41573][41591]Ven aqu, ven aqu, ven aqu, ven aqu.  
[41637][41649]Oye.  
[41655][41688]Comet un terrible error, pero voy a compensarlo.  
[41724][41736]Ay, Dios mo!  
[41739][41756]Pens que estabas muerto.  
[41763][41775]Est bien.  
[41787][41804]No, no, estoy preocupada.  
[41814][41826]Brodie.  
[41837][41856]Llvate a mi hija y vyanse de aqu.  
[41856][41875]Qu vas a hacer t?  
[41885][41909]Slo cuida de ella.  
[41966][41978]Lo har.  
[42038][42057]No, pap, t vienes con nosotros.  
[42061][42084]No tengo tiempo para discutir. Vete.  
[42091][42117]Pap, no me ir de aqu sin ti.  
[42184][42197]De acuerdo.  
[42204][42217]Vamos.



[42381][42405]<i>No, pap!|Qu ests haciendo?</i>  
[42405][42438]<i>No,  
no!</i>  
[42433][42445]<i>Pap!</i>  
[42565][42601]Es hora de pagar por loque hiciste, Hollister.  
[42626][42649]Por primera vez t yyo estamos de acuerdo.  
[42662][42676]Esto termina aqu y ahora.  
[42754][42776]Tal vez t y yo|encontremos la redencin.  
[42787][42807]Entonces, nos veremos en el Cielo.  
[42837][42858]A quin estoy engaando?  
[42892][42905]Te ver en el Infierno.  
[43243][43276]<i>El 31 de octubre es|normalmente el momento...</i>  
[43276][43285]<i>para un susto seguro.</i>  
[43288][43308]<i>El momento en que los|nios van a pedir dulces...</i>  
[43309][43326]<i>y los adultos ven|pelculas de terror,</i>  
[43329][43354]<i>pero anoche los|residentes de Dunwich...</i>  
[43355][43376]<i>experimentaron un|horror de la vida real,</i>  
[43376][43407]<i>mientras una fiesta de Noche de Brujas|se transform en una pesadilla.</i>  
[43416][43443]<i>El Ayuntamiento qued|envuelto en llamas...</i>  
[43444][43473]<i>y se cree que una docena|de personas han muerto.</i>  
[43474][43497]<i>Varias  
personas estn|heridas de gravedad...</i>  
[43497][43525]<i>y se espera que el nmero|de muertos aumente.</i>  
[43531][43559]<i>El Departamento de Bomberos local,|an no ha confirmado...</i>  
[43559][43584]<i>la causa del incendio,|pero varios testigos...</i>  
[43584][43611]<i>han afirmado que|antes de la explosin...</i>  
[43612][43648]<i>un hombre enmascarado|no identificado entr en el edificio.</i>  
[43648][43688]<i>Con un arma, hiriendo y|matando a varios asistentes.</i>  
[43691][43717]<i>El Departamento de Polica|se ha negado a comentar...</i>  
[43717][43733]<i>sobre estos reportes.</i>  
[43803][43862]<i>UN AO MS TARDE</i>  
[44043][44087]Esto es WKB y yo soy|Jennifer Hollister, despidindome.  
[44093][44112]Estimados oyentes...  
[44124][44144]feliz Noche de Brujas!  
[44926][44975]<i>FRANK HOLLISTER|1976 - 2018</i>  
[45423][45472]<i>JACK CAIN|1978 - 2018</i>  
[45646][45726]<i>The Legend of Halloween Jack (2018)|Una traduccin de|TaMaBin</i>  
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This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

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For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

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To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot

effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run

that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

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A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

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d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

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This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and

therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this

License.

Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6.

Any executables

containing that work also fall under Section 6,

whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

a) Accompany the work with the complete corresponding machine-readable

source code for the Library including whatever

changes were used in the work (which must be distributed under

Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

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library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice

That's all there is to it!  
Mathieu Desnoyers  
May 13th, 2009

IBM Corporation allowed LGPLv2.1+ licensing of their contribution to the  
userspace RCU library in a patch submitted on May 8, 2009 from Paul E.  
McKenney and reviewed by Steven L. Bennett:

<https://lists.lttng.org/pipermail/lttng-dev/2009-May/012835.html>

I (Mathieu Desnoyers) re-implemented ACCESS\_ONCE(), likely(), unlikely() and  
barrier() from scratch without reference to the original code.

commit id : 2dc5fa0f7cfbfb0a64a7a67b39626650e863f16a



Bert Wesarg <bert.wesarg@googlemail.com> approved LGPL relicensing of his patch in an email dated May 13, 2009 :

<http://lkml.org/lkml/2009/5/13/16>

xchg() primitives has been rewritten from a MIT-licensed cmpxchg for Intel and powerpc. They are MIT-licensed and therefore usable in LGPL code. This cmpxchg code was obtained from the atomic\_ops project:

[http://www.hpl.hp.com/research/linux/atomic\\_ops/](http://www.hpl.hp.com/research/linux/atomic_ops/)

I (Mathieu Desnoyers) wrote the remainder of the code.

The license for the library files in this project was therefore changed to LGPLv2.1 on May 13, 2009, as detailed in LICENSE.

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b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.

c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

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c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

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Upstream-Contact: Doug Ledford <dledford@redhat.com>,

Leon Romanovsky <Leon@kernel.org>

Source: <https://github.com/linux-rdma/rdma-core>

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## 1.144 jq 1.7.1-3build1

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# 1.148 Isof 4.95.0-1build3

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/\*

\* GetOpt() -- Local get option

\*

\* Borrowed from Isof's main.c source file.

\*

\* Liberally adapted from the public domain AT&T getopt() source,  
\* distributed at the 1985 UNIFORM conference in Dallas

\*

\* The modifications allow '?' to be an option character and allow  
\* the caller to decide that an option that may be followed by a  
\* value doesn't have one -- e.g., has a default instead.  
\*/

Found in path(s):

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/Isf-4-95-0-orig-1-tar-bz2/Isf\_4.95.0.linux/tests/LTlib.c  
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/\* Extended regular expression matching and search library,  
version 0.12.

(Implements POSIX draft P1003.2/D11.2, except for some of the  
internationalization features.)

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\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/lib/regex.c

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/\* Definitions for data structures and routines for the regular  
expression library, version 0.12.

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#!/usr/bin/perl

#

# idrlogin.pl -- sample Perl 5 script to identify the network source of a

# network (remote) login via rlogind, sshd, or telnetd

```

# IMPORTANT DEFINITIONS
# =====
#
# 1. Set the interpreter line of this script to the local path of the
# Perl 5 executable.

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# Initialize variables.

$dev = $faddr = $tty = ""; # fd variables
$pidst = 0; # process state
$cmd = $login = $pgrp = $pid = $ppid = ""; # process var.

# Set path to lsof.

if (($LSOF = &isexec("../lsof")) eq "") { # Try .. first
    if (($LSOF = &isexec("lsof")) eq "") { # Then try . and $PATH
        print "can't execute $LSOF\n"; exit 1
    }
}

```

```

# Open a pipe from lsof

if (! -x "$LSOF") { die "Can't execute $LSOF\n"; }
open (P, "$LSOF -R -FcDfLpPRn0") || die "Can't pipe from $LSOF\n";

# Process the lsof output a line at a time

while (<P>) {
    chop;
    @F = split('\0', $_, 999);
    if ($F[0] =~ /^p/) {

# A process set begins with a PID field
# whose ID character is `p'.

if ($pidst) { &save_proc }
foreach $i (0 .. ($#F - 1)) {

    PROC: {
if ($F[$i] =~ /^c(.*)/) { $cmd = $1; last PROC }
if ($F[$i] =~ /^p(.*)/) { $pid = $1; last PROC }
if ($F[$i] =~ /^R(.*)/) { $ppid = $1; last PROC }
if ($F[$i] =~ /^L(.*)/) { $login = $1; last PROC }
    }
}
$pidst = 1;
next;
}

# A file descriptor set begins with a file descriptor field whose ID
# character is `f'.

if ($F[0] =~ /^f/) {
if ($faddr ne "") { next; }
$proto = $name = "";
foreach $i (0 .. ($#F - 1)) {

    FD: {
if ($F[$i] =~ /^P(.*)/) { $proto = $1; last FD; }
if ($F[$i] =~ /^n(.*)/) { $name = $1; last FD; }
if ($F[$i] =~ /^D(.*)/) { $dev = $1; last FD; }
    }
}
if ($proto eq "TCP"
&& $faddr eq ""
&& (($cmd =~ /rlogind/) || ($cmd =~ /sshd/) || ($cmd =~ /telnetd/))) {
    if (($name =~ /[^\:]*:[^\:]*->([^\:]*):.*/)) {
        $faddr = $1;
    }
}
}

```



```

    }
} elseif ($tty eq "" && ($cmd =~ /.sh$/)) {
    if (($name =~ m#/dev.*ty.*#)) {
($tty) = ($name
=~ m#/dev.*(/.*#));
    } elseif (($name =~ m#/dev/(pts/d+)#)) {
$TTY = $1;
    } elseif (($name =~ m#/dev.*pts.*#)) {
$d = oct($dev);
$TTY = sprintf("pts/%d", $d & 0xffff);
    }
}
}
next;
}
}

# Flush any stored file or process output.

if ($pidst) { &save_proc }

# List the shell processes that have rlogind/sshd/telnetd parents.

$hdr = 0;
foreach $pid (sort keys(%shcmd)) {
    $p = $pid;
    if (!defined($raddr{$pid})) {
        for ($ff = 0; !$ff && defined($Ppid{$p}); ) {
            $p = $Ppid{$p};
            if ($p < 2 || defined($raddr{$p})) { $ff = 1; }
        }
    } else { $ff = 2; }
    if ($ff && defined($raddr{$p})) {
if (!$hdr) {
    printf "%-8.8s %-8.8s %6s %-10.10s %6s %-10.10s %s\n",
"Login", "Shell", "PID", "Via", "PID", "TTY", "From";
    $hdr = 1;
}
printf "%-8.8s %-8.8s %6d %-10.10s %6s %-10.10s %s\n",
    $shlogin{$pid}, $shcmd{$pid}, $pid,
    ($ff == 2) ? "(direct)" : $rcmd{$p},
    ($ff == 2) ? "" : $p,
    ($stty{$pid} eq "") ? "(unknown)" : $stty{$pid},

    $raddr{$p};
}
}
}
exit(0);

```

```

# save_proc -- save process information
#   Values are stored inelegantly in global variables.

sub save_proc {
    if (!defined($Ppid{$pid})) { $Ppid{$pid} = $ppid; }
    if ($faddr ne "") {
        $raddr{$pid} = $faddr;
    if (($cmd =~ /.sh$/)) {
        $shcmd{$pid} = $cmd;
        $shlogin{$pid} = $login;
    } else { $rcmd{$pid} = $cmd; }
    }
    if ($tty ne "") {
        $shcmd{$pid} = $cmd;
        $shtty{$pid} = $tty;
        $shlogin{$pid} = $login;
    }
}

# Clear variables.

$cmd = $dev = $faddr = $pgrp = $pid = $ppid = $tty = "";
$pidst = 0;
}

## isexec($path) -- is $path executable
#
# $path = absolute or relative path to file to test for executability.
# Paths that begin with neither '/' nor '.' that aren't found as
# simple references are also tested with the path prefixes of the
# PATH environment variable.

sub
isexec {
    my ($path) = @_ ;
    my ($i, @P, $PATH);

    $path =~ s/^\s+|\s+$//g;
    if ($path eq "") { return(""); }
    if (($path =~ m#^\[\.\.]\#)) {
    if (-x $path) { return($path); }
    return("");
    }
    $PATH = $ENV{PATH};
    @P = split(":", $PATH);
    for ($i = 0; $i <= $#P; $i++) {
    if (-x "$P[$i]/$path") { return("$P[$i]/$path"); }

```

```
}  
return("");  
}
```

Found in path(s):

```
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-  
bz2/lsof_4.95.0.linux/scripts/idrlogin.pl
```

No license file was found, but licenses were detected in source scan.

Notes for the distribution of lsof version 4

```
*****
```

| The latest release of lsof is always available from

| <https://github.com/lsof-org/lsof/releases>

|

| From 4.92.1, git is introduced to manage changes.

| You can consult the details of changes with git.

```
*****
```

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## Dialects Supported

=====

Lsof (for LiSt Open Files) lists files opened by processes on selected Unix systems. Version 4 is a source reorganization of version 3, itself a major revision of version 2. Version 4 has been tested on:

Apple Darwin 9 and Mac OS X 10.[567]  
FreeBSD 10.3, 11.0, 12.0 and 13.0 for AMD64-based systems  
Solaris 9

(The pub/tools/unix/lsof/contrib directory on lsof.itap.purdue.edu contains information on other ports.)

If your favorite Unix dialect is not in the list, or if your version of it is more recent than the ones listed, please contact me at <abe@purdue.edu>.

Version 3 of lsof was tested on:

AIX 3.2.5, 4.1.[1234], and 4.2  
BSDI BSD/OS 2.0, 2.0.1, and 2.1 for x86-based systems  
DC/OSx  
1.1 for Pyramid systems  
Digital UNIX (DEC OSF/1) 2.0, 3.0, 3.2, and 4.0  
EP/IX 2.1.1 for the CDC 4680  
FreeBSD 1.1.5.1, 2.0, 2.0.5, 2.1, 2.1.5 for x86-based systems  
HP-UX 8.x, 9.x, 10.01, 10.10, and 10.20  
IRIX 5.2, 5.3, 6.0, 6.0.1, and 6.[124]  
Linux through 2.0.27 for x86-based systems  
NetBSD 1.0, 1.1, and 1.2 for x86 and SPARC-based systems  
NEXTSTEP 2.1 and 3.[0123]  
OpenBSD 1.2 and 2.0 for x86-based systems  
Reliant UNIX 5.43 for Pyramid systems  
RISC/os 4.52 for MIPS R2000-based systems  
SCO OpenServer Release 1.1, 3.0, and 5.0.x for x86-based systems  
SCO UnixWare 2.1 and 2.1.1 for x86-based systems  
Sequent PTX 2.1.[1569], 4.0.[23], 4.1.[024], 4.2.[1], and 4.3  
Solaris 2.[12345], 2.5.1, and 2.6-Beta  
SunOS 4.1.x  
Ultrix 4.2, 4.3, 4.4, and 4.5

Version 3 and its predecessor, version 2, may be found at:

<ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/OLD>

## How Lsof Works

=====

Using available kernel data access methods -- `getproc()`, `getuser()`, `kvm_*`(), `nlist()`, `pstat()`, `read()`, `readx()`, `/proc` -- lsof reads process table entries, task table entries, user areas and file pointers to reach the underlying structures that describe files opened by processes.

Lsof interprets most file node structures -- `advfsnodes`, `autonodes`, `cnodes`, `cdmnodes`, `devnodes`, `fifonodes`, `gnodes`, `hsnodes`, `inodes`, `mfsnodes`, `pcnodes`, `procnodes`, `rnodes`, `snodes`, `specnodes`, `s5inodes`, `tmpnodes`. It understands NFS connections. It recognizes FIFOs, multiplexed files, Unix and Internet sockets. It knows about streams. It understands `/proc` file systems for some dialects. On many dialects it recognizes execution text and library references. It knows about AFS on some Unix dialects.

## Lsof Output

=====

The lsof output describes:

- \* the identification number of the process (PID) that has opened the file;
- \* the process group identification number (PGID) of the process (optional);
- \* the process identification number of the parent process (PPID) (optional);
- \* the command the process is executing;
- \* the owner of the process;
- \* for all files in use by the process, including the executing text file and the shared libraries it is using:
- \* the file descriptor number of the file, if applicable;

- \* the file's access mode;
- \* the file's lock status;
- \* the file's device numbers;
- \* the file's inode number;
- \* the file's size or offset;
- \* the name of the file system containing the file;
- \* any available components of the file's path name;
- \* the names of the file's stream components;
- \* the file's local and remote network addresses;
- \* the TLI network (typically UDP) state of the file;
- \* the TCP state, read queue length, and write queue length of the file;
- \* the file's TCP window read and write lengths (Solaris only);
- \* other file or dialect-specific values.

### Getting Started Quickly

=====

If

you want to get started using lsof quickly, or see some examples of how lsof can be used, consult the 00QUICKSTART file of the lsof distribution.

The 00QUICKSTART file won't help you build or install lsof, but it will cut through the density of the lsof man page, giving you more readily an idea of what you can do with lsof.

For information on building and installing lsof, consult the 00README file of the lsof distribution.

### Limiting, Filtering, and Selecting Lsof Output

=====



Lsof accepts options to limit, filter, and select its output.

These are the possible criteria:

- \* Process ID (PID) number -- to list the open files for a given process;
- \* Process Group ID (PGID) -- to list the open files for all the processes of a given process group;
- \* User ID number or login name -- to list the open files for all the processes of a given user;
- \* Internet address -- to list the open files using a given Internet address (host name), protocol, or port (number or name); or to list all open Internet files;
- \* command name;
- \* file descriptor name or number;
- \* list all open NFS files;
- \* list all open Unix domain socket files;
- \* list all uses of a specific file;
- \* list all open files on a file system.

Selection options are normally ORed -- i.e., an open file meeting any of the criteria is listed. The selection options may be ANDed so that an open file will be listed only if it meets all the criteria.

In the absence of any selection criteria, lsof lists files open to all processes.

#### Parsing Lsof Output with Another Program

=====

The lsof -F option directs it to produce "field" output that can easily be parsed by another program. The lsof distribution contains sample awk, perl 4, and perl 5 scripts in its scripts subdirectory that show how to post-process field output.

Repeat Mode

=====

Lsof can be directed to produce output, delay for a specified time, then repeat the output, cycling until stopped by an interrupt or quit signal. This mode is useful for monitoring the status of some file operation -- e.g., an ftp transfer or a tape backup operation.

Repeat mode is more efficient when combined with lsof's selection options, since they limit lsof overhead.

It's possible to use lsof's field output options to supply repeat mode output to another process for its manipulation. The scripts subdirectory of the lsof distribution has sample Perl scripts showing how to consume lsof repeat mode output from a pipe.

### Distribution Restrictions

=====

Lsof may be used and distributed freely, subject to these limitations:

1. Neither the author nor Purdue University is responsible for any consequences of the use of this software.
2. The origin of this software must not be misrepresented, either by explicit claim or by omission. Credit to the author and Purdue University must appear in documentation and sources.
3. Altered versions must be plainly marked as such, and must not be misrepresented as being the original software.
4. This notice may not be removed from or altered in the lsof source files.

### Cautions

=====

Lsof is a tool that is closely tied to the Unix operating system version. It uses header files that describe kernel structures and reads kernel structures that typically change from OS version to OS version.

DON'T TRY TO USE AN LSOF BINARY, COMPILED FOR ONE UNIX OS VERSION, ON ANOTHER.

On some Unix dialects, notably SunOS and Solaris, lsof versions may be even more restricted by architecture type. An lsof binary, compiled for SunOS 4.1.3 on a sun4c machine, for example, won't work on a sun4m machine.

AN LSOF BINARY, COMPILED FOR ONE SOLARIS 1.X ARCHITECTURE, ISN'T GUARANTEED TO WORK ON A DIFFERENT SOLARIS 1.X ARCHITECTURE.

## Distribution Contents

=====

The lsof distribution is checked for completeness when it is constructed and by the Inventory script when you run the Configure script. (See The Inventory Script section of the 00README file of this distribution.)

Lsof is organized in these parts:

- \* The main lsof directory, containing common sources, configuration and setup scripts and three subdirectories: dialects/, lib/, and scripts/.

Lsof is compiled in the main lsof directory after configuration. The selected dialect sources are copied or linked from the specified subdirectory. (Symbolic linking is the standard method.)

Common lsof definitions may be found in lsof.h; common function prototypes, proto.h; and common storage, store.c.

- \* The dialects/ subdirectory contains subdirectories with sources specific to UNIX dialect implementations -- e.g., the dialects/sun/ subdirectory contains sources for the SunOS (Solaris 1.x) and Solaris (2.x) implementations of lsof. The dialects subdirectories also contain Makefiles and scripts for assisting dialect source configuration.

Dialect configuration definitions may be found in dlsof.h; other dialect definitions, dlsof.h; dialect prototypes, dproto.h; and dialect storage, dstore.c.

- \* The lib/ subdirectory contains sources for common lsof functions. Not all dialects use the functions -- some have their own versions of them. The lib/ functions are enabled and customized with #define's in the dialect machine.h header

files.

- \* The scripts/ subdirectory contains sample scripts for processing lsof field (-F) output. The scripts are written in AWK, Perl 4, and Perl 5.

The 00PORTING file of the lsof distribution has more information on lsof components, configuration, and construction.

#### Warranty

=====

Lsof is provided as-is without any warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

The entire risk as to the quality and performance of lsof is with you. Should lsof prove defective, you assume the cost of all necessary servicing, repair, or correction.

#### Bug Reports

=====

Now that the obligatory disclaimer is out of the way, let me hasten to add that I accept lsof bug reports and try hard to respond to them. I will also consider and discuss requests for new features, ports to new dialects, or ports to new OS versions.

PLEASE DON'T SEND A BUG REPORT ABOUT LSOF TO THE UNIX DIALECT VENDOR.

At worst such a bug report will confuse the vendor; at best, the vendor will forward the bug report to me.

Please send all bug reports, requests, etc. to me via email at <abe@purdue.edu>.

#### The lsof-l Mailing List

=====

Information about lsof, including notices about the availability of new revisions, may be found in mailings of the lsof-l listserv. For more information about it, including instructions on how to subscribe, read the 00LSOF-L file of the lsof distribution.

## Version 3 Release Notes

=====

See 00DIST in the last lsof 3 revision 3.88, for its complete set of release notes. Lsof revision 3.88 may be found at:

<ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/OLD>

3.0 May 24, 1994

This is the first official release of lsof 3.

...

3.88 February 17, 1997

+=====+

| This is the last version 3 revision. |

+=====+

Added documentation files -- 00.README.FIRST[\_<version>] and 00RELEASE.SUMMARY\_<version> -- to the distribution.

## What's new in Version 4

=====

The main goal of version 4 was to eliminate the confusing common/fragment source file technique. Changing the version number also provided an opportunity to restart the numbering, which at 3.88 had risen to a large value.

The sources that appeared in the dialects/common subdirectory of version 3 in fragment files have been incorporated into the version 4 liblsof.a library as \*.c files. This results in significant changes to many source files, scripts, and Makefiles of all dialect versions. It allows elimination of some source files -- ddev.c, dfile.c, dmnt.c -- for dialects now obtaining functions from liblsof.a that formerly came from making dialect source files by combining fragment files.

The version 4 liblsof.a sources are stored in the lib/ subdirectory of the main lsof directory. The liblsof.a functions are activated and conditioned in their source files by values #define'd in the dialect dlsof.h and machine.h header files.

Dialects that provide a private version of a library function refrain from #define'ing the symbol that would activate the library function code.

## Version 4 Release Notes

=====

4.0 February 24, 1997

```
+=====+  
| This is the first lsof 4 revision. |  
+=====+
```

Reorganized sources:

eliminated code fragment files  
and created a library in their place. Modified or  
deleted many dialect source and header files.  
Changed documentation accordingly.

Added a warning to sgi/Makefile and 00FAQ that advises  
against using the IRIX C compiler -n32 option when  
compiling lsof. Thanks go to Peter Ilieve  
<peter@memex.co.uk> for bringing this to my attention.

Dropped IRIX 5.2 in mid-stream, because my 5.2 test  
system was upgraded to 5.3.

4.01 March 3, 1997

Added TFS support for Pyramid dialects.

Added test to Configure and to the IRIX dnode.c  
for the different cnode struct that appears in  
<cache/fs/cache/fs.h> on the 6.2 IMPACT distribution.  
Heddy Boubaker <boubaker@amfou.cenatls.cena.dgac.fr>  
alerted me to the cnode change and helped test this  
lsof adjustment.

Shut down the lsof child process before doing a -r  
sleep(). A comment from Dan Mercer <dam@mmm.com>  
prompted this.

4.02 March 21, 1997

Based on a report from Pasi Kaara  
<Pasi.Kaara@atk.tpo.fi>,  
disabled HP-UX CCIT support in lsof for HP-UX  
versions 10 and above. Pasi's report also led to

changes in the HP-UX machine.h to support use of gcc to compile lsof for HP-UX 10.20 and warnings against using `cc -Aa` or `gcc -ansi` to compile lsof under HP-UX 10.x.

With help from Richard Allen <ra@hp.is> taught HP-UX 10.x lsof to name file systems better by using the virtual file system device number. Elias Halldor Agustsson <elias@rhi.hi.is> provided a test system.

Changed NEXTSTEP and UNIXWARE Makefiles to use safer quoting when generating version.h. The change was suggested by Bob Farmer <ucs\_brf@unx1.shsu.edu>.

Added SHELL=/bin/sh string to all Makefiles.

Added support for Linux 2.1.28 on a test system, kindly provided by Jonathan Sergent <sergent@purdue.edu>. Configure tests the Linux 2.1.x's C library lseek() function for proper handling of kernel offsets. If lseek() appears suspect, Configure activates the use of a private lseek() function. Changed the private nlist() function to nlist\_private() and taught it to use the query\_module() syscall in place of the deprecated get\_kernel\_syms() one. Added rudimentary AX.25 support for Pierfrancesco Caci <ik5pvx@infogroup.it> who helped test it. Updated the old get\_kernel\_syms() code to recognize and skip module name entries.

Prompted by Marty Leisner <leisner@sdsp.mc.xerox.com>, eased the requirement that service name lookup for the -i option be accompanied by a protocol name. The name is not needed if both TCP and UDP names yield the same port number.

Added xusers.awk script from Dan Mercer <damercer@mmm.com> to the distribution scripts/ subdirectory.

Changed Configure script to use LSOF\_VERS for all UNIX dialect version numbers and to pass LSOF\_VERS to the dialect Mksrc functions. Also added the ability for a dialect stanza to declare a different dialect Makefile source. Modified dialect Mksrc files

-- e.g., linux and sun -- accordingly.

Added support for BSD/OS 3.0 with help from Jim Reid <jim@mpn.cp.philips.com>. Terry Kennedy <TERRY@spcvxa.spc.edu> kindly provided a test system. During the port corrected a bug that prevented proper handling of revoked files.

#### 4.03 April 7, 1997

At the suggestion of Dan Mercer <damercer@mmm.com>, made HP-UX building of lsof aware of differences between the HP-UX bundled and unbundled C compilers.

Added the ability for the lsof builder to define the default warning message issuance state. By default the issuance of warning messages is disabled; defining WARNINGSTATE in machine.h disables it. The Customize script was updated to handle WARNINGSTATE. Dan Mercer suggested this.

Eliminated compiler complaint about improperly cast get\_Nl\_value() argument in ncache\_load() in lib/rnch.c.

Corrected zeromem() argument error in SCO dproc.c.  
Sped up parent directory cache lookup slightly.

Updated for PTX 4.4,  
including additional VxFS (EFS)  
file system support.

#### 4.04 April 17, 1997

At the suggestion of Bela Lubkin <belal@sco.COM> changed device cache handling to be more tolerant of a device cache file whose [cm]times are older than the ones on /dev or /devices. The change required adding information to Solaris device cache file clone lines, so the first time lsof 4.04 is run under Solaris it will complain about a bad cached clone device in a previous device cache file, then regenerate it.

Added boot file path detection for SCO OSR 5 and above, based on information supplied by Bela.

Fixed two bugs in DEC OSF/1 lsof -- an error in reporting locks and a missing continue statement in readdev() after a failure to open a directory.  
Jan Ole Suhr <josuhr@informatik.tu-clausthal.de>



reported the second bug and supplied a fix.

Fixed XFS problems with IRIX 6.2 by abandoning the idea that SGI will distribute XFS header files and defining an lsof-private xfs\_inode structure. John

Paul Morrison <John.Paul.Morrison@MultiActive.com> helped develop and test the 5.3 definition. John R. Vanderpool <fish@daacdev1.gsfc.nasa.gov> helped develop and test the 6.2 definition.

Remove obsolete comments about common/\*.frag files.

Updated Linux lsof for Linux version 2.1.35.

4.04 April 18, 1997

Supplement Regenerated the 4.04 distribution to correct a non-device-cache #define misplacement in the Solaris and SunOS dlsof.h. Alexandre Oliva <oliva@dcc.unicamp.br> reported the problem.

4.05 April 24, 1997

Corrected an error in 00DCACHE.

Made sure SCO /etc/ps/booted.systems is closed.

Based on an observation by Bela Lubkin <belal@sco.COM> that the lsof child had needless file descriptors open, closed all but the open pipes between the lsof parent and child.

Decommissioned CDC EP/IX support; I no longer have a test system.

Based on a suggestion from Patrick Connor <connor@phreak.csd.sgi.com>, added -xansi to CFLAGS for IRIX 5.3 and 6.[234].

Also at Patrick's suggestion changed Configure to propagate exact SunOS 4.1.x version to the main and library Makefiles. This allowed the sunos413 and sunos413cc Configure abbreviations to be shortened to sunos and sunoscc.

Updated obsolete argument uses (-H changed to -n) in count\_pf.perl\* and watch\_a\_file.perl scripts.

Adjusted Solaris 2.6 lsof for Beta\_Update with tips from Casper Dik <casper@holland.Sun.COM>.

Fixed a Solaris 2.4 TCP address reporting bug.

#### 4.06 April 30, 1997

Added a step to the Makefile clean rules that does a make clean in the lib subdirectory; suggested by Casper Dik <casper@holland.Sun.COM>. (Configure's -clean argument already did this.)

Fixed an incorrect awk argument in the sunos\* Configure stanza, reported by Alexandre Oliva <oliva@dcc.unicamp.br>.

Added CD9660 (aka ISO) file system support to FreeBSD, NetBSD, and OpenBSD with mods and help from Kenneth Stailey <kstailey@disclosure.com>. (BSDI already had CD9660 support.) While at it, added file descriptor system support to BSDI and FreeBSD.

Added /kern file system support to OpenBSD. The support wasn't extended to BSDI, FreeBSD, or NetBSD, because it requires Kenneth Stailey's changes to /sys/miscfs/kernfs/kernfs.h.

Updated IRIX 6.3 support after getting access to a test system, provided by John Paul Morrison <John.Paul.Morrison@MultiActive.com>. Improved the handling of IRIX 5.1 and greater FIFOs.

#### 4.07 May 12, 1997

Based on AIX problem reports from David Capshaw <David.Capshaw@SEMATECH.Org>, changed the aix\* Configure script stanza to avoid -bnolibpath for gcc (which the GNU loader doesn't grok) and AIX below 4.1.4 (where -bnolibpath hasn't been tested or is known to be unimplemented), and to refuse to use gcc for compiling lsof in AIX versions below 4.1 (because of possible structure alignment problems). Updated 00FAQ appropriately.

Added OpenBSD support for EXT2FS. This support has yet to be tested.

Tested lsof under OpenBSD 2.1.

Activated /kern file system support for NetBSD when Configure senses that /sys/miscfs/kernfs/kernfs.h defines the kern\_target structure. This support has not been tested under NetBSD, although it has been tested under OpenBSD.

Made some simple changes to the BSDI machine.h, suggested by Jeffrey C. Honig <jch@bsd.com>.

Improved handling of alternate dialect Configure abbreviations -- aix and aixgcc, hpux and hpuxgcc, solaris and solariscc, and sunos and sunoscc.

4.08 May 23, 1997

Cleaned up dialect Makefile's, starting with a suggestion from Christopher Schanzle <chris@cam.nist.gov>.

Improved Configure's -clean processing.

Corrected bugs in Solaris lock reporting.

Changed NetBSD Configure stanza to put -I/usr/include before -I/sys.

4.09 June 1, 1997

Adjusted for latest FreeBSD 3.0 release. This required adding a new kernel name cache module for reading BSD-form hashed kernel name cache entries, rnmh.c, to the lsof library, and adding a #define to each machine.h to select it.

Activated rnmh.c for BSDI 2.1, BSDI 3.0, NetBSD 1.2, and OpenBSD 2.1.

4.10 June 8, 1997

Adjusted for Linux 2.1.x (x > 35) kernels with hashed task structure pointers. Marty Leisner <leisner@sdsp.mc.xerox.com> and Jonathan Sergent <sergent@io.com> tested the adjustment.

Replaced readdev() stat() calls with lstat() to reduce device table and cache entries with the same device number and inode values. Added code to remove all remaining duplicates. This fixes a Linux problem reported by Jonathan Sergent and

makes device node name output predictable.

Corrected a bug in UnixWare stream file handling that prevented searching for the stream file by its associated character device name.

Added Pyramid code to determine Reliant UNIX clone major device number differently from that of DC/OSx.

#### 4.11 June 12, 1997

Changed Configure to sense that the PTX `inp_[fl]addr` members of the `inpcb` structure of `<netinet/in_pcb.h>` have a struct type and set `HASINADDRSTR` for use in `PTX dnode.c` and `dsock.c` tests.

Changed PTX version 4.1.4 tests to use 4.1.3 instead. Carson Wilson `<carson@mcs.com>` reported the need to do this and tested the change.

Fixed a block device table indexing bug in `lib/rdev.c`, reported by Carson Wilson. The same bug was squashed in `pyramid/ddev.c`.

Added code to the Pyramid Reliant UNIX `kread()` function to compensate for an address boundary error in the kernel's `/dev/kmem` driver.

Verified that `lsnf` compiles and works under AIX 4.2.1. Added an AIX test for the presence of NFS header files, defined `HAS_NFS` and adjusted AIX dialect sources accordingly.

Based on a suggestion from Gaylord Holder `<holder@phy.ucsf.EDU>`, added DEC OSF/1 code to auto-detect the booted file, whence kernel symbol addresses are obtained.

#### 4.12 June 24, 1997

Corrected a device number sign extension problem in the reading and writing of device cache file. The problem was reported by Bela Lubkin `<belal@sco.com>` and he suggested a fix.

Fixed an SCO stream device lookup problem. The report and solution came from Bela Lubkin

Enhanced the Configure script to enable cross-configuration of lsof, based on suggestions from Marty Leisner <leisner@sdsp.mc.xerox.com>. A new documentation file, 00XCONFIG, describes the process.

Made Pyramid OBJFS support conditional on the presence of supporting header files. Corrected the Pyramid MkKernOpts script so it generates the necessary -D's for the Nile/Jolt architecture. Richard Coley <rcoley@pyra.co.uk> helped.

Added another IRIX xfs\_inode variant for 6.2, 32 bits, no XFS rollup patch.

Tested under UnixWare 2.1.2.

4.13 July 9, 1997

Taught Pyramid lsof to grok ttyfs vnodes with help from Richard Coley <rcoley@pyra.co.uk>. Fixed some minor bugs in Pyramid FIFO reporting. Eliminated use of the Pyramid UCB compatibility library at Richard's suggestion.

Eliminated reporting of "strange" inode numbers for SCO OSR 3.2v5.0.x HPPS files with help from Bela Lubkin <belal@sco.com>

Modified port to service name lookup to use a small number of getservbyport() calls before reading the entire map with getservent(). Changed port reporting to represent a zero as '\*' to be consistent with other prt number reporting tools like netstat. Casper Dik <casper@holland.Sun.COM> suggested these changes -- the getserv\*() one to improve performance for large NIS service name maps.

Changed all readdev() functions to make the absence of block devices a warning instead of a fatal error after Brian Redman <ber@ms.com> reported his IRIX 6.4 system had no block devices. (It really did have block devices, but readdev()'s lstat() use caused it to miss them in a directory symbolically linked from /dev/dsk->/hw/disk.) Fixed Brian's real problem by changing the IRIX readdev() to use stat() on /dev nodes if a Configure test shows /hw is readable. Extended the potential to do the same

to all readdev() functions.

For consistency and convenience changed some Configure abbreviations and dialect subdirectory names: "decosf" abbreviation and "osf" dialect subdirectory name to "du"; "netbsd" dialect subdirectory name to "n+obsd"; "next3" abbreviation and "next" dialect subdirectory name to "ns"; "sco" abbreviation and dialect subdirectory name to "osr"; "sgi" dialect subdirectory name to "irix"; and "unixware" abbreviation and dialect subdirectory name to "uw".

Added #if/#endif clauses to the AIX rmdupdev() function to avoid clone processing for AIX versions less than 4.1.4. The problem was reported by Toralf Foerster <toralf.foerster@io-warnemuende.de>, who supplied corrective code.

Added support for new style NetBSD inode with i\_ffs and i\_e2fs union members.

Improved Configure and 00FAQ information on Digital UNIX configuration subdirectory with suggestions from Brad Krebs <brad@EECS.Berkeley.EDU>.

#### 4.14 July 22, 1997

Reorganized the Solaris handling of the inode structure header file, ufs\_inode.h, to eliminate VxFS structure definition conflicts for Solaris 2.4, based on information from Greg Earle <earle@netbsd4me.jpl.nasa.gov>.

Cleaned up some typos and confusion in Configure's help output, based on comments from Bela Lubkin <belal@sco.com>

Added a 00DIALECTS file, containing UNIX dialect version numbers, that can be used by Configure and the man page.

#### 4.15 August 15, 1997

Aligned `Configure -help` output better. Removed Configure's 2.6 Beta test adjustments.

Added improved Solaris VxFS configuration and handling, based on information from Greg Earle

<earle@netbsd4me.jpl.nasa.gov>.

Added socket state -- TCO or TPI -- for socket files at the suggestion of Ian Fitchet <I.D.Fitchet@ftel.co.uk>.

#### 4.16 September 25, 1997

Added reporting of TCP/TPI queue lengths and window sizes ala netstat to NAME column. Added -T option to select or de-select TCP/TPI info reporting. (Window sizes are only reported for Solaris.) Fixed anomalies along the way in SIZE/OFF processing for some dialects.

Fixed service name argument processor to allow minus signs as part of the name. Consequently this disallows names with embedded minus signs from being specified as the start of a range.

Added 00FAQ entries explaining why lsof won't find a file being edited with vi, why window sizes aren't reported for all dialects, and what the "no more information" message means.

Forced Pyramid CC to be /usr/ccs/bin/cc to avoid accidental use of the BSD variant in /usr/ucb/cc.

Added support for Linux glibc2, including a Configure test; cross-Configure support (00XCONFIG); and much unfortunate and risky sleight-of-hand in lsof Linux dialect header and source files, forced upon lsof by incompatibilities between Linux kernel and glibc2 header files.

Included in scripts/identd.perl5 a Perl 5 implementation of an identd server, using lsof, provided by Kapil Chowksey <kchowksey@hss.hns.com>.

Updated IRIX 6.4 xfs\_inode guess.

#### 4.17 October 14, 1997

Added -V option for verbose search result reporting. Verbose reports are prepared for failure to locate file names, command names, Internet addresses or files, login names, NFS files, PIDs, PGIDs, and UIDs.

Augmented Linux NFS file test to cope with kernels whose NFS code is in a loadable module. Need for the test was pointed out by Jonathan Sergent <sergent@csociety.ecn.purdue.edu>. The change required that Linux have private dmnt.c source,

Completed a Linux 2.1.57 port on a system provided by Jonathan Sergent.

4.18 October 25, 1997

Eliminated memory leaks in alloc\_lfile(), lkup\_port(), and NEXTSTEP's process\_text() function.

Added recognition of OpenBSD 2.2 in Configure, supplied by Kenneth Stailey <kstailey@disclosure.com>.

Consolidated print\_file() functions to use the one in lib/prtf.c. Made it configurable and changed it to size print columns dynamically.

!!! WARNING !!!

WITH DYNAMICALLY SIZED PRINT COLUMNS LSOF 4.18 PRODUCES OUTPUT SIGNIFICANTLY DIFFERENT FROM THAT OF PREVIOUS REVISIONS. LINES ARE GENERALLY SHORTER AND THERE IS GENERALLY LESS BLANK SPACE BETWEEN COLUMNS AND THE ITEMS IN THEM. THERE ARE NO LONGER ANY SPACES BETWEEN DEVICE NUMBER ELEMENTS, ONLY COMMAS.

!!! WARNING !!!

Added special types and print specification modifiers for file size and offset to handle UNIX dialects with 64 bit sizes and offsets. Paul Eggert <eggert@twinsun.com> reported the need for this addition.

With Paul Eggert's help picked lint from the lsof library, the main level lsof sources, and the Sun dialect sources.

Added documentation, including the file 00LSOF-L, about the lsof-1 LISTSERV.

Added support for Reliant



UNIX on the RM600. Bob

Passarella <rmpassar@pyramid.com> supplied the changes. Kevin Smith <kevin@pyramid.com> helped arrange test systems. While incorporating Bob's changes, modified lib/rnch.c to handle kernel ncache structs whose name is accessed via a char \*, rather than in a char array.

Changed #include order of <sys/socketvar.h> for Solaris 2.x. W. Richard Stevens <rstevens@kohala.com> pointed out the need to do this.

4.19 October 30, 1997

Changed Pyramid Reliant RM600 proc scan to skip SSYS (p\_flag) processes, since they don't seem to have a readable u\_cdir vnode.

Enabled Pyramid Reliant UNIX kread() work-around for DC/OSx, too, since its read(/dev/kmem) kernel driver seems to share the page boundary bug this work-around circumvents.

Changed SzOffFtm\_d and SzOffFtm\_dv (new formats at 4.18 to print size and offset) from signed to unsigned. Setting them signed at 4.18 was an oversight.

Plugged a memory leak that caused the loss of 130 bytes per repeat-mode pass. Fixed it with a simple work-around in main(). Lionel Cons <Lionel.Cons@cern.ch> reported the leak.

4.20 November 11, 1997

Tested under BSDI 3.1.

Added support for Reliant UNIX Mesh IPC files with help from Billy Ho <bho@pyramid.com>.

Added support to Digital UNIX lsof that uses the libmsfs tag\_to\_path() function (when it exists) to look up AdvFS path names. The idea and sample code came from Dean Brock <brock@cs.unca.edu>. Converted Dean's code into more general purpose support for private name cache lookups via the HASPRIVNMCACHE #define in the dialect machine.h file and code conditional on it in the printname() function.

Taught Digital UNIX lsof to recognize NFS3 file systems. Corrected Digital UNIX lsof DEVICE column alignment.

4.21 December 1, 1997

Squashed bug, introduced at revision 4.18, that resulted in double reporting of each selected PID when terse mode (-t) was specified.

Corrected minor bug, also introduced at 4.18, that might cause an extra print\_proc() pass when one PID has been specified.

Added -R to lsof options in scripts/idrlogin.perl\*. The option should have been there -- it was supposed to be mandatory for PGID reporting -- but a bug, corrected in revision 4.18, previously made -R unnecessary.

Enabled configuring for BSDI BSD/OS 4.0 per a suggestion from Jeff Honig <jch@bsd.com>.

Enabled replacement of scoff\_t with off64\_t (scoff\_t is used to type r\_size and r\_localsize in the rnode struct) for IRIX 5.3 systems that have the NFS kernel rollup patch (1477). This compensates for SGI's failure to distribute an updated <sys/fs/rnode.h> with their patch.

Validated under Linux 2.0.3[12], Linux 2.1.64, and NetBSD 1.3.

Added FreeBSD root directory reporting, courtesy of Dan Nelson <dnelson@emsphone.com>.

4.22 December 15, 1997

Made adjustments for Linux 2.1.7[02].

Improved NAME information for Linux UNIX domain sockets.

Added option +|-M to control the reporting of portmapper registration information in square brackets after the TCP or UDP port or service name. Kenneth Stailey <kstailey@disclosure.com> suggested the feature and provided sample code from OpenBSD.

Reporting is disabled by default in the distribution and may be enabled with +M; if lsof is compiled with HASPMAPENABLED (e.g., from machine.h), reporting will be enabled by default and can be disabled with -M.

Changed the -w option to +/-w to match the syntax of the +/-M option and to eliminate any options that flip meaning when a symbol is defined at compile time. For both +/-M and +/-w, specifying '-' when the default state is disabled or specifying '+' when the default state is enabled causes no problems.

!!!WARNING The -w option has changed in lsof 4.22. WARNING!!!

Made the +/- prefix legal for most options, but didn't document it in the man page or help panel. Most options that disable something -- e.g., -b, -C, -n, -P -- now disable when the prefix is '-' and enable when it is '+'. Since the states these options disable are enabled by default, I chose to avoid documentation complexity and confusion by not mentioning that they can be used with the '-' prefix.

Condensed the help panel.

Made sure Digital UNIX Configure stanza puts normal include path (e.g., /usr/include) before system include paths.

Added IPX socket information reporting to Linux with help from Jonathan Sergent <sergent@purdue.edu>.

4.23 January 16, 1998

Fixed conflict arising from the quondam replacement of the Sun Solaris <netdb.h> with a BIND/BSD version.

With help from Jonathan Sergent <sergent@purdue.edu> developed a /proc file system based Linux lsof. It needs some Linux 2.1.x release to work -- I'm not sure which, but I tested under 2.1.72, 2.1.76, and 2.1.79. The Configure script selects special sources for this lsof, so the full lsof distribution now

contains both /dev/kmem and /proc based sources for Linux lsof. An optional kernel mod, written by Jonathan, enhances the /proc-based lsof ability to recognize IPX socket files. Reorganized and augmented the Linux sections in 00FAQ to explain the two types of Linux lsof.

Defined DOSTAT\_FUNCTION for dostat() in misc.c to select the function, stat() or lstat(), it will use. DOSTAT\_FUNCTION is normally undefined, defaults to lstat(), and is only defined for the /proc-based Linux lsof in its dlsof.h.

Made conditional on the presence of IRIX 6.4 XFS rollup patch #6 an XFS node change introduced in revision 4.16. Identified the patch with help from John R. Vanderpool <fish@daacdev1.gsfc.nasa.gov>.

Added NFS node compensation for NetBSD 1.3. The code and suggestion for it was supplied by Jean-Luc Richier <richier@imag.fr>.

Added diagnostic messages to the /dev/kmem-based Linux Mksrc script to report errors during the construction of the kernel name cache header file, kncache.h. Added 00FAQ information on kncache.h.

Added a new Linux test host, running 2.0.33 and Glibc, provided by Steve Logue <stevell@mail.cdsnet.net>.

Ported to PTX 4.1.3 and 4.4.2. Adjusted lib/rnch.c for 4.4.2 to allow customization of additional ncache struct element names.

4.24 January 28, 1998

Changed /proc-based Linux lsof offset test to use "/" instead of "/etc/passwd".

To assist Jim Mintha <jim@geog.ubc.ca> with the packaging of lsof for Debian Linux, added a DEBIAN\_LINUX\_LSOF #define to trigger the activation of special system map file location code in the /dev/kmem-based dproc.c.

Applied modification to dialects/bsdi/dlsof.h from Ingimar Robertson <iar@skyr.is>, enabling lsof to compile for BSDI BSD/OS 2.0.

Corrected a documentation error in 00DCACHE, pointed out by Thomas Anders <anders@hmi.de>. The error was created when the -V option was added at lsof 4.17.

Made IRIX 5.3 through 6.3 lsof aware of IRIX SCSI tape devices (e.g., /dev/tape). Dave Olson of SGI and Randolph J. Herber of FNAL provided valuable advice, and Igor Schein <ischein@air-boston.com> helped test.

Added a machine.h symbol (NEVER\_HASDCACHE) that prevents Customize from offering to change HASDCACHE. The symbol may appear anywhere in machine.h -- e.g., in a comment. Included the symbol in a comment of the HASDCACHE section of the /proc-based Linux lsof machine.h, and accompanied it with warnings against #define'ing HASDCACHE. Did the same thing for WARNDEVACCESS (NEVER\_WARNDEVACCESS is the suppressant.)

4.25 February 7, 1998

Corrected an IRIX mis-cast of file offset (position). Igor Schein <ischein@air-boston.com> reported the problem. This was offered as a patch to 4.24. Picked some lint Igor pointed out.

At Igor's suggestion added an optional decimal digit size argument to the -o option. This argument specifies how many file offset decimal digits can follow "0t" before lsof switches to a "0x..." form. The argument size specification doesn't count the two characters of the "0t". A size of 0 means unlimited. The default is OFFDECDIG (8), preserving compatibility with existing lsof output; it can be changed by the lsof builder. When size is specified with -o it does not force offset display; -o without a size still must be used to do that.

Added an IRIX 6.2, 32 bit system, XFS node patch, courtesy of Ulrich Bernhard <rzubu@rzu.unizh.ch>.

For my own convenience enabled Configure to use /usr/local/bin/gcc for NEXTSTEP. This allows circumvention of a gcc 2.8.0 ranlib problem on my test 3.1 `040 cube.

Added flags recommended by the RISC/os and Ultrix compilers for the updated (and longer) main.c.

Updated FreeBSD cd9660\_node.h Configure test.

4.26 February 17, 1998

Added shared process group processing for IRIX 5.3, and IRIX 6.1 and above, based on investigation of a bug report from Igor Schein <ischein@air-boston.com>. Igor helped test this addition.

Improved handling of file system name arguments. It's now done in a manner similar to fuser. The -f argument forces path names to be considered as simple files, rather than as file system names. The +f flag forces them to be considered as file system names. Normally path arguments are considered file system names when they match a mounted-on directory in the system's mount table, or when they match a mounted file system's block device. Igor Schein helped test this change.

Igor also suggests that the proper compilation of the IRIX 6.4 proc structure after patch 2536 has been installed may need -DPIOMEMOPS. So lsof's MkKernOpts script was updated to propagate that option from CCOPTS in /var/sysgen/system/irix.sm, even though patch 2536 doesn't add -DPIOMEMOPS to it. Added a 00FAQ item on this patch.

Added a fatal warning message about names forced to be file system names (with +f) that have no match in the mount table.

Improved the -V message for files and file systems for which no open files were found. Added reporting of /proc file and file system search failures.

Did some code reorganization to combine the multiple ck\_file\_arg() functions into one. Moved the new function from the library to the top level and put it in arg.c; moved the usage function from arg.c to a new top-level source file, usage.c, to balance top-level source file size. The new usage.c depends on version.h; arg.c no longer does.

Added flag recommended by the DU compiler for the updated (and longer) main.c.

4.27 March 6, 1998

At the request of Igor Schein <ischein@air-boston.com> added a conditional repeat mode option, using the '+' prefix to the 'r' option. '+r' operates as does '-r' with the exception that it exits the first time no open files have been listed during a cycle. The exit code will be zero when any open files have been listed; one, if none were ever listed.

Ported lsof to HP-UX 11.0 with the help of Richard Allen. This port hasn't been tested on a 64 bit kernel; I'm sure it won't work there without more mods. It may not work on PA 2 architectures; I've only tested it under PA 1 and a separate, busy tester reported PA 2 problems that I've been unable to investigate.

In anticipation of getting access to a 64 bit HP-UX kernel and the pending start of the Solaris 2.7 Beta test (It will have 64 bit kernel addressing.), started adding support for 64 bit kernel pointers. This includes: ubiquitous use of the KA\_T cast for kernel pointers; a format to print them, KA\_T\_FMT\_X; a function to print them, print\_kptr(); and modifications to most kernel-related functions -- e.g., process\_file(), process\_node(), process\_socket(), readvfs() -- to process kernel addresses as KA\_T types.

Fixed minor bug in handling path name arguments that end with a '/'.

Removed support for RISC/os;  
its test system is no  
longer available.

Made modifications to insure that lsof output doesn't contain non-printable characters. All such characters are now printed in the printf form "\x%02x". Several new common functions were installed in misc.c to support "safe" printing. This second major modification in 4.27 to common and dialect code could have introduced bugs not

yet detected.

4.28 March 10, 1998

Refined unprintable format to use `\b`, `\f`, `\r`, `\n`, `\t`, and `^*` (for CTRL) forms. Corrected omission of `safestrprt()` use for field output command name. These changes were offered as patches to 4.27.

Made space an unprintable character (`\x20`) in the COMMAND column; printable elsewhere, including the NAME column, field output, and error messages.

Made sure FD column is parseable as a single entity -- i.e., has no embedded space. Thus, if the access mode is unknown but there is a known lock mode, (a very rare case) the access mode will be printed as  
`-'.

Picked lint with gcc 2.8.0 under Solaris 2.6.

With the help of Dave Olson of SGI identified a proc struct element that should have been added to `<sys/proc.h>` by IRIX 6.4 patch 2536. Added a work-around for it to the lsof Configure script. Igor Schein `<ischein@air-boston.com>` identified that the patch caused a proc structure length complaint from lsof. Removed an obsolete 00FAQ item on the patch, installed at lsof 4.26, explaining that no solution was yet available.

Added a 00FAQ item on how BIND installs its own header files, including `<netdb.h>`, which may cause the `rpcent` struct definition to vanish. Solaris has an automatic lsof work-around, but that hasn't been (and probably can't be) propagated to all dialects supported by lsof. The 00FAQ item recommends re-installation of the vendor header files that BIND has replaced. (Others include `<rpcent.h>`, `<sys/bitypes.h>`, and `<sys/ctypes.h>`.)

Made AIX AFS fixes.

4.29 March 26,  
1998

Corrected bug in Internet address matching. The matching formerly stopped if the foreign address matched, thus failing to check the local address



for a match. That led to a possible false "Internet address not located" warning (i.e., in response to -V) about the local address, when both foreign and local addresses were specified with -i. This correction was offered as a patch to 4.28.

Changed readmnt() usage in an attempt to defer mount readlink() and stat() delays until they are necessary.

Corrected two bugs in the Digital UNIX readdev() function. Made the correction available as a patch to 4.28 and regenerated the 4.28 DU binaries.

Added a missing argument to a print-kptr() call in the HP-UX dsock.c. The missing argument causes a fatal gcc error. The problem was reported by Eyal Shaynis <eyal.shaynis@telrad.co.il>. The fix was offered as a 4.28 patch.

Adjusted for Digital UNIX 4.0D; the spec\_node structure is now defined in <sys/specdev.h>. Kris Chandrasekhar <Kris.Chandrasekhar@digital.com> identified the need for the adjustment.

Incorporated a bug fix from Brian McAllister <mcallister@mit.edu> to the DU readmnt() function. This fix was offered as a patch to 4.28.

Added "safe" printing to a SunOS clone device error message.

Corrected bug in tabling of Linux /proc-based lock info.

Corrected bug in handling of SunOS TLI streams. Dan Farmer <zen@trouble.org> reported the problem.

Added a Solaris 2.6 work-around to keep the BIND <sys/bitypes.h> from colliding with the Solaris <sys/int\_types.h>.

Strengthened the Configure test for /proc-based Linux lsof, based on a report from Marty Leisner <leisner@sdsp.mc.xerox.com>.

Tested on OpenBSD 2.3.

Made AIX changes that allow use with 3.2.5. The changes were suggested and tested by Brett Hogden <hogden@rge.com>.

Added Solaris 2.6 AFS support. Disabled reporting of some node numbers for Solaris 2.5 and above open AFS files. The node number computation algorithms used for SunOS 4.1.x and Solaris less than 2.5 no longer always work under Solaris 2.5 and above.

4.30 April 9, 1998

Corrected a pid structure member naming error for UnixWare < 2.1.2. The problem was reported by Richard van Meurs <vanmeurs.anva@atriserv.nl>. He supplied the correction. This was offered as a patch to 4.29.

Had a report from Igor Schein <ischein@air-boston.com> that IRIX 6.4 patch 2839 is another SGI kernel patch, along with 2536, that changes the size of the proc structure in the kernel without changing the proc structure in <sys/proc.h>. Upon further investigation found that the effect of these patches on the proc structure is not consistent. Therefore, dropped the Configure patch test for IRIX 6.4 and made the code in irix/dproc.c slightly more tolerant of proc structure size differences for IRIX 6.4. Igor help test the change.

Corrected Solaris >= 2.5 AFS inode number generation.

Craig Everhart <Craig\_Everhart@transarc.com> helped find the cause of the problem. This was offered as a patch to 4.29.

Refined the Linux /dev/kmem-based glibc evasion for the timeval structure to make it work with glibc version 2.0.7. This required defining a new global symbol, TIMEVAL\_LSOF, default timeval, that the /dev/kmem-based Linux lsof can set to its private glibc timeval name, distinct from the kernel timeval name.

Added support for Alpha to the /dev/kmem-based Linux lsof. Alexandre Oliva <oliva@dcc.unicamp.br> provided a test system. Added an item to 00FAQ

about lsof, the Alpha processor, and Linux.

Added a 00FAQ item about lsof year 2000 compliance. Basically it says lsof is probably compliant, because its only date or time computations are done with time\_t values, but I haven't done any specific Y2K validation. I don't have plans to do any.

Added support for UnixWare 7. Chris Daniels <chrisd@dlpco.com> provided a test system and Don Draper <dond@sco.COM> provided technical information. Added BFS and SFS file system support to lsof for UW 2.1.[12] and 7.

Updated Solaris VxFS support for VxFS 3.2.1. Greg Earle <earle@netbsd4me.jpl.nasa.gov> reported the need for the update. Greg and Roger Klorese <rogerk@veritas.com> provided technical information. Scott McClung <mcclung@primenet.com> tested.

Changed IRIX XFS patch detection in anticipation of learning there are multiple XFS patches for IRIX 6.4 that require different versions of the lsof-invented xfs\_inode structure.

#### 4.31 April 21, 1998

Added a VxFS #if/#endif wrap to a section of the HP-UX dnode.c that wasn't properly protected. The problem was reported by Peter Klosky <PKlosky@bdm.com>. This was offered as a patch to 4.30.

Added support for Solaris 2.7 (first Beta release). Mike Sullivan <Mike.Sullivan@Eng.Sun.COM> provided technical advice and helped test. Charles Stephens <cfs@jurassic.eng.Sun.COM> also helped test.

Fixed bug in /proc-based Linux that caused it to access /proc/mounts excessively. Marty Leisner <leisner@sdsp.mc.xerox.com> provided a syscall trace that identified the bug. The fix was offered as a patch to 4.30.

Adjusted the IRIX 6.4 private structure definition for the XFS node to accommodate patch 2970. Igor Schein <ischein@air-boston.com> identified the patch and the required adjustment.

4.32 May 11, 1998

Corrected Solaris 2.7 code for reporting PCFS (floppy disk) node numbers. Casper Dik <casper@holland.sun.com> supplied the fix. The fix was offered as a patch to 4.31.

Corrected a bug in conditional repeat mode handling pointed out by Igor Schein <ischein@air-boston.com>. This was offered as a patch to 4.31.

Improved reporting of AIX open(/dev/memory device) errors.

Corrected a Solaris < 2.5 KA\_T declaration error, pointed out by Robert Kiessling <robert@easynet.de>. Changed KA\_T from a #define to a typedef for all dialects to prevent future problems of this kind.

Changed the sample Perl 5 script big\_brother.perl5 to report a four digit year from localtime().

Added support for AIX 4.3[.1]. Bill Pemberton <wfp5p@tigger.itc.virginia.edu> provided a test system. Andrew Kephart <akephart@austin.ibm.com> and Tom Weaver <tvweaver@austin.ibm.com> provided technical assistance. Niklas Edmundsson <nikke@ing.umu.se> did 4.3.1 testing.

Added -qmaxmem option to CFLAGS for an AIX compilation with an xlc version 4.x compiler.

Adjusted Linux socket handling for changes in the AX25 members of the sock struct. Richard Green <rtg@tir.com> pointed out the problem. Tested /dev/kmem-based lsof under Linux 2.0.34.

4.33 May 22, 1998

Added generic IPv6 support to common lsof sources and specific IPv6 support to AIX sources. Andrew Kephart <akephart@austin.ibm.com> supplied the additions and helped with testing. Bill Pemberton <wfp5p@tigger.itc.virginia.edu> provided a test system. The modification affected sources for every dialect, whether it supports IPv6 or not, by changing the interfaces to the common Internet

address function `ent_inaddr()`.

Added support for the NetBSD UVM virtual memory system. Paul Kranenburg <pk@cs.few.eur.nl> supplied technical details.

Bracketed HP-UX 11 use of <sys/spinlock.h> with `#if/#endif _KERNEL`.

Corrected printing of PCB address in DEVICE column for IRIX.

#### 4.34 June 26, 1998

Updated 00FAQ to discuss TCP and UDP ports private to the AIX kernel and 00README to describe how ACLs can be used to give `lsf` permission to read the kernel memory devices. Add information to 00FAQ and 00README about other OpenBSD architectures where `lsf` is reported to compile and run. Added section to 00FAQ discussing how an incorrect loader path environment variable value can prevent `lsf` from loading correctly.

Improved Solaris `namefs` and `doorfs` support so that it is now possible to search for an open `VDOOR` file by the path name of its fattached file system object. Igor Schein <igor@txc.com> requested the ability to do such a search. Even with the change, `lsf` can't always identify path names for open `VDOOR` files.

Also at Igor's request, improved reporting of information on open Solaris `VCHR` files that share a common `vnode`, and Solaris UNIX domain socket files.

Corrected `print_kptr()` argument error in `PTX dnode.c`, reported by Mark Price <mprice@sequent.com>. Compensated for `nache` element naming differences, introduced at `PTX 4.4.2`; Kurtis D. Rader <krader@sequent.com> reported the problem.

Changed output column title from `INODE` to `NODE` to better reflect the column's contents of node IDs for more than just inodes.

Improved Configuration and processing for Solaris

AFS. Corrected AIX AFS 3.4 afs\_rwlock\_t simulation.

Corrected a cast problem with two AIX knlist() calls, thus quieting an AIX 4.2.1 compiler argument type warning. Jon Champlin <champlin@us.ibm.com> reported the problem.

Added support to most dialect versions (exception: /proc-based Linux) to warn when the identity of the kernel where lsof was compiled doesn't match the running identity. The warning can be suppressed with -w. Note: determining AIX state requires calling oslevel, a potentially slow operation. Jon Champlin <champlin@us.ibm.com> suggested this addition.

!!!! WARNING !!!! !!!! WARNING !!!! !!!! WARNING !!!!

Those using the lsof cross-configuration capability (see 00XCONFIG), should be aware that the kernel identity test feature introduces two new basic cross configuration environment variables, LSOF\_ARCH and LSOF\_VSTR.

!!!! WARNING !!!! !!!! WARNING !!!! !!!! WARNING !!!!

Identified a situation where a Solaris UNIX domain socket name is known and can be searched for by name; added the necessary code.

4.35 July 17, 1998

Made the kernel identity check an option with the HASKERNIDCK #define in machine.h. Enabled altering of HASKERNIDCK with the Customize script. Added a clause to the help output that indicates the build-time HASKERNIDCK status.

Added more information to the NAME column for Solaris UNIX domain sockets. Made them searchable by their clone device path name. Igor Schein <igor@txc.com> requested this.

Completed the HP-UX 11 port with support for its optional 64 bit kernel. Rich Rauenzahn <rrouenza@cup.hp.com> provided a test system. Corrected errors with HP-UX 11 lock reporting and

private kernel structure and type definitions.

Added support for HP-UX NFS3 files.

Limited mount table warnings -- e.g., when -b is used -- to one set per mount point.

Fixed some mount table scanning and usage bugs, including one in Solaris, reported by Kjetil Torgrim Homme <kjetilho@ifi.uio.no>.

#### 4.36 August 4, 1998

Made corrections and additions to IPv6 support and to AF\_ROUTE socket

handling, supplied by Jean-Luc

Richier <Jean-Luc.Richier@imag.fr>. Jean-Luc's additions provide IPv6 support for the Inria IPv6 implementations on FreeBSD and NetBSD.

Fixed two Solaris 2.5, 2.5.1, 2.6 and 2.7 TCP and UDP host name or IP address reporting bugs, reported by James Mathiesen <James-Mathiesen@deshaw.com>. This fix was offered as a patch to 4.35.

Updated the Customize script to cause ENTER to use all defaults. Amir J. Katz <amir@ndsoft.com> suggested this and helped test the changes.

Updated Solaris ICMP and IP stream handling, based on a report from Igor Schein <igor@txc.com>.

Fixed a bug in the Digital UNIX mount table handling, reported by Bob Ward <bward@thehartford.com>. While working on the bug, found and updated some obsolete AdvFS code. This fix was offered as a patch to 4.35.

#### 4.37 September 15, 1998

Deactivated SGI IRIX support and archived revision 4.36 sources and binaries in pub/tools/unix/lsf/OLD.

Improved performance of FD searching. This was offered as a patch to 4.36.

Amir J. Katz <amir@ndsoft.com> pointed out that ranlib isn't needed for AIX or Solaris. Made appropriate Configure script changes.

Fixed a file offset reporting bug for HP-UX VCHR and VBLK device nodes located on a VxFS root. Doug Siebert <douglas-siebert@iowa.edu> reported the bug. The fix was offered as a patch to 4.36.

Resolved an HP-UX root device name reporting bug, partly caused by an out-dated local copy of the <sys/mount.h> mount structure, by generating a local header file with the structure that can be compiled without needing \_KERNEL defined. Doug Siebert also reported this bug.

Changed some dialect source code -- Digital UNIX, Solaris, SunOS, and UnixWare -- to make more consistent with ps the user ID lsof reports in the USER column. Added a 00FAQ entry about it. Igor Schein <igor@txc.com> reported the Solaris and SunOS lsof inconsistencies with what ps(1) reports.

Ported  
lsof to Pyramid ReliantUNIX 5.44.

Added brackets as comments to case, do, done, else, endif, esac, if, and while statements in Configure to assist in navigating its clauses.

Added more Linux 2.0.x glibc work-arounds.

Added support for UnixWare 7.0.1.

Ralph Forsythe <ralph@contact-paging.com> provided a new FreeBSD test system.

4.38 November 25, 1998

Added support for recent FreeBSD 3.0 distributions. A 3.0 test system was provided by David O'Brien <obrien@NUXI.com>. This was offered as a patch to 4.37.

Updated the scripts/idrlogin.perl\* files to look for sshd processes in addition to rlogind and telnetd ones.

Added support for DU 5.0 Beta. Berkley Shands <berkley@cs.wustl.edu> provided a test system.

Added support for OpenBSD 2.4 with changes supplied by Kenneth Stailey <kstailey@disclosure.com>.



Changed the Solaris 2.7 tests and documentation to Solaris 7.

Made some changes to the header files for NEXTSTEP 3.3 and added support for OPENSTEP 4.x with help from Michael A. Hovan III <mhovan@BLaCKSMITH.com> and Carl Lindberg <Carl\_Lindberg@BLaCKSMITH.com>. The combined dialect subdirectory is named n+os. One of Carl's changes propagates RC\_CFLAGS to the library Makefile. Timothy J. Luoma <luomat@peak.org> helped test under NEXTSTEP 3.3 and OPENSTEP 4.2.

Made UW 7.x version sensitive to the presence of ptf7038. Added peer PCB address to Unix domain socket Name column, even when a path name has been located. Information for these changes was supplied by Francis Le Bourse <flebourse@intelcom.fr>. Lee Penn <lee@dlpco.com> provided a test system.

Tested lsof under OSR 5.0.5 on a test system also provided by Lee Penn.

Made path name argument processing more tolerant of errors per a suggestion from Julian Gordon <julian@cadence.com>.

Acquired a new UnixWare 2.x test system, generously provided by Computer Classroom, Inc. -- Matthew Thurmaier <matt@compclass.com>, Ken Laing <ken@compclass.com>, and Andrew Merrill <andrew@compclass.com>. Updated Configure to accept a UnixWare version of 2.1.3.

Updated kmem-based lsof for Linux 2.0.36.

Updated NetBSD sources for a change in a UVM virtual mapping header file.

Corrected a cache allocation bug in Sun format kernel name cache handling. The bug only shows up when the kernel name cache is inaccessible.

4.39 December 29, 1998

Corrected problems with large device number handling for 64 bit Solaris 7. The problems were reported

by Steve Bellenot <bellenot@math.fsu.edu>. Steve helped test the fixes. The fixes were offered as two patches to lsof 4.38.

Improved FreeBSD Configure operations for header files that must be obtained from the kernel source tree, based on a suggestion from David O'Brien <obrien@NUXI.com>.

For Bela Lubkin <filbo@deephought.armory.com> made optional with +f[cfn] the display of file structure address, shared use count, and node structure address.

/proc-based Linux doesn't implement this feature, because it doesn't read kernel structures from kernel memory. Modified the PTX -X option to take advantage of the new file structure display option. Added shared.perl5 to the scripts/ subdirectory to provide an example of how +f[fn] might be used to track shared file descriptors and files.

Added more /dev/kmem-based Linux glibc evasions, provided by Jeff Johnson <jbj@redhat.com> and Maciej Lesniewski <nimir@kis.p.lodz.pl>. Jeff helped test them on various Linux architectures.

Tested on AIX 4.3.2; no changes were required. Doug Crabill <dgc@purdue.edu> provided a test system.

Fixed -c option to detect missing command name when following option begins with `+'.

4.40 January 25, 1999

Added support for using the CDS compiler for Reliant Unix 5.44 and above. Made Reliant Unix MIPC support optional, dependent on the presence of <sys/mipc.h>.

Based on a report from Michael Schmitz <MSchmitz@lbl.gov> that /dev/kmem-based lsof misbehaves on a Linux 2.0.x m68k kernel without module support, made the absence of query\_module() or get\_kernel\_syms() Linux kernel support a fatal error. Updated relevant sections of 00FAQ to reflect the change.

Added the ability to force the Linux Configure

stanza to use the /proc or /dev/kmem source base via a LINUX\_BASE environment variable specification. This is a cross-configuration assist.

Added "+D <dir>" and "+d <dir>" options for directory searching. +D searches the entire tree, starting at <dir>, including <dir>, its contents, and its subdirectory branches; +d searches only <dir> and its contents, but not its subdirectory branches. Improved lsof's searching of the specified name list to compensate for anticipated long lists from +d and +D.

Made an egrep in the Solaris Configure stanza usable by the standard and XPG4 egrep's. Kenneth Stailey <kstailey@disclosure.com> pointed out the improvement.

Fixed bugs in /dev/kmem-based Linux and UnixWare Unix domain socket name searching.

Changed a Linux Alpha #include to be conditional on the presence of its named header file, so that lsof will compile on Red Hat 5.1 and 5.2 (Linux kernel 2.0.35) where the header file is absent. The problem was reported by Alexandre Oliva <oliva@dcc.unicamp.br>.

Fixed an AIX 4.3+ bug in procinfo struct space allocation, reported by Jeff Stewart <jws@purdue.edu>. This was offered as a patch to 4.39.

Added an lstatsafely() function to offer the same isolation for lstat() calls that statsafely() offers for stat() calls. This made DOSTAT\_FUNCTION no longer necessary, so deleted it.

With help from Laurent P. Montaron <lpm@sequent.com> ported lsof to PTX 4.4.4. Laurent did a monumental job of identifying TCP/IP changes by their TCP version, rather than by their PTX (With mix 'n match PTX and TCP/IP versions, the PTX version often has no bearing on the TCP/IP version.), and changed the Configure script and pre-processor #if/#else/#endif blocks to match. He also updated Unix domain socket handling for PTX TCP/IP versions 4.5 and above.

Updated CLIENT handle acquisition of fill\_portmap() in print.c to use the more modern RPC function clnt\_create() in place of clnttcp\_create() where possible. PTX 4.4.4 requires clnt\_create().

4.41 February 27, 1999

Added FreeBSD 3.1 and 4.0 support with help from Sheldon Hearn <axl@iafrica.com>, David O'Brien <obrien@NUXI.com>, and John Polstra <jdp@polstra.com>.

Corrected bungled AIX 4.3+ patch that went into lsof 4.40.

Reorganized the Configure script to improve Makefile construction. A specific impetus for this was to allow FreeBSD system-wide make flags to be propagated to the lsof Makefiles, but other goals were to make sure that the DEBUG= make entry can over-ride standard CFLAGS values, and to better manage the identification of compilers and their versions.

Two compiler-related values may now be supplied in environment variables: 1) the compiler path in LSOF\_CC; and 2) the compiler version in LSOF\_CCV. 00XCONFIG documents them.

Added support for Pyramid Reliant Unix bsdfs, mssockfs, and sockfs file systems.

Added an optional LSOF\_CINFO string to Configure, producing a CINFO string in selected Makefiles, producing a #define LSOF\_CINFO in selected version.h header files. The purpose of this is to allow Configure the option to propagate information to the lsof -v output. It is now used for Linux to identify the code base, and for HP-UX 10.30 and 11.0 and Solaris 7 to identify the kernel bit size.

Added system information to NEXTSTEP and OPENSTEP -v output, from the second line of hostinfo's output.

Fixed a login name buffer overflow problem in the processing of -u option values. This was offered as a patch to 4.40. !!!THIS IS A SERIOUS STACK OVERFLOW BUG; A LINUX EXPLOIT

EXISTS FOR IT THAT

OPENS A BASH SHELL WITH LSOFS AUTHORITY -- E.G,  
SETGID(KMEM) POWER!!!

Improved the Solaris mount table filter so the volume manager's fake mount point, "/vol", is ignored and doesn't supplant "/" in NAME column path assemblies. Igor Schein <igor@txc.com> reported this bug and provided important help in finding it. This was offered as a patch to 4.40.

Changed the Linux /dev/kmem-based lock ownership test to answer a problem reported by Tom Christiansen <tchrist@jherreg.perl.com>. This was offered as a patch to 4.40.

Installed an HP-UX 11 patch, suggested by Kevin Vajk <kvajk@cup.hp.com>, that adjusts a private lsof kernel header file, derived via Q4, to correspond to an HP-UX patch bundle.

Made NetBSD 1.3I sockproto structure adjustment.

4.42 March 30, 1999

Fixed a typo in the HP-UX dfile.c that caused +fF and +fN output controls to swap effect.

Enabled for OpenBSD 2.5 per notice from Kenneth Stailey <kstailey@kstailey.tzo.com>

Made  
more VM accommodations for FreeBSD 4.0.

Improved file system search reporting to include path name components when they're available, instead of mindlessly reporting the file system name in the NAME column. Guy Dallaire <gdallair@geocities.com> brought the need for this change to my attention.

Updated Solaris 2.6 VxFS for Veritas Oracle Database Edition 2.0, VxFS version 3.3, and VxVm version 2.5.4, based on a report from Chris Kordish <chris.kordish@East.Sun.COM>. Chris kindly provided a test system.

Improved HP-UX ipc\_s patch detection in Configure, response in .../dialects/hpux/hpux11/ipc\_s.h, and documentation in 00FAQ, Kevin Vajk <kvajk@cup.hp.com>

helped test.

Added to Customize the option to suppress HASKERNIDCK selection for specified dialects. Suppressed it for /proc-based Linux lsof, and removed its test and code from there. Tin Le <tin@netimages.com> alerted me to the need for this update.

Ported to official Digital UNIX 5.0 release.

Changed DU lsof to use the knlist(3) function when no kernel file has been specified with -k. This change was suggested by Erich Wimmer <Erich.Wimmer@digital.com>.

Updated Configure for latest NetBSD (1.3I?) with UVM support the default.

4.43 May 11, 1999

Corrected a typo in the Solaris gcc discussion in 00FAQ. Made changes to the Solaris 2.5[.1] private tcp\_s structure. Both changes were done in response to reports from Igor Schein <igor@txc.com>, who tested the Solaris 2.5 change.

Made more IPv6 adjustments to lsof for Tru64 UNIX (Digital UNIX) 5.0, based on information obtained from Compaq by Berkley Shands <berkley@cs.wustl.edu>.

Corrected HP-UX error message about HP-UX 11 q4 usage. Amir Katz <amir@ndsoft.com> reported the correction.

Fixed a Glibc 2.1 conflict in /proc-based Linux lsof.

Fixed a man page typo reported by Vlad Harchev <hvv@hippo.ru>.

Changed some Solaris 2.7 references to Solaris 7 in Configure and 00EXPORTING.

Added a Solaris example to the echo statements that are the install rule in the SunOS/Solaris Makefile.

Added a field to the file structure output -- FILE-FLAG (file structure open flags, f\_flag[s], and process file flags, typically u\_pofile) --

enabled with +f[gG]. Its field output character is 'G'.

Figured out another piece of the HP-UX 11 patched ipc\_s structure puzzle with the help of Keith Kalet <KEITH\_KALET@HP-USA-om41.om.hp.com>.

Fixed a PTX real vnode to real inode interpretation bug.

Added link count to lsof output. Eric Dumazet <dumazet@risgw.ris.fr> requested and helped test it. The new +L option enables and filters it. Its field output character is 'k'.

Updated Configure script to recognize NetBSD 1.4.

Updated AFSConfig to handle default answers to questions.

Incorporated patch from Jonathan Sergent <sergent@io.com> that enables /proc-based Linux lsof to run on both 32 and 64 bit kernels.

Updated Configure script with a patch from David O'Brien <obrien@NUXI.com> that recognizes FreeBSD 3.2.

4.44 June 24, 1999

Corrected use of nlink member of hsnode for SunOS 4.1.x High Sierra File System files. John Dzubera <zube@tlaloc.stat.colostate.edu> reported the problem and helped test the fix. Also fixed a SunOS segmentation fault bug. These fixes were offered as a patch to 4.43.

Improved handling of /proc-based Linux UNIX PCB address.

Fixed a NEXTSTEP and OPENSTEP bug that made repeat option (-r) processing malfunction. This fix was offered as a patch to 4.43.

Fixed Configure so it doesn't use -O in the Cflags for the bundled HP-UX C compiler. Jim Ankenbrandt <jankenbrandt@penton.com> reported the problem.

Corrected output ordering of parent PID and process

group ID when both -R and -g are specified.

Enhanced the pdev.c and pdvn.c library modules for wider use. These dialect versions use the new library modules: DEC OSF/1, Digital UNIX, and Tru64 UNIX; Pyramid DC/OSx and Reliant UNIX; SCO OSR and UnixWare; and Sequent PTX.

Added basic clone device support to /dev/kmem-based HP-UX lsof for HP-UX 10.30 and higher.

Added raw socket support to /proc-based Linux lsof.

Changed NODE-ADDR column title to NODE-ID in anticipation of using more general identification information in the column.

Ported to UnixWare 7.1, using a test system kindly provided by Matt Thurmaier <matt@compclass.com> and Don Draper <dond@sco.com>.

Updated for NetBSD 1.4C VM changes, and a new current and root working directory structure.

Made minor adjustment for latest Tru64 UNIX 5.0 Beta release.

4.45 July 30, 1999

Fixed quoting problem in DEC OSF/1, Digital Unix, and Tru64 UNIX Makefile's install rule. The problem was reported by Berkley Shands <berkley@cs.wustl.edu>. Fixed bug in Tru64 UNIX 4 lsof that caused FDs to be skipped. These fixes were offered in a patch to 4.44.

Fixed a repeat-mode /proc-based Linux lsof bug, reported by Sami Farin <sfarin@ratol.fi>. This was offered as a patch to 4.44.

Picked lint, some reported by Sami Farin.

Corrected a 00DCACHE documentation error in a sample shell script. The problem was reported by Chad R. Larson <chad@larsons.org>. Changed commented-out entries in machine.h files so they require more thought and work when the comments are removed,



based on a remark by Chad.

Compensated for the practice of Solaris 7 and above to record the dev= value in /etc/mnttab in 32 bit mode, even on 64 bit systems. This was offered as a patch to 4.44.

Added a C library test for /proc-based Linux lsof, so that the #include files can be adjusted for a non-Glibc environment. The need for this was reported by Andrew Hill <andrewh@tirin.openworld.co.uk>. This was offered as a patch to 4.44.

Added support for Auspex LFS 1.8.1 and 1.9.2 to SunOS 4.1.4 lsof. The support was requested by Quentin Fennessy <quentin@dvorak.amd.com>, who provided information and did testing.

Enabled IPv6 support code for NetBSD and OpenBSD, conditional on Configure script tests. Wolfgang Rupprecht <wolfgang@wsrcc.com> supplied the NetBSD code and tested it. The OpenBSD code I constructed has been compiled but not tested.

Updated the identd Perl 5 script, based on a report from Wendy Lin <af5@taiyang.cc.purdue.edu> that the space in its response line in front of the user name violates RFC 1413.

Added IPv6 support to /proc-based Linux lsof. Jonathan Sergent <sergent@ETLA.NET> and Andrew Thomas Sydelko <sydelko@ecn.purdue.edu> kindly provided a test system.

Updated man page description of AIX multiplexed files to indicate that they might be /dev/ptc or /dev/pts, depending on the AIX version. The correction was suggested by Onno van der Linden <onno@simplex.nl>.

Sylvain Robitaille <syl@alcor.concordia.ca> reports lsof passes his Y2K tests.

4.46 October  
23, 1999

Corrected /proc-based Linux lsof to detect that an IPv6 address is a mapped IPv4 address. The problem

was reported and analyzed by Arkadiusz Miskiewicz <misiek@misiek.eu.org>, who also tested the fix.

Added a libc5 library /dev/kmem-based Linux lsof circumvention, supplied by Jason Lingohr <lingman@lucid.net.au>.

Corrected a bug in -t (terse) AIX output, reported by Wendy Lin <af5@taiyang.cc.purdue.edu>. I introduced the bug at revision 4.43 when adding FILE\_FLAG reporting. This was offered as a patch to 4.45.

Added a work-around for a problem in the OpenBSD 2.3 <sys/pipe.h> header file. Volker Borchert <bt@tekon.de> provided and tested it.

Improved description of cross-building lsof for a 64 bit Solaris 7 system on a 32 bit system with suggestions from Phillip Edwards <Philip.Edwards@sn.wpafb.af.mil>.

Fixed a gawk POSIX-mode pattern error in the Linux /dev/kmem-based Mksrc script, based on a tip from Ambrose C. Li <acli@mingpaoxpress.com>.

Fixed a bug in the Tru64 UNIX IPv6 handling, courtesy of a report from Casper Dik <casper@holland.sun.com>.

Enabled support for OpenBSD 2.6.

Enabled support for BSDI BSD/OS 4.1, based on a report from Jeffrey C Honig <jch@bsd.com> that only a Configure script change is necessary.

Enabled Configure script to use gcc for building lsof for a 64 bit Solaris 7 and 8 kernels, if the gcc version is 2.95 or above.

Improved -i option handling for systems with IPv6 support so that it will search for a host name in both IPv4 and IPv6 families, when that is possible. As a companion modification, changed -V processing to report a single error when a multiple host name match is requested. Casper Dik <casper@holland.Sun.COM> helped test.

Fixed a DEC OSF/1, Digital UNIX, Tru64 UNIX repeat mode bug, reported by Mayer Ilovitz <mayer@cooper.edu>. Mayer helped test the fix. The fix was offered as a patch to 4.45.

Changed Solaris socket file recognition scheme, so it is (nearly) the same through Solaris 8, where the previous clone device scheme no longer works.

With significant assistance from Casper Dik, added support for Solaris 8 Beta and Beta refresh. The IPv6 support in Solaris 8 is still in some flux, so there are temporary compensations for the differences between Beta IPv6 support and Beta refresh IPv6 support. Casper and I hope those differences disappear by FCS.

Improved the delivery of information on Solaris 2.5.1, 2.6, 7, and 8 door files.

Fixed a repeat mode bug that surfaces when /etc/passwd changes between cycles. The bug report and diagnostic help were supplied by Igor Schein <igor@txc.com>. The fix was offered as a patch to 4.45.

Added support for INRIA IPv6 to NetBSD. Jean-Luc Richier <Jean-Luc.Richier@imag.fr> provided patches and a test system on which to verify them.

Added support for AIX 4.3.3. Jeff W. Stewart <jws@anaconda.cc.purdue.edu> provided a test system.

Made adjustments for FreeBSD 4.0-current.

Improved reporting of information for AIX sockets that lack protocol control blocks.

4.47 November 29, 1999

Based on a query from Jean-Pierre Radley <jpr@jpr.com>, changed the lsof top-level Makefile to propagate CFGF to the library Makefile. (DEBUG was already being propagated.) Added osrgcc and scogcc Configure abbreviations (to use gcc) for Jean-Pierre.

In response to a query from Igor Schein <igor@txc.com>, improved the Configure script test for Solaris 7

and 8 that decides if the compiler can produce 64 bit executables.

Made an ugly hack, based on making a private rnode structure definition from q4 output, to compensate for HP-UX 10.20 and lower recent NFS3 patches. HP didn't supply an updated <nfs/rnode.h> with the patches. The problem was reported by Will Partain <partain@mekb2.sps.mot.com>. Elias Halldor Agustsson <elias@hi.is> helped identify the patches as PHNE\_18173, PHNE\_19426, PHNE\_19937, and PHNE\_20091, and provided a test system.

Switched BSDI test system from 2.1 and 3.1 to 4.0.1, courtesy of Terry Kennedy <terry@tmk.com>.

Added some more dev\_t hacks for Alpha FreeBSD 4.0.

Added support for IPv6 on BSD 4.x. The support hasn't yet been tested, just compiled.

Added support for the mnt file system (mntfs or /etc/mnttab) on Solaris 8. Tested on Solaris 8 BETA-Refresh.

Made selection of optional fields (e.g., PPID with -FR) in a field output specification select the optional field, too, so that the option selector for the field (e.g., -R) isn't also required. This change was made in response to an inquiry from John DuBois <spccdt@armory.com>. This may require some revision to scripts that parse all field output; two scripts in the lsof distribution's scripts/ subdirectory had to be updated.

Corrected handling of Linux IPv4 addresses mapped in IPv6 addresses.

Tested under OpenBSD 2.6.

4.48 January  
14, 2000

Modified -i argument processing of colon-separated IPv6 addresses to recognize an IPv4 address mapped in an IPv6 address and handle it as an IPv4 address. This was offered as a patch to 4.47.

Added a defined symbol (NOWARNBLKDEV) to control (inhibit) the issuance of a warning when no block devices are found. This was done anticipating its need in FreeBSD 4.x, but that dialect version no longer has any block devices, so HASBLKDEV was disabled for it instead. NOWARNBLKDEV was left in place for possible use in the future.

Enabled KAME IPv6 Configure support for FreeBSD when `<netinet6/in6.h>` is found.

Disabled use of gcc to compile lsof for 64 bit HP-UX 11.

Updated Configure to recognize FreeBSD 3.4.

Based on suggestions from Bernt Christandl `<beb@MPA-Garching.MPG.DE>` improved AFS configuration for AIX and Solaris, and updated AIX AFS 3.5 support. Johannes Tax `<tax@bluedog.oit.unc.edu>`, Hung T. Pham `<hung_pham@unc.edu>`, and Curt Freeland `<curt@grumpy.cse.nd.edu>` provided test systems.

Updated lsof's private rnode definition for AIX 4.3.3, since IBM still doesn't ship the `<oncpus/nfs/rnode.h>` header file and the rnode structure definition in `<nfs/rnode.h>` doesn't match what the kernel uses. This was offered as a patch to 4.47.

Weakened the test in the Linux /proc-based lsof of the field count of data lines in `/proc/net/{tcp,udp}`. It appears that recent 2.3.x Linux kernels have added untitled fields to these files. The bug report came from Gabor Liptak `<gaborliptak@usa.net>`.

Adjusted for a FreeBSD 4.0 change in the definition of `[_]KERNEL`. David O'Brien `<obrien@NUXI.com>` reported the problem and provided a test system.

Removed the HASPPID bracket from Fppid (the -R option state variable) so that the field select table will compile even when HASPPID is not defined. This problem was introduced at revision 4.47 with code that causes some field output characters to set

option states. The problem was reported by David Bacon <bacon@birch.eecs.lehigh.edu>.

4.49 April 3, 2000

Made clearer in man page that "Lxx" FDs are AIX loader table references. Also updated the 00FAQ discussion of the Stale Segment ID bug to include AIX 4.3.x.

Modified support for NetBSD 1.4Q to include the <sys/buf.h> header file to cope with an MFS change.

Added support for OpenBSD UVM virtual memory.

Added support for AIX systems with > 2GB of memory. Chris Sylvain <csylvain@itg.ummc.umaryland.edu> reported the problem and provided the solution. Chris also supplied some minor code cleanup. This was offered as a patch to 4.48.

Based on new information from Igor Schein <igor@txc.com> made additional compensation in Configure script for 64 bit Solaris 7 and 8 gcc.

Added some 00FAQ info on the effect ordering of the +fg and -FG options has on output format.

Improved NetBSD IPv6 configuration, based on a suggestion from Thomas Klausner <wiz@danbala.ifoer.tuwien.ac.at>.

Added code to convert IPv4-mapped-in-IPv6 addresses to IPv4 addresses.

Updated the information in 00FAQ and the HP-UX 11 binary directory README files on the HP-UX 11 ipis\_s patch with new information supplied by Eric McWhorter <emcwhorter@xisis.xerox.com>.

Added documentation on changes to HASFSTYPE and HASNCACHE, and the new HASPRIVPRIPP.

Adjusted Configure for FreeBSD 5.0. Made additional, necessary changes to Configure and the BSDI sources to eliminate load errors.

Added KAME IPv6 support to FreeBSD at the request of Ollivier Robert <roberto@eurocontrol.fr>, who

provided a test system.

Corrected the script that generates the CHECKSUMS files for binaries to correctly name the detached PGP certificate. The documentation bug was reported by Michael Hennecke <hennecke@rz.uni-karlsruhe.de>.

4.50 June 29, 2000

Added a NetBSD alpha test host, courtesy of Ray Phillips <r.phillips@mailbox.uq.edu.au>.

An lsof

4.49 binary, built on Ray's 1.4.1 system was made available prior to the 3.50 release.

Upgraded the system map file tests in /dev/kmem-based Linux lsof, making the use of DEBIAN\_LINUX\_LSOF unnecessary. Tested the changes on a system made available by Vincent Kujala <kujala@geog.ubc.ca> and Jim Mintha <jim@ic.uva.nl>.

Forced AIX to use the large-file-enabled versions of lstat (lstat64) and stat (stat64) if <sys/stat.h> contains stat64. This should allow lsof to stat() AIX files > 2GB even when the builder has not defined the "large file enabled programming environment." Configure tests <sys/stat.h> and puts -DHASSTAT64 in the Makefile's CFLAGS to make this happen. Fernando A.B. Whitaker <whitaker@cenapad.unicamp.br> reported the problem. This was offered as a patch to 4.48.

Enabled Configure script to handle OpenBSD 2.7. Angelos D. Keromytis <angelos@dsl.cis.upenn.edu> reported the availability of OpenBSD 2.7 and supplied the Configure script patch.

Improved handling of DOOR and fattach()'d files in Solaris.

Changed message about missing kernel symbol file from "not yet determined" to "none found".

Updated FreeBSD, NetBSD, NEXTSTEP, OpenBSD, and OPENSTEP support to report "no PCB" and the values of the SO\_CANTSENDMORE and SO\_CANTRCVMORE state flags when a socket structure has no inpcb pointer. This modification was made to AIX lsof at revision

4.46. Added an entry to 00FAQ about sockets that have no inpcb pointer.

Upgraded support for FreeBSD 5.0-CURRENT. Ben Smithurst <ben@scientia.demon.co.uk> supplied patches and did testing. David O'Brien <obrien@NUXI.com> supplied a test system. The update included dropping the Fctty part of file descriptor file system support, conditional on a Configure script test. I propagated those changes to BSDI, NetBSD, and OpenBSD in anticipation of their having the modification in the future. David also arranged with Michael Haro <mharo@area51.fremont.ca.us> for a FreeBSD 3.4 test system.

In response to an lsof 3.72 bug report from Jim Mewes <jim@corp.phone.com>, added more kernel address filtering to the lsof function, kread(), that reads Solaris kernel data.

In response to a report from Marc Duponcheel <marc@offline.be>, added tests to the /proc-based Linux lsof to ignore file systems of types "autofs" and "pipfs".

Based on a report and information supplied by Casper Dik <casper@holland.Sun.COM>, updated the ncache\_load() function in lib/rnch.c with new code that deals with a post Solaris 8 change in kernel name cache (DNLC) handling. Casper tested the update, which should be invisible to Solaris versions without the new DNLC code.

Added support for Solaris VxFS QIO files, based on a report from Kieran Broadfoot <kieran.broadfoot@gs.com>. Kieran help test the support.

Added support for PTX 4.4.6 and 4.5[.1] with help from the usual cast of good people at Sequent.

Added support for 64 bit file sizes and offsets on BSDI, FreeBSD, NetBSD, and OpenBSD, based on a report from Dan Nelson <dnelson@emsphone.com>. Dan supplied a patch and did FreeBSD testing.

Added Configure script recognition of NetBSD 1.5,



based on a report from Andrew Brown <atatat@atadot.net>. Thomas Klausner <wiz@danbala.ifoer.tuwien.ac.at> updated the NetBSD port package to use a pre-release of this addition.

At the last minute saw a notice via deja.com's UseNet search service that FreeBSD 3.5 had been released and lsof didn't grok it. Added recognition of 3.5 to lsof's Configure script, but didn't have the opportunity to test lsof on 3.5.

4.51 August 21, 2000

Added Configure script support for the upcoming Solaris 9 release based on suggestions from Casper Dik <Casper.Dik@holland.sun.com>.

Changed sample Perl scripts to assume that /usr/local/bin/perl is Perl 5 and Perl 4 may be found in /usr/local/bin/perl4.

Updated Configure to recognize FreeBSD 4.1 and made a FreeBSD pre-release distribution available.

Bela Lubkin <belal@sco.COM> tested lsof on the upcoming SCO OSR 5.0.6 release and reports that lsof appears to work properly.

Updated the AIX compiler test in Configure to recognize its version 5.

Updated AIX 4.3.3 support with automatic recognition of the proper rnode structure, based on machine bit width. Also added code to detect when processing the -X option that lsof has been compiled with the "other" AIX 4.3.3 user structure and to apply compensations. When a compensation method works, it's applied during subsequent -X processing; when none works, further -X processing is disabled.

Added Tru64 UNIX 5.1 support. Updated Tru64 UNIX library text file support to recognize new kernel support for AdvFS library files. Berkley Shands <berkley@cs.wustl.edu> and Klaus Saggerer USG [saggerer@zk3.dec.com] helped put me in contact with Chang Song <song@zk3.dec.com>, the developer of 5.1's new kernel name cache and he helped me

develop new code in lsof to access it.

Corrected reporting of PTX fattach()'d address.

Changed Configure and dlsof.h for NetBSD and OpenBSD to use /usr/include/uvm header files when available.

Andrew Brown <atatat@atatdot.net>, Thomas Klausner <wiz@danbala.ifoer.tuwien.ac.at>, and Wolfgang Rupprecht <wolfgang@wsrcc.com> pointed out the need to do this for NetBSD. Andrew provided access to a NetBSD 1.5 system for verifying the changes.

Installed snprintf() support, including a private version in the lsof library for those UNIX dialects without the function. Changed all sources to use it instead of sprintf() and strcpy().

Fixed a memory leak in the readvfs() functions of BSDI, DEC/OSF1, Digital UNIX, FreeBSD, NetBSD, OpenBSD, and Tru64 UNIX.

Tested on Linux 2.4.

Modified the Pyramid MkKernOpts script to compensate for `uname -s` configuration alternatives. Robert Dahlem <Robert.Dahlem@ffm2.siemens.de> supplied the modification.

Obtained access to an FCS Solaris 8 64 bit system and built lsof on it, using Sun Workshop C 5.0 and gcc 2.96 20000814 (experimental). Both compilers produce a working lsof.

4.52 November 8, 2000

Completed work on an HP-UX 11.11 port that uses a pstat(2) interface provided by HP. To distinguish it from its predecessors for HP-UX, this lsof version is called PSTAT-based and the predecessor versions are now called /dev/kmem-based. I am indebted to the far-sightedness and support of these good people at HP for making PSTAT-based lsof possible: Carl Davidson, Louis Huemiller, Rich Rauenzahn, and Sailu Yallapragada. The PSTAT-based sources are in lsof\_4.52/dialects/hpux/pstat, the /dev/kmem-based ones in lsof\_4.52/dialects/hpux/kmem.

Ported to IBM Monterey for Merced|Itanium, aka AIX 5L. It configures via the Configure script's "aix" abbreviation and has been tested on AIX 5L Beta 3.

Jay Beck,

Steve Dibbell, Loc Le, Nasser Momtaheni, and Malcom Zung of IBM provided generous support. Since AIX 5L is still in Beta testing, this port can't be considered complete.

Added Configure support for OpenBSD 2.8. David Mazieres <dm@cs.nyu.edu> provided a test system.

Based on a report from Marc Christensen <marc@mecworks.com> added sockfs to the mount scan exemption list for /proc-based Linux lsof.

Added large file, CDFS, and DOSFS for UnixWare 7.x. Added UnixWare device memory mapping support. All UnixWare changes were supplied by Eric Dumazet <edumazet@cosmosbay.com> Eric also supplied some miscellaneous bug fixes.

Deferred name cache loading until printname() needs to use the name cache.

Terminated Pyramid, SunOS 4.1.x, and Ultrix support, because test systems are no longer available. Final Pyramid and Ultrix source code distributions for lsof revision 4.51 may be found on lsof.itap.purdue.edu in pub/tools/unix/lsof/OLD/src. The no longer supported SunOS 4.1.x source code is still distributed with the Solaris source code.

Added code to set Solaris node address to real vnode address, when applicable.

John Speno <speno@lopan.isc-net.upenn.edu> provided information that enabled me to update the Tru64 AdvFS (MSFS) node definition for AdvFS version 5.

Added Tru64 5.x CFS support with help from Kris Chandrasekhar <Kris.Chandrasekhar@compaq.com>, Diane Lebel <lebel@zk3.dec.com>, and John Speno. The support only provides information about cached file attributes.

Installed a Configure patch for HP-UX 11 supplied by

Kenneth Stailey <kstailey@disclosure.com> that adds another command to q4 input.

Tested on FreeBSD 4.2.

Will Day <willday@rom.oit.gatech.edu> and Frank Winkler <frank.winkler@germany.sun.com> graciously supplied Solaris 8 binaries.

Added Solaris 9 text file support, supplied by Casper Dik <Casper.Dik@holland.sun.com>.

4.53 December 6, 2000

Added the AIX 5L j2\_lock.h to the distribution with a Configure script step to use it when it's missing from /usr/include/j2.

Removed SunOS 4.1.x support.

Removed Linux 2.0.x /dev/kmem support.

Fixed VBLK and VCHR special device file reporting to handle /dev information more accurately.

Added a Apple Darwin / Mac OS X 1.2 port, provided by Allan Nathanson <ajn@apple.com>. Allan also arranged for a test system so I can maintain this port. An additional test system was provided by Dale Talcott.

Dropped claims of support for all UnixWare versions except 7.1.0, since that is the only version on which I can test lsof. Even though lsof 4.53 is deprecated for UnixWare 2.1.3, installed a patch for it with testing done by A. Channing Clark <clark.channing@heb.com>.

Dropped claims of support for all SCO OpenServer versions except 5.0.5, since that is the only version on which I can test lsof.

4.54 January 19, 2001

Added compensation for a change that made the FreeBSD mount structure invisible. I can only test back to 3.2 and the compensation works there, so it's been #ifdef'd for 3.2 and above. David O'Brien

<obrien@FreeBSD.org> provided the necessary clue.

Based on a report from Valdis Kletnieks  
<Valdis.Kletnieks@vt.edu>, changed all IPv6 support  
to report a TYPE of IPv6 for sockets with IPv4  
addresses mapped in IPv6 addresses. The previous  
lsof behavior was to report their TYPE as IPv4.

Restored the Linux Glibc test to Configure, removed  
at revision 4.53, based on a report from John Dzubera  
<zube@cs.colostate.edu>, that RedHat Linux 6.0 still  
needs the test.

Made setting of link count for Solaris more selective.

Limited Readlink() recursion to MAXSYMLINKS. The bug  
was reported by Jan Dvorak <johnydog@go.cz>.

Dropped the \*claim\* that lsof runs on Solaris 2.5.1.  
It may well do so, but I no longer have access to a  
test system.

Fixed an #endif comment typo, reported by Igor Schein.

Fixed a typo  
in a cast for a Tru64 UNIX 5.1 function  
and updated Configure for Tru64 UNIX 5.0 and 5.1 with  
information from Jesse Perry <jesse.perry@compaq.com>.

Corrected non-fatal typos in the AdvFS support in  
dnode.c for Tru64 UNIX.

Added msdos file system support for NetBSD and OpenBSD.  
Andrew Brown <atatat@atatat.net> requested and helped  
test it.

4.55 February 15, 2001

Based on a report from Bernd Eckenfels <eck@lina.inka.de>  
added support in lsof for files in /proc/<PID>/maps  
that have been deleted.

Changed PGRP output title to PGID, conforming to  
the most common current abbreviation for Process  
Group ID (PGID). While some systems continue to  
use \*pgrp for internal kernel variable names, most  
systems that support the display of PGID via ps(1)  
now title it PGID. The lsof -g and -fg options  
operations are unchanged in function; only titles

and descriptions have changed. Also changed internal variable names from \*PGRP and \*pgrp to \*PGID and \*pgid where possible.

Dropped the \*claim\* that lsof runs on HP-UX 9.x. It may well do so, but I no longer have access to a test system.

In response to a suggestion from Jeff Howie <jeff.howie@federated.ca> added support for command name selection by regular expression. A new form of the -c option value is used to identify and specify a regular expression.

Restore the \*claim\* that lsof works on UnixWare 7.0, since I re-acquired a test system.

4.56 May 3, 2001

Corrected some problems Amir Katz <Amir\_Katz@bmc.com> found with Insure++, one in lib/dvch.c, the rest in Solaris sources. Amir's report also helped me find an error in an snpf() call that caused (the unsupported) Solaris 2.5.1 lsof to crash. Wally Winzer, Jr. <wally.winzer@ChampUSA.COM> helped test.

Added support for UnixWare 7.1.1 and above in-kernel UNIX sockets. John Hughes <john@Calva.COM> kindly provided code and access to a test system. John also provided a test system and advice for adding UnixWare 7.1.1 NonStop Cluster and CFS support. More help with that effort came from Kurt Gollhardt (SCO), Barbara Howe (SCO), Bela Lubkin (SCO), and Dewan Rashid <Dewan.Rashid@ir.com>.

Archived a set of compilation hints (patches) from Bill Melvin <Bill.Melvin@esc.edu> that make it possible to compile the old, unsupported lsof 3.08 sources on UnixWare 1.x without NFS or CDFS support.

Installed support supplied by Allan Nathanson <ajn@apple.com> for the Darwin "Gold Master" release, Mac OS X 10.0 (aka Darwin 1.3 in its public source version). Added Allan's CVS repository suggestions to the script that gets additional header files from an open source repository.

Tested an HP-UX 11.11 kernel patch from Sailu Yallapragada that enables reporting of TCP/IP information for telnetd processes that use the telnet multiplexor. I don't yet know the kernel patch ID.

Made the Solaris inclusion of <inet/mi.h> conditional on the Solaris version. (It's apparently not needed at 2.6 and above.) Bill Watson <bill.watson@uk.sun.com> brought this to my attention.

Added alternate Linux 2.4.x lock extent test, supplied by Jim Mintha <jim@ic.uva.nl>.

Rearranged the lines and pre-processor tests in regex.h, lib/regex.c, and lib/snprintf.c so that undef can be used to eliminate copyright and GPL statements when the files aren't being used for a particular dialect. (USE\_LIB\_\* definitions in a dialect's machine.h header file determine if one or more of those three files are to be used.)

Added preliminary support for Solaris 8 with VxFS 3.4. This support will be refined as I get information from Veritas about how they will distribute the kernel header files lsof needs. Those header files were omitted from the standard VxFS 3.4 distribution. Technical assistance and testing were provided by Calle Dybedahl <cdy@algonet.se>, Gary Millen <gary.millen@veritas.com>, Rainer Orth <ro@TechFak.Uni-Bielefeld.DE>, Peter C. Vernam <pvernam@draper.com>, and Donna Yobs <Donna.Yobs@veritas.com>

Tested on FreeBSD 4.3-STABLE.

Dropped the \*claim\* that lsof works on UNIX dialects where I no longer have test systems: BSDI 2.1, 3.[01] and 4.0; DEC OSF/1, Digital UNIX and True 64 UNIX 2.0 and 3.2; FreeBSD 2.1.[67], 2.2[.x], 3.[012345] and 4.[01]; HP-UX 10.20; NetBSD 1.[234]; SCO OpenServer 5.0.5; and SCO UnixWare 7.0

Tested on Solaris 9 BETA, s81\_36.

4.57 July 19, 2001

Help (-h) and version (-v) output now have URLs  
for the newly created and timeliest lsof FAQ  
(00FAQ in the lsof distribution) at:

<ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/FAQ>

and the man page for the current lsof distribution  
at:

[ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/lsof\\_man](ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/lsof_man)

Based on a report from Steve Laubscher  
<slaubs@woodward.com>, modified dlsof.h for PTX  
4.6[.1] to avoid a temporary dnlc\_t definition  
needed at PTX 4.5.1.

Corrected test for old Linux  
kernels in Configure.  
Henri Karrenbeld <ishtar@cal044202.student.utwente.nl>  
brought the error to my attention. Limited Linux  
claims to 2.1.72 and above in the documentation.

Improved HP-UX 11 Configure stanza and stream socket  
handling.

Constructed a work-around for the HP-UX 11 optional  
OnlineJFS package. The work-around sadly requires  
lsof to have a private version of the vx\_inode  
structure, since the OnlineJFS package doesn't  
update <sys/fs/vx\_inode.h>. Troyan Krastev  
<Troyan.Krastev@ricoh-usa.com> brought the bug to  
my attention and Michael Bracewell  
<michael@ra.TSS.PeachNet.EDU> provided a test system  
where I developed the work-around.

Added locale support to lsof's isprint() test,  
based on a suggestion from Dan Mercer <damercer@mmm.com>.  
lsof will use setlocale(), when that function and  
its supporting <locale.h> header file are available.

Added OpenBSD 2.9 support.

Based on a report from Aaron Rhodes <arhodes@psionic.com>  
and  
with testing help from Aaron, made the lsof  
4.56 revision compile and work on OpenBSD 2.6.  
While that OpenBSD version is no longer supported,  
Aaron's report exposed a Configure script bug



affecting OpenBSD versions lsof does support.

Updated for FreeBSD 5.0-CURRENT. Szilveszter Adam <sziszi@petra.hos.u-szeged.hu> help test. The lsof FreeBSD ports packager, David O'Brien <obrien@FreeBSD.org>, assisted.

Tested on AIX 5.1. Loc Le and Nasser Momtaheni of IBM provided test systems.

4.58 September 13, 2001

Added options to safestrprt() and safestrprtn() to surround the string with "" and to suppress the printing of an ending '\n'. Use of these functions in device cache file error message reporting answers a suggestion for better error reporting from John Jackson <jrj@purdue.edu>.

Fixed a Solaris 2.6 and above problem related to searching for "large" (O\_LARGEFILE) files by name; lsof was using the wrong version of [l]stat(2). The bug was reported by Daniel Trinkle <trinkle@cs.purdue.edu>.

Added AIX 4.1.4 and above XTI socket support.

Added OSR Xenix Shared Data and Semaphore file type support with modifications supplied by Bela Lubkin.

Updated OPENSTEP support with modifications from Carl E. Lindberg <lindberg@clindberg.org>. The changes enable the correct reporting of executable and library open files ("txt" type).

Limited claims of OpenServer support to the versions where I currently test, 5.0.4 and 5.0.6. (Lsof probably works on 5.0.5.)

Enabled processing of -C option for PSTAT-based HP-UX lsof.

Enabled and tested on FreeBSD 4.4.

Corrected a file system test example in 00QUICKSTART, based on a report from Jun Biao WANG <>wangjunb@cn.ibm.com>.

Made available for re-distribution a user-contributed

port of lsof 4.51 to Reliant UNIX 5.45. Thomas Mauterer <Thomas.Mauterer@philosys.de> contributed the port.

4.59 October 20, 2001

With the closing of the Sequent Synergy Links Lab

by IBM, terminated lsof support for PTX. The last tested PTX lsof revision, 4.58, is available on lsof.itap.purdue.edu in .../lsof/OLD/src.

Adjusted for FreeBSD 5.0-CURRENT NFS header file changes, based on a report from Jos Backus <josb@cncdsl.com>.

Corrected a bug in the way Linux lsof identifies the owner of a process. Lionel Cons <lionel.cons@cern.ch> reported the problem and tested the fix. Added code to avoid stat(2) calls on regular Linux files whenever possible. Lionel reported the need to do this (AFS files) and tested the new code.

Added new output field for raw device number in hex. The field is identified with 'r'. This field is NOT selected when -F or -F0 is specified so that its appearance won't disturb existing scripts that process field output.

Added support for OpenUNIX 8. A test system was provided by Larry Rosenman <ler@lerctr.org>. Matthew Thurmaier <matt@compclass.com> and many people from Caldera provided technical assistance.

Added an additional UVM test to the NetBSD Configure stanza. Andrew Brown <atatat@atatdot.net> supplied the test; it recognizes NetBSD 1.5Y UVM changes to the vnode structure recently committed by Chuck Silvers.

Applied Configure and get-xnu-headers.sh script changes supplied by Allan Nathanson <ajn@apple.com> for Darwin 1.4.

Added for Bela Lubkin <belal@mammoth.ca.caldera.com> OSR-specific environment variables to supply values to the Configure script. The variables are described in 00XCONFIG.

Added an IP version selector to the -i option parameters.

4.60 November 9, 2001

Added special handling to and corrected bugs in the matching of IPv4 in IPv6 addresses to -i6:<...> selectors.

Made 00FAQ corrections and updates, based on discussions with Igor Schein <igor@txc.com>.

Modified Configure script to detect a 64 bit capable gcc compiler and permit it to be used to build 64 bit (PA-RISC 2) lsof for HP-UX 11.00. Tested with HP's gcc package, which Rich Rauenzahn of HP kindly installed on a test system at HP. Stefan Marquardt <stefan.marquardt@hagebau.de> helped test.

Made lsof's method of killing its child process more robust, based on a suggestion from Bela Lubkin <belal@caldera.com>.

Modified all dialect Makefile segments to accept select -v #define's from the environment -- a builder's comment, host, logname, system information and user name. This was done for Bela Lubkin, so he can "tune" the -v output when he packages lsof in the upcoming Caldera OSR 5.0.7 release.

Changed Perl scripts in scripts/ to put the lsof path consistently in \$LSOF. Also added a fix from Bela Lubkin to scripts/big\_brother.perl5 that allows it to tolerate SCO OSR "ago" clauses in open UDP file information. Strengthened emphasis in scripts/00README that the scripts are examples that shouldn't be expected to run on all UNIX dialects without modification.

At Bela Lubkin's suggestion changed the device cache file format examples in 00DCACHE and 00FAQ to avoid "%U%". That's an SCCS escape sequence.

Added support for OpenBSD 3.0.

Added +DAportable to CFLAGS for 32 bit HP-UX 11.

Amir Katz <Amir\_Katz@bmc.com> suggested the addition.

4.61 January 22, 2002

Updated field output example Perl scripts in the scripts/ subdirectory to discover the lsof path, starting at .. and proceeding through the PATH environment variable's directories.

Added minor OSR Configure script fixes, provided by Bela Lubkin <belal@caldera.com>.

In response to a report from Joshua Wright <Joshua.Wright@jwu.edu> modified NetBSD and OpenBSD Configure stanzas and sources so that lsof can be built when there is no system source tree (e.g., /usr/src/sys).

In response to a report from Peter Valchev <pvalchev@openbsd.org> improved the UVM test in the OpenBSD Configure stanza.

Updated Configure script to recognize FreeBSD 4.5.  
Updated for FreeBSD  
5.0 procfs and pseudofs changes.

Updated HP-UX stanza to see if the compiler named in the LSOF\_CC environment variable is the bundled compiler. If it is, "-O" is omitted from the compiler flags.

Updated Digital UNIX 4.x and Tru64 UNIX error message related to kernel name list failures. Added an FAQ section about how a kloadsrv daemon failure can cause knlist(3) to fail. The condition was reported by Douglas B. Jones <douglas@gpc.peachnet.edu>

Based on a report from Mark W. Eichin <eichin@thok.org> made Linux lsof capable of handling and reporting file sizes greater than 32 bits.

Tested on Solaris 9 BETA-Refresh.

Corrected a bug in the matching of IPv4 addresses, mapped in IPv6 addresses, to an IPv4 parameter to an -i option.

Ported to 64 bit Power AIX 5.1 kernel with advice from David Clissold <cliss@austin.ibm.com> and Marc

Stephenson <marc@austin.ibm.com>, and on a test system provided by Loc Le <lple@us.ibm.com>.

4.62 March 7, 2002

Updated

00README to reflect the usefulness of gcc for building AIX lsof. Documented a report from Brian L. Gentry <BGentry@nationsrent.com> of success on AIX 4.3.3. I documented my success on 32 bit Power AIX 5.1 and my lack of success on ia64 AIX 5.1 and 64 bit Power AIX 5.1.

Improved UnixWare >=7.1.1 reporting of UNIX socket NAME field information for NonStop Cluster systems with a patch provided by John Hughes <john@Calva.COM>. Offered John's improvement as a patch to lsof 4.61.

Corrected bugs in handling of open files on block devices by OSR lsof. The bugs were reported by Bela Lubkin <filbo@deephought.armory.com>.

Fixed bug in writing >32 bit device numbers for block devices to the device cache file.

Added support for reporting block special nodes not in /dev (or /devices). That required "like device special" be changed to "like block special" and "like character special". (00FAQ was updated.)

Based on a report from Peter Valchev <pvalchev@openbsd.org> improved the definition of the source for NetBSD and OpenBSD kernel symbols (the nlist() source file). NetBSD now defaults to getbootfile(3) if it is available, /netbsd otherwise. OpenBSD now defaults to /dev/ksyms if it is available, /bsd otherwise.

Made possible compilation under BSD/OS (BSDI) 5.0 with changes to Configure, dialects/bsdi/dlsof, dialects/bsdi/dproc.c and lib/rnmh.c. The changes were suggested by Steven Hinkle <hinkle@bsdi.com>. Note that these changes do not substantiate a claim that lsof works on BSDI 5.0, because I haven't tested it there.

Updated OpenUNIX private <sys/fs/memfs\_mnode.h>, based on a report from Larry Rosenman <ler@lerctr.org>

that it had been updated by Caldera patch OU800PK3. Unfortunately the patch only corrects some of the problems with the header file, so it is still necessary to distribute a private patched version of it with the lsof sources.

Applied a man page correction reported by Frederic Delanoy <max\_ok@yahoo.com>.

Corrected cast bugs related to using the HP-UX bundled C compiler on HP-UX 11.11.

4.63 April 23, 2002

Added HPUX\_BOOTFILE environment variable for use by the Configure script in determining HP-UX kernel configuration information -- e.g., the state of the ipis\_s structure in the HP-UX 11 kernel. The change was suggested by Marc Bejarano <beej@alum.mit.edu>. Marc also suggested some changes to the HP-UX section in 00FAQ that discusses Configure's use of q4 for HP-UX 11.

Fixed a bug in the Solaris lsof file system matching code. It was not reporting that VCHR files in /devices were in / when /devices was in /, too.

Corrected bugs in device number, file size, file offset, and raw device number field output generation.

Added recognition of OpenBSD 3.1 to the Configure script with a suggestion from Peter Valchev <pvalchev@sightly.net>. Note that this change does not constitute a claim that lsof works on OpenBSD 3.1, because I haven't tested it there.

Built an automated test suite. (See 00TEST and the tests/ sub-directory of the lsof main directory). Bela Lubkin requested it. Dale Talcott, John Hughes, and Larry Rosenman helped me validate it on their systems.

During the development of the test suite I discovered the following lsof bugs or missing features, and corrected or supplied them.

\* Corrected the reporting of locks for:

- o Digital UNIX 4.0d and Tru64 Unix 5.[01];
- o HP-UX 10.30 and 11.00;
- o OpenUNIX 8;
- o UnixWare 7.1.1.

\* Enabled HP-UX 10.30 and 11.00 to report open NFS file link counts.

\* Corrected the reporting of UNIX domain socket names for Apple Darwin, FreeBSD 4.5 and above, NetBSD 1.4.1 and above, and for OpenBSD 3.0 and above.

\* Enabled HP-UX 11.11 to stat(2) large files.

\* Fixed handling of combination 32 and 64 bit device numbers in AIX 64 bit architectures.

Updated the AIX 4.3.3 NFS rnode recognition code, first installed at revision 4.51. It looks like some IBM update has restored a single rnode structure independent of the machine bit width.

Updated the NetBSD and OpenBSD sources so NetBSD can process DTYPE\_PIPE files, as OpenBSD was already able to do.

Updated Darwin get-xnu-headers.sh script to reflect information about a recent reorganization of the Darwin CVS hierarchy, supplied by Allan Nathanson <ajn@apple.com>.

Added defense against the standard I/O descriptor attack.

4.64 June 26, 2002

Corrected some FreeBSD pre-processor directives. David O'Brien <obrien@NUXI.com> pointed them out.

Updated lsof's main() function to: 1) close all open file descriptors above 2 before starting; and 2) to set a non-interfering umask. Moved GET\_MAX\_FD test from misc.c to proto.h, so that main() could use it. Added multiple-include protection to proto.h.

Moved FAQ's test suite Q's & A's to a more appropriate

section. Added  
a Q&A on HASSECURITY option and  
its affect on searching for open files. (That was  
already in the man page.)

Updated hpux/kmem/dnode.c for HP-UX < 11 compilation  
with information from John Dzuberka <Zube@CS.ColoState.EDU>.  
While lsof doesn't support HP-UX < 11 any more, I  
try to avoid disabling it there when possible, and  
a locking fix for HP-UX >= 11 in lsof 4.63  
inadvertently disabled compilation of lsof for  
HP-UX < 11. Fixed long-standing bug in HP-UX 10.20  
lock reporting.

Removed language from the test suite programs that  
requires an ANSI-C compiler. This allowed the test  
suite to be validated with cc and gcc on the un-  
supported HP-UX 10.20.

At the suggestion of Manuel Bouyer <bouyer@antioche.eu.org>  
switched NetBSD and OpenBSD lsof from using nlist()  
to using kvm\_nlist(). Made the same change for  
BSDI, Darwin, and FreeBSD.

Validated test suite on OPENSTEP 4.2.

In response to a suggestion from Jeff Stoner  
<jstoner@blackboard.com> enhanced  
support for the  
FD list of the -d option to allow it to be either  
an exclusion or inclusion list, using the '^' prefix  
to denote exclusions.

Made adjustments for FreeBSD 4.6 and 5.0-CURRENT.  
Fixed a FreeBSD /etc/make.conf CFLAGS extraction  
bug, reported by Kris Kennaway <kris@obsecuity.org>,  
and new a bug in the fix, reported by Eric Cronin  
<ecronin@eecs.umich.edu>

Added nullfs support for FreeBSD, NetBSD, and OpenBSD  
at the request of Andrew Brown <atatat@atatdot.net>.

Modified all readmnt() functions to ignore mounted-on  
directory names that don't begin with '/.

Tested on NetBSD 1.6A and OpenBSD 3.1.

Upgraded to Solaris 9 FCS with two changes to the



BETA-Refresh support: 1) an adjustment to dnode.c for a change in the so\_so (sonode) structure; and 2) addition of Solaris 9 FCS specific DNLC code. David Comay <David.Comay@Eng.Sun.COM> sent me the dnode.c change and Casper Dik <Casper.Dik@sun.com> helped with the new DNLC support code.

Applied OpenUNIX changes that permit lsof to compile and run on the upcoming 8.0.1 release. The changes were supplied by Robert Lipe <robertl@caldera.com>. Larry Rosenman <ler@lerctr.org> provided a test system.

Added Solaris fd file system support.

4.65 October 10, 2002

Adjusted for change in FreeBSD 5.0-CURRENT inode structure, reported by David O'Brien <obrien@NUXI.com>. Adjusted for changes in FreeBSD 5.0-CURRENT <sys/vnode.h>. One change was reported by Anders Nordby <anders@FreeBSD.org>. Adjusted for FreeBSD 5.0-CURRENT on sparc64 architecture.

Enhanced the error reporting of Solaris lsof when it detects a kvm\_open() failure, and added a 00FAQ entry on the cause, based on a report from Peter J. Bertocini <pjb@anl.gov>.

Enabled compiling of lsof for NetBSD 1.5 with the NULL file system, using a patch from Andrew Brown <atatat@atadot.net>.

Removed a hack in the LTbigf test program that was once needed when it was compiled on Solaris 9 BETA-Refresh with gcc. The hack isn't needed on Solaris 9 FCS. Janet Hempstead <jan@library.carleton.ca> brought the need for this change to my attention.

Applied a patch, supplied by Andrew Brown <atatat@atadot.net>, that updates lsof for NetBSD version 1.6F. Corrected handling of the NetBSD nullfs.

Updated to BSDI BSD/OS 4.3 on a test system kindly provided by Terry Kennedy <terry@tmk.com>.

Updated to FreeBSD 4.7.

Updated to Apple Darwin 1.5, 5.x and 6.x with patches supplied by Allan Nathanson <ajn@apple.com>. The patches include IPv6 support.

Updated Configure to use the -bnolibpath loader option when building lsof on a PowerPC, running AIX 5 or greater. Valdis Kletnieks <Valdis.Kletnieks@vt.edu> informed me this was needed. Lsof for AIX 5.x was initially developed on the IA64, where -bnolibpath can't be used and I didn't think to restore it to PowerPC loads when AIX 5.x became available for that architecture.

Updated to UnixWare 7.1.3 on a test system provided by Larry Rosenman <ler@lerctr.org>. Removed claims that lsof works on OpenUNIX 8.0.1, because UnixWare 7.1.3 is the release name of OpenUNIX 8.0.1.

Based on a comment that his e-mail address was wrong in the lsof distribution from Kenneth Stailey <kstailey@disclosure.com>, removed all e-mail addresses from lsof documentation files except this one, 00DIST. The addresses in 00DIST are used to send revision release notices to those who contributed to a revision, but the addresses in this file for previous revisions and in other documentation files sometimes grow stale and are never validated.

4.66 December 22, 2002

Acquired Solaris 7 and 8 test systems, courtesy of John Dzuberka <Zube@CS.ColoState.EDU>. Updated 00TEST and tests/TestDB accordingly.

Clarified FreeBSD 5.0 architecture claims at the suggestion of David O'Brien <obrien@NUXI.com>. Also implemented David's suggestion to change Intel to x86.

Installed changes to DNLC handling in OSR lsof in preparation for handling changes in the OSR 5.0.7 DNLC cache. Information about the changes and patches to handle them were supplied by Bela Lubkin <filbo@deepthought.armory.com>.

Upgraded True 64 UNIX support to the 5.1B release on a test system provided by Berkley Shands <berkley@cse.wustl.edu> Had to use relaxed ANSI compilation because of an error in a system header file and other lsof source usages.

Implemented the HASNOSOCKSECURITY compile-time option. When it and HASSECURITY are defined, lsof will be built to list only the user's open files, but will also list anyone else's open socket files, provided the "-i" option selects their listing. Updated the Customize script to ask about setting HASNOSOCKSECURITY. Left it undefined in all dialect machine.h header files. This change was requested by Kenneth Stailey <kstailey@speakeasy.net> for use with ntop.

Added support for OpenBSD 3.2 and its kernel trace file.

Improved lsof help (-h) and version (-v) information reporting.

Fixed a FreeBSD 4.7 and above off-by-two UNIX domain socket path termination bug, reported by Ken Stailey <kstailey@speakeasy.net>

4.67 March 27, 2003

Began the transition of the lsof ftp server host name from vic.cc.purdue.edu to lsof.itap.purdue.edu. That reflects Purdue organizational changes. This first step makes the new name an alias to the old one. The old name, vic.cc.purdue.edu, will remain usable for an extended period.

Corrected a revision number reference in section 17.17 of 00FAQ on the appearance of Solaris negative DNLC caching handling.

Updated 00FAQ discussion of compilers for 64 bit Solaris.

Validated test suite for 64 bit Solaris 8 and gcc.

At the request of Alek O. Komarnitsky <alek@komar.org> added the "+c <width>" option to enable optional changing of the COMMAND column output maximum width

from the default to <width>.

The default maximum width remains CMDL, as defined in lsof.h.

Fixed three AIX kernel bit size detection bugs, one in the AIX Configure script stanza, the second and third in the AIX dproc.c get\_kernel\_access() function. The bugs were reported by Pierre-Yves Fontaniere <pyf@cc.in2p3.fr>, who tested the fixes.

Added kernel event queue file support for FreeBSD, NetBSD and OpenBSD. Andrew Brown <atatat@atadot.net> supplied the code.

Updated to AIX 5.2 on a test system provided by Dale Talcott <dtalcott@purdue.edu>. Had to build work-arounds for two missing AIX 5.2 header files, <j2/j2\_snapshot> and <proc/proc\_public.h>. Corrected an off-by-one UNIX socket addressing bug. Taught AIX lsof to handle both jfs and jfs2 files at the same time. Adjusted for an IBM mistake in the sizing of the fdsinfo structure in <procinfo.h> Toshiya Nakamura <TOSHIYAN@jp.ibm.com> helped test,

Updated to FreeBSD 4.8. Corrected another bug in FreeBSD UNIX domain socket name handling.

Corrected gcc build problems on HP-UX 11i, reported by Yuliy Minchev <yuliy@mobiltel.bg>.

Updated BSDI BSD/OS support to 4.3.1.

Augmented a lock ID test on NetBSD to check if the ID is an LWP pointer.

4.68 June 18, 2003

Enhanced Configure script's cleanup operations.

Added support for OpenBSD 3.3, based on a report from Peter Valchev <pvalchev@sightly.net>.

Improved the description of the detached PGP signature certificate file in the main lsof README file, based on a suggestion from Diana Stockdale <diana@mpl.ucsd.edu>.

Installed a work-around for FreeBSD 5.0-CURRENT on

Alpha to avoid a compiler register use complaint.

Corrected a 'c' option error message. Gnele  
<blaadeleng@yahoo.com> reported the problem.

Upgraded EXT2FS and UFS support for NetBSD and  
OpenBSD to handle new inode information, and the  
fast UFS1 and UFS2 file systems.

With the help of Andrew Brown <atatat@atadot.net>  
determined the NetBSD snapshot  
(1.6F) at which  
<sys/mount.h> could be included under `_KERNEL`, thus  
eliminating the `lsof netexport.h` hack. The same  
change applies to OpenBSD versions 3.3 and above.

Applied a patch from Armin Gruner <ag@muc.de> that  
corrects the use of the `HASPROCFS` definition in the  
FreeBSD dialect sources.

Corrected spelling errors in `00FAQ` and in the  
generated `00.README.FIRST_<version>` file of the  
distribution archive. John Jackson <jrj@purdue.edu>  
and Ray Phillips <r.phillips@jkmrc.uq.edu.au>  
spotted and reported the errors.

Corrected a spelling error in a comment and incorrect  
use of an alarm function in the `LTsock` test program.

At the suggestion of Stuart Anderson <sba@srl.caltech.edu>  
added preliminary (and incomplete) SAM-FS file system  
support to Solaris `lsof`. Completion awaits availability  
of SAM-FS internals.

Fixed a Solaris device name printing bug, reported by  
Ric Anderson <ric@tick.Telcom.Arizona.EDU>, only  
visible when `HASDCACHE` is  
not defined. Ric helped  
test the fix.

Fixed an AIX kernel bit size handling bug related  
to the NFS node (`rnnode`) structure.

Corrected a `print_kptr()` function call error in the AIX  
AFS code, reported by David Steiner  
<david.r.steiner@Dartmouth.EDU>. Upon further reflection  
and because I no longer have appropriate AIX AFS test  
systems, disabled AIX AFS support in the `Configure` script

for AIX versions above 4.3.3.0 or AIX AFS versions above 3.5.

Added support for FreeBSD 5.1.

With advice from Allan Nathanson <ajn@apple.com> adjusted the Darwin get-xnu-headers.sh script to access the kernel header files needed by lsof from a new form of the Apple open source repository.

Installed Linux and lsof library bug fixes and improvements, supplied by Marian Jancar <mjancar@suse.cz>. One Linux improvement handles mount strings that have octal escapes in them, eg., \040 for embedded blanks. Marian tested the changes.

4.69 October 16, 2003

Received and applied an OpenBSD patch from Peter Valchev <pvalchev@sightly.net> that replaces a ctob() call with a sysconf() call. Peter claims sysconf() is needed for OpenBSD on SPARC. (It is not needed for NetBSD on SPARC.)

With the upgrade of my only Solaris 7 test system to, Solaris 8, dropped the \*claim\* that lsof works on Solaris 7. That doesn't mean it won't work there, so those who want lsof for Solaris 7 probably should be able to build it there and it probably will work there.

Revised lsof's DNLC handling for BSD derivatives, including: BSDI; Darwin, DEC OSF/1, Digital UNIX and Tru64 UNIX; FreeBSD; NetBSD; and OpenBSD. The latest NetBSD distribution's dropping of the vnode capability ID (v\_id) required the revision.

Adjusted to the latest FreeBSD 5.1-CURRENT.

Added NetBSD support for using kvm\_getproc2().

Added a patch from Andrew Brown <atatat@atadot.net> to handle NetBSD enum conflicts and changes in the <miscfs/kernfs/kernfs.h> and <miscfs/procfs/procfs.h> header files.

Added a "#define \_KERNEL" to the AIX dnode2.c source file for compatibility with a new <j2/j2\_inode.h> AIX 5.2 header file version. The addition was

supplied by Dick Dunbar <Dick.Dunbar@Siebel.com>  
and was offered as a patch to lsof 4.68/

Added support for a second type of Solaris SAMFS.  
Stuart Anderson <sba@srl.caltech.edu> provided the  
support. SAMFS support in lsof SOLARIS remains  
scanty, because Sun won't release any details on  
its kernel structures.

Dropped the \*claim\* that lsof works on AIX 4.3.3,  
because I was unable to test it there. That doesn't  
mean it won't work there, so those who want lsof  
for AIX 4.3.3 probably should be able to build it  
there and it probably will work there.

Updated for Solaris 10 on test systems provided by  
Mike Miscevic <miscevic@hotpop.com>. Casper Dik  
<casper@holland.sun.com> provided significant help.  
During the Solaris 10 port found and fixed an lsofs  
handling bug that  
prevented reporting of open lsofs  
file lock status.

Updated the DNLC test, LTdnlc, to provide a possible  
explanation about file systems on which the test  
might fail.

Modified the procedure for obtaining missing Darwin  
XNU kernel header files. The new one requires more  
manual intervention, but is the best that can be  
done with the way Apple open sources are now  
organized. 00FAQ explains the new procedures for  
those not used to downloading Apple open source  
files.

Added support for Apple Darwin 7.0 (Mac OS X 10.3)  
with patches supplied by Allan Nathanson <ajn@apple.com>.  
Dropped the \*claim\* that lsof builds and works on  
Apple Darwin below 6.0.

Validated lsof on FreeBSD 4.9, using a test system  
provided by Ben Lewis <bl@purdue.edu>.

Validated lsof on FreeBSD 5.1-CURRENT for Amd64.  
David O'Brien <obrien@FreeBSD.org> provided a test  
system.

Changed the NetBSD Configure stanza to do header

file searches in /usr/include by default. The LSOF\_INCLUDE and NETBSD\_SYS environment variables may still be used to specify other search paths. Discussions with Andrew Brown and Wolfgang S. Rupprecht <wolfgang@wsrcc.com> led to the change.

4.70 January 16, 2004

Improved shell-portability of the linux stanza of the Configure script with a patch from Paul Jarc <ptj@po.cwru.edu>.

Added a "silent" rule to tests/Makefile for Paul. Updated, extended and clarified the test suite documentation in 00FAQ and 00TEST.

Fixed Solaris 10 dlsof.h typo, reported by Mike Miscevic <miscevic@hotpop.com>. The typo prevents lsof from loading cleanly in Solaris 10 builds past 40.

Fixed a Solaris HSFS node number reporting bug and added a structure definition work-around for Solaris 10.

Converted PGP signing to GPG. My previous PGP key can be used, but the gpg "--allow-non-selfsigned-uid" option may have to be used when it is imported into a GPG key ring.

Added bz2 compression.

Updated for OpenBSD 3.4.

Added a work-around for a missing header file in the s10\_44 Solaris 10 build.

Added support for FreeBSD 5.2-BETA and 5.2-CURRENT.

Updated Linux AX25 support with modifications supplied by Lutz Poetschulat <dl9cu@db0zwi.de>.

Added raw IPv6 support to Linux lsof.

Improved handling of parameters after "-i@".

Improved file name test in LTdnlc.c.



Added loop count controls to the reading of Solaris lock chains. The change was implemented as a result of a report from Steve Gonczi <steve@relicore.com>.

Based on a report from John Jackson <jrj@purdue.edu>, enabled a Solaris 10 <sys/lgrp.h> work-around for Solaris 9, too. (Patch 112233 installs an lgrp.h on Solaris 9 that needs the work-around.)

With help from Andrew Brown <atatat@atadot.net> and John Heasley <heas@netbsd.org> added log-structured file system (LFS) support for NetBSD and OpenBSD.

Added AMD64 to the list of FreeBSD 5.x-CURRENT supported architectures. FreeBSD.org provides a test system, courtesy of (I believe) David O'Brien <obrien@FreeBSD.org>.

Added a cast to lseek() in the HP-UX /dev/kmem-based kread() function to make it work properly with the bundled HP C compiler.

4.71 March 11, 2004

Added text file support to Apple Darwin lsof and enabled the lsof executable portion of the LTbasic test. Added support for Darwin kernel queue, POSIX semaphore and POSIX shared memory files. Tested on Darwin 7.2 (aka Mac OS 10.3.2).

Added process\_kqueue() function prototypes for FreeBSD, NetBSD and OpenBSD.

Picked some lint in AIX sources, lib/rnmh.c and tests/LTsock.c.

Added "-x [fl]" cross-over option, which enables +d and +D processing to cross over symbolic links and/or file system mount points. Discussion with Johan Lindquist <johan@smilfinken.net> and Eric Williams (aka The Ghost In The Machine) <ewill3@earthlink.net> on Linux news groups revealed the need for the option.

Updated support for UnixWare 7.1.4.

Added support for the optional reporting of socket options, socket states and TCP flags for most currently

supported dialects. John Smith <lbalbalba@hotmail.com> and Tristan Nefzger <tn@bhtrader.com> requested the information. The dialects and their versions for which this feature has become available include:

- AIX 4.3.2 and 5.[12]
- Apple Darwin 7.2
- BSDI BSD/OS 4.3.1
- Digital UNIX and Tru64 UNIX 4.0
- FreeBSD 4.9 and 5.2
- HP-UX 11 and 11.11 (aka 11i)
- NetBSD 1.6ZH
- OpenBSD 3.4
- OPENSTEP 4.2
- OpenUNIX 8
- SCO OpenServer Release 5.0.6
- Solaris 2.6, 8, 9 and 10
- UnixWare 7.1.[134]

Modified the Configure stanza for HP-UX 11 with better q4 detection. Steve Bonds <3vhmxxm02@sneakemail.com> supplied the modification.

Applied a patch from Mike Miscевич <miscевич@hotpop.com> to enable lsof to compile with the zone support in the Solaris 10 s10\_b51 release. Added information on lsof zone behavior to 00FAQ.

Added a "-z [z]" option to Solaris 10 lsof. It enables the listing of zone name and can also be used to select the listing of processes and their files from specified zones.

4.72 July 13, 2004

Corrected Solaris 10 ZONE column title display bug with a patch from Joep Vesseur <Joep.Vesseur@Sun.COM>. Joep's fix was offered as a patch to 4.71.

Based on a report from Jean-Pierre Radley <jpr@jpr.com> about an unexpected GNU uname Configure interaction on OSR, and working from information received from Bela Lubkin, changed the OSR Configure stanza to use /bin/uname instead of uname. Added an FAQ entry about Configure version detection problems.

Added the +m and "+m m" options in response to a dialog with Robert T. Brown <rbrown@netmentor.com>. The

options allow the creation of a mount table supplement file which can be used on selected dialects to get device numbers when stat(2) and lstat(2) can't deliver them. (That's generally the result of an inaccessible NFS server.) Currently the new options are supported only on Linux.

Made cpumask\_t typedef \_KERNEL compensation for FreeBSD 5.2-CURRENT. Refined it for 5.2.1-RELEASE with testing help from Scott Ellentuch <tuc@tsg.com>.

Added support for FreeBSD 4.10. Larry Rosenman <ler@lerctr.org> kindly provided a test system.

Added support for NetBSD 2.0 with patches supplied by Andrew Brown <atatat@atadot.net>. Andrew also provided two test systems.

Made handling of Linux maps file more robust, based on a report from Jan Blunck <J.Blunck@tu-harburg.de>. As a side benefit, made handling of generated stat(2) information more flexible.

As a result of a discussion with Jason Fortezzo <fortezza@mechanicalism.net>, adjusted lsof for Solaris to obtain the maximum user name length from ut\_name of the utmpx structure, if <utmpx.h> exists.

Tested under OpenBSD 3.5.

Updated 00README information about using gcc (via the Configure aixgcc abbreviation) to compile lsof on AIX. Ann Janssen <ajanssen@nebook.com> made me aware the information was out of date.

Added an AIX SIGDANGER handler and some 00FAQ sections on lsof memory usage after a discussion with Tom Qin <tom.qin@citigroup.com> about lsof memory usage.

Added scripts/sort\_res.perl5, contributed by Fabian Frederick <fabian.frederick@gmx.fr>. The script displays lsof output sorted by size and path name.

Improved handling of files on Linux NFS mount points that use the root\_squash option, based on discussions with Paul Szabo <psz@maths.usyd.edu.au>.

Updated FreeBSD 5.2-CURRENT support, based on a problem report from Filippo Natali <filippo@widestore.net>.

Corrected improper FreeBSD 5.x-CURRENT #if condition, reported by Kim Culhan <kimc@kim.net>.

Added a Configure script work-around for AIX 5.2 lsof with JFS2, compiled by gcc >= 3.3. The work-around was supplied by Florian M. Weps <fmw@hactrn.ch>.

4.73 October 21, 2004

Added  
an `__XPG4_CHAR_CLASS__` #define before  
#include'ing <ctype.h> on Solaris to restore lsof's  
ability to display special characters such as acute-e.

Added wide-character (e.g., UTF-8) support where possible, prompted by a request from Kyungjoon Lee <kjoonlee@gmail.com>. Some older dialects -- e.g., NetBSD 1.4.1 -- don't support wide characters, so the wide character support is enabled by definitions in each dialect's machine.h. Dialects with wide-character support are listed in 00FAQ.

Make a FreeBSD 5.2-CURRENT adjustment for <sys/pipe.h>, supplied by Sergey A. Osokin <osa@FreeBSD.ORG>.

Implemented a Linux feature request made by Jakub Jelinek <jakub@redhat.com> that enhances lsof's ability to locate UNIX domain sockets whose paths are named as arguments. Jakub supplied suggested code.

Dropped \*claims\* that lsof works on AIX below 5.1, SCO  
Dropped \*claims\* that lsof works on AIX below 5.1, SCO  
Openserver 5.0.4, Tru64 UNIX 5.0, and UnixWare  
below

7.1.4. Lsof will probably build and work on those UNIX dialect versions, but I no longer have any way to test lsof on them.

Added support for FreeBSD 5.3 and 6.0. The FreeBSD 5.3 support hasn't been tested.

Added FD test code that will allow dialect versions to test FD option selections. Used the new code in the PSTAT-based HP-UX lsof to enable it to avoid scanning the mount table when its information is not needed.

The addition was made in response to a query from Harvey Garner <Harvey.Garner@championusa.com> about lsof performance in a busy NFS environment.

Upgraded lsof's AIX support level to AIX 5.3, based on a report from Dick Dunbar <Dick.Dunbar@Siebel.com>. (I have not tested lsof under AIX 5.3.) Based on Dick's recommendation and local testing changed the C for AIX version 6 and higher -qmaxmem option value to -1.

Made LSOE\_AR environment variable more useful and documented it in 00XCONFIG.

Corrected the use of sum(1) to generate signatures for the lsof distribution and binaries to match the documentation that claims it is sum -r output. Jin Guojun <jin@george.lbl.gov> noticed and reported the problem.

Tested under OpenBSD 3.6.

Added checksum and GPG certificate files for the bz2, gz and Z lsof distribution archives. The new files reside with the distribution archives and supplement the signature information already inside the archives.

Validated on Solaris 10, i8xpc, build s10\_63.

4.74 January 17, 2005

Fixed a Solaris segment fault bug on systems that lack a /dev/allkmem device. Offered the fix as a patch to lsof 4.73. The bug was reported by Donald Zoch <donald.zoch@amd.com>.

Updated lsof for FreeBSD 6.0 and higher for a change in <sys/vnode.h>, based on a report from Sergey A. Osokin <osa@FreeBSD.ORG>. Made the update available in a 4.74 'A' edition pre-release.

Filed an HP bug report about missing pstat(2) CWD info for LOFS on HP-UX 11.11 and higher.

The missing CWD info was noticed by Ermin Borovac <e.borovac@bom.gov.au>. Added info to 00FAQ about the problem, which can cause the lsof test suite's LTbasic test to fail.

Updated the q4-generated tcp\_s.h in the lsof

distribution and added socket option support for HP-UX 11.00. Erwin Reynolds <ereyns@europarl.eu.int> helped test.

Updated for Solaris 10, build s10\_69, with a patch supplied by Mike Miscevic <miscevic@hotpop.com>.

Added v\_path support to Solaris 10 lsof. That relieves it of having to read and decode the kernel DNLC, and delivers full paths more reliably.

Added specialized NFS4 support to Solaris 10 lsof.

Applied Solaris 10 patches to lsof supplied by Casper Dik <casper@holland.sun.com>.

Updated lsof for NetBSD 2.99.10 and tested it on a system provided by Andrew Brown <atatat@atatdot.net>.

Added support for the FreeBSD 6.0-CURRENT f\_vnode pointer in the file structure.

Added BSDI, FreeBSD, NetBSD and OpenBSD support for the \*effnlink member of the inode structure. This makes the lsof LTnlink test run faster on all modified dialects and correctly on OpenBSD.

Added ptyfs support for NetBSD, using modifications provided by Andrew Brown.

Changed the netbsd Configure stanza to look by default for system header files in both /usr/include and /usr/src. (The NETBSD\_SYS environment variable can still be used to select an alternate for /usr/src.)

Corrects two FreeBSD 4.10 RPC/XDR type definitions.

Added an FAQ Q&A about setuid and setgid restrictions in HP-UX 11.11. The information in the answer was supplied by Frank Sanders <frank.sanders@siemens.com>.

Added abbreviations for AXI FCIO and FSNAPSHOT file flags. Holger VanKoll <Holger.VanKoll@swisscom.com> reported the missing FCIO.

Adjusted lsof's private AIX 64 bit rnode structure for 64 bit AIX 5.2 systems. (IBM doesn't distribute a

correct <nfs/rnode.h> for it.)

Corrected a Linux socket inode printing bug reported by Igor Schein <igor@txc.com>.

Updated for FreeBSD 4.11. The support compiles but hasn't been tested.

Back-ported a FreeBSD 6.0-CURRENT fix to FreeBSD 5.3-RELEASE-p1. That was done to solve a compilation problem reported by Radko Keves <rado@daemon.sk>.

4.75 May 16, 2005

Dropped the *\*claim\** that lsof works on DEC OSF/1 and Digital UNIX, since my last 4.0 test system has been removed. The last tested distribution of lsof on DEC OSF/1 and Digital UNIX was revision 4.74. It has been archived on lsof.itap.purdue.edu in pub/tools/unix/lsof/OLD/src.

Added negation forms to the values in the -g (PGID) and -p (PID) lists. Negated PGID and PID values, like negated UID or login name values, are applied without ORing or ANDing and take effect before any other selection criteria are applied.

At the request of Marcin Gozdzalik <gozdal@gmail.com> added a -X option for Linux. The option inhibits the reading of the /proc/net/tcp\* and /proc/net/udp\* files.

Based on a report from David Gutierrez <davegu1@hotmail.com> changed DEC OSF/1 process table allocation to request memory in smaller increments.

Based on a report from jayjwa <jayjwa@atr2.ath.cx> updated the Customize script to use "tail -n 1" where possible.

Enabled support for FreeBSD 5.4.

Improved the BSDI, FreeBSD, NetBSD, OpenBSD and Solaris kvm\_open() and kvm\_openfiles() error messages.

Enabled support for NetBSD 2.99.12.

Improved HP-UX Configure stanza with help from Piet

Starreveld <pstarrev@csc.com>. Picked some lint Piet found.

Enabled IPv6 support for HP-UX > 11. Piet Starreveld helped test it on 11.23, among others.

Updated for HP-UX 11.23 on the ia64 architecture.

Updated to latest FreeBSD 6.0-CURRENT, using a test system provided by Andrzej Tobola <ato@iem.pw.edu.pl>.

Added support for SCO OSR 6.0.0 and UnixWare 7.1.4 with help from Richard at SCO.

Corrected a Linux bug in NFS handling, reported by Karel Zak <kzak@redhat.com>. Karel supplied a patch.

Improved the code for accessing an AIX 3.2 and higher sockaddr\_un structure, thus eliminating a segmentation fault possibility.

Updated for AIX 5.3.

Added preliminary (DEBUG) support for the AIX SANFS file system.

Fixed a bug in the Solaris 10 processing of the vnode's v\_path pointer with code supplied by Edward Jajko <ejajko@portal.com>. The fix was offered as a patch to 4.74.

Dropped support for OpenUNIX 8, since a test system is no longer available. Archived an OpenUNIX-only distribution of the last revision (4.74) tested on OpenUNIX in pub/tools/unix/lsof/OLD/src.

Tested under Openbsd 3.7.

Tested under Darwin 7.7.0.

Enabled building on amd64 Solaris 10 with hints from Marc Aurele La France <tsi@ualberta.ca>. Marc provided a test system.

Supplied a missing quote in the FreeBSD Configure stanza. Carl Cook <Info@quantum-sci.com> reported the problem.



Removed "-O" option from tests/Makefile so that the HP-UX bundled compiler won't complain.

4.76 August 30, 2005

Corrected an example and spelling errors in man page.

Updated for Apple Darwin 8.x with changes supplied by Allan Nathanson <ajn@apple.com>. Allan also provided a test system.

Completed documentation of CLRLFILEADD in all machine.h files.

At the request of Chris Markle <cmarkle@sendmail.com> added partial listen queue length to socket options displayed when -Tf is specified. Partial queue length is not reported for all dialects. (00FAQ lists the ones where it is reported.)

Updated for FreeBSD 7.0 with information supplied by Andrzej Tobola <ato@iem.pw.edu.pl>.

Updated Solaris VxFS support for VxFS versions 4 and above with technical advice from Craig Harmer <craig\_harmer@symantec.com>, Gary Millen <gary\_millen@symantec.com> and Chuck Silvers <charles\_silvers@symantec.com>. Testing help was provided by Michael Antlitz <mantlitz@prophasys.com>, Steve Ginsberg <steve@dhapdigital.com> and Kenneth Stailey <kstailey@yahoo.com>.

Fixed a Solaris address space map processing bug. Janardhan Molumuri <mjanardhan@gmail.com> reported the bug and help me identify it. Made the fix available as a patch to 4.75.

Added support for Solaris 10 port and CTFS files. The CTFS support is incomplete, because I don't know how to get inode number, size and link count. (There's a new 00FAQ entry about that.)

Investigated a report from Christopher J Warweg <warwegc@GAO.GOV> that the CHECKSUMS for the lsof 4.75 binary for 64 bit Solaris 8 was incorrect. It was my packaging error. I rebuilt and repackaged the binary.

Enabled support for Linux map file names with embedded spaces.

4.77 April 10, 2006

Added -X option support for Solaris 10 and above. When -X is specified lsof will report cached v\_node path names for unlinked files, followed by "(deleted)".

Improved cached vnode path name handling by adding "(?)"

to the end of path names of questionable accuracy.

Updated 00FAQ to reflect these changes.

Updated for FreeBSD 7.0-CURRENT.

Fixed name addition spacing bug, reported by Stuart Anderson <anderson@ligo.caltech.edu>. Also updated Solaris 10 SAMFS support at Stuart's request.

Added missing "break;" and another HASSTATVFS test to the NetBSD and OpenBSD dnode.c. Bill Behr <bbeh@networkstoragecorp.com> reported those needs.

Fixed an HP-UX 11 file descriptor "chunk" size problem, reported by Per Allansson <per@appgate.com>. Per helped devise the fix and tested it. This fix was offered as a patch to lsof 4.76.

Updated for FreeBSD 6.0-STABLE and FreeBSD 6.1-PRERELEASE.

Updated scripts/sort\_res.perl5 with changes supplied by Frederick Fabian <fabian.frederick@skynet.be>, the author of the script.

Corrected +|-M man page documentation error, reported by Roger Cornelius <rac@tenzing.org>.

Improved FreeBSD user device random seed generation in response to a problem report from Danny Braniss <danny@cs.huji.ac.il>.

Eliminated three syntax error bugs and other compiler complaints from the PSTAT-based lsof. H. Merijn Brand <h.m.brand@xs4all.nl> reported the problems and tested the fixes.

Eliminated compiler complaints in the test suite.

Investigated problems with the building of lsof on PA-RISC HP-UX 11.23, based on a report from John Orndorff <John.Orndorff@sungard.com>. Found that neither the HP bundled C compiler nor gcc would build lsof, but the the HP unbundled ANSI C compiler would. Concluded that HP bundled C compiler can't handle <gssapi/gssapi.h>. Devised a work-around to gcc's omission of the rpercent structure definition of <netdb.h> that allows it to compile lsof's print.c, but the resulting binary doesn't run reliably. Documented the situation in 00FAQ.

Changed reporting of unknown file types. The number of an unknown type is now reported as four octets. The change was made in response to a Linux lsof bug report from Karel Zak <kzak@redhat.com>.

Dropped the \*claim\* that lsof works on BSDI BSD/OS since my last test system has been removed. The last tested distribution of lsof for BSDI BSD/OS was revision 4.76. It has been archived on lsof.itap.purdue.edu in pub/tools/unix/lsof/OLD/src.

As a result of discussing the lsof source tar's MD5 checksum with Andrew Bell <andrew.bell.ia@gmail.com>, changed the description of a suitable MD5 tool in the lsof distribution's documentation to name the openssl "dgst" command.

Enabled compilation on Solaris 10 1/06 with a fix sent by Jason Fortezzo <fortezza@mechanicalism.net>. Made the fix available as a patch to 4.76.

Adjusted to FreeBSD 5.5-PRERELEASE.

Corrected a bug in the lsof library's process\_file() function to enable the locating of AIX XTI sockets by their TCP/IP address values. The bug was reported by Michel Dubois <Dubois@sears.ca>.

Based on a bug report from Karel Zak <kzak@redhat.com> added command name length checking to as many dialects as possible (Linux for Karel) for the "-c c" option.

Updated for OpenBSD 3.[89]. Tested the 3.9 update on a system provided by David Mazieres. I have not tested on OpenBSD 3.8, but David reports lsof 4.76 worked there.

Ended regression testing of lsof on 32 bit Solaris 8 with the ending of access to a test system. lsof continues to be tested on 64 bit Solaris 8.

4.78 April 24, 2007

Added more information to the lsof FAQ about missing link counts and sizes on Linux files.

Simplified Linux stat() and lstat() usage.

Relocated #define's that prevent OpenBSD compilation on systems without a /proc file system. Pieter Bowman <bowman@math.utah.edu> reported the problem.

Added code to avoid processing Linux /proc/<PID>/maps file entries with zero device and node numbers. Some such entries now have names associated with them that are not path names -- e.g., "[heap]", "[stack]" or "[vdso]". Scott Worley <sworley@chkno.net> reported lsof's mishandling of such entries.

Added SELinux security context support, provided by James Antill <james.antill@redhat.com>. I have not tested this, but James and Karel Zak <kzak@redhat.com> have.

Added the #include of <sys/types.h> to Solaris lsof to enabled compilation on Solaris 10 6/06. Peter Harvey Peter.Harvey@Sun.COM diagnosed the problem and supplied a patch.

Added better support for JFS2 on AIX 5.2 and 5.3, based on bug reports and help from Thomas Braunbeck <BRAUNBEC@de.ibm.com> and Tom Whitty <TWHITTY@cerner.com>.

Documented that lsof supports AIX 5.3 only up through maintenance level 1 (ML1).

Enabled Solaris lsof to locate the AFS vnode operation address for OpenAFS 1.4.1. The fix was supplied by Robert Jelinek <Robert.Jelinek@MorganStanley.com>.

Enabled support for Solaris 10 ZFS. If the necessary ZFS header files aren't found, lsof offers the option to drop ZFS support, to use internal, possibly inaccurate structure definitions, or to supply a path to the missing header files. Horst Scheuermann <Horst.Scheuermann@uni-trier.de> provided a development system and helped test the support.

Corrected a typo in the man page, reported by Eric S. Raymond <esr@thyrsus.com>.

Changed the spelling of macroes to macros in lsof source and documentations files, based on a suggestion from Josh Soref <timeless@gmail.com> and verification with the OED.

The following dialects are no longer supported: 32 bit AIX 5.2, HP-UX 11, OpenStep 4.2, Solaris 2.6, Solaris 8, True Unix 64 and UnixWare 7.1.4. Lsof may work on them, but I no longer have test systems for them. Support for OpenBSD ends at its version 3.9 for lack of interest in the port.

4.79 April 15, 2008

```
***** IMPORTANT NOTE *****
*
* Lsof support has been reduced to the following
*
* dialects: AIX, FreeBSD, Linux and Solaris, and *
* only in selected versions of those dialects. *
* The selected versions are listed in this file *
* and in other lsof documentation. *
*
* I have made this move because of retirement *
* and because I no longer have many test systems *
* available to me. *
*
* Vic Abell *
*
*****
```

Fixed a Solaris VXFS permission problem when accessing the VXFS inode offsets. The bug was reported by Gregory A. Ivanov <ivga@mts.ru>. Gregory tested the fix.

Moved an `#include <string.h>` later in FreeBSD `dlsof.h` to enable compilation on recent FreeBSD releases. The change was supplied by Roy Marples [<uberlord@gentoo.org>](mailto:uberlord@gentoo.org).

Improved

Linux `/proc` file stream reading speed by applying an expanded version of a patch from Eric Dumazet [<dada1@cosmosbay.com>](mailto:dada1@cosmosbay.com) that allocates a page size buffer to each stream. Improved TCP, TCP6, UDP and UDP6 hashing by determining the hash bucket count from the `/proc/net` `sockstat` and `sockstat6` files. The improvement was suggested by Eric and he provided sample code. Eric also tested both improvements.

Modified Configure script to build `lsuf` on FreeBSD

6.2. Tested it on a system provided by Larry Rosenman [<ler@lerctr.org>](mailto:ler@lerctr.org).

Fixed a Linux maps file processing bug that prevented path names from having an embedded colon. James Lingard [<jchl@arastra.com>](mailto:jchl@arastra.com) reported the bug and helped with its fix.

Based on reports from Eric Dumazet and Samuel Thibault [<samuel.thibault@ens-lyon.org>](mailto:samuel.thibault@ens-lyon.org) added support for the Linux 2.6.22 kernel's `/proc/<PID>/fdinfo` files -- i.e., file offset and flags. Samuel Thibault provided a test system.

Fixed a Linux UNIX socket memory leak, reported by Philip Shin [<pshin@xceedium.com>](mailto:pshin@xceedium.com). Phillip supplied the fix.

With generous assistance from HP added support for an HP-UX 11.23 patch that makes TLI/XTI socket address information available.

Fixed a header file problem for FreeBSD 6.2 on the Alpha architecture. The problem was reported by Pekka Honkanen [<phonkane@cc.hut.fi>](mailto:phonkane@cc.hut.fi). Pekka tested the fix.

Based on a report and using suggested fixes from Karel Zak [<kzak@redhat.com>](mailto:kzak@redhat.com), made these changes to Linux `lsuf`: corrected a `getpidcon()` error message; insured that inode numbers are handled correctly for their unsigned long long type; and improved SELinux handling. At the request of Alon Bar-Lev [<alonbl@gentoo.org>](mailto:alonbl@gentoo.org) added the `LINUX_HASSELINUX` environment

variable to enable or inhibit SELinux support unconditionally.

Updated Configure for FreeBSD 8.0-CURRENT and tested lsof on AMD64 there.

Added a patch provided by Oles Hnatkevych <don\_oles@able.com.ua> for FreeBSD systems where the root file system is on a CD9660 device.

Added compensation for the disappearance of FMARK and FDEFER from the FreeBSD 8.0-CURRENT <sys/file.h>.

Updated FreeBSD lsof with ZFS support. Larry Rosenman <ler@lerctr.org>, Erwin Lansing <erwin@FreeBSD.org>, Wesley Shields <wxs@atarininja.org> and Dmitry Morozovsky <marck@rinet.ru> provided test systems.

Fixed a socket file identification problem reported by Pavol Rusnak <stick@gk2.sk>. Pavol also reported the cause of the problem.

Added the ability to format the repeat mode marker line with strftime(3), where the dialect supports the localtime(3) and strftime(3) C library functions. The addition was suggested by Mike Depot <mdepot@comcast.net>, who also tested it. The addition required creating a new main lsof source module, util.c, that contains functions whose compilation conflicts with the general header file tree defined by lsof.h and dlsof.h.

Based on reports from Andrei V. Lavreniyuk <andy.lavr@reactor-xg.kiev.ua> and Pav Lucistnik <pav@FreeBSD.org> updated the FreeBSD 7.0 and above file lock handling to use new locking structures. The update requires a terrible hack to get a definition for the lock owner structure from a kernel source module into a local lsof header file.

4.80 May 12, 2008

Updated for a FreeBSD 7.0 and above byte level locking change. The problem was reported by Conrad J. Sabatier <conrads@cox.net>, who helped test the update. Wesley Shields <wxs@FreeBSD.org> provided an 8.0-CURRENT test system.

Propagated the FreeBSD 7.0 and above locking changes to

FreeBSD 6.x, based on a report from Edwin Groothuis  
<edwin@FreeBSD.org>.

Added warnings for unsupported dialects or versions.

Added Linux support for the UDPLITE protocol. Eric  
Dumazet <dada1@cosmosbay.com> supplied a patch.

Added a missing quote to the Configure script's  
FreeBSD stanza.

Added a usage.o rule to the HP-UX PSTAT-based  
Makefile. I mistakenly  
deleted the rule at revision  
4.79. The missing rule was reported by Kawaljeet Kaur  
<kawaljeet.malviya@gmail.com> who tested the corrected  
Makefile.

4.81 October 21, 2008

Updated the Darwin libproc sources with changes from  
Allan Nathanson <ajn@apple.com>. Tested them on a iMac  
mini, provided by Apple Inc.

Changed dummy declarations in library source files to  
eliminate complaints about unused variables and empty  
object files. This change may not work on dialects I  
can no longer test; it has been tested on some versions  
of AIX, Darwin, FreeBSD, Linux and Solaris.

At the request of Hal Brooks <hal@uga.edu> added support  
for Linux /proc/net/packet files. Hal tested it.

Added socket file only performance enhancements to Linux  
and PSTAT-based HPUX lsof.

Added htonl call around improper usage of INADDR\_LOOPBACK;  
report from an Apple engineer forwarded by Allan Nathanson  
<ajn@apple.com>.

Adjusted for FreeBSD-8.0 change in device number  
handling.

The adjustment should work for FreeBSD 5 and above, should  
the 8.0 change be propagated downward. The problem was  
reported by Pav Lucistnik <pav@FreeBSD.org>. An updated  
test system was provided by Erwin Lansing <erwin@FreeBSD.org>.

Reduced AIX support to version 5.3, since test systems with  
older versions are no longer available to me.



At the request of Marjo F. Mercado <mmercado@xceedium.com> and Phil Shin <pshin@xceedium.com> applied some speed improvements to lsof, particularly when the files of interest are /Internet files -- i.e., selected with lsof's "-i" option. Added a two new options to assist the improvements: 1) "-c^<command>" to tell lsof to exclude the named command(s); and 2) "-stcp|ud>:[^]state'" to tell lsof to include in its reporting or exclude (^) from its reporting Internet files in the named states (e.g., LISTEN, ^CLOSE\_WAIT, IDLE, etc.) For the most part these changes apply only to AIX, Darwin, FreeBSD, PSTAT-based HP-UX, Linux and Solaris, since those are the only places I could test them. They are controlled by the HASTCPUDPSTATE definition in each dialect's machine.h header file. Marjo and Phil provided HP-UX 11.23 and 11.31 test systems.

Fixed a stat(2) problem on HP-UX 11.31 while testing the speed improvements.

Adjusted for kernel header file changes in FreeBSD 8.0-CURRENT. Larry Rosenman <ler@lerctr.org> provided a test system.

Added a warning for Solaris systems where VxFS node info can't be obtained from the VxFS utility library. The warning was requested by Tom Matthews <Tom.MATTHEWS@rbs.com>.

Corrected mishandling of file system path name arguments that have trailing slashes, except, of course, the root file system, "/". Allan Nathanson <ajn@apple.com> reported the bug.

4.82 March 25, 2009

Corrected an over-zealous exclusion test that caused lsof to report nothing when it was given no arguments and built with HASSECURITY and HASNOSOCKSECURITY enabled.

Joshua Kinard <kumba@gentoo.org> reported the bug and supplied information for reproducing it.

Based on a report from Dan Trinkle <trinkle@cs.purdue.edu> corrected use of <sys/utsname.h> for 32 bit Solaris 10 and above compilations. Simultaneously eliminated a casting complaint in arg.c and updated Configure to use the appropriate 64 bit compilation option (-xarch=v9 or -m64) with the Solaris Sun C compiler.

Updated for FreeBSD 7.1-PRERELEASE with information supplied by Larry Rosenman <ler@lerctr.org>.

Updated the Darwin libproc sources with changes from Allan Nathanson <ajn@apple.com>. Tested them on a iMac mini, provided by Apple Inc. Allan also provided man page corrections.

Updated the FreeBSD Makefile to use the `{MAKE}` variable for ZFS dnod2.c module compilation, based on a suggestion from Alexis Ballier <aballier@gentoo.org>.

Improved the Solaris VxFS library location test, based on a suggestion from Jason Fortezzo <fortezza@mechanicalism.net>. Jason tested the change.

Updated Solaris 10 ZFS support for ZFS version 4 and ZFS pool version 10, using a test system kindly provided by Vladislav Nespov <vladislav.nespov@id.ethz.ch>. Renata Maria Dart <renata@slac.stanford.edu> tested on ZFS version 4, verifying that the update works there, too. (ZFS pool version 10 is apparently the ZFS version shipped with the 10/08 update to Solaris. The original ZFS support targeted ZFS version 3.)

I still consider ZFS support in Solaris lsof a hack, because it depends on a znode structure definition that I developed using dbx. Sun is remiss in not distributing the ZFS header files used to build the distributed kernel.

Because of the znode structure definition hack, I can't guarantee that lsof ZFS support will work for any other versions of ZFS.

Solaris 10: adjusted to a change in the way devices are stored in the kernel; fixed a problem in zone handling; and added rudimentary sharedfs support. Carson Gaspar <carson@taltos.org> reported the device number problem, provided a test system, and tested the changes. Peter Vines <psv2b@eservices.virginia.edu> reported the zone handling problem and tested the fix.

Adapted to FreeBSD 8.0-CURRENT changes in device number computation. Problem was reported by Erwin Lansing <erwin@FreeBSD.org>. Larry Rosenman <ler@lerctr.org>

provided a test system.

Corrected Solaris Configure test for appropriate VxFS library when using gcc to compile lsof.

Updated for loss of KAME IPv6 FreeBSD accommodations.

Adapted to FreeBSD 7.2. Made Configure script recognized FreeBSD 6.3.

4.83 January 18, 2010

Converted Solaris 10 and above ZFS support to use the CTF debugger library, libctf. Code was supplied by Robert Byrnes <Robert.Byrnes@deshaw.com>.

Corrected a typo in the testing of the LINUX\_HASSELINUX environment variable in the Configure script. The error was reported by Mike Frysinger <vapier@gentoo.org>.

At Mike's request made Configure script accept LSOF\_RANLIB (ranlib command), LSOF\_CFGF (additional configuration flags) and LSOF\_CFGL (additional library specifications) from the environment.

Enabled compilation of Solaris 10 lsof after a recent Sun patch which changed the PC file system's structure. Peter Vernam <pvernam@draper.com> reported the problem and helped with the fix.

Made the sort of configuration CFLAGS in the CkTestDB script impervious to locale settings.

Ported to Solaris 11, using a test system kindly provided by David Day <dday76@gmail.com>.

Adjusted to the disappearance of <nfs/rpcv2.h> in FreeBSD 8.0-BETA1.

Changed Solaris node type lookup to a hashed method and added some ability for it to handle duplicate vnodeop names in /dev/ksyms.

Updated for FreeBSD 9.0-CURRENT. Andrzej Tobola <ato@iem.pw.edu.pl> provided a test system. Extends the fix to FreeBSD 6.0 and above via a Configure test and a compile-time definition. The need for the extension was reported by Erik Trulsson <ertr1013@student.uu.se>>

Made corrections to FAQ typographical errors, suggested by Josh Soref <timeless@gmail.com>.

Added `__UCLIBC__` test to Linux `lsof.h` so `lsof` would compile on an Intel ARM XScale processor. The addition was provided by Doug Kehn <rdkehn@yahoo.com>.

Added test for `<utmpx.h>` to FreeBSD configuration. Improved its use in `lsof.h`. The changes were supplied by Martin Wilke <miwi@FreeBSD.org>.

4.84 July 29, 2010

Fixed a man page `nroff` command error with a correction supplied by Josh Soref <timeless@gmail.com>.

Made `Configure` script recognize FreeBSD 7.3. Larry Rosenman <ler@lerctr.org> provided a test system.

Improved task support, initially for Linux only, with help provided by Jerome Marchand <jmarchan@redhat.com> and Miklos Szeredi <mszeredi@suse.cz>. The support includes a new compile-time definition, `HASTASKS`, and a new run time option, `"-K"` to select task reporting.

While adding help output support for `"-K"`, reorganized the printing of help columns to make it much easier to add a new option description.

Updated the Solaris PC file system structure patch in revision 4.83 so it will compile with `gcc`.

Disabled the Solaris `lgrp_root` work-around in the Solaris `machine.h` so it won't cause compilation problems on Solaris 11. It no longer causes compilation problems on my Solaris 9 and 10 test systems, but some older Solaris 9 and 10 versions may still need it, so the work-around was left in the Sun `machine.h` and a FAQ entry was created about it.

Updated for Solaris 11 b134, using a test system kindly provided by Carson Gaspar <carson@taltos.org>. Made provisions for the next ZFS version. Added info about the failure of the `LTnlink` test on ZFS file systems.

Corrected typo in `Configure` script, reported by Dmitry Berezin <dmitryb@oit.rutgers.edu>.

4.85 September 27, 2011

John

Dzuberger <Zube@CS.ColoState.EDU> kindly provided a patched Solaris 9 test system with the lgrp\_root conflict and I was able to devise an automatic work-around for the conflict. The special note in ../dialects/sun/machine.h was removed and the 17.28.1 FAQ entry was modified to reflect the update.

Added a Solaris 11 work-around for a typedef problem with <sys/mutex.h>. Carson Gaspar <carson@taltos.org> reported the problem and supplied the work-around.

Added support for FreeBSD 7.4 and 8.2; tested on systems provided by Larry Rosenman <ler@lerctr.org>.

Added support for 32 bit Solaris 11 lsof with mods supplied by Jan Wortelboer <J.H.P.Wortelboer@uva.nl>.

Added Solaris 11 support for using an alternate genunix location. Bill Goodridge <bill@its.brooklyn.cuny.edu> reported the alternate location.

Added further Linux cross configuration support to lsof's Configure script. The additional support was supplied by Grant Erickson <erick205@umn.edu>.

See the descriptions of the LINUX\_\* environment variables in 00XCONFIG for more information. Tested lsof on Linux kernel 2.6.32 and picked some lint that surfaced during the test.

Added fixes and changes for Apple Mac OS X 10.6, provided by Allan Nathanson <ajn@apple.com>. Allan also provided a test system.

Tested on FreeBSD 6.4 i386, using a test system provided by Terry Kennedy <TERRY@tmk.com>. Updated for recent FreeBSD ZFS changes on an 8.2 amd64 test system also provided by Terry.

Changed documentation to indicate FreeBSD 7.x is no longer supported, since I no longer have a test system.

Made some changes to the lsof man page, suggested by Navid <evi1m4chine@gmail.com>.

Added compensation for Solaris 10 systems that have patch 144488-10. The patch requires that the new header file <sys/socket\_proto.h> be included while \_KERNEL is defined. Brett Bartick <Brett.bartick@nomura.com> reported the problem

first, followed by Stuart Anderson

<anderson@ligo.caltech.edu>.

Michael Hocke <michael.hocke@nyu.edu> suggested a work-around which I refined to limit it to the specific Solaris 10 instance and then tested on a system provided by Charles Stephens <cfs@cowlabs.com>

Added the `+|-e` option for Linux. It exempts file systems named by path from function calls that might block in the kernel -- i.e., `stat(2)` and `lstat(2)`, and when the `+e` form is used, `readlink(2)`. The new packager of `lsf` for the Linux Fedora and RHEL distributions, Peter Schiffer <pschiffe@redhat.com>, asked for the feature so it could be used with Clearcase file systems, whose implementation can block `stat(2)` calls. I consider this feature very risky and easy to misuse -- e.g., specifying the file system as `/` would exempt all file systems. I don't intend to propagate this option to any other UNIX dialect that `lsf` currently supports.

Made FreeBSD 9 adjustment.

Fixed a Linux bug that prevented the display of paths for abstract UNIX sockets. Masatake Yamato <yamato@redhat.com> reported the bug and supplied a patch.

Added compensation for the removal of RPC header files from Glibc 2.14 for Linux. Marek Behun <kabel@blackhole.sk> reported the problem and supplied a patch.

Added support for Linux Netlink protocol. Masatake Yamato requested the support and supplied a patch. Peter Schiffer <pschiffe@redhat.com> provided a test system.

Corrected Linux UDP6-lite path. The error was reported by Masatake Yamato and he also supplied a patch.

4.86 April 10, 2012

`lsf` for AIX is no longer supported on any versions of that operating system.

Added information about the clang compiler for FreeBSD to the FAQ.

Corrected an `arg.c` bug in the accumulation of `+|-e` option values, reported by Peter Schiffer <pschiffe@redhat.com>. This correction was supplied as a patch to revision 4.85.

Enabled FreeBSD 10 support and tested it there on a system provided by Larry Rosenman <ler@lerctr.org>.

Updated for latest Solaris 11 with patches supplied by Carson Gaspar <carson@taltos.org>. Carson supplied a test system.

Adjusted Linux file system search method to compensate for NFS mounts that have duplicate device numbers. The problem was reported by Peter Schiffer <pschiffe@redhat.com>, who provided a test system.

At the request of Peter Schiffer <pschiffe@redhat.com>, added support for Linux SCTP socket files. Peter provided a test system. Applied a warning patch supplied by Peter.

Added support for Mac OS X 10.7 (Lion), provided by Allan Nathanson <ajn@apple.com>. Allan also supplied a test system.

Enabled FreeBSD 8.3 support and tested it there on a system provided by Larry Rosenman <ler@lerctr.org>.

Corrected the FAQ information on ZFS with Solaris 10 after Steven Blackmon <stblackm@cisco.com> and Prasad Jampala <jampalp@cisco.com> pointed out that it was incorrect -- i.e., outdated by the libctf changes at revision 4.83.

Added code to handle a Linux NFS-mounted root. Jia He <hejianet@linux.vnet.ibm.com> reported the need for this.

4.87 January 2, 2013

Added an entry to 00FAQ about lsof behavior when the HASSECURITY and HASNOSOCKSECURITY options are defined. Carson Gaspar <carson@taltos.org> pointed out the need for this clarification.

Added a work-around for a missing definition of mach\_port\_t in Darwin 9 (Mac OS/X 10.5.8). The work-around was supplied by Jim Reid <jim@rfc1035.com>.

Added support for Linux anon\_inodefs, provided by Masatake YAMATO <yamato@redhat.com>.

Documented a Solaris 9 and 10 portmap reporting problem

(+M) in 00FAQ. The problem was reported by Clint Roberts <Clint.Roberts@tti.us.com>. I have no solution to the problem, but discuss a possible work-around in the answer to this 00FAQ question: "Why doesn't lsof report portmap registrations for some Solaris versions?"

Added FreeBSD support for the oldnfs and newnfs file system types.

Daniel Braniss <danny@cs.huji.ac.il> reported the need for the addition.

Added ICMP socket support for Linux with code provided by Masatake YAMATO <yamato@redhat.com>.

Corrected the reporting of process group ID for libproc versions of Mac OS X with a patch from Jeff Trawick <trawick@gmail.com>. The patch has not been applied to Darwin kmem versions, because of little call for them and inadequate test system access. The patch has been tested on Mac OS X 10.8 (Mountain Lion), courtesy of a test system provided by Allan Nathanson <ajn@apple.com>.

Added thread support to those FreeBSD versions that have ki\_numthreads in their kinfo\_proc structure. This also activates the -K option for those FreeBSD versions. Jeff Trawick reported problems with FreeBSD lsof when threads are present and this addition solves those problems.

Made changes to 00FAQ and the distribution, suggested by Warren Young <warren@etr-usa.com>. The 00FAQ changes center on sections that discuss the -s option. The changes to the distribution include a ChangeLog file that is either a pointer to or a copy of 00DIST, the distribution notes.

Added support to FreeBSD for using the clang compiler.

Added Linux support for using the getxattr() call to obtain socket protocol identification when it can't be obtained from the /proc/net files that lsof examines. Masatake YAMATO <yamato@redhat.com> developed the kernel patch to getxattr() and supplied the lsof patch.

4.88 October 13, 2014

Reduced to 50 the number of open file descriptors lsof attempts to close while trying to protect itself from a file descriptor exec() attack. This limits the overhead lsof incurs on systems that have large file descriptor



limits, yet provides sufficient open descriptors for the library functions lsof calls.

Updated for changes in FreeBSD 10 with advice from Eygene Ryabinkin <rea@freebsd.org>. Taught Configure to recognize FreeBSD

8.4.

Herein am noting that lsof for Solaris 10 or 11 is no longer supported. I no longer have test systems. Some support is still available from Casper Dik <Casper.Dik@oracle.com> and a Solaris 11 patch he provided is included in this revision.

Initialized local variables in the Linux process\_id() function. Jia He <jiakernel@gmail.com> reported the problem.

Added support for FreeBSD 11.

Updated FreeBSD ZFS Configure stanza to supply a dummy opt\_kdtrace.h when needed.

Added tmpfs file system support for FreeBSD.

Since a test system is no longer available, dropped the claim of FreeBSD 4.9 support.

Added the +|-E options for Linux. -E displays endpoint info; +E displays endpoint info and endpoint files. Masatake YAMATO <yamato@redhat.com> requested this support and suggested code to implement it.

Fixed a Linux bug handling processes whose command includes a non-printing character, particularly a NEWLINE character, and clarified printing of single '\\' characters in command and file names. Stephane Chazelas <stephane.chazelas@gmail.com> reported the problem.

Added support for Linux RDMA and CRYPTO protocol names and UNIX socket type with code from Masatake YAMATO <yamato@redhat.com>.

Fixed field output to insure that the field descriptor field is always selected, since it identifies the file set. The bug was reported by Gary Plewa <gary.m.plewa-1@lowes.com>.

4.89 July 7, 2015

Applied correction from Casper Dik <Casper.Dik@oracle.com> to his patch for Solaris 11 that I applied incorrectly in revision

4.88.

Updated for latest version of FreeBSD 11.0-CURRENT.

Compensated for a missing FreeBSD 10.0 typedef of bool on the i386 architecture. Allen Hewes <rallenh@hotmail.com> provided a test system. Andrey Chernov <ache@freebsd.org> provided useful advice.

Improved tests/Add2TestDB script with a patch from Peter Schiffer <pschiffe@redhat.com>. Added patches from Peter to eliminate

Linux gcc warnings. Updated Lsof.8 with improvements supplied by Bjarni Ingi Gislason <bjarniig@rhi.hi.is>.

Changed FreeBSD global CFLAGS extraction per Terry Kennedy <TERRY@tmk.com>. Also made sure -DNEEDS\_BOOL\_TYPEDEF is #define'd when the resulting CFLAGS doesn't contain it. Terry reported that need.

Improved Linux test for tcp.h in response to a report from Cato Auestad <cato@cato.ninja>. Cato did the testing.

Fixed Linux UNIX socket search by name bug reported by Stephane Chazelas <stephane.chazelas@gmail.com>.

Added Linux display of UNIX socket endpoint information with code provided by Masatake YAMATO <yamato@redhat.com>. Peter Schiffer <pschiffe@redhat.com> provided a test system.

Insured that type definitions from <vm/vm.h> were again made visible to lsof on FreeBSD 11 after a system header file change hid them.

4.90 February 14, 2018

!!!NOTE!!

!

!

! It is likely that this is the last lsof revision I !  
! will issue, unless serious bugs are detected, Stay !  
! tuned to lsof-l for information about future support !  
! of lsof. !  
! !  
! I thank all the many contributors to lsof over the !  
! many years (20+?) I have been distributing lsof !  
! versions 1, 2, 3 and 4. !  
! !

! Vic Abell <abe@purdue.edu> !  
!  
!!!NOTE!!

Taught the Configure script to create a dummy opt\_random.h for FreeBSD systems whose <sys/random.h> includes it.

Added support for the FreeBSD ZFUSE file system.

Corrected the quoting in a Darwin putchar() statement in the dfile.c source file. Andrew Janke <floss@apjanke.net> reported my error.

Added support for the FreeBSD DTYPE\_PTS file descriptor and for unknown descriptors that reference the kernel's badfileops operation switch. Enabled FreeBSD 12.0 support. Tested the changes on systems provided by Larry Rosenman <ler@lerctr.org>.

Enhanced -K option with the form "-K i" to direct lsof to (i)gnore tasks. A query from Rachel Kroll <rkroll@fb.com> suggested this option. Linux task reports now include both process and task command names, making lsof's "-c <name>" option work correctly.

Added a patch to prevent NFS blocking in Linux supplied by Kristyna Streitova <kstreitova@suse.com>.

Installed a FreeBSD patch that prevents examining a TCP state structure during a race condition. The patch was supplied by Bryan Drewery <bdrewery@FreeBSD.org>.

Updated FreeBSD for new UFS inode structure that lacks an i\_dev member in the most recent 12.0-CURRENT. Larry Rosenman <ler@lerctr.org> reported the problem and provided a test system.

Added "#define KLD\_MODULE" to dlsof.h and dnode2.c to prevent <machine/cpuconf.h> from generating an "ARM\_NARCH is 0" error. This is needed so lsof can access kernel structures. Larry Rosenman supplied the addition.

Added recognition of the FreeBSD 11 file system name "nullfs". Jamie Landeg-Jones <jamie@catflap.org> supplied the fix.

Added a patch from Larry Rosenman <ler@lerctr.org> that is needed on FreeBSD 12 so the lsof compilation can obtain the

inpcb and tcpcb structures from their respective header files.

Updated FreeBSD dmnt.c for the ino64 changes.

Inserted a patch for Solaris 12.x to avoid compilation errors from <sys/aio\_req.h>, based on information provided by Jorn Clausen <joern.clausen@uni-bielefeld.de>. Jorn tested the patch.

Added performance enhancement that uses the FreeBSD closefrom() and dup2() C library functions when available. The enhancement was supplied by Conrad Meyer <cem@freebsd.org>.

Corrected FreeBSD lsof's gathering of ZFS file device numbers.

Updated lsof test library for FreeBSD.

Updated socket options information collection from the socket structure per changes supplied by Gleb Smirnoff <glebius@FreeBSD.org>.

Added patch to dlsof.h that avoids a \_KERNEL conflict with bzero. Mateusz Guzik <mjguzik@gmail.com> supplied the patch.

Corrected test library to handle 64 bit FreeBSD device numbers.

Added #defines for FreeBSD 12, src r324225, from Gleb Smirnoff <glebius@FreeBSD.org>.

Incorporated Linux pseudoterminal endpoint processing (+|-E) provided by Masatake YAMATO <yamato@redhat.com> with access to test systems provided by Peter Schiffer <pschiffe@redhat.com>.

Corrected Linux command extraction for commands that include parentheses -- e.g., "(sd-pam)".

4.91 March 26, 2018

A bug has been reported in the PTY endpoint processing of Linux lsof 4.90 by Peter Wu <peter@lekensteyn.nl>, making it necessary for me to release another revision of lsof.

This revision applies two fixes that correct the Linux PTY endpoint processing bug. Masatake YAMATO <yamato@redhat.com> supplied the fixes.

4.92 July 14, 2018

THIS IS A FREEBSD-ONLY DISTRIBUTION!

Fixes Configure script section that creates the FreeBSD lockf\_owner.h header file; fixes <string.h> conflicts with FreeBSD kernel header files. Mateusz Gusik supplied part of the fix.

Released lsof to GitHub with Purdue releases documented in support/GitHub-release.

Vic Abell <abe@purdue.edu>

July 14, 2018

4.92.1 May 6, 2019

```
!!!NOTE!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
!
! The maintainership is switched from Vic to lsof-org !
! at GitHub team officially. !
! We thank Vic for working on lsof over the years. !
!
! lsof-org at GitHub
team (https://github.com/lsof-org) !
!!!NOTE!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
```

This is just for testing "Release" feature of GitHub.  
Many documentations are not updated yet.  
URLs in -v output and -h output are updated.

4.93.0 May 7, 2019

[freebsd] Made FreeBSD 13 adjustment.  
[darwin] Fix a typo causing a build error.  
Fix a potential memory leak.  
[linux] use tircp for rpc if libc doesn't provide rpc.h.  
Fix a typo in man page.  
[linux] fix memory leaks detected by valgrind about unix endpoint information.  
Update the description about -fg and -fG options on linux.

4.93.1 May 7, 2019

Fix a broken symbolic link.

4.93.2 May 8, 2019

Update the version number embedded in lsof executable.

4.94.0 November 11, 2020

(All changes in this version are ported from lsof-org/lsof-linux repository at GitHub).

Introduced a new test harness. The harness can run test cases specific to a dialect. It is designed for running test cases on CI environment like Travis-CI.

However, it is runnable locally with following command line:

```
$ ./check.sh DIALECT
```

after making lsof executable.

[linux] Fixed a bug +|-E options output for pipe.

If two processes use the same fd number for a pipe connecting them, the option didn't print the information about it.

[linux] Fixed a bug +|-E options output for PTY.

If two processes use the same fd number for a PTY connecting them, the option didn't print the information about it.

[linux] Fixed a bug +|-E options output for PTY.

The code for detecting a slave device was incorrect.

[linux] Fixed a potential bug +|-E options output for PTY. A structure field for the feature was not initialized.

[linux] Added a code for decoding O\_PATH flag in +fg option.

[linux] Added a code for decoding O\_CLOEXEC flag as CX in +fg option.

[linux] Added a code for decoding O\_TMPFILE flag as TMPF in +fg option.

[linux] Added Linux display of INET socket endpoint information with +|-E option. The option handles INET sockets using IPC.

[linux] Added support for POSIX MQ of Linux implementation. A POSIX message queue (MQ) is represented in a fd on Linux. lsof reported it as a regular file. lsof with this change reports it as a file with PSXMQ type if mqueue file system is mounted.

[linux] Added Linux display of POSIX message queue endpoint information with +|-E option. mqueue file system must be mounted to display the information.

[linux] Added Linux display of INET6 socket endpoint information with +|-E option. The option handles INET6 sockets using IPC.

[FreeBSD] update to include <sys/\_lock.h> on recent -CURRENT since it is no longer implicitly included via header pollution.

[linux] Added Linux display of eventfd endpoint information with +|-E option. The option handles eventfd using IPC.

[FreeBSD] include <stdbool.h> for recent change requiring refcount(9).

Enhanced -r option.  
With 'c<N>' specifier, lsof can stop itself when the number of iterations reaches at <N>.

[linux] Fixed accessing an uninitialized local variable. Detected by valgrind.

[linux] fix a crash when printing the endpoint for unaccepted unix socket with +E option.

This closes the github issue #74 reported by @jolmg.

[linux] abort execution when failing in memory allocation for socket private data.

[linux] decode the name of DCCP socket type.

[linux] decode more netlink protocol numbers (RDMA, CRYPTO, and SMC).

[linux] print the connection state of unix domain socket  
Lsof can print the state of TCP socket like:

```
nc 22247 yamato 3u IPv4 471409 0t0 TCP localhost:38802->localhost:9999 (ESTABLISHED)
```

This change extends this feature to support unix domain sockets.  
LISTEN, UNCONNECTED, CONNECTING, CONNECTED, DISCONNECTING,  
and UNKNOWN can be taken as a state.  
An example of output:

```
evince 17333 yamato 1u unix 0x0000000054183795  
0t0 89141 type=STREAM (CONNECTED)
```

This feature is enabled by default.  
To turn off printing state information, use -T option.

Don't display command usage even when a file (or directory) listed  
in command line doesn't exist.  
This closes the github issue #90 reported by @rowlap.

[FreeBSD] merge all the FreeBSD specific fixes from the FreeBSD sysutils/lsof port

[linux] allow reproducible builds  
In a reproducible build all varied information is removed. This  
change does so, by checking if the standard SOURCE\_DATE\_EPOCH  
variable is set. If it is, we are attempting a reproducible build  
and will strip varying information.  
About the standard, see <https://reproducible-builds.org/specs/source-date-epoch/>  
Provided in github pull request #93 by @T4cC0re.



[freebsd] update for r363214

- no user visible changes

Added the way to include (or exclude) all numbered file descriptors in -d option. "fd" is a pseudo file descriptor name for the purpose.

See the following output on Linux; lsof doesn't print cwd, rtd, txt, and mem files.

```
# ./lsof -p $$ -a -d fd
COMMAND  PID USER  FD  TYPE DEVICE SIZE/OFF NODE NAME
bash    866421 root   0u  CHR 136,1   0t0  4 /dev/pts/1
bash    866421 root   1u  CHR 136,1   0t0  4 /dev/pts/1
bash    866421 root   2u  CHR 136,1   0t0  4 /dev/pts/1
bash    866421 root  255u  CHR 136,1   0t0  4 /dev/pts/1
```

docs: fixed minor grammatical error in instructions in Customize file  
The change is provided by @hardikpnsp.

man page: improve phrasing and add examples  
The change is provided by Martin D Kealey.

man page: improve explanation of -t implying -w  
The change is provided by Martin D Kealey.

test cases, [linux]: fix tests for large inode-numbers ( $i \geq 2^{32}$ )  
The change is provided by Henry Peteet.

[linux] handle ffff:ffff in ipv6 addr correctly  
The listen address and port of an AF\_INET6 socket were not display if  
the socket listened at an ipv6 address including ffff:ffff.

Here is a command session demonstrating the bug:

```
# ip -6 addr add abcd:ef10:ffff:ffff:ffff:ffff:ffff:ff62 dev lo
# nc -6 -l abcd:ef10:ffff:ffff:ffff:ffff:ffff:ff62 8888 &
[1] 6762
# ./lsof -p 6762 -a -d fd -P -n
COMMAND PID  USER  FD  TYPE DEVICE SIZE/OFF  NODE NAME
nc     6762 yamato 0u  CHR 136,6   0t0  9 /dev/pts/6
```

```
nc 6762 yamato 1u CHR 136,6 0t0 9 /dev/pts/6
nc 6762 yamato 2u CHR 136,6 0t0 9 /dev/pts/6
nc 6762 yamato 3u sock 0,9 0t0 5833594 protocol: TCPv6
```

The last line should be:

```
nc 6762 yamato 3u IPv6 5833594 0t0 TCP [abcd:ef10:ffff:ffff:ffff:ffff:ff62]:8888 (LISTEN)
```

The original code decoding an ipv6 address uses U\_INT32\_MAX constant incorrect way.

@zhrf2020 reported this bug in #102.

@zhrf2020 provided the initial version of fix, #109.

man

page,[linux]: enumerate abbreviated flags printed with '+f g' option

Make -Fo option work

-Fo option is for printing file offset. For regular files, the option didn't work.

Here is a command session demonstrating the fix:

```
# ./lsof -Fo -o0 | grep ^o | sort | uniq -c
90586 o0t0
87 o0t101
84 o0t103
```

...

@JustAnotherArchivist reported this bug in #118.

man page: fix definition of the `o` field on programmatic output

The change is provided by @JustAnotherArchivist who reported the original issue in #118.

[linux]: show the pid monitored by a pidfd

With this change, lsof prints pidfd in the following form:

```
[pidfd:%d]
```

where %d represents the pid monitored by the pidfd.

Example output:

```
# ./lsof -p 12573 -p 12710 | grep pidfd
```

```
dbus-brok 12573 jet 11u a_inode      0,13    0 13312 [pidfd:12575]
dbus-brok 12710 jet 10u a_inode      0,13    0 13312 [pidfd:12711]
```

fd

11 of pid 12573 monitors pid 12575.

fd 10 of pid 12710 monitors pid 12711.

This change closed #116.

Don't select the file descriptor field by default.

The version 4.88 introduced the change for selecting the file descriptor field by default. However, the change is not suitable for users who wants to print only PID field.

@po5857 suggests the use case and the way to improve the man page.

[linux]: enumerate fds monitored by an eventpoll fd

With this change, lsof prints an eventpoll fd in the following form:

```
[eventpoll:<fd0>,<fd1>,....,<fdn>...]
```

Here fdX is a file descriptor monitored by the eventpoll fd.

If an eventpoll fd monitors too many file descriptors, lsof truncates the list of fds. "..." at the end of list implies the truncation.

Example output:

```
# sudo ./lsof -p 1 -a -d 10,11,12
COMMAND PID USER  FD   TYPE DEVICE SIZE/OFF  NODE NAME
systemd  1 root  10u  a_inode  0,13    0 11624 [eventpoll:11,12]
systemd
1 root  11r   REG  0,4    0 17680 /proc/1/mountinfo
systemd  1 root  12r  a_inode  0,13    0 11624 inotify
```

systemd monitors fd 11 and fd 12 via eventpoll fd 10.

[linux]: implement "make check"

The target runs check.bash.

4.95.0 April 28, 2022

[n+obsd] fix syntax error

Corrected end of comment.

This change closes #138.

@albert-github reported this issue in #138,

and provided the fix in #140

Don't ignore failures in test/Makefile  
Tobias Geerinckx-Rice <me@tobias.gr> provides the fix.

Update perl scripts for the past few decades of progress  
Generally, perl is available on base systems - people who are manually installing perl into /usr/local/bin are the exception rather than the rule. In addition, Perl 5 was release in 1994, so Perl 4 isn't relevant any more. We've also standardized on the .pl extension, rather than .perl5 or whatever.

Provided by @dilinger (Andres Salomon) in #149.

A commit in the pull request includes work of Nicholas Bamber.

Drop LSOFF\_CCDATE across all dialects to ensure reproducible builds  
Simplify things for reproducible builds by just getting rid of the embedded date/time string. With LSOFF\_CCDATE gone, keeping SOURCE\_DATE\_EPOCH around doesn't make much sense, so drop that as well. Folks doing reproducible builds should still override the LSOFF\_HOST, LSOFF\_LOGNAME, LSOFF\_SYSINFO, and LSOFF\_USER variables (as they were previously doing before SOURCE\_DATE\_EPOCH).

Provided by @dilinger (Andres Salomon) in #150.

[FreeBSD] get the ISO9660 filesystem working again  
The ISO9660 filesystem broke starting with FreeBSD 7 due to the header location changing. Fix the header search path to get it to be detected again. Fix the header inclusion order. Also add the new way of finding dev\_t on more recent FreeBSD versions.  
Provided by Damjan Jovanovic in #151.

[FreeBSD] add support for msdosfs on FreeBSD  
Provided by Damjan Jovanovic in #151.

Fix FD field description.

In

811dc78 the output format was changed to not printf the `f` field by default, however the field description in `lsof\_fields.h`, as seen in `-F?` output still included the `(always selected)` text.

Provided by @algorythmic (Grisha Levit) in #158.

Adjust alignment of buffer passed to stat().

The original code passes char[] buffer to stat(). This can be cause a SIGBUS. #160 reported an actual crash on armv7a + glibc-2.33 platform. See also [https://sourceware.org/bugzilla/show\\_bug.cgi?id=27993](https://sourceware.org/bugzilla/show_bug.cgi?id=27993). Reported by @10ne1 in #160.

Clean up source code and documentats.

- remove trailing whitespace,
- fix some issues in scripts found through shellcheck, and
- fix spelling

Provided by @a1346054 in #163.

man page: fix hyphen issues

Properly use '-' and '\-' in the man page, ensuring that users can cut & paste commandline options without issue. Original patch from Raoul Gunnar Borenus <borenus@dfn.de>, and submitted/expanded by @dilinger (Andres Salomon) in #168.

[FreeBSD] update for FreeBSD 13 & 14, and various internal changes submitted by @DmitryAndric & @emaste.

[FreeBSD] remove various old FreeBSD versions from support submitted by @emaste

[FreeBSD] configure: suggest variable to set if FreeBSD sys not found submitted by @emaste

Fix broken LSOF\_CFLAGS\_OVERRIDE.  
Provided by Fabrice Fontaine in #172.

[linux] Remove sysvlegacy function.  
Provided by Fabrice Fontaine in #195.

[linux] use close\_range instead of calling close repeatedly  
At the starting up, lsof closes its file descriptors greater than 2 by calling close(2) repeatedly. As reported in #186, it can take long time. Linux 5.9 introduced close\_range(2). The new system call can close multiple file descriptors faster. @qianzhangyl reported the original issue (#186).

Add -Q option for adjusting exit status when failed to find a search item (#129)

In the original code, lsof returned 1 when it failed to find a search item.

With the new option, lsof returns 0 in the case.

Document -Q option in manpage/00QUICKSTART, and adjust -h output by @dilinger (Andres Salomon) in #129.

Improve readability of complex adverbial clause by adding a comma.

Provided by Danny Fowler in #156.

The lsof-org team at GitHub

April 28, 2022

Found in path(s):

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/00DIST

No license file was found, but licenses were detected in source scan.

/\*

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\*

\* Written by Victor A. Abell

\*

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\*/

Found in path(s):

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/tests/LsofTest.h

No license file was found, but licenses were detected in source scan.

/\*

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\*/

Found in path(s):

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/proto.h

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/arg.c

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/node.c

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/lsof\_fields.h

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/misc.c

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/lsof.h

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/proc.c

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/store.c

No license file was found, but licenses were detected in source scan.

#!/usr/bin/perl

#

# list\_NULf.pl -- sample Perl 5 script to list lsof NUL-terminated

# full field output (i.e., -F0 output)

```

#
# This script has been tested under perl version 5.001e.
#
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# Initialize variables.

$fhdr = 0;    # fd hdr. flag
$fdst = 0;    # fd state
$access = $devch = $devn = $fd = $inode = $lock = $name = ""; # | file descr.
$offset = $proto = $size = $state = $stream = $type = ""; # | variables
$pidst = 0;   # process state
$cmd = $login = $pgrp = $pid = $ppid = $uid = ""; # process var.

# Process the ``ls -F'' output a line at a time, gathering
# the variables for a process together before printing them;
# then gathering the variables for each file descriptor
# together before printing them.

while (<>) {
    chop;
    @F = split("\0", $_, 999);
    if ($F[0] =~ /^p/) {

# A process set begins with a PID field whose ID character is `p'.

```



```

if ($pidst) { &list_proc }
if ($fdst) { &list_fd; $fdst = 0; }
foreach $i (0 ..
($#F - 1)) {

    PROC: {
if ($F[$i] =~ /^c(.*)/) { $cmd = $1; last PROC }
if ($F[$i] =~ /^g(.*)/) { $pgrp = $1; last PROC }
if ($F[$i] =~ /^p(.*)/) { $pid = $1; last PROC }
if ($F[$i] =~ /^u(.*)/) { $uid = $1; last PROC }
if ($F[$i] =~ /^L(.*)/) { $login = $1; last PROC }
if ($F[$i] =~ /^R(.*)/) { $ppid = $1; last PROC }
print "ERROR: unrecognized process field: \"$F[$i]\"\n";
    }
}
$pidst = 1;
next;
}

# A file descriptor set begins with a file descriptor field whose ID
# character is `f`.

if ($F[0] =~ /^f/) {
if ($pidst) { &list_proc }
if ($fdst) { &list_fd }
foreach $i (0 .. ($#F - 1)) {

    FD: {
if ($F[$i] =~ /^a(.*)/) { $access = $1; last FD; }
if ($F[$i] =~ /^C(.*)/) { last FD; }
if ($F[$i] =~ /^f(.*)/) { $fd = $1; last FD; }
if ($F[$i] =~ /^F(.*)/) { last FD; }
if ($F[$i] =~ /^d(.*)/) { $devch = $1; last FD; }
if ($F[$i] =~ /^D(.*)/) { $devn = $1; last FD; }
if ($F[$i] =~ /^G(.*)/) { last FD; }
if ($F[$i] =~ /^i(.*)/) { $inode
= $1; last FD; }
if ($F[$i] =~ /^k(.*)/) { last FD; }
if ($F[$i] =~ /^l(.*)/) { $lock = $1; last FD; }
if ($F[$i] =~ /^N(.*)/) { last FD; }
if ($F[$i] =~ /^o(.*)/) { $offset = $1; last FD; }
if ($F[$i] =~ /^P(.*)/) { $proto = $1; last FD; }
if ($F[$i] =~ /^s(.*)/) { $size = $1; last FD; }
if ($F[$i] =~ /^S(.*)/) { $stream = $1; last FD; }
if ($F[$i] =~ /^t(.*)/) { $type = $1; last FD; }
if ($F[$i] =~ /^T(.*)/) {
    if ($state eq "") { $state = "(" . $1; }
}
}
}
}

```

```

    else { $state = $state . " " . $1; }
    last FD;
}
if ($F[$i] =~ /^n(.*/)) { $name = $1; last FD; }
print "ERROR: unrecognized file set field: \"$F[$i]\"\n";
}
}
$fdst = 1;
next;
}
print "ERROR: unrecognized: \"$_\"\n";
}

# Flush any stored file or process output.

if ($fdst) { &list_fd }
if ($pidst) { &list_proc }
exit(0);

## list_fd -- list file descriptor information
#   Values are stored inelegantly in global variables.

sub list_fd {
    if ( ! $fhdr ) {

        # Print header
        once.

        print "  FD  TYPE  DEVICE  SIZE/OFF  INODE NAME\n";
        $fhdr = 1;
    }
    printf " %4s%1.1s%1.1s %4.4s", $fd, $access, $lock, $type;
    $tmp = $devn; if ($devch ne "") { $tmp = $devch }
    printf " %10.10s", $tmp;
    $tmp = $size; if ($offset ne "") { $tmp = $offset }
    printf " %10.10s", $tmp;
    $tmp = $inode; if ($proto ne "") { $tmp = $proto }
    printf " %10.10s", $tmp;
    $tmp = $stream; if ($name ne "") { $tmp = $name }
    print " ", $tmp;
    if ($state ne "") { printf " %s)\n", $state; } else { print "\n"; }
}

# Clear variables.

$access = $devch = $devn = $fd = $inode = $lock = "";
$name = $offset = $proto = $size = $state = $stream = $type = "";
}

```

```

# list_proc -- list process information
#   Values are stored inelegantly in global variables.

sub list_proc {
    print "COMMAND    PID  PGRP  PPID  USER\n";
    $tmp = $uid; if ($login ne "") { $tmp = $login }
    printf "%-9.9s %6d %6d %6d %s\n", $cmd, $pid, $pgrp,
    $ppid, $tmp;

# Clear variables.

    $cmd = $login = $pgrp = $pid = $uid = "";
    $fhdr = $pidst = 0;
}

```

Found in path(s):

```

* /opt/cola/permits/2134360459_1722972872.2498574/0/lsf-4-95-0-orig-1-tar-
bz2/lsf_4.95.0.linux/scripts/list_NULf.pl

```

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```

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```

Found in path(s):

```
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/ptti.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/rnam.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
bz2/lsof_4.95.0.linux/dialects/linux/dmnt.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/rnmh.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/rdev.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
bz2/lsof_4.95.0.linux/dialects/linux/dfile.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/dvch.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
bz2/lsof_4.95.0.linux/dialects/linux/dnode.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/cvfs.c
*
/opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/fino.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
bz2/lsof_4.95.0.linux/dialects/linux/dstore.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/pdvn.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
bz2/lsof_4.95.0.linux/dialects/linux/dlsof.h
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/rnch.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/lkud.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/prfp.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/isfn.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
bz2/lsof_4.95.0.linux/dialects/linux/dsock.c
*
/opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
bz2/lsof_4.95.0.linux/dialects/linux/machine.h
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
bz2/lsof_4.95.0.linux/dialects/linux/dproto.h
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
bz2/lsof_4.95.0.linux/dialects/linux/dproc.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/rmnt.c
No license file was found, but licenses were detected in source scan.
```

/\*

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*/
```

Found in path(s):

```
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/lib/ckkv.c
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof_4.95.0.linux/usage.c
No license file was found, but licenses were detected in source scan.
```

```
#!/usr/bin/perl
#
# list_fields.pl -- sample Perl script to list lsof full field output
#   (i.e., -F output without -0)
#
# This script has been tested under perl versions 4.036 and 5.001e.
#
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#   misrepresented as being the original software.
```

```

#
# 4. This notice may not be removed or altered.

# Initialize variables.

$fhdr = 0;    # fd hdr. flag
$fdst = 0;    # fd state
$access = $devch = $devn = $fd = $inode = $lock = $name = ""; # | file descr.
$offset = $proto = $size = $state = $stream = $type = ""; # | variables
$pidst = 0;   # process state
$cmd = $login = $pgrp = $pid = $ppid = $uid = ""; # process var.

# Process the `ls -F' output a line at a time, gathering
# the variables for a process together before printing them;
# then gathering the variables for each file descriptor
# together before printing them.

while (<>) {
    chop;
    if (/^p(.*)/) {

# A process set begins with a PID field whose ID character is `p'.

        $pid = $1;
        if ($pidst) { &list_proc }
        $pidst = 1;
        $pid = $pid;
        if ($fdst) { &list_fd; $fdst = 0; }
        next;
    }

# Save process-related values.

        if (/^g(.*)/) { $pgrp = $1; next; }
        if (/^c(.*)/) { $cmd = $1; next; }
        if (/^u(.*)/) { $uid = $1; next; }
        if (/^L(.*)/) { $login = $1; next; }
        if (/^R(.*)/) { $ppid = $1; next; }

# A file descriptor set begins with a file descriptor field whose ID
# character is `f'.

        if (/^f(.*)/) {
            $fd = $1;
            if ($pidst) { &list_proc }
            if ($fdst) { &list_fd }
            $fd = $fd;
            $fdst = 1;
        }
    }
}

```

```

next;
}

# Save file set information.

if (/^a(.*)/) { $access = $1; next; }
if (/^C(.*)/) { next; }
if (/^d(.*)/) { $devch = $1; next; }
if (/^D(.*)/) { $devn = $1; next; }
if (/^F(.*)/) { next; }
if (/^G(.*)/) { next; }
if (/^i(.*)/) { $inode = $1; next; }
if (/^k(.*)/) { next; }
if (/^l(.*)/) { $lock = $1; next; }
if (/^N(.*)/) { next; }
if (/^o(.*)/) { $offset = $1; next; }
if (/^P(.*)/) { $proto = $1; next; }
if (/^s(.*)/) { $size = $1; next; }
if (/^S(.*)/) { $stream = $1; next; }
if (/^t(.*)/)
{ $type = $1; next; }
if (/^T(.*)/) {
if ($state eq "") { $state = "(" . $1; }
else { $state = $state . " " . $1; }
next;
}
if (/^n(.*)/) { $name = $1; next; }
print "ERROR: unrecognized: \"$_\"\n";
}

```

# Flush any stored file or process output.

```

if ($fdst) { &list_fd }
if ($pidst) { &list_proc }
exit(0);

```

## list\_fd -- list file descriptor information

# Values are stored inelegantly in global variables.

```

sub list_fd {
if (! $fhdr) {

# Print header once.

print "  FD  TYPE  DEVICE  SIZE/OFF  INODE NAME\n";
$fhdr = 1;
}
}

```

```

printf " %4s%1.1s%1.1s %4.4s", $fd, $access, $lock, $type;
$tmp = $devn; if ($devch ne "") { $tmp = $devch }
printf " %10.10s", $tmp;
$tmp = $size; if ($offset ne "") { $tmp = $offset }
printf " %10.10s", $tmp;
$tmp = $inode; if ($proto ne "") { $tmp = $proto }
printf " %10.10s", $tmp;
$tmp = $stream; if ($name ne "") { $tmp = $name }
print " ", $tmp;
if ($state
ne "") { printf " %s\n", $state; } else { print "\n"; }

# Clear variables.

$access = $devch = $devn = $fd = $inode = $lock = $name = "";
$offset = $proto = $size = $state = $stream = $type = "";
}

# list_proc -- list process information
# Values are stored inelegantly in global variables.

sub list_proc {
print "COMMAND PID PGRP PPID USER\n";
$tmp = $uid; if ($login ne "") { $tmp = $login }
printf "%-9.9s %6d %6d %6d %s\n", $cmd, $pid, $pgrp, $ppid, $tmp;

# Clear variables.

$cmd = $login = $pgrp = $pid = $uid = "";
$fhdr = $pidst = 0;
}

```

Found in path(s):

```
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
bz2/lsof_4.95.0.linux/scripts/list_fields.pl
```

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```

#!/usr/bin/perl
# sort_res.pl - Script to group & sort lsof output by resource
#
# Copyright (c) 2004, 2005 - Fabian Frederick <fabian.frederick@gmx.fr>
#
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# (at your option) any later version.
#

```



```

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# distribution in the file COPYING); if not, write to the Free Software
# Foundation, Inc., 59 Temple Place, Suite 330, Boston,
# MA 02111-1307 USA
#
# Note :
# -This script uses lsof released by Victor A. Abell
# -lsof path recovery comes from standard perl scripts in there.
#
# Usage :
# perl sort_res.pl -> display used resources + size
# or perl sort_res.pl <program name>
#
# 12/2005 (FabF)
# -size reset in loop (script was broken in 4.76)
# -isexec looking in .. (like other scripts)
# -display for one or all processes
# -removing unuseful line number arg.
# -display global size

my @args = @_ ;

# Set path to lsof.
if (($LSOF = &isexec("../lsof")) eq "") { # Some distros use lsof
    # out of $PATH
    if (($LSOF = &isexec("lsof")) eq "") { # Then try . and $PATH
    if (($LSOF = &isexec("../lsof")) eq "") { # Then try ..
        print "can't execute $LSOF\n"; exit 1
    }
    }
}

if ($ARGV[0] ne ""){
    $cmd="$LSOF -nPI -Fcns -c".$ARGV[0]."|";
}else{
    $cmd="$LSOF -nPI -Fcns|";
}

#Parse lsof output to gather command, resource name, pid and size
#Some extradata stand to keep script genericity
$i=0;
if

```

```

(open(FILE, $cmd)){
  while (defined ($line=<FILE>)){
$cline=$line;
$cline =~ s"^(.)";
$cline =~ s/^\s+|\s+$//g;
if($line=~m/^p/){
  $pid=$cline;
}else{
  if($line=~/^s/){
$size = $cline;
  }else{
if($line=~/^c/){
  $command = $cline;
}else{
  if($line=~/^n/){
$name = $cline;
$ddata{$i} = { command => $command, name => $name,
  pid => $pid , size => $size};
$size=0;
$i = $i+1;
  }
}
}
}
}

#Resource name sorting
sub byresname { $data{$a}{name} cmp $data{$b}{name}}
@ks=sort byresname (keys %data);

#Resource grouping
$i=0;
$name="a";
foreach $k (@ks){
  if ($data{$k}{name} ne $name){
$dgroup{$i} = { name => $data{$k}{name}, size => $data{$k}{size}};
$name = $data{$k}{name};
$i++;
  }
}

#Size sort on resource hash
sub bysize { $dgroup{$a}{size} <=> $dgroup{$b}{size} }
@ks=sort bysize (keys %dgroup);
$gsize=0;
printf(" -- KB -- -- Resource --\n", );
foreach $k (@ks){

```

```

printf("%10d %s\n", $dgroup{$k}{size}/1024,
$dgroup{$k}{name});
$gsize+=$dgroup{$k}{size};
}

```

```

printf("Total KB : %10d\n", $gsize/1024);
## isexec($path) -- is $path executable
#
# $path = absolute or relative path to file to test for executabiity.
# Paths that begin with neither '/' nor '.' that aren't found as
# simple references are also tested with the path prefixes of the
# PATH environment variable.

```

```

sub
isexec {
    my ($path) = @_ ;
    my ($i, @P, $PATH);

    $path =~ s/^\s+|\s+$//g;
    if ($path eq "") { return(""); }
    if (($path =~ m#^\[\.\.]\#) {
    if (-x $path) { return($path); }
    return("");
    }
    $PATH = $ENV{PATH};
    @P = split(":", $PATH);
    for ($i = 0; $i <= $#P; $i++) {
    if (-x "$P[$i]/$path") { return("$P[$i]/$path"); }
    }
    return("");
}

```

Found in path(s):

```

* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
bz2/lsof_4.95.0.linux/scripts/sort_res.pl

```

No license file was found, but licenses were detected in source scan.

/\*

```

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```

\*

```

* Written by Victor A. Abell

```

\*

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(Version 8.6, last updated 6/24/1998)

\* End endmail LICENSE file.

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Found in path(s):

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsf-4-95-0-orig-1-tar-bz2/lsf\_4.95.0.linux/lib/snpf.c

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```
#!/usr/bin/perl
```

```
#
```

```
# shared.pl -- sample Perl 5 script to list processes that share
```

```
# file descriptors or files, using `lsf +ffn -F..."
```

```
# output
```

```

#
# Usage: shared [fd|file]
#
# where: fd to list file descriptors (default)
#
# file to list files
#
# This script has been tested under perl version 5.001e.

# IMPORTANT DEFINITIONS
# =====
#
# 1. Set the interpreter line of this script to the local path of the
# Perl5 executable.

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#
# Written by Victor A. Abell <abe@purdue.edu>
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# misrepresented as being the original software.
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# Initialize variables.

$Access = $Devch = $Devn = $Fd = $Fsa = $Inode = $Lock = # file
$Na = $Name = ""; # | descriptor
$Cmd = $Login = $Pgrp = $Pid = $Ppid = $Uid = ""; # process var.
$Fdst = 0; # fd state

```

```

$Hdr = 0;    # header state
$Offset = $Proto = $Size = $State = $Stream = $Type = ""; # | variables
$Pidst = 0;    # process state
$Pn = "shared";

# Set path to lsof.

if (($LSOF = &isexec("../lsof")) eq "") { # Try .. first
    if (($LSOF = &isexec("lsof")) eq "")
    { # Then try . and $PATH
        print "can't execute $LSOF\n"; exit 1
    }
}

# Define print field constants.

$CmdTtl = "CMD";
$CmdW = length($CmdTtl);
$DevTtl = "DEVICE";
$DevW = length($DevTtl);
$FdTtl = "FD";
$FdW = length($FdTtl);
$InoTtl = "NODE";
$InoW = length($InoTtl);
$KeyTtl = "FILEADDR";
$KeyW = length($KeyTtl);
$PidTtl = "PID";
$PidW = length($PidTtl);
$PpidTtl = "PPID";
$PpidW = length($PpidTtl);

# Process one (optional) argument.

if ($#ARGV >= 0) {
    $err = 0;
    if ($#ARGV > 1) { $err = 1; }
    elsif ($ARGV[0] eq "fd") {
        $KeyTtl = "FILEADDR";
        $Shfd = 1;
        $Shfile = 0;
    } elsif ($ARGV[0] eq "file") {
        $KeyTtl = "NODEID";
        $Shfd = 0;
        $Shfile = 1;
    } else { $err = 1; }
    if ($err) { die "$Pn: usage [fd|file]\n"; }
    shift;
} else { $Shfd = 1; $Shfile = 0; }

```



```

$KeyW = length($KeyTtl);

# Open a pipe from lsof.

if (!open(LSOF_PIPE, "$LSOF -R +ffn -F0pcRDfFinN |")) {
    die "$Pn: can't open pipe to: $LSOF\n";
}

# Process the lsof output a line at a time, gathering
the variables for
# processes and files.

while (<LSOF_PIPE>) {
    chop;
    @F = split('\0', $_, 999);
    if ($F[0] =~ /^p/) {

# A process set begins with a PID field whose ID character is `p'.

        if ($Fdst) { &End_fd }
        if ($Pidst) { &End_proc }
        foreach $i (0 .. ($#F - 1)) {

            PROC: {
                if ($F[$i] =~ /^c(.*)/) { $Cmd = $1; last PROC }
                if ($F[$i] =~ /^g(.*)/) { $Pgrp = $1; last PROC }
                if ($F[$i] =~ /^p(.*)/) { $Pid = $1; last PROC }
                if ($F[$i] =~ /^u(.*)/) { $Uid = $1; last PROC }
                if ($F[$i] =~ /^L(.*)/) { $Login = $1; last PROC }
                if ($F[$i] =~ /^R(.*)/) { $Ppid = $1; last PROC }
                print "ERROR: unrecognized process field: \"$F[$i]\"\n";
            }
        }
        $Pidst = 1;
        next;
    }

# A file descriptor set begins with a file descriptor field whose ID
# character is `f'.

    if ($F[0] =~ /^f/) {
        if ($Fdst) { &End_fd }
        foreach $i (0 .. ($#F - 1)) {

            FD: {
                if ($F[$i] =~ /^a(.*)/) { $Access = $1; last FD; }
                if ($F[$i] =~ /^f(.*)/) { $Fd = $1; last FD; }
                if ($F[$i]

```

```

==~/^F(.*)/ { $Fsa = $1; last FD; }
if ($F[$i] ==~/^l(.*)/ ) { $Lock = $1; last FD; }
if ($F[$i] ==~/^t(.*)/ ) { $Type = $1; last FD; }
if ($F[$i] ==~/^d(.*)/ ) { $Devch = $1; last FD; }
if ($F[$i] ==~/^D(.*)/ ) { $Devn = $1; last FD; }
if ($F[$i] ==~/^s(.*)/ ) { $Size = $1; last FD; }
if ($F[$i] ==~/^o(.*)/ ) { $Offset = $1; last FD; }
if ($F[$i] ==~/^i(.*)/ ) { $Inode = $1; last FD; }
if ($F[$i] ==~/^P(.*)/ ) { $Proto = $1; last FD; }
if ($F[$i] ==~/^S(.*)/ ) { $Stream = $1; last FD; }
if ($F[$i] ==~/^T(.*)/ ) {
    if ($State eq "") { $State = "(" . $1; }
    else { $State = $State . " " . $1; }
    last FD;
}
if ($F[$i] ==~/^n(.*)/ ) { $Name = $1; last FD; }
if ($F[$i] ==~/^N(.*)/ ) { $Na = $1; last FD; }
print "ERROR: unrecognized file set field: \"\$F[$i]\"\\n";
}
}
$Fdst = 1;
next;
}
print "ERROR: unrecognized: \"$_\"\\n";
}
close(LSOF_PIPE);
if ($Fdst) { &End_fd }
if ($Pidst) { &End_proc }

# List matching files or file descriptors.

for ($pass
= 0; $pass < 2; $pass++) {
    foreach $key (sort keys(%Fds)) {
        @Praw = split(' ', $Fds{$key}, 999);
        if ($#Praw < 1) { next; }
        if ($Shfd) { @P = sort Sort_by_FD_and_PID @Praw; }
        else { @P = sort Sort_by_PID_and_FD @Praw; }

        # Accumulate and print blocks of (key, PID, FD) triplets.

        for ($i = 0; $i < $#P; $i++) {
            if ($Shfile) {
                for ($n = 0; $n <= $#P; $n++) {
                    ($pid, $fd) = split(" ", $P[$n], 999);
                    $PrtPid[$n] = $pid;
                    $PrtFd[$n] = $fd;
                }
            }
        }
    }
}

```

```

$i = $n;
} else {
($pid, $fd) = split(",", $P[$i], 999);
$PrtFd[0] = $fd;
$PrtPid[0] = $pid;
for ($n = 1; $i < $#P; $i++, $n++) {
($nxtpid, $nxtfd) = split(",", $P[$i + 1], 999);
if ($fd ne $nxtfd) { last; }
$PrtFd[$n] = $nxtfd;
$PrtPid[$n] = $nxtpid;
}
}
if ($n > 1) { &Print_block($key, $n, $pass); }
}
}
}
exit(0);

## End_fd() -- process end of file descriptor

sub End_fd {

local ($key);

if ($Fdst && $Pidst && $Pid ne "") {
if ($Cmd ne "") { $Cmds{$Pid}
= $Cmd; }
if ($Ppid ne "") { $Ppids{$Pid} = $Ppid; }
$key = $Shfd ? $Fsa : $Na;
if ($key ne "") {
if (!defined($Fds{$key})) { $Fds{$key} = "$Pid,$Fd"; }
else { $Fds{$key} .= " $Pid,$Fd"; }
if ($Name ne "" && !defined($Name{$key})) { $Name{$key} = $Name }
if ($Inode ne "" && !defined($Inodes{$key})) {
$Inodes{$key} = $Inode;
}
if ($Devn ne "" && !defined($Devns{$key})) {
$Devns{$key} = $Devn;
}
}
}

# Clear variables.

$Access = $Devch = $Devn = $Fd = $Fsa = $Inode = $Lock = "";
$Na = $Name = $Offset = $Proto = $Size = $State = $Stream = $Type = "";
$Fdst = 0;

```

```

}

## End_proc() -- process end of process

sub End_proc {

# Clear variables.

    $Cmd = $Login = $Pgrp = $Pid = $Ppid = $Uid = "";
    $Fdst = $Pidst = 0;
}

## Print_block() -- print a block of entries
#
# entry:
#
# @_ [0] = block's key
# @_ [1] = number of entries in the block
# @_ [2] = print pass status (1 == print)

sub Print_block {

    my ($key, $n, $pass)
    = @_ ;

    local ($fd, $i, $pid, $t, $tW);

    if ($pass) {
    if (!$Hdr) {
        printf "%${KeyW}.${KeyW}s", $KeyTtl;
        printf " %${PidW}.${PidW}s", $PidTtl;
        printf " %${PpidW}.${PpidW}s", $PpidTtl;
        printf " %-${CmdW}.${CmdW}s", $CmdTtl;
        printf " %${FdW}.${FdW}s", $FdTtl;
        printf " %${DevW}.${DevW}s", $DevTtl;
        printf " %${InoW}.${InoW}s", $InoTtl;
        printf " NAME\n";
        $Hdr = 1;
    } else { print "\n"; }
    }

# Loop through block. During a non-print pass, calculate maximum field widths.

    for ($i = 0; $i < $n; $i++) {
        $fd = $PrtFd[$i];
        $pid = $PrtPid[$i];

```

```

# Process key.

if (!$pass) {
    $tW = length(sprintf("%s", $key));
    if ($tW > $KeyW) { $KeyW = $tW; }
} else { printf "%s", $key; }

# Process PID.

if (!$pass) {
    $tW = length(sprintf(" %s", $pid));
    if ($tW > $PidW) { $PidW = $tW; }
} else { printf " %${PidW}.${PidW}s", $pid; }

# Process parent PID.

$t = defined($Ppids{$pid}) ? $Ppids{$pid} : "";
if (!$pass)
{
    $tW = length(sprintf(" %s", $t));
    if ($tW > $PpidW) { $PpidW = $tW; }
} else { printf " %${PpidW}.${PpidW}s", $t; }

# Process command name.

$t = defined($Cmnds{$pid}) ? $Cmnds{$pid} : "";
if (!$pass) {
    $tW = length(sprintf(" %s", $t));
    if ($tW > $CmdW) { $CmdW = $tW; }
} else { printf " %-${CmdW}.${CmdW}s", $t; }

# Process file descriptor.

if (!$pass) {
    $tW = length(sprintf(" %s", $fd));
    if ($tW > $FdW) { $FdW = $tW; }
} else { printf " %${FdW}.${FdW}s", $fd; }

# Process device number.

$t = defined($Devns{$key}) ? $Devns{$key} : "";
if (!$pass) {
    $tW = length(sprintf(" %s", $t));
    if ($tW > $DevW) { $DevW = $tW; }
} else { printf " %${DevW}.${DevW}s", $t; }

# Process node number.

```

```

$t = defined($Inodes{$key}) ? $Inodes{$key} : $t;
if (!$pass) {
    $tW = length(sprintf (" %s", $t));
    if ($tW > $InoW) { $InoW = $tW; }
} else { printf " %${InoW}.${InoW}s", $t; }

# Print name and line terminator, if this
is a print pass.

if ($pass) {
    if (defined($Name{$key})) { print " $Name{$key}\n"; }
    else { print "\n"; }
}
}

## Sort_by_FD_and_PID() -- sort (PID,FD) doublets by FD first, then PID

sub Sort_by_FD_and_PID {

    local ($pida, $pidb, $fda, $fdj, $rv);

    ($pida, $fda) = split(",", $a);
    ($pidb, $fdb) = split(",", $b);
    if ($fda < $fdb) { return(-1); }
    if ($fda > $fdb) { return(1); }
    if ($pida < $pidb) { return(-1); }
    if ($pida > $pidb) { return(1); }
    return(0);
}

## Sort_by_PID_and_FD() -- sort (PID,FD) doublets by PID first, then FD

sub Sort_by_PID_and_FD {

    local ($pida, $pidb, $fda, $fdj, $rv);

    ($pida, $fda) = split(",", $a);
    ($pidb, $fdb) = split(",", $b);
    if ($pida < $pidb) { return(-1); }
    if ($pida > $pidb) { return(1); }
    if ($fda < $fdb) { return(-1); }
    return(0);
    if ($fda > $fdb) { return(1); }
}

```

```

## isexec($path) -- is $path executable
#
# $path = absolute or relative path to file to test for
# executability.
# Paths that begin with neither '/' nor '.' that aren't found as
# simple references are also tested with the path prefixes of the
# PATH environment variable.

```

```

sub
isexec {
    my ($path) = @_ ;
    my ($i, @P, $PATH);

    $path =~ s/^\s+|\s+$//g;
    if ($path eq "") { return(""); }
    if (($path =~ m#^\[\\\.]#)) {
    if (-x $path) { return($path); }
    return("");
    }
    $PATH = $ENV{PATH};
    @P = split(":", $PATH);
    for ($i = 0; $i <= $#P; $i++) {
    if (-x "$P[$i]/$path") { return("$P[$i]/$path"); }
    }
    return("");
}

```

Found in path(s):

```

* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
bz2/lsof_4.95.0.linux/scripts/shared.pl

```

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## Making and Installing lsof 4

```

*****
| The latest release of lsof is always available via anonymous ftp |
| from lsof.itap.purdue.edu. Look in pub/tools/unix/lsof.      |
*****

```

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## Environment Variables Affecting the Configure Script

=====

### Pre-built Lsof Binaries

=====

Avoid using pre-built lsof binaries if you can; build your own instead.

I do not support lsof binaries built and packaged by third parties nor lsof binaries built from anything but the latest lsof revision. (See the Bug Reports section for more information on the details of lsof support.)

One important reason for those support restrictions is that when lsof is built its Configure script tunes lsof to the features available on the building system, often embodied in supporting header files and libraries. If the building system doesn't have support for a particular feature, lsof won't be built to support the feature on any system.

The Veritas VxFS file system is a good example of a feature that requires build-time support.

UNIX dialect version differences -- Solaris 8 versus 9, AIX 4.3.3 versus 5.2, etc. -- can also render a pre-built lsof binary useless on a different version. So can kernel bit size.

There are so many potential pitfalls to using an lsof binary improperly that I strongly recommend lsof be used only where it is built.

=====

### Making Lsof

=====

```
$ cd <lsof source directory>
$ ./Configure <your dialect's abbreviation>
$ make
```

(Consult the 00FAQ and 00XCONFIG files of the lsof distribution for information about using make command invocations and environment variables to override lsof default Makefile strings.)

This lsof distribution can be used with many UNIX dialects. However, it must be configured specifically for each dialect. Configuration is done in three ways: 1) by changing definitions in the machine.h header file of the UNIX dialect of interest; 2) by defining environment variable values prior to calling Configure (see the 00XCONFIG file, the Environment Variables and Environment Variables Affecting the Configure Script sections of this file); and 3) by running the Configure shell script found in the top level of the distribution directory.

You may not need to change any machine.h definitions, but you might want to look at them anyway. Pay particular attention to the definitions that are discussed in the Security section of this file. Please read that section.

The Configure script calls three other scripts in the lsof distribution: AFSConfig; Inventory; and Customize. The AFSConfig script is called for selected dialects (AIX, HP-UX, NEXTSTEP, and Solaris) to locate AFS header files and determine the AFS version. See The AFSConfig Script section of this file for more information.

The Inventory script checks the completeness of the lsof distribution. Configure calls Inventory after it has accepted the dialect abbreviation, but before it configures the top-level directory for the dialect. See The Inventory Script section of this file for more information.

Configure calls the Customize script after it has configured the top-level lsof directory for the declared dialect. Customize helps you modify some of the important compile-time definitions of machine.h. See the The Customize Script section.

You should also think about where you will install lsof and its man page, and whom you will let execute lsof. Please read the Installing Lsof section of this file for information on installation considerations.

Once you have inspected the machine.h file for the dialect for which you want to build lsof, and made any changes you need, run the Configure script, supplying it with the abbreviation for the dialect. (See the following table.) Configure selects the appropriate options for the dialect and runs the Mksrc shell script in the dialect sub-directory to construct the appropriate source files in the top-level distribution directory.

Configure may also run the MkKernOpts script in the dialect

sub-directory to propagate kernel build options to the dialect Makefile. This is done for only a few dialects -- e.g., DC/OSx, and Reliant UNIX.

Configure creates a dialect-specific Makefile. You may want to inspect or edit this Makefile to make it conform to local conventions. If you want the Makefile to install lsof and its man page, you will have to create an appropriate install rule.

Lsof may be configured using UNIX dialect abbreviations from the following table. Alternative abbreviations are indicated by a separating `|'. For example, for SCO OpenServer you can use either the ``osr" or the ``sco" abbreviation:

```
$ Configure osr
or
$ Configure sco
```

#### Abbreviations UNIX Dialect

-----

aix	IBM AIX 5.[23] and 5.3-ML1 using IBM's C Compiler
aixgcc	IBM AIX 5.[12] and 5.3-ML1 using gcc
darwin	Apple Darwin 7.x and 8.x for Power Macintosh systems
decosf	DEC OSF/1, Digital UNIX, Tru64 UNIX 4.0 and 5.1
digital_unix	Digital UNIX, DEC OSF/1, Tru64 UNIX 4.0 and 5.1
du	Digital UNIX, DEC OSF/1, Tru64 UNIX 4.0 and 5.1
freebsd	FreeBSD 4.x, 4.1x, 5.x and [67].x
hpux	HP-UX 11.00, 11.11 and 11.23, using HP's C Compiler, both /dev/kmem-based and PSTAT-based
hpuxgcc	HP-UX 11.00, 11.11 and 11.23, using gcc, both /dev/kmem-based and PSTAT-based
linux	Linux 2.1.72 and above for x86-based systems
netbsd	NetBSD 1.[456], 2.x and 3.x
next	NEXTSTEP 3.[13]
nextstep	NEXTSTEP 3.[13]
ns	NEXTSTEP 3.[13]
nxt	NEXTSTEP 3.[13]
openbsd	OpenBSD 2.[89] and 3.[0-9]
openstep	OPENSTEP 4.x
os	OPENSTEP 4.x
osr	SCO OpenServer Release 5.0.6, using the C compiler from the SCO developer's kit
osrgcc	SCO OpenServer Release 5.0.6, using gcc
osr6	SCO OpenServer Release 6.0.0, using the SCO C compiler
sco	SCO OpenServer Release 5.0.6, using the C compiler

from the SCO developer's kit  
scogcc SCO OpenServer Release 5.0.6, using gcc  
solaris Solaris 2.x, 7, 8, 9 and 10 using gcc  
solariscc Solaris 2.x, 7, 8, 9 and 10 using Sun's cc  
tru64 Tru64 UNIX, DEC OSF/1, Digital UNIX 4.0 and 5.1  
unixware SCO|Caldera UnixWare 7.1.4  
uw SCO|Caldera UnixWare 7.1.4

If you have an earlier version of a dialect not named in the above list, lsof may still work on your system. I have no way of testing that myself. Try configuring for the named dialect -- e.g., if you're using Solaris 2.1, try configuring for Solaris 2.5.1.

After you have configured lsof for your UNIX dialect and have selected options

via the Customize script (See the The Customize Script section.) , use the make command to build lsof -- e.g.,

```
$ make
```

#### Other Configure Script Options

=====

There are three other useful options to the Configure script besides the dialect abbreviation:

-clean      may be specified to remove all traces of a dialect configuration, including the Makefile, symbolic links, and library files.

-h            may be specified to obtain a list of  
-help        Configure options, including dialect abbreviations.

-n            may be specified to stop the Configure script from calling the Customize and Inventory scripts.

Caution: -n also suppresses the AFSConfig step.

#### Environment Variables

=====

Lsof configuration, building, and execution may be affected by

environment variable settings. See the Definitions That Affect Compilation section in the 00PORTING file, the General Environment Variables section in the 00XCONFIG file, the Dialect-Specific Environment Variables section in the 00XCONFIG file, and the Environment Variables Affecting the Configure Script section of this file for more information.

Note in the General Environment Variables section of the 00XCONFIG file that there are five environment variables that can be used to pre-define values in lsof's -v output: LSOF\_BLDCMT, LSOF\_HOST, LSOF\_LOGNAME, LSOF\_SYSINFO, and LSOF\_USER.

## Security

=====

If the symbol HASSECURITY is defined, a security mode is enabled, and lsof will allow only the root user to list all open files.

Non-root users may list only open files whose processes have the same user ID as the real user ID of the lsof process (the one that its user logged on with).

However, if HASNOSOCKSECURITY is also defined, anyone may list anyone else's open socket files, provided their listing is enabled with the "-i" option.

Lsof is distributed with the security mode disabled -- HASSECURITY is not defined. (When HASSECURITY is not defined, the definition of HASNOSOCKSECURITY has no meaning.) You can enable the security mode by defining HASSECURITY in the Makefile or in the machine.h header file for the specific dialect you're using -- e.g. dialects/aix/machine.h.

The Customize script, run by Configure when it has finished its work, gives you the opportunity to define HASSECURITY and HASNOSOCKSECURITY. (See the The Customize Script section.)

The lsof -h output indicates the state HASSECURITY and HASNOSOCKSECURITY had when lsof was built, reporting:

```
"Only root can list all files;"
if HASSECURITY was defined and HASNOSOCKSECURITY wasn't
defined;
```

```
"Only root can list all files, but anyone can list socket files."
if HASSECURITY and HASNOSOCKSECURITY were both defined;
```

"Anyone can list all files;"  
if HASSECURITY wasn't defined. (The definition of  
HASNOCKSECURITY doesn't matter when HASSECURITY isn't  
defined.)

You should carefully consider the implications of using the default  
security mode.

When lsof is compiled in the absence of the  
HASSECURITY definition, anyone who can execute lsof may be able to  
see the presence of all open files. This may allow the lsof user  
to observe open files -- e.g., log files used to track intrusions  
-- whose presence you would rather not disclose.

As distributed, lsof writes a user-readable and user-writable device  
cache file in the home directory of the real user ID executing  
lsof. There are other options for constructing the device cache file  
path, and they each have security implications.

The 00DCACHE file in the lsof distribution discusses device cache  
file path construction in great detail. It tells how to disable  
the various device cache file path options, or how to disable the  
entire device cache file feature by removing the HASDCACHE definition  
from the dialect's machine.h file. There is also information on  
the device cache file feature in the 00FAQ file. (The 00DCACHE  
and 00FAQ files are part of the lsof distribution package.)

The  
Customize script, run by Configure after it has finished its  
work, gives you the opportunity to change the compile-time options  
related to the device cache file. (See The Customize Script  
section.)

Since lsof may need setgid or setuid-root permission (See the Setgid  
Lsof Dialects and Setuid-root Lsof Dialects sections.), its security  
should always be viewed with skepticism. Lest the setgid and  
setuid-root permissions allow lsof to read kernel name list or  
memory files, declared with the -k and -m options, that the lsof  
user can't normally access, lsof uses access(2) to establish its  
real user's authority to read such files when it can't surrender  
its power before opening them. This change was added at the  
suggestion of Tim Ramsey.

Lsof surrenders setgid permission on most dialects when it has  
gained access to the kernel's memory devices. There are exceptions  
to this rule, and some lsof implementations need to run setuid-root.  
(The Setgid Lsof Dialects and Setuid-root Lsof

## Dialects sections

contains a list of lsof implementations and the permissions recommended in the distribution's Makefiles.)

The surrendering of setgid permission is controlled by the WILLDROPGID definition in the dialect machine.h header files.

In the end you must judge for yourself and your installation the risks that lsof presents and restrict access to it according to your circumstances and judgement.

## Run-time Warnings

=====

Lsof can issue warning messages when it runs -- e.g., about the state of the device cache file, about an inability to access an NFS file system, etc. Issuance of warnings are enabled by default in the lsof distribution.

Issuance of warnings may be disabled by default by defining WARNINGSTATE in the dialect's machine.h. The Customize script may also be used to change the default warning message issuance state. (See The Customize Script section.)

The ``-w" option description of the ``-h" option (help) output will indicate the default warning issuance state. Whatever the state may be, it can be reversed with ``-w".

## Device Access Warnings

=====

When lsof encounters a /dev (or /devices) directory, one of its sub-directories, or one of their files that it cannot access with opendir(3) or stat(2), it issues a warning message and continues. Lsof will be more likely to issue such a warning when it has been installed with setgid(<some group name>) permission; it won't have trouble if it has been installed with setuid(root) permission or is being run under the root login.

The lsof caller can inhibit or enable the warning with the -w option, depending on the issuance state of run-time warnings. (See the Run-time Warnings section.)

The warning messages do not appear when lsof obtains device information from a device cache file that it has built and believes

to be current or when warning message issuance is disabled by default. (See the "Caches -- Name and Device" section for more information on the device cache file.)

The lsof builder can inhibit the warning by disabling the definition of WARNDEVACCESS in the dialect's machine.h or disable all warnings by defining WARNINGSTATE. WARNDEVACCESS is defined by default for most dialects. However, some dialects have some device directory elements that are private -- e.g., HP-UX -- and it is more convenient for the lsof user if warning messages about them are inhibited.

Output from lsof's -h option indicates the status of WARNDEVACCESS. If it was defined when lsof was compiled, this message will appear:

```
/dev warnings = enabled
```

If WARNDEVACCESS was not defined when lsof was compiled, this message will appear instead:

```
/dev warnings = disabled
```

The Customize script, run by Configure after it has finished its work, gives you the opportunity to change the WARNDEVACCESS definition. (See The Customize Script section.)

## NFS Blocks

=====

Lsof is susceptible to NFS blocks when it tries to lstat() mounted file systems and when it does further processing -- lstat() and readlink() -- on its optional file and file system arguments.

Lsof tries to avoid being stopped completely by NFS blocks by doing the lstat() and readlink() functions in a child process, which returns the function response via a pipe. The lsof parent limits the wait for data to arrive in the pipe with a SIGALRM, and, if the alarm trips, terminates the child process with a SIGINT and a SIGKILL.

This is as reliable and portable a method for breaking NFS deadlocks as I have found, although it still fails under some combinations of NFS version, UNIX dialect, and NFS file system mount options. It generally succeeds when the "intr" or "soft" mount options are used; it generally fails when the "hard" mount option is used.



When lsof cannot kill the child process, a second timeout causes it to stop waiting for the killed child to complete. While the second timeout allows lsof to complete, it may leave behind a hung child process. Unless warnings are inhibited by default or with the -w option, lsof reports the possible hung child.

NFS block handling was updated with suggestions made by Andreas Stolcke. Andreas suggested using the alternate device numbers that appear in the mount tables of some dialects when it is not possible to stat(2) the mount points.

The -b option was added to direct lsof to avoid the stat(2) and readlink(2) calls that might block on NFS mount points and always use the alternate device numbers. If warning message issuance is enabled and you don't want warning messages about what lsof is doing, use the -w option, too.

The -O option directs lsof to avoid doing the potentially blocking operations in child processes. Instead, when -O is specified, lsof does them directly. While this consumes far less system overhead, it can cause lsof to hang, so I advise you to use -O sparingly.

#### Caches -- Name and Device

=====

Robert Ehrlich suggested that lsof obtain path name components for open files from the kernel's name cache. Where possible, lsof dialect implementations do that. The -C option inhibits kernel name cache examination.

Since AFS apparently does not use the kernel's name cache, where lsof supports AFS it is unable to identify AFS files with path name components.

Robert also suggested that lsof cache the information it obtains via stat(2) for nodes in /dev (or /devices) to reduce subsequent running time. Lsof does that, too.

In the default distribution the device cache file is stored in .lsof\_hostname, mode 0600, in the home directory of the login of the user ID that executes lsof. The suffix, hostname, is the first component of the host's name returned by gethostname(2). If lsof is executed by a user ID whose home directory is NFS-mounted from several hosts, the user ID's home directory may collect several device cache files, one for each host from which it was executed.

Lsof senses accidental or malicious damage to the device cache file with extensive integrity checks, including the use of a 16 bit CRC. It also tries to sense changes in /dev (or /devices) that indicate the device cache file is out of date.

There are other options for forming the device cache file path. Methods the lsof builder can use to control and employ them are documented in the separate 00DCACHE file of the lsof distribution.

#### Raw Sockets

=====

On many UNIX systems raw sockets use a separate network control block structure. Display of files for applications using raw sockets -- ping, using ICMP, for example -- need special support for displaying their information. This support is so dialect-specific and information to provide it so difficult to find that not all dialect revisions of lsof handle raw sockets completely.

#### Other Compile-time Definitions

=====

The machine.h and dlsof.h header files for each dialect contains definitions that affect the compilation of lsof. Check the Definitions That Affect Compilation section of the 00PORTING file of the lsof distribution for their descriptions. (Also see The Customize Script section.)

#### The AFSConfig Script

=====

Lsof supports AFS on some combinations of UNIX dialect and AFS version. See the AFS section of this document for a list of supported combinations.

When configuring for dialects where AFS is supported, the Configure script calls the AFSConfig script to determine the location of AFS header files and the AFS version. Configure will not call AFSConfig, even for the selected dialects, unless the file /usr/vice/etc/ThisCell exists.

The AFS header file location is recorded in the AFSHeaders file;

version, AFSVersion. Once these values have been recorded, Configure can be told to skip the calling of AFSCConfig by specifying its (Configure's) -n option.

### The Inventory Script

=====

The lsof distribution contains a script, called Inventory, that checks the distribution for completeness. It uses the file 00MANIFEST in the distribution as a reference point.

After the Configure script has accepted the dialect abbreviation, it normally calls the Inventory script to make sure the distribution is complete.

After Inventory has run, it creates the file ".ck00MAN" in the top-level directory to record for itself the fact that the inventory has been check. Should Inventory be called again, it senses this file and asks the caller if another check is in order, or if the check should be skipped.

The -n option may be supplied to Configure to make it bypass the calling of the Inventory script. (The option also causes Configure to avoid calling the Customize script.)

The lsof power user may want to define (touch) the file ".neverInv". Configure avoids calling the Inventory script when ".neverInv" exists.

### The Customize Script

=====

Normally when the Configure script has finished its work, it calls another shell script in the lsof distribution called Customize. (You can tell Configure to bypass Customize with its -n option.)

Customize leads you through the specification of these important compile-time definitions for the dialect's machine.h header file:

HASDCACHE device cache file control  
HASENVDC device cache file environment  
variable name  
HASPERSDC personal device cache file path  
format

HASPERSDCPATH name of environment variable that provides an additional component of the personal device cache file path  
HASSYSDC system-wide device cache file path  
HASKERNIDCK the build-time to run-time kernel identity check  
HASSECURITY the security option  
HASNOSOCKSECURITY the open socket listing option when HASSECURITY is defined  
WARNDEVACCESS /dev (or /devices) warning message control  
WARNINGSTATE warning message issuance state

The Customize script accompanies its prompting for entry of new values for these definitions with brief descriptions of each of them. More information on these definitions may be found in this file or in the 00DCACHE and 00FAQ files of the lsof distribution.

You don't need to run Customize after Configure. You can run it later or you can edit machine.h directly.

The -n option may be supplied to Configure to make it bypass the calling of the Customize script. (The option also causes Configure to avoid calling the Inventory script.)

The lsof power user may want to define (touch) the file ".neverCust". Configure avoids calling the Customize script when ".neverCust" exists.

Customize CAUTION: the Customize script works best when it is applied to a newly configured lsof source base -- i.e., the machine.h header file has not been previously modified by the Customize script. If you have previously configured lsof, and want to rerun the Customize script, I recommend you clean out the previous configuration and create a new one:

```
$ Configure -clean
$ Configure <dialect_abbreviation>
...
Customize in response to the Customize script prompts.
```

Cautions  
=====

Lsof is a tool that

is closely tied to the UNIX operating system version. It uses header files that describe kernel structures and reads kernel structures that typically change from OS version to OS version, and even within a version as vendor patches are applied.

DON'T TRY TO USE AN LSOF BINARY, COMPILED FOR ONE UNIX OS VERSION, ON ANOTHER. VENDOR PATCHES INFLUENCE THE VERSION IDENTITY.

On some UNIX dialects lsof versions may be even more restricted by architecture type.

The bottom line is use lsof where you built it. If you intend to use a common lsof binary on multiple systems, make sure all systems run exactly the same OS version and have exactly the same patches.

#### Warranty

=====

Lsof is provided as-is without any warranty of any kind, either expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. The entire risk as to the quality and performance of lsof is with you. Should lsof prove defective, you assume the cost of all necessary servicing, repair, or correction.

#### License

=====

Lsof has no license. Its use and distribution are subject to these terms and conditions, found in each lsof source file. (The copyright year in or format of the notice may vary slightly.)

/\*

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\*

\* Written by Victor A. Abell

\*

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## Bug Reports

=====

Now that the obligatory disclaimer is out of the way, let me hasten to add that I accept lsof bug reports and try hard to respond to them. I will also consider and discuss requests for new features, ports to new dialects, or ports to new OS versions.

PLEASE DON'T SEND BUG REPORTS ABOUT LSOF TO THE UNIX DIALECT OR DIALECT OPTION VENDOR.

At worst such bug reports will confuse the vendor; at best, the vendor will forward the bug report to me.

PLEASE DON'T SEND BUG REPORTS ABOUT LSOF BINARIES BUILT OR DISTRIBUTED BY SOMEONE ELSE, BECAUSE I CAN'T SUPPORT THEM.

Before you send me a bug report, please do these things:

- \* Make sure you try the latest lsof revision.

+ Download the latest revision from:

<ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof>

+ Verify the signatures of what you have downloaded;

+ While connected to [lsof.itap.purdue.edu](ftp://lsof.itap.purdue.edu), check for patches:

<ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/patches>

+ If patches exist, install them in the latest revision you just downloaded. Then build the latest revision and see if it fixes your bug.

\* If you're having trouble compiling lsof with gcc, try the UNIX dialect vendor's compiler. I don't have access to gcc on all test systems, so my support for it is hit-and-miss, and so is my ability to respond to gcc compilation problem reports.

\* Check the lsof frequently asked questions file, 00FAQ, to see if there's a question and answer relevant to your problem.

\* Make sure you're running the lsof you think you are by checking the path to it with which(1). When in doubt, use an absolute path to lsof. Make sure that lsof binary has sufficient permissions to do what you ask, including internal permissions given it (e.g., restrictions on what files lsof may report for whom) during its build.

When you send a bug report, make sure you include output from your running of lsof's Configure script. If you were able to compile a running lsof, please also include:

\* Output from which(1) that shows the absolute path to the lsof binary in question;

\* Output from running lsof with its -h and -v options at lsof's absolute path;

\* Output from "ls -l" directed to lsof's absolute path.

If you weren't able to compile a running lsof, please send me: the compiler error output; identification of the lsof revision you're using (contents of the lsof version.c file); identification of your system (full uname output or output from whatever other tool identifies the system); and compiler identification (e.g., gcc -v output).

Either set of output will help me understand how lsof was configured and what UNIX dialect and lsof revision is involved.

Please send all bug reports, requests, etc. to me via e-mail at <abe@purdue.edu>. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

## The 00FAQ File

=====

The lsof distribution contains an extensive frequently asked questions file on lsof features and problems. I recommend you consult it before sending me e-mail. Use your favorite editor or pager to search 00FAQ -- e.g., supplying as a search argument some fixed text from an lsof error message.

## The lsof-l Mailing List

=====

Information about lsof, including notices about the availability of new revisions, may be found in mailings of the lsof-l listserv. For more information about it, including instructions on how to subscribe, read the 00LSOF-L file of the lsof distribution.

## Field Output Example Scripts

=====

Example AWK and Perl 4 or 5 scripts for post-processing lsof field output are located in the scripts sub-directory of the lsof distribution. The scripts sub-directory contains a 00README file with information about the scripts.

## Field Output C Library

=====

The lsof test suite (See "Testing Lsof."), checks basic lsof operations using field output. The test suite has its own library of C functions for common test program operations, including processing of field output. The library or selections of its functions could be adapted for use by C programs that want to process lsof field output. See the library in the file LTlib.c in the tests/ sub-directory

## Testing Lsof

=====

Lsof has an automated test suite in the tests/ sub-directory that can be used to test some basic lsof features -- once lsof has been configured and made. Tests are arranged in three groups: basic



tests that should run on all dialects; standard tests that should run on all dialects; and optional tests that may not run on all dialects or may need special resources to run. See 00TEST for more information.)

CAUTION!!! Before you attempt to use the test suite make sure that the lsof you want to test can access the necessary kernel resources -- e.g., /dev/mem, /dev/kmem, /proc, etc. Usually you want to test the lsof you just built, so this is an important check. (See 00TEST.)

To run the basic and standard tests, using the lsof in the parent directory of tests/, do this:

```
$ cd tests
$ make test
  or $ make std
  or $ make standard
```

The basic and standard tests may be run as silently as possible, using the lsof in the parent directory of tests/, with:

```
$ cd tests
$ make auto
```

This is the "automatic" test mode, designed for use by scripts that build lsof. The caller is expected to test the make exit code to determine if the tests succeeded. The caller should divert standard output and standard error to /dev/null to suppress make's error exit message.

The optional tests may be run, using the lsof in the parent directory of tests/, with:

```
$ cd tests
$ make opt
  or $ make optional
```

It's possible to execute individual tests, too. See the 00TEST file of this distribution for more information on the tests, what they do, and how to run and possibly customize each test.

It's possible to run the tests, using an lsof other than the one in the parent directory of /tests, too. See 00TEST for information about using the LT\_LSOF\_PATH environment variable to do that.

=====  
Dialect Notes  
=====

AFS

===

Lsof recognizes AFS files on the following combinations of UNIX dialect and AFS versions:

- AIX 4.1.4 (AFS 3.4a)
- Linux 1.2.13 (AFS 3.3)
- NEXTSTEP 3.2 (AFS 3.3) (untested on recent lsof revisions)
- Solaris 2.6 (AFS 3.4a)
- Ultrix 4.2 RISC (AFS 3.2b) (no longer available)

Lsof has not been tested under other combinations -- e.g. HP-UX 10.10 and AFS 3.4a -- and probably won't even compile there. Often when a UNIX dialect version or AFS version changes, the new header files come into conflict, causing compiler objections.

AIX

===

Specify the aix Configure abbreviation for AIX 4.1.[45], 4.2[.1], 4.3[.123], 5L, and 5.[123].

Specify aixgcc on AIX above 4.1 to use the gcc compiler. (Gcc can't be used to compile lsof on AIX 4.1 and below because of kernel structure alignment differences between it and xlc.) Gcc results sometimes depend on the version of the gcc compiler that is used.

Compilation of lsof with gcc on AIX 4.3[.123], 5L, and 5.[123] has been sparsely tested with varying degrees of success: it has been reported to succeed on AIX 4.3.3 and 32 bit Power AIX 5.1; to fail on ia64 AIX 5.1 and 64 bit Power AIX 5.1; and to succeed on 32 and 64 bit Power AIX 5.2. Lsof compilation with gcc hasn't been tested on AIX 5.3.

At revision 4.61 and above lsof is configured and built to match the bit size of the kernel of Power architecture AIX 5.1 systems. Lsof binaries built for 32 and 64 bit kernels are not interchangeable. See 00FAQ for more information.

The Configure script uses `/usr/bin/oslevel` to determine the AIX version for AIX less than 5 and ```uname -rv``` for AIX 5 and higher. If `/usr/bin/oslevel` isn't executable on AIX less than 5, the Configure script issues a warning message and uses ```uname -rv``` to determine the AIX version.

When Configure must use ```uname -rv``` on AIX less than 5 to determine the AIX version, the result will lack a correct third component -- e.g., the ``4'` of ```4.1.4```. If your AIX less than 5 system lacks an executable `oslevel`, I suggest you edit the Configure-produced Makefile and complete the `_AIXV` definition in the CFGF string.

By default `lsof` avoids using the kernel's `readx()` function, causing it to be unable to report information on some text and library file references. The ```-X``` option allows the `lsof` user to ask for the information `readx()` supplies.

`lsof` avoids

`readx()` to avoid the possibility of triggering a kernel problem, known as the Stale Segment ID kernel bug. Kevin Ruderman reported this bug to me. The bug shows up when the kernel's `dir_search()` function hangs, hanging the application process that called it so completely that the application process can neither be killed nor stopped. The hang is the consequence of another process (perhaps `lsof`) making legitimate use of the kernel's `readx()` function to access the kernel memory that `dir_search()` is examining. IBM has indicated they have no plans to fix the bug.

A fuller discussion of this bug may be found in the `00FAQ` file of the `lsof` distribution. There you will find a description of the Stale Segment ID bug, the APAR on it, and a discussion of the sequence of events that exposes it.

I added the ```-X``` function so you can tell `lsof` to use `readx()`, but if you use ```-X```, you should be alert to its possibly serious side effects. Although `readx()` is normally disabled, its state is controlled with the `HASXOPT`, `HASXOPT_ROOT`, and `HASXOPT_VALUE` definitions in `dialects/aix/machine.h`, and you can change its default state by changing those definitions. You can also change `HASXOPT_ROOT` via the `Customize` script.

You can also compile `lsof` with `readx()` use permanently enabled or disabled -- see the comments about the definitions in the `dialects/aix/machine.h` header file. You may want to permanently disable `lsof`'s use of `readx()` if you plan to make `lsof` publicly executable. You can also restrict `-X` to processes whose real UID is root by defining `HASXOPT_ROOT`.

I have never seen lsof cause the Stale Segment ID bug to occur and haven't had a report that it has, but I believe there is a possibility it could.

AFS support for AIX was added with help help from Bob Cook and Jan Tax who provided test systems.

Henry Grebler and David J. Wilson helped with lsof for AIX 4.2.

Bill Pemberton provided an AIX 4.3 test system. Andrew Kephart and Tom Weaver provided AIX 4.3 technical assistance. Niklas

Edmundsson did 4.3.1 testing. Doug Crabill provided an AIX 4.3.2 test system. Jeff W. Stewart provided an AIX 4.3.3 test system.

The SMT file type for AIX 4.1.[45], 4.2[.1], and 4.3[.12] is my fabrication. See the 00FAQ file more information on it.

Loc Le and Nasser Momtaheni of IBM provided test systems for AIX 5L and 5.1. Lsof for AIX 5L and 5.1 needs setuid-root permission to process the -X option on systems whose architecture type is ia64.

Dale Talcott of Purdue provided AIX 5.1 and 5.2 test systems. Dale and John Jackson of Purdue provided an AIX 5.3 test system.

#### Apple Darwin

=====

The Apple Darwin port was provided by Allan Nathanson for version 1.2. Allan also arranged for access to a test system for maintenance and regression testing. Dale Talcott provided a test system, too.

Allan supplied patches for updates to 1.4, 5.x, 6.x, 7.x and 8.x.

#### BSDI BSD/OS

=====

As of lsof revision 4.77 support for BSDI BSD/OS has been discontinued.

Lsof revision 4.76 with BSDI BSD/OS support may be found on lsof.itap.purdue.edu in pub/tools/unix/lsof/src.

#### DEC OSF/1, Digital UNIX, Tru64 UNIX

=====

Robert Benites, Dean Brock, Angel Li, Dwight McKay, Berkley Shands, Ron Young and Steve Wilson have kindly provided test systems. Jeffrey Mogul has provided technical assistance. Dave Morrison and Lawrence MacIntyre did Digital UNIX V3.2 testing.

Lsof supports the ADVFS/MSFS layered file system product. Lsof can locate all the open files of an ADVFS/MSFS file system when its path is specified, provided the file system is listed in /etc/fstab with an ``advfs" type. (This /etc/fstab caveat applies only to Digital UNIX 2.0.) At Digital UNIX 4.0 and Tru64 UNIX, using code provided by David Brock, lsof 4.20 and above can locate ADVFS file paths.

Testing of lsof on DEC OSF/1 and Digital UNIX 4.0 ended with lsof revision 4.74. Hence, the lsof documentation has dropped the claim that it works there.

For a distribution of lsof 4.74 that was tested on DEC OSF/1 and Digital UNIX 4.0, check pub/tools/unix/lsof/OLD/src on the lsof ftp home, lsof.itap.purdue.edu.

Lsof revisions past 4.74 have only been tested on Tru64 UNIX 5.1.

#### FreeBSD

=====

Bill Bormann of Purdue University provided access to several FreeBSD test systems. Ade Barkah, John Clear, Ralph Forsythe, Michael Haro, Kurt Jaeger, and William McVey have also provided FreeBSD test systems.

The FreeBSD distribution header files are augmented by header files in the dialects/freebsd/include directory.

Larry Rosenman maintains the lsof FreeBSD port package.

#### HP-UX

=====

Lsof has two HP-UX bases: /dev/kmem for HP-UX 11.0 and earlier; and PSTAT for HP-UX 11.11 and later. The lsof Configure script will pick the appropriate base.

To use the CCITT x.25 socket support for HP-UX, you must have the x.25 header files in /etc/conf/x25

Pasi Kaara helped with the HP-UX port, especially with its CCITT x.25 socket support.

Richard

Allen provided HP-UX 10.x and 11.x test systems, as did Mark Bixby, and Elias Halldor Agustsson. Marc Winkler helped test the 10.20 port. Richard J. Rauenzahn provided a 64 bit HP-UX 11 test system and an HP-UX 11.11 development system.

AFS support for HP-UX was added thanks to help from Chaskiel Moses Grundman, who provided a test system.

The /dev/kmem-based HP-UX 11.00 support is extremely fragile. It depends on privately developed kernel structure definitions. (See ../dialects/hpux/hpux11 for the header files making the definitions.) Those header files and their definitions will not be updated by HP-UX 11.00 patches, making it likely that any patch changing a kernel structure critical to lsof will break lsof in some way.

It's possible to build a 64 bit lsof for 64 bit HP-UX 11.00 with gcc, but you must have a gcc compiler capable of producing 64 bit executables. See the 00FAQ file for more information.

The PSTAT-based lsof for HP-UX 11.11 and later is much more solid.

I

am indebted to the vision of HP for providing an lsof kernel API through the PSTAT implementation. Specifically I appreciate the help of HP staff members Carl Davidson, Louis Huemiller, Rich Rauenzahn, and Sailu Yallapragada that made PSTAT-based HP-UX lsof possible.

IPv6

=====

Lsof has IPv6 support that has been tested for these UNIX dialects: AIX 4.3.x; Apple Darwin 5.[12] and 6.0; the INRIA and KAME FreeBSD IPv6 implementations; PSTAT-based HP-UX; /proc-based Linux; the INRIA and KAME NetBSD implementations; and Solaris 8 and 9. Lsof has IPv6 support that hasn't been tested for: OpenBSD (KAME); OpenUNIX 8; Tru64 Unix 5.[01]; and UnixWare 7.1.[34].

Please let me know if your UNIX dialect has IPv6 support and I'll see if it can be supported by lsof.

Linux

=====

Tim Korb, Steve Logue, Joseph J. Nuspl Jr., and Jonathan Sergent have provided Linux test systems.

Michael Shields helped add and test automatic handling of ELF/COFF form names in /System.map, Marty Leisner and Keith

Parks have helped test many lsof revisions. Marty has provided valuable suggestions, Linux hints, and code, too.

The 00FAQ file gives some Linux tips, including information on coping with system map file problems.

To determine the state of the Linux 2.1.x C library lseek() function, the lsof Configure script runs a test program that must have permission to read /dev/kmem. The test determines if the lseek() function properly handles kernel offsets, which appear to be negative because their high order bit is set. If the lseek() test reveals a faulty lseek(), Configure activates the use of a private lseek() function for kernel offset positioning. See the Linux problems section of the 00FAQ file of the lsof distribution for more information.

#### NetBSD

=====

Greg Earle and Paul Kranenburg have assisted with the NetBSD ports. Paul has provided test systems. Ray Phillips provided a NetBSD Alpha test system. Andrew Brown also provided a test system.

The NetBSD dialect version of lsof is compiled using the dialect sources it shares with OpenBSD in the n+obsd dialect sub-directory.

#### NEXTSTEP and OPENSTEP

=====

Virtual memory header files that allow lsof to display text references were derived from the contents of /usr/include/vm of NEXTSTEP 2.0. NeXT did not ship the virtual memory header files with other NEXTSTEP or OPENSTEP versions.

You may use the RC\_FLAGS environment variable to declare compiler options outside the Makefile. A common use of this variable is to define the architecture types to be included in a "fat" executable. See the comments in dialects/next/Makefile for an example.

## OpenBSD

=====

David Mazieres has provided OpenBSD test systems. The OpenBSD dialect version of lsof is compiled using the dialect sources it shares with NetBSD in the n+obsd dialect sub-directory.

Kenneth Stailey has provided OpenBSD testing and advice.

John Dzuber (Zube) reports, "lsof 4.33 compiles and runs on OpenBSD 2.3 for the pmax architecture (decstation 3100)."

I have not tested lsof on OpenBSD 3.8, but David Mazieres reports revision 4.76 worked on OpenBSD 3.8.

## Pyramid DC/OSx and Reliant UNIX

=====

As of lsof revision 4.52 support for all Pyramid dialects has been discontinued. Lsof revision 4.51 with Pyramid support may be obtained upon request. Send the request to [abe@purdue.edu](mailto:abe@purdue.edu).

These two UNIX dialects are very similar and share dialect-specific source files from the pyramid sub-directory.

The Reliant Unix Pyramid C compiler issues warning messages that I haven't found a convenient way to suppress. You can ignore warning messages about casts and conversions that lose bits. The message "warning: undefining \_\_STDC\_\_" is intentionally caused by the lsof MkKernOpts configuration script to suppress warning messages about cast and conversion problems in standard system header files, such as <stdio.h> and <string.h>.

Bruce Beare and Kevin Smith provided test systems.

## Caldera OpenUNIX

=====

Larry

Rosenman provided an OpenUNIX 8 test system. Matthew Thurmaier provided technical assistance, along with these people from Caldera: Jack Craig, Robert Lipe, and Bela Lubkin.



Robert Lipe supplied changes to lsof for OpenUNIX 8.0.1. Those changes were also incorporated in UnixWare 7.1.3 when it became the release name for OpenUNIX 8.0.1.

Support for lsof on OpenUNIX ended at lsof revision 4.74. The last lsof revision, 4.74, tested on OpenUNIX, may be found at the lsof "home" ftp site, lsof.itap.purdue.edu, in pub/tools/unix/lsof/OLD/src.

#### SCO OpenServer

=====

Dion Johnson, Bela Lubkin, and Nathan Peterson of SCO gave me copies of SCO OpenServer and the SCO OpenServer Development System 3.0 and provided technical advice for the lsof port.

Hugh Dickins, Bela Lubkin, Craig B. Olofson, and Nathan Peterson provided version 5.0 and gave technical advice for porting lsof to it. Bela provided the 5.0.4 changes. D. Chris Daniels provided a 5.0.4 test system, Lee Penn provided one for 5.0.5, and John Dubois for 5.0.6.

The <netdb.h> header file was accidentally omitted from some SCO OpenServer Development System releases. The Configure script will sense its absence and substitute an equivalent from the BSD distribution. The BSD <netdb.h> and the <sys/cdefs.h> header file it includes are located in the dialects/os/include sub-directory tree.

To compile lsof from its distribution sources you must have the TCP/IP and NFS headers in /usr/include. While those are optional OpenServer packages, I have access to no system that doesn't have them, so I'm unable to build lsof for such a configuration. However, it should be possible to modify the lsof Configure script and sources so lsof would compile and work without those optional packages.

If you have an OpenServer system configured without the TCP/IP and NFS packages, and want to tackle the job of building lsof for it, contact me via e-mail at <abe@purdue.edu>. I'll identify the Configure script, header file, and source file changes you will need to make. (Caution: this is not a simple task, or I would have already done it.)

The optional osrgcc and scogcc Configure abbreviations construct Makefiles for compiling lsof with gcc.

The UnixWare 7.1.4 sources are used for OpenServer Release 6.0.0.  
Hence there is a separate Configure abbreviation for it, "osr6".  
Richard of SCO provided a test system and technical assistance.

SCO|Caldera UnixWare

=====

D. Chris Daniels, John Hughes, Ken Laing, Andrew Merrill, Lee Penn, and  
Matthew Thurmaier provided test systems. Bela Lubkin provided  
technical assistance. Larry Rosenman provided 7.1.[34] test systems.

Solaris 2.x, 7, 8, 9 and 10

=====

SEE THE CAUTIONS SECTION OF THIS DOCUMENT.

The latest Solaris revision of lsof 4 might work under Solaris  
2.[1-4] and 2.5.[1] and 7 but hasn't been tested there. I have no  
test systems for those Solaris versions.

Lsof will compile with gcc and the Sun C compiler  
under Solaris.

If you want to use the Sun compiler, use the solariscc Configure  
abbreviation. If you use a gcc version less than 2.8 on Solaris,  
make sure the gcc-specific includes have been updated for your  
version of Solaris -- i.e., run the gcc fixincludes script.

Solaris 7, 8, 9 and 10 support for 64 bit kernels depends on a Sun  
WorkShop or Forte C compiler version that supports the "-xarch=v9"  
flag -- usually 5.0 or greater. Gcc versions 2.95 and above \*may\*  
be configured and built for 64 bit support, but it takes some extra  
work, the resulting compiler may be fragile, and the gcc developers  
discourage it. I've built 64 bit capable gcc compilers for Solaris  
7, 8 and 9 from gcc versions 2.95 through 3.0.1 and produced working  
lsof executables with them. More information on 64 bit gcc for  
Solaris may be found in the 00FAQ file.

Solaris 10 ZFS support is questionable, because Sun does not distribute  
the ZFS kernel structure definition header files. The lsof Configure  
script

and source code use some risky work-arounds. ZFS file system  
support was made possible with help from Horst Scheuermann.

Dave Curry and Steve Kirsch provided resources for Solaris 2.x  
ports. Casper Dik and Gerry Singleton consulted and provided

valuable assistance.

Henry Katz, Joseph Kowalski, Charles Stephens, Mike Sullivan, and Mike Tracy provided technical assistance.

AFS support was added to Solaris lsof with help from Curt Freeland, Heidi Hornstein, Michael L. Lewis, Terry McCoy, Phillip Moore, and Sushila R. Subramanian.

Casper Dik provided valuable assistance for the Solaris 8 support.

Sun has graciously provided me access to BETA versions of Solaris 2.5, 2.6, 7, 8, and 9.

John Dzuberger provided Solaris 7 and 8 test systems.

Mike Miscevic provided Solaris 10 test systems.

Ultrix

=====

As of lsof revision 4.52 support for Ultrix is no longer available, because I no longer have an Ultrix test system.

Terry Friedrichsen, Dwight McKay, and Jeffrey Mogul helped me with this port.

DECnet support was added to Ultrix lsof with the help of John Beacom, who kindly provided a test system. The Configure script decides that DECnet support is available if /usr/lib/libdnet.a and /usr/include/netdnet/dn.h exist and are readable.

Veritas VxFS and VxVM

=====

Lsof supports some versions of Veritas VxFS and VxVM on some UNIX dialects. Consult the lsof Configure script for the specific dialect, and consult the lsof dialect-specific source files for the UNIX dialect of interest. Veritas support will usually be found in a source file named dnode[1-9].c.

Since Veritas rarely has a version number that can be extracted with shell commands, lsof doesn't use it. Instead, when lsof supports Veritas, the Configure script will form compile-time definitions starting with HASVXFS. Check the lsof 00PORTING

documentation file for more information.

Lsof Veritas support requires that the supporting Veritas header files be installed -- e.g., in /usr/include/sys/fs.

(The location will depend in the dialect's header file conventions.)

Some information on lsof support for Veritas extensions may be found in the lsof 00DIST file. (The ChangeLog file points to 00DIST.)

Chris Kordish and Andy Thomas have provided Solaris VxFS test systems.

=====  
User-contributed Dialect Support  
=====

There are some user-contributed dialect versions of lsof; more information on them can be found at:

<ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/contrib>

Check the 00INDEX file there for details.

=====  
Dialects No Longer Supported  
=====

Because I don't have access to test systems, these UNIX dialects are no longer supported by lsof:

CDC EP/IX  
/dev/kmem-based Linux  
MIPS RISC/os  
Motorola V/88  
Pyramid DC/OSx  
Pyramid Reliant UNIX  
Sequent DYNIX  
SGI IRIX  
SunOS 4.x  
Ultrix  
UnixWare below 7.0

Remnants of the support lsof once provided for these

dialects may  
be found in:

<ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/OLD/dialects>

=====  
Installing Lsof  
=====

The distributed Makefiles do not have actions that will install lsof. I've come to the conclusion there is no standard for installing lsof or its man page, so I no longer distribute make rules for installing them. You should adjust the Makefile for your local preferences.

The Makefile does have an install rule that will cause lsof to compile by virtue of its dependency clause. Some Makefiles also have a dependency that causes the production of a man page that is ready to install. However, the actions of the install rule will not cause the lsof executable or its man page to be installed in any UNIX system-wide directory.

Instead, after the compilation and optional man page production are completed, the install rule will produce a brief description of what actions you might add to the install rule. The description will suggest the possible modes, ownerships, permissions, and destinations your install rule might employ to install the lsof executable and man page.

As you form your install rule, keep in mind that lsof usually needs some type of special permission to do its job. That may be permission to read memory devices such as /dev/kmem, /dev/mem, or /dev/swap, or it may be authorization to read entries in the /proc file system.

Memory device access can usually be provided by setting the modes of the lsof executable so that its effective group identifier when it runs is the same as the group that has permission to read the memory devices -- i.e., it is setgid-group. The privileged group is usually kmem, sys, or system.

Don't overlook using ACLs -- e.g., on AIX or Solaris 8 -- to give lsof permission to access memory devices. ACLs, coupled to a separate group like kmem, can be safer than giving lsof setgid authorization to a commonly used system group.

When lsof needs to read /proc file system entries, it must be

installed

with modes that make its effective user identifier root when it runs -- i.e., it must be setuid-root. If lsof must be installed setuid-root (only the AIX 5L, PSTAT-based HP-UX, and /proc-based Linux, ports need such power.), then access to memory devices is automatic (or not needed in the case of /proc-based Linux).

Your choice of permissions for lsof may also be affected by your desire to allow anyone to use it or your need to restrict its usage to specific individuals. You will have to be guided by local policy and convention in this case.

The next two sections, Setgid Lsof Dialect Versions and Setuid-root Lsof Dialect Versions, list recommended install permissions.

The system directory where you install the lsof executable is also open to choice. A traditional place for a tool like lsof is /usr/local/etc, but recent changes in directory structure organization suggest that somewhere in /opt may be more suitable.

Bear one other factor in mind when choosing a location for the lsof executable -- it usually is a shared executable, requiring access to shared libraries. Thus, locations like /sbin or /usr/sbin are probably unsuitable.

Once you've chosen a location for the executable you may find that the location for the man page follows -- e.g., if the executable goes in /usr/local/etc, then the man page goes in /usr/local/man. If the executable location doesn't imply a location for the man page, you'll have to let local custom guide you.

#### Setuid-root Lsof Dialect Versions

=====

These dialect versions should be installed with setuid-root permission -- i.e., the lsof binary should be owned by root and its setuid execution bit (04000) should be set.

AIX 5L and above for full use of the -X option  
Apple Darwin 8.x for Power Macintosh systems  
PSTAT-based HP-UX 11.11 and 11.23  
/proc-based Linux (generally 2.1.72 and above)

#### Setgid Lsof Dialect Versions

=====

These dialect versions should be installed with setgid permission, owned by the group that can read kernel memory devices such as /dev/drum, /dev/kmem, /dev/ksyms, /dev/mem, /dev/swap. ACLs may be another mechanism (e.g., under AIX or Solaris 8) you can use to grant read permission to the kernel memory devices.

AIX 4.1.[45], 4.2[.1], and 4.3[.123]  
Apple Darwin 7.x for Power Macintosh systems  
DEC OSF/1, Digital UNIX, Tru64 UNIX 2.0, 3.2, 4.0, and 5.[01]  
FreeBSD 2.1.6, 2.2[.x], 3.x, 4.x, 5.x, [6789].x and 1[012].x  
NetBSD 1.[456], 2.x and 3.x  
NEXTSTEP 3.[13]  
OpenBSD 2.[89] and 3.[0-9]  
OPENSTEP 4.x  
Caldera OpenUNIX 8  
SCO OpenServer 5.0.[46]  
SCO UnixWare 7.0 and 7.1.[0134]  
Solaris 2.6, 8, 9 and 10  
Ultrix 4.2 (no longer available)

=====

### Porting lsof 4 to a New UNIX Dialect

=====

If you're brave enough to consider this, look at the 00PORTING file. Please contact me before you start. I might be able to help you or even do the port myself.

Don't overlook the contrib/ directory in pub/tools/unix/lsof on my ftp server, lsof.itap.purdue.edu. It contains user-contributed ports of lsof to dialects I don't distribute, because I can't test new revisions of lsof on them.

=====

### Quick Start to Using lsof

=====

For information on how to get started quickly using lsof, consult the 00QUICKSTART file of the lsof distribution. It cuts past the formal density of the lsof man page to provide quick examples of using lsof to solve common open file display problems.

=====  
Cross-configuring Lsof  
=====

Using environment variables it is possible to Configure (and possibly build) Lsof for one UNIX dialect on a different one -- e.g., you are running Configure on a Linux 2.3 system and you want to Configure and build Lsof for Linux 2.4.

See the 00XCONFIG file of the Lsof distribution for a discussion of how to do this.

=====  
Environment  
Variables Affecting the Configure Script  
=====

Configure script actions can be modified by introducing values to the script via environment variables. In many cases the environment variable values take the place of test operations the Configure script makes.

For more information on environment variables that can affect Configure, consult the 00XCONFIG file of the Lsof distribution. See the General Environment Variables sections for descriptions of ones that affect all dialects. Consult the Dialect-Specific Environment Variables section for ones that might affect the dialect you are trying to configure.

Vic Abell <abe@purdue.edu>  
February 14, 2018

Found in path(s):

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/00README  
No license file was found, but licenses were detected in source scan.

Frequently Asked Questions about Lsof

\*\*\*\*\*  
| The latest release of Lsof is always available via anonymous ftp |  
| from lsof.itap.purdue.edu. Look in pub/lsof.README for its |  
| location. |  
\*\*\*\*\*



This file contains frequently asked questions about lsof and answers to them.

Vic Abell <abe@purdue.edu>

October 13, 2014

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- 18.2.1 What's the risk with a perverted device cache file?
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  - 18.3.1 Why doesn't lsof report node numbers for all AFS volume files, or how do I reveal dynamic module addresses to lsof?
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## 1.0 General Concepts

### 1.1 Lsof -- what is it?

Lsof is a UNIX-specific tool. Its name stands for LiSt Open Files, and it does just that. It lists information about files that are open by the processes running on a UNIX system.

See the lsof man page, the 00DIST file, the 00QUICKSTART file, and the 00README file of the lsof distribution for more information.

### 1.2 Where do I get lsof?

Lsof is available via anonymous ftp from lsof.itap.purdue.edu. Look in the pub/tools/unix/lsof sub-directory.

`ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof`

Bzip2'd, compressed and gzip'd tar files with GPG certificates are available.

#### 1.2.1 Are there mirror sites?

On March 21, 2013 these sites appeared to have the latest lsof revision:

`ftp://ftp.fu-berlin.de/pub/unix/tools/lsof`

`ftp://sunsite.ualberta.ca/pub/Mirror/lsof`

`http://www.mirrorservice.org/sites/lsof.itap.purdue.edu/pub/tools/unix/lsof/`

`ftp://ftp.mirrorservice.org/sites/lsof.itap.purdue.edu/pub/tools/unix/lsof/`

`rsync://rsync.mirrorservice.org/lsof.itap.purdue.edu/pub/tools/unix/lsof/`

#### 1.2.2 Are lsof executables available?

Some lsof executables are available in the subdirectory

tree pub/tools/unix/lsof/binaries These are neither guaranteed to be current nor cover every dialect and machine architecture.

I don't recommend you use pre-compiled lsof binaries; I recommend you obtain the sources and build your own binary. Even if you're a Sun user without a Sun C compiler, you can use gcc to compile lsof.

If you must use a binary file, please be conscious of the security and configuration implications in using an executable of unknown or different origin. The lsof binaries are accompanied by GPG certificates. Please use them!

Three additional cautions apply to executables:

1. Don't try to use an lsof executable, compiled for one version of a UNIX dialect, on another. Patches can make the dialect version different.
2. If you want to use an lsof binary on multiple systems, they must be running the same dialect OS version and have the same patches and feature support.

### 1.2.3 How do I check the validity of an lsof distribution?

There are two ways to check the validity of an lsof distribution:

1. Follow the instructions in the CHECKSUMS\_<revision> file found with the lsof distribution.

Checking with GPG is the best method.

2. Follow the instructions in the "Security" section of the README.lsof\_<revision> file found inside the lsof distribution.

Again, checking with GPG is the best method.

### 1.2.4 Why can't I get the sum(1) result reported in README.lsof\_<revision>?

The "Security" section of the README.lsof\_<revision> file found inside the lsof distribution gives md5, sum, and GPG certificate information.

The simplest, the sum(1) signature, seems to be the trickiest. That's because there are different sum(1) methods, BSD systems usually have cksum(1) instead of sum(1), and different systems compute the block size value differently.

First, the lsof sum results are computed with the old, "alternate" algorithm. On newer systems, you can use sum's "-r" option to get that computation result.

Second, on BSD systems you usually must use cksum(1) instead of sum(1), because they have no sum(1). To tell cksum(1) to use the old, "alternate" algorithm, use its "-o1" option.

Third, the second value that sum reports, the block count, may be computed differently on different systems -- usually block size is considered to be 512 or 1,024. The lsof block counts were computed on a system with a sum(1) option that considers block size to be 512. The BSD system cksum(1) -o1 option considers block size to be 1,024. If your sum(1) or cksum(1) doesn't report a block count that matches the sum(1) signature given in README.lsof\_<revision>, check its man page to see what block size it uses, then adjust its reported block count appropriately.

#### 1.2.5 Why won't gpg accept the lsof-signing PGP public key?

An older PGP key that once signed lsof distributions is included in lsof revisions prior to 4.70. The PGP key is indeed my key, but is incompatible with GPG. It was created about ten years ago and is still acceptable to PGP versions 2.6.2 through 6.5.2.

Lsof revisions 4.70 and above are signed with a copy of my PGP key that has been made acceptable for use with GPG by importing it under GPG's "--allow-non-selfsigned-uid" option.

You can find my GPG compatible key in lsof revisions 4.70 and above and at:

`ftp://lsof.itap.purdue.edu/pub/Victor_A_Abell.gpg`

If you have an older lsof revision with my PGP key, there are two possible ways to use it:

\* Use it with a PGP version from 2.6.2 through 6.5.2.

\* Use GPG's "--allow-non-selfsigned-uid" option when you import my PGP key into your GPG key ring.

```
$ gpg --allow-non-selfsigned-uid --import Victor_A_Abell.pgp
```

### 1.3 Where can I get more lsof documentation?

A significant set of documentation may be found in the lsof distribution (See "Where can I get lsof?"). There is a manual page, copious documentation in files whose names begin with 00, and a copy of this FAQ in the file 00FAQ (perhaps slightly less recent than this file if you're reading it via a web browser.)

Two URLs provide some documentation that appears in the lsof distribution:

FAQ: <ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/FAQ>

man page: [ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/lsof\\_man](ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/lsof_man)

### 1.4 How do I report an lsof bug?

If you believe you have discovered a bug in lsof, you can report it via e-mail to <[abe@purdue.edu](mailto:abe@purdue.edu)>. Do NOT report lsof bugs to the UNIX dialect vendor. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

Before you send me a bug report, please read the "Bug Reports" section of the 00README file of the lsof distribution. It lists the steps you should take before and when reporting a suspected bug.

### 1.5 Where can I get the lsof FAQ?

This lsof FAQ is available in the file 00FAQ in the lsof distribution and at the URL:

<ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/FAQ>

#### 1.5.1 How timely is the on-line FAQ?

The on-line FAQ is sometimes too timely. :-)

I

update it as soon as new information is available. That may include information about support that won't appear in the lsof source distribution until the next revision. If you encounter something like that, please send me e-mail at <abe@purdue.edu>. I may be able to point you at a pre-release distribution that contains the support of interest. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

#### 1.6 Is there a test suite?

Yes, as of lsof revision 4.63 there's an automated lsof test suite in the tests/ sub-directory of the lsof top-level directory.

More information on using the test suite, what it does, how to use it and how to configure it may be found in the 00TEST file of the lsof distribution. That file also explains where the test suite has been tested.

Frequently asked questions about the test suite will be asked and answered here in the FAQ. (See "Test Suite Problems.")

After lsof has been configured with the Configure script, lsof can be made and tested with:

```
$ make
$ cd tests
$ make
```

Under normal conditions -- i.e., unless the lsof tree has been cleaned or purged severely -- all tests or individual tests may be run by:

```
$ cd test
$ make
or
$ <run a single test> (See 00TEST.)
```

#### 1.7 Is lsof vulnerable to the standard I/O descriptor attack?

Lsof revisions 4.63 and above are not vulnerable.

Lsof revisions 4.62 and below are vulnerable, but no damage scenarios have so far been demonstrated.

The standard I/O descriptor attack is a local programmed



assault on `setuid` and `setgid` programs that tricks them into opening a sensitive file with write access on a standard descriptor, usually `stderr` (2), and writing error messages to `stderr`. If the attacker can control the content of the error message, the attacker may gain elevated privileges.

The attack was first described in Pine Internet Advisory PINE-CERT-20020401, available at:

<http://www.pine.nl/advisories/pine-cert-20020401.txt>

If you are using an `lsof` revision below 4.63, you should remove any `setuid` or `setgid` permissions you might have given its executable. Then you should upgrade to `lsof` revision 4.63.

#### 1.8 Can I alter `lsof`'s `make(1)` behavior?

Yes. There are at least two ways to do that.

You can put replacements for `lsof` Makefile strings in your environment. If you specify the `-e` `make` option, `make` will give environment variable values precedence over strings from the Makefile. For example, to change the compiler string `CC` from the environment, you might do this with the Bourne shell:

```
$ CC=foobar; export CC
$ make -e
```

You can also replace `lsof` Makefile strings in the `make` command invocation. Here's the previous example done that way:

```
$ make CC=foobar
```

Changing the `CFGF`, `CFGL`, and `DEBUG` strings used in `lsof` Makefiles, either from the environment or from the `make` invocation, can significantly alter `lsof` `make(1)` behavior.

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commonly use `DEBUG` to change the `-O` option to `-g` so I can build an `lsof` executable for debugging -- e.g.,

```
$ make DEBUG=-g
```

(Look for `DEBUG` in this FAQ for other examples of its use.)

Consult the Makefiles to see what CFGL, CFGL, and other Isof Makefile strings contain, and to see what influence their alteration might have on Isof make(1) behavior.

#### 1.9 Is there an Isof license?

No.

The only restriction on the use or redistribution of Isof is contained in this copyright statement, found in every Isof source file. (The copyright year in or format of the notice may vary slightly.)

/\*

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\* Indiana 47907. All rights reserved.

\*

\* Written by Victor A. Abell

\*

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\*

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\*/

#### 1.10 Language locale support

##### 1.10.1 Does Isof support language locales? How do I use the support?

Most UNIX dialect versions of Isof support 8 bit language

locale characters -- e.g., the ability to print 8 bit characters that have accents and other marks over them.

See the answer to the "Does lsof support wide characters in language locales?" question for information on when lsof's language locale support covers characters wider than 8 bits.

To see if lsof supports language locales for your dialect, look in the dialect's machine.h header file for the HASSETLOCALE definition. If it is present and not disabled, then lsof has language locale support for the dialect.

To enable lsof's language locale support, you must specify in a locale environment variable (e.g., LANG) a language locale known to your system that supports the printing of marked characters -- e.g, en\_US. (On some dialects locale(1) may be used to list the known language locales.)

Note that LANG=C and LANG=POSIX are NOT language locales that support the printing of marked characters.

If the language locale doesn't support the printing of marked characters, lsof's OUTPUT of them follows the rules for non-printable characters described in the OUTPUT section of lsof(8).

Consult your dialect's setlocale(3) man page for the names of environment variables other than LANG -- e.g., LC\_ALL, LC\_TYPE, etc. -- which may be used to define language locales.

#### 1.10.2 Does lsof support wide characters in language locales?

When lsof's language locale support is enabled with the HASSETLOCALE definition, for selected dialects lsof will also print wide characters (e.g., from UTF-8) when iswprint(3) reports them to be printable.

Wide character support is available when HASWIDECHAR is defined in a dialect's machine.h header file. As of this writing on July 22, 2004, the following dialect versions have wide character support:

AIX >= 4.3.2

Apple Darwin >= 7.3.0

FreeBSD >= 5.2

HP-UX >= 11.00

/proc-based Linux  
NetBSD >= 1.6  
SCO OpenServer >= 5.0.6  
Solaris >= 2.6  
Tru64 UNIX 5.1

#### 1.11 Are any files in the lsof distribution copyrighted?

Yes. Most files carry the copyright of the Purdue Research Foundation and may be redistributed under the terms that accompany the copyright notice. Those terms may also be found in the answer to the question, "Is there an lsof license?")

A few files carry other copyright notices. Some are BSD notices and they explain the terms under which they are included in the lsof distribution.

Those that carry vendor copyright notices have been reproduced in their original or modified forms with permission from the copyright owners. That permission is indicated in the README files that accompany the files.

#### 1.12 Are there other lsof-related resources?

There are other resources available, connected to lsof. Among them are FreeBSD and Linux packages whose products use lsof and two particularly interesting resources.

The two interesting resources are a Gnome Tool Kit (GTK) GUI for lsof and a Perl wrapper module.

The GTK GUI is called Glsof and was developed by Gnele. It can be found at:

<http://www.sourceforge.net>

The Perl wrapper module by Marc Beyer can be found at:

<http://search.cpan.org/dist/Unix-Lsof/>

#### 1.13 What

does the "WARNING: unsupported dialect or version" mean?

The lsof configure script issues that message for UNIX dialects or their versions where I have been unable to test the current revision of lsof. The message doesn't mean that lsof won't work, just that I have no direct evidence that it will.

If the CONfigure script succeeds, except for the warning, try compiling) lsof. If that succeeds, try the lsof test suite.

## 2.0 Lsof Ports

### 2.1 What ports exist?

The pub/lsof.README file carries the latest port information:

AIX 5.[23] and 5.3  
FreeBSD 4.9 and 6.4 for x86-based systems  
FreeBSD 8.[234], 9.0, 10.0 and 11.0 for AMD64-based systems  
Linux 2.1.72 and above for x86-based systems  
Solaris 9, 10 and 11

In the above list the only UNIX dialects present are ones for which I test the current lsof revision. Lsof may still support unlisted dialect versions -- e.g., HP-UX 10.20, Solaris 7, etc. -- but I don't have access to systems where I could test lsof on them, so I can't claim lsof works on them. If your dialect isn't in the list, you should try building lsof on it anyway.

Lsof version 4 predecessors, versions 2 and 3, may support older version of some dialects. Contact me via e-mail at <abe@purdue.edu> if you're interested in their distributions. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

### 2.2 What about a new port?

The 00PORTING file in the distribution gives hints on doing a port. I will consider doing a port in exchange for permanent access to a test host. I require permanent access so I can test new lsof revisions, because I will not offer distributions of dialect ports I cannot upgrade and test.

#### 2.2.1 User-contributed Ports

Sometimes I receive contributions of ports of lsof to systems where I can't test future revisions of lsof. Hence, I don't incorporate these contributions into my lsof distribution.

However, I do make descriptions of these contributions available. You can find them in the 00INDEX and README

files at:

<ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/contrib>

Consult the 00INDEX file in the contrib/ directory for a list of the available contributions and consult README there for information on how to obtain them.

### 2.3 Why isn't there an AT&T SVR4 port?

I haven't produced an AT&T SVR4 port because I haven't seen a UNIX dialect that is strictly limited to the AT&T System V, Release 4 source code. Every one I have seen is a derivative with vendor additions.

The vendor additions are significant to lsof because they affect the internal kernel structures with which lsof does business. While some vendor derivatives of SVR4 are similar, each one I have encountered so far has been different enough from its siblings to require special source code.

If you're interested in an SVR4 version of lsof, here are some existing ports you might consider:

DC/OSx (This obsolete port is only available upon special request.)  
Reliant UNIX (This obsolete port is only available upon special request.)  
SCO|Caldera UnixWare (This is the most likely choice.)  
Solaris

### 2.4 Why isn't there an SGI IRIX port?

Lsof support for IRIX was terminated at lsof revision 4.36, because it had become increasingly difficult for me to obtain information on the IRIX kernel structures lsof needs to access.

At IRIX 6.5 I decided the obstacles were too large for me to overcome, and I stopped supporting lsof on IRIX. I have sources to the last revision of lsof (4.36) for IRIX, but that version of lsof does not work on IRIX 6.5 and is vulnerable to the standard I/O descriptor attack. (See the "Is lsof vulnerable to the standard I/O descriptor attack?" Q&A for more information.) Contact me to discuss obtaining those sources.

If you wish to pursue the issue, don't contact me, contact SGI. This case was opened with SGI on the subject:

Case ID: 0982584

Category: Unix

Priority: 30-Moderate Impact

Problem Summary:

kernel structure header files needed for continued lsof support

Problem Description:

Email In 07/17/98 19:09:23

2.5 Why does lsof's Configure script report "WARNING: unsupported dialect or version"?

Lsof's Configure script issues this message when it encounters a dialect or its version that lsof once supported, but no longer does. Usually I drop support for a dialect or version when I can no longer test lsof on it.

However, it's worth trying to compile and use lsof. Be sure to run the test suite. (See the answer to the "Is there a test suite?" question for information on the test suite.)

If you have problems with an unsupported dialect or version, contact me via e-mail at <abe@purdue.edu> and I may be able to help. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

## 3.0 Lsof Problems

### 3.1 Configuration Problems

#### 3.1.1 Why

can't Configure determine the UNIX dialect version?

The lsof Configure script uses UNIX shell commands, often in a command pipeline, to determine the UNIX dialect version. (Consult the dialect stanza in Configure to determine which commands are used.) If Configure can't determine the dialect version, probably one of the commands is not behaving as Configure expects.

Symptoms of the failure include Configure warning messages and

incorrect version definitions in the Makefile CFLAGS.

If you suspect that the lsof Configure script is failing to determine the dialect version correctly, try running the commands from Configure stanza one at a time. That will usually reveal the source of the problem. Be particularly mindful that the PATH environment variable can cause commands to be executed from non-standard directories.

If you can't determine the source of the problem, there is a work-around. You can supply the UNIX dialect version in the LSOF\_VSTR environment variable.

Use Configure as a guide to forming what it expects in LSOF\_VSTR. There is also some information on LSOF\_VSTR in the 00XCONFIG documentation file of the lsof distribution.

## 3.2 Compilation Problems

### 3.2.1 Why does the compiler complain about missing header files?

When you use make to build lsof, the compiler may complain that it can't find header files -- e.g.,

```
$ make
(cd lib; make DEBUG="-O" CFGF="-DAIXA=0 -DAIXV=4330 \
-DLSOF_VSTR=\"4.3.3.0\"")
gcc -DAIXA=0 -DAIXV=4330 -DLSOF_VSTR="4.3.3.0" -O \
-c ckv.c
In file included from ckv.c:33: ../machine.h:70: \
sys/types.h: A file or directory in the path name \
does not exist. \
```

That type of complaint doesn't represent an lsof problem. It represents a problem with a missing system header file that probably should be found in /usr/include or in the system source tree.

As a first step try using find(1) to locate the problem header file. If it's a system header file and can't be found, here are some possible causes:

1. The file set, RPM or package containing the header files has not been installed. Instructions for doing that are specific to the UNIX dialect and beyond the scope of this document.



2. If the compiler is gcc, the private gcc header files:

- \* May not have been installed;
- \* May have been installed incorrectly;
- \* May not have been updated properly after the last compiler or system update;
- \* Ones from a previous installation may not have been removed.

A path leading to the gcc private header files can be found with ``gcc -v``. Consult the gcc documentation for instructions on proper installation of the private gcc header files.

3. On some dialects -- e.g., FreeBSD, NetBSD, OpenBSD -- lsof may need to use header files that are located in the system source tree -- `/sys` or `/usr/src/sys`, for example. Make sure the system source tree has been installed.

### 3.2.2 Why does gcc complain about the contents of header files distributed by the system's vendor?

When you use make to build lsof and gcc to compile it, gcc may complain that it finds errors in system header files -- e.g.,

```
$ make
(cd lib; make DEBUG="-O" CFGF="-Dsolaris=80000 \
-DHASPR_GWINDOWS -m64 -DHASIPv6 -DHAS_VSOCK \
-DLSOF_VSTR=\"5.8\"")
gcc -Dsolaris=80000 -DHASPR_GWINDOWS -m64 -DHASIPv6 \
-DHAS_VSOCK -DLSOF_VSTR="5.8" -O -c dvch.c
In file included from /usr/include/sys/proc.h:31, \
  from /homes/abe/gnu/gcc-3.2.1/lib/gcc-lib/sparcv9-sun-solaris2/\
3.2.1/include/sys/user.h:267, from /usr/include/kvm.h:13, \
from ../dlsof.h:53, from ../lsof.h:172, from dvch.c:43: \
/homes/abe/gnu/gcc-3.2.1/lib/gcc-lib/sparcv9-sun-solaris2/\
3.2.1/include/sys/task.h:59: parse error before "uint_t"
```

Errors like the above are most likely not problems in the system's header files, but in the private copies of them that were created when gcc was made or installed. Note

the presense of  
".../gcc-3.2.1/lib/gcc-lib/sparcv9-sun-solaris2/3.2.1/include/..."  
in the paths for user.h and task.h. It indicates both  
header files are gcc-specific.

To solve errors like this requires comparing the header  
files in the vendor's /usr/include tree to the gcc-specific  
ones in gcc's private gcc-lib/.../include tree. It may be  
necessary to regenerate gcc-specific header files, correct  
them or remove them. See the gcc distribution for the  
appropriate tools.

A possible temporary work-around is to direct gcc to use  
the vendor's header files instead of its temporary ones by  
declaring -I/usr/include in the compilation flags.

### 3.2.3 Other header file problems

Don't overlook any vendor tools that might validate the  
vendor header files installed on the system -- e.g., the  
Solaris pkgchk tool can be used to check the header files  
that were installed from the SUNWhea package.

For  
other header file problems contact me at <abe@purdue.edu>.  
Please follow the reporting guidelines in the "How do I  
report an lsof bug?" section of this FAQ.

### 3.3 Why doesn't lsof report full path names?

Lsof reports the full path name when it is specified as a  
search argument for open files that match the argument.  
However, if the argument is a file system mounted-on  
directory, and lsof finds additional path name components  
from the kernel name cache, it will report them.

Lsof reports path name for file system types that have path  
name lookup features -- e.g., some versions of AdvFS for  
Digital and Tru64 UNIX. The Linux /proc-based lsof reports  
full path names, because the Linux /proc file system provides  
them. Lsof on recent builds of Solaris 10 also report full  
path names, because those Solaris kernels record the full path  
name in the vnode structure.

Otherwise, lsof uses the kernel name cache, where it exists  
and can be accessed, and reports some or  
all path name  
components (e.g., the sys and proc.h components of

/usr/include/sys/proc.h) for these dialects:

Apple Darwin  
DC/OSx  
FreeBSD  
HP-UX, /dev/kmem and PSTAT based  
Linux, /dev/kmem-based  
NetBSD  
NEXTSTEP  
OpenBSD  
OPENSTEP  
Reliant UNIX  
SCO OpenServer  
SCO|Caldera UnixWare  
Solaris 2.x, 7, 8 and 9 (except for some VxFS versions;  
see the "Why doesn't Solaris  
lsof report VxFS path name  
components?" section for more  
information)  
Solaris 10 (early builds) Tru64 UNIX

As far as I can determine, AFS path lookups don't share in kernel name cache operations, so lsof can't identify open AFS path name components. Apparently Solaris VxFS versions 4 and above don't share in kernel name cache operations, either, so lsof can't display path name components for those open files.

Since the size of the kernel name cache is limited and the cache is in constant flux, it does not always contain the names of all components in an open file's path; sometimes it contains none of them.

Lsof reports the file system directory name and whatever components of the file's path it finds in the cache, starting with the last component and working backwards through the directories that contain it. If lsof finds no path components, lsof reports the file system device name instead.

When lsof does report some path components in the NAME column, it prefixes them with the file system directory name, followed by " -- ", followed by the components -- e.g., /usr -- sys/path.h for /usr/include/sys/path.h. The " -- " is omitted when lsof finds all the path name components of a file's name.

The PSTAT-based HP-UX lsof relies on kernel name cache contents, too, even though its information comes to lsof

via pstat() function calls. Consequently, PSTAT-based HP-UX lsof won't always report full paths, but may use the "--" partial path name notation, or may occasionally report no path name at all but just the file system mounted-on directory and device names.

Lsof can't obtain path name components from the kernel name caches of the following dialects:

#### AIX

Only the Linux kernel records full path names in the structures it maintains about open files; instead, most kernels convert path names to device and node number doublets and use them for subsequent file references once files have been opened.

To convert the device and node number doublet into a complete path name, lsof would have to start at the root node (root directory) of the file system on which the node resides, and search every branch for the node, building possible path names along the way. That would be a time consuming operation and require access to the raw disk device (usually implying setuid-root permission).

If the prospect of all that local disk activity doesn't concern you, think about the cost when the device is NFS-mounted.

Try using the file system mount point and node number lsof reports as parameters to find

-- e.g.,

```
$ find <mount_point> -inum <node_number> -print
```

and you may get an appreciation of what a file system directory tree search would cost.

### 3.3.1 Why do lsof -r reports show different path names?

When you run lsof with its repeat ("`-r") option, you may notice that the extent to which it reports path names for the same files may vary from cycle to cycle. That happens because other processes are making kernel calls affecting the cache and causing entries to be removed from and added to it.

### 3.3.2 Why does lsof report the wrong path names?

Under some circumstances lsof may report an incorrect path name component, especially for files in a rapidly changing directory like /tmp.

In a rapidly changing directory, like /tmp, if the kernel doesn't clear the cache entry when it removes a file, a new file may be given the same keys and lead lsof to believe that the old cache entry with the same keys belongs to the new file.

lsof tries to avoid this error by purging duplicate entries from its copy of the kernel name cache when they have the same device and inode number, but different names.

This error is less likely to occur in UNIX dialects where the keys to the name cache are node address and possibly a capability ID. The Apple Darwin, Digital UNIX, FreeBSD, HP-UX, NEXTSTEP, OPENSTEP, Solaris, Tru64 UNIX, and UnixWare dialects use node address. Apple Darwin, FreeBSD, NetBSD, OpenBSD, Tru64 UNIX, and also use a capability ID to further identify name cache entries.

### 3.3.3 Why doesn't lsof report path names for unlinked (rm'd) files?

When lsof gets path name components from the kernel's name cache, it does not report the path names of a file that has been unlinked from its parent directory -- e.g., deleted via rm, or the unlink() system call -- even when some process may still hold the file open; lsof reports only the file system's mounted-on directory and device. That's because path name components are removed from the kernel name cache when the file is unlinked.

Unlinked open files are sometimes used by applications for temporary, but invisible storage (i.e., ls won't show them, and no other process can open them.) However, they may occasionally consume disk space to excess and cause concern for a system administrator, who will be unable to locate them with find, ls, du, or other tools that rely on finding files by examining the directory tree.

By using lsof's +L option you can see the link count of open files -- in the NLINK column. An unlinked file will have an NLINK value of zero. By using the option +L1 you

can tell lsof to display only files whose link count is less than one (i.e., zero).

There are some UNIX dialect-specific exceptions to lsof's inability to report unlinked path names. They are described in the answer to the "When will lsof report path names for deleted files?" question.

### 3.3.4 Why doesn't lsof report the "correct" hard linked file path name?

When lsof reports a rightmost path name component for a file with hard links, the component may come from the kernel's name cache. Since the key which connects an open file to the kernel name cache may be the same for each differently named hard link, lsof may report only one name for all open hard-linked files. Sometimes that will be "correct" in the eye of the beholder; sometimes it will not. Remember, the file identification keys significant to the kernel are the device and node numbers, and they're the same for all the hard linked names.

### 3.3.5 When will lsof report path names for deleted files?

Lsof will report path names for deleted files for two dialects: Linux and later builds of Solaris 10.

Deleted Linux path names are reported by default and have "(deleted)" at their ends.

The display of Solaris 10 deleted path names may be selected with the -X option. When selected they are also reported with "(deleted)" at their ends.

### 3.4 Why is lsof so slow?

Lsof may appear to be slow if network address to host name resolution is slow. This can happen, for example, when the name server is unreachable, or when a Solaris PPP cache daemon is malfunctioning.

To see if name lookup is causing lsof to be slow, turn it off with the ``-n" option.

Port service name lookup or portmap registration lookup may also be causes of slow-down. To suppress port service name

lookup, specify the ``-P" option.

Lsof doesn't usually make direct portmap calls -- only when +M is specified, or when HASPMAPENABLED is defined during lsof construction. (The lsof help panel, produced with `lsof -h` will display the default portmap registration reporting state.) The quickest first step in checking if lsof is slow because of the portmapper is to use lsof's ``-M" option.

Lsof may be slow if UID to login name lookups are slow. Suppress them with ``-l".

On dialects where lsof uses the kernel name cache, try disabling its use with ``-C". (You can tell if lsof uses the kernel name cache by looking for ``-C" in lsof's ``-h" output.) Of course, disabling kernel name cache use will mean that lsof won't report full or partial path names, just file system and character device names.

If you're just interested in the open files of one process, try using the ``-p <Process-ID>" option to limit lsof to that process. (The ``-p" option may also be followed with a list of Process-IDs.)

If you're interested in including or excluding certain commands, try lsof's "-c[^]cmd" option.

If you're interested in certain Internet TCP and UDP states (e.g., ESTABLISHED) or in excluding some (e.g., CLOSE\_WAIT), try lsof's "-s p:s" option, available where shown on the lsof help output, obtained with -h or -?. More information on it may be found in the answer to the "How are protocol state name exclusion and inclusion used?" question.

Your UNIX dialect may not support "-s p:s" and its associated performance improvements to Internet-only file processing. You can find more information on those topics in the answer to the "Why doesn't my dialect support state name exclusion and inclusion?" question.

Older AIX lsof may be slow to start because of its oslevel identity comparison. (Newer AIX lsof uses uname(2).) See the "Why does AIX lsof start so slowly?" and "Why does lsof warn "compiled for x ... y; this is z.?" sections for more information.

### 3.5 Why doesn't lsof's setgid or setuid permission work?

If you install lsof on an NFS file system that has been mounted with the nosuid option, lsof may not be able to use the setgid or setuid permission you give it, complaining it can't open the kernel memory device -- e.g., /dev/kmem.

The only solution is to install lsof on a file system that doesn't inhibit setgid or setuid permission.

### 3.6 Does lsof have security problems?

I don't think so. However, lsof does usually start with setgid permission, and sometimes with setuid-root permission.

Any program that has setgid or setuid-root permission, should always be regarded with suspicion.

Lsof drops setgid power, holding it only while it opens access to kernel memory devices (e.g., /dev/kmem, /dev/mem, /dev/swap). That allows lsof to bypass the weaker security of access(2) in favor of the stronger checks the kernel makes when it examines the right of the lsof process to open files declared with -k and -m. Lsof also restricts some device cache file naming options when it senses the process has setuid-root power.

On a few dialects lsof requires setuid-root permission during its full execution in order to access files in the /proc file system. These dialects include:

DC/OSx 1.1 for Pyramid systems

Reliant UNIX 5.4[34] for Pyramid systems

When lsof runs with setuid-root permission it severely restricts all file accesses it might be asked to make with its options.

The device cache file (typically .lsof\_hostname in the home directory of the real user ID that executes lsof) has 0600 modes. (The suffix, hostname, is the first component of the host's name returned by gethostname(2).) However, even when lsof runs setuid-root, it makes sure the file's ownerships are changed to that of the real user and group. In addition, lsof checks the file carefully before using it (See the question "How do I disable the device cache file feature or alter its behavior?" for a description of



the checks.); discards the file if it fails the scrutiny; complains about the condition of the file; then rebuilds the file.

See the 00DCACHE file of the lsof distribution for more information about device cache file handling and the risks associated with the file.

### 3.7 Will lsof show remote hosts using files via NFS?

No. Remember, lsof displays open files for the processes of the host on which it runs. If the host on which lsof is running is an NFS server, the remote NFS client processes that are accessing files on the server leave no process records on the server for lsof to examine.

### 3.8 Why doesn't lsof report locks held on NFS files?

Generally lock information held by local processes on remote NFS files is not recorded by the UNIX dialect kernel. Hence, lsof can't report it.

One exception is some patch levels of Solaris 2.3, and all versions of Solaris 2.4 and above. Lsof for those dialects does report on locks held by local processes on remotely mounted NFS files.

#### 3.8.1 Why does lsof report a one byte lock on byte zero as a full file lock?

When a process has a lock of length one, starting at byte zero, lsof can't distinguish it from a full file lock. That's because most UNIX dialects represent both locks the same way in their file lock (flock or eflock) structures.

### 3.9 Why does lsof report different values for open files on the same file system (the automounter phenomenon)?

On UNIX dialects where file systems may be mounted by an automounter with the ``direct" type, lsof may sometimes report difference DEVICE, SIZE/OFF, INODE and NAME values when asked to report files open on the file system.

This happens because some files open on the file system -- e.g., the current directory of a shell that changed its directory to the file system as the file system's first

reference -- may be characterized in the kernel with temporary automounter node information. The `cd` doesn't cause the file system to be mounted.

A subsequent reference to the file system -- e.g., an `ls` of any place in it -- will cause the file system to be mounted. Processes with files open to the mounted file system are characterized in the kernel with data that reflects the mounted file system's parameters.

Unfortunately some kernels (e.g., some versions of Solaris 2.x) don't revisit the process that did only a change-directory for the purpose of updating the data associated with the open directory file. The file continues to be characterized with temporary automounter information until it does another directory change, even a trivial `cd .`.

`Lsof` will report on both reference types, when supplied the file system name as an argument, but the data `Lsof` reports will reflect what it finds in the kernel. For the different types `Lsof` will display different data, including different major and minor device numbers in the `DEVICE` column, different lengths in the `SIZE/OFF` column, different node numbers in the `INODE` column, and slightly different file system names in the `NAME` column.

In contrast, `fuser`, where available, can only report on one reference type when supplied the file system name as an argument. Usually it will report on the one that is associated with the mounted file system information. If the only reference type is the temporary automounter one, `fuser` will often be silent about it.

### 3.10 Why don't `Lsof` and `netstat` output match?

`Lsof` and `netstat` output don't match because `Lsof` reports the network information it finds in open file system objects -- e.g., socket files -- while `netstat` often gets its information from separate kernel tables.

The information available to `netstat` may describe network activities never or no longer associated with open files, but necessary for proper network state machine operation.

For example, a TCP connection in the `FIN_WAIT_[12]` state may no longer have an associated open file, because the

connection has been closed at the application layer and is now being closed at the TCP/IP protocol layer.

### 3.10.1 Why can't lsof find accesses to some TCP and UDP ports?

Lsof stands for LiSt Open Files. If there is no open file connected to a TCP or UDP port, lsof won't find it. That's the most common reason why lsof doesn't find a port netstat might report open.

One reason I've found on some UNIX dialects is that their kernels set aside TCP and UDP ports for communicating with support activities, running in application layer servers -- the automounter daemons, and the NFS biod and nfsd daemons are examples. Netstat may report the ports are in use, but lsof doesn't.

Another reason is that netstat may also be able to report a port is open on a particular dialect, because it uses a source of data different from what lsof uses -- e.g., netstat might examine kernel tables or use streams messages to MIB2, while lsof relies on the information it finds in open file structures and their descendants.

Sometimes it's possible to search the data netstat and lsof use. For example, on Linux `/proc/tcp` and `/proc/udp` can be examined. There might an entry there for a particular protocol and port, but if the line on which the port appears doesn't have an inode number that matches an inode number of an open file, lsof won't be able to identify the process using the port.

This is a tough question to which there is no easy answer.

### 3.11 Why does lsof update the device cache file?

At the end of the lsof output you may see the message:

```
lsof: WARNING: /Homes/abe/.lsof_vic  
was updated.
```

In this message `/Homes/abe/.lsof_vic` is the path to the private device cache file for login `abe`. (See `00DCACHE`.)

Lsof issues this message when it finds it necessary to recheck the system device directory (e.g., `/dev` or `/devices`) and rebuild the device cache file during the open file

scan. Lsof may need to do these things it finds that a device directory node has changed, or if it cannot find a device in the cache.

### 3.12 Why doesn't lsof report state for UDP socket files?

Lsof reports UDP TPI connection state -- TS\_IDLE (Idle), TS\_BOUND (Bound), etc. -- for some, but not all dialects. TPI state is stream-based TCP/IP information that isn't available in many dialects.

A fairly weak general rule is if netstat(1) reports UDP TPI state, lsof may be able to report it, too. But don't be surprised if lsof fails to report UDP TPI state for your dialect. Other factors influence lsof's ability to report UDP TPI state, including the availability of state number data in kernel structures, and state number to state name conversion data.

### 3.13 I am editing a file with vi; why doesn't lsof find the file?

Classic implementations of vi usually don't keep open the file being edited. (Newer ones may do so in order to maintain an advisory lock.) Instead classic vi opens the file, makes a temporary copy (usually in /tmp or /usr/tmp), and does its work in that file. When you save the file being edited from a classic vi implementation, it reopens and rewrites the file.

During a classic vi session, except for the brief periods when vi is reading or rewriting the file, lsof won't find an open reference to the file from the vi process, because there is none.

### 3.14 Why doesn't lsof report TCP/TPI window and queue sizes for my dialect?

Lsof only reports TCP/TPI window sizes for Solaris, because only its netstat reports them. The intent of providing TCP/TPI information in lsof NAME column output is to make it easier to match netstat output to lsof output.

In general lsof only reports queue sizes for both TCP and UDP (TPI) connections on BSD-derived UNIX dialects, where both sets of values appear in kernel socket queue structures. SYSV-derived UNIX dialects whose TCP/IP implementations are based on streams generally provide only TCP queue sizes,

not UDP (TPI) ones.

While you may find that netstat on some SYSV-derived UNIX dialects with streams TCP/IP may report UDP (TPI) queue sizes, you will probably also find that the sizes are always zero -- netstat supplies a constant zero for UDP (TPI) queue sizes to make its headers align the same for TCP and UDP (TPI) connections. Solaris seems to get it right -- i.e., its netstat does not report UDP (TPI) queue sizes.

When in doubt, I chose to avoid reporting UDP (TPI) queue sizes for UNIX dialects whose netstat-reported values I knew to be a constant zero or whose origin I couldn't determine. OSR is a dialect in this category.

#### 3.14.1 Why doesn't

lsf report socket options, socket states, and TCP flags and values for my dialect?

The lsf -T argument, 'f', that selects the reporting of socket options, socket states and TCP flags was implemented at lsf revision 4.71 for the following UNIX dialects, providing the indicated information:

AIX 4.3.2 and 5.1 and above

All socket options and values, socket states, and TCP flags and values described in lsf(8) are reported.

Apple Darwin 7.2 and above

All socket options and values, socket states, and TCP flags and values described in lsf(8) are reported.

Digital UNIX and Tru64 UNIX 4.0

All socket options and values, socket states, and TCP flags and values described in lsf(8) are reported.

FreeBSD 4.9 and above

All socket options and values, socket states, and TCP flags and values described in lsf(8) are reported.

HP-UX 11.00 (/dev/kmem-based lsf)

All socket options and values are reported. No socket states are reported. Only the TF\_NODELAY TCP flag and the TF\_MSS value are reported.

HP-UX 11.11 and iiv2 (PSTAT-based lsf)

All socket options and values, and socket states are reported. No TCP flags or values are reported.

Linux

No socket options and values, socket states, or TCP flags and values are reported. The support for "-Tf" could not be added to Linux, because socket options,

socket states, and TCP flags and values are not available via the /proc file system.

NetBSD 1.6G and above

All socket options and values, socket states, and TCP flags and values described in lsof(8) are reported.

OpenBSD 3.4 and above

All socket options and values, socket states, and TCP flags and values described in lsof(8) are reported.

OPENSTEP 4.2

All socket options and values, socket states, and TCP flags and values described in lsof(8) are reported.

OpenUNIX 8

All socket options and values, socket states, and TCP flags and values described in lsof(8) are reported.

SCO OpenServer Release 5.0.6

All socket options and values, socket states, and TCP flags and values described in lsof(8) are reported.

Solaris 2.6, 8 and above

The socket option display is limited to BROADCAST, DEBUG, DGRAM\_ERRIND, DONTRROUTE and OOBINLINE. Socket values are limited to KEEPALIVE and LINGER. No socket states are reported. The TCP DELACK, NODELAY and SENTFIN flags are reported. The TCP MSS value is reported.

UnixWare 7.1.[134]

All socket options and values, socket states, and TCP flags and values described in lsof(8) are reported.

### 3.14.2 Why doesn't lsof report the partial listen queue connection count for my dialect?

The reporting of partial listen queue connections was added to -Tf processing at lsof revision 4.76. Currently it is reported for these dialects:

AIX 4.3.2

This dialect is no longer supported, so no attempt was made to add partial listen queue length support for it.

AIX 5.1 and above

Partial listen queue information is available.

Apple Darwin 7.2 and above

Partial listen queue information is available.

Digital UNIX 4.0

This dialect is no longer supported, so no attempt was made to add partial listen queue length support

for it.

FreeBSD 4.9 and above

Partial listen queue information is available.

HP-UX 11.00 (/dev/kmem-based lsof)

No partial listen queue information is available.

HP-UX 11.11 and iiiiv2 (PSTAT-based lsof)

No partial listen queue information is available.

Linux

No partial listen queue information is available.

NetBSD 1.6G and above

Partial listen queue information is available.

OpenBSD 3.4 and above

Partial listen queue information is available.

OPENSTEP 4.2

Partial listen queue information is available.

OpenUNIX 8

This dialect is no longer supported, so no attempt was made to add partial listen queue length support for it.

SCO OpenServer Release 5.0.6

No partial listen queue information is available.

Solaris 2.6, 8 and above

Partial listen queue information is available.

Tru64 UNIX 5.0

This dialect is no longer supported, so no attempt was made to add partial listen queue length support for it.

Tru64 UNIX 5.1

Partial listen queue information is available.

UnixWare 7.1.[134]

Partial listen queue information is available.

### 3.15 What does "no more information" in the NAME column mean?

When lsof can find no successor structures -- a gnode, inode, socket, or vnode -- connected to the file structure of an open descriptor of a process, it reports "no more information" in the NAME column. The TYPE, DEVICE, SIZE/OFF, and INODE columns will be blank.

Because the file structure is supposed to contain a pointer to the next structure of a file's processing support, if the pointer is NUL, lsof can go no further.

Some UNIX dialects have file structures for system processes -- e.g., the sched process -- that have no successor

structure pointers. The "no more information" NAME will commonly appear for these processes in lsof output.

It may also be the case that lsof has read the file structure while it is being assembled and before a successor structure pointer value has been set. The "no more information" NAME will again result.

Unless lsof output is filled with "no more information" NAME column messages, the appearance of a few should be no cause for alarm.

### 3.16 Why doesn't lsof find a process that ps finds?

If lsof fails to display open files for a process that ps indicates exists, there may be several reasons for the difference.

The process may be a "zombie" for which ps displays the "(defunct)" state. In that case, the process has exited and has no open file information lsof can display. It does still have a process structure, sufficient for the needs of ps.

Another possible explanation is that kernel tables and structures may have been changing when lsof looked for the process, making lsof unable to find all relevant process structures. Try repeating the lsof request.

### 3.17 Why doesn't -V report a search failure?

The usual reason that -V won't report a search failure is that lsof located the search item, but was prevented from listing it by an option that doesn't participate in search failure reporting.

For example, this lsof invocation:

```
$ lsof -V -i TCP@foobar -a -d 999
```

won't report it can't find the Internet address TCP@foobar, even if there is an open file connected to that address, unless the open file also has a file descriptor number of 999 (the "-a -d 999" options).

Compile-time options can also affect -V results in much the



same way. For example, if HASSECURITY and HASNOSOCKSECURITY are defined at compile time, this lsof invocation, run by a non-root user:

```
$ lsof -V -c inetd
```

won't report that it can't find the inetd command, even if there is a process running the inetd command, because the HASSECURITY and HASNOSOCKSECURITY options prevent the listing of all but the socket files of another user, and no socket file selector (e.g., "-i") was specified.

### 3.18 Portmap problems

#### 3.18.1 Why isn't a name displayed for the portmap registration?

When portmap registration reporting is enabled, any time there is a registration for a local TCP or UDP port, lsof displays it in square brackets, following the port number or service name -- e.g., ``:1234[name]" or ``:name[100083]".

The TCP or UDP port number or service number (what follows the `:') is displayed under the control of the lsof -P option. The registration identity is held by the portmapper and may be a name or a number, depending on how the registration's owner declared it. Lsof reports what the port map holds and cannot derive a registration name from a registration number.

Lsof can be compiled with registration reporting enabled or disabled by default, under the control of the HASPMAPENABLED #define (usually in machine.h).

The lsof help panel (lsof -h) will show the default. Lsof is distributed with reporting disabled by default.

#### 3.18.2 How can I display only portmap registrations?

Lsof doesn't have an option that will display only TCP or UDP ports with portmap registrations. The +M option only enables the reporting of registration information when Internet socket files are displayed; +M doesn't select the displaying of Internet socket files -- the -i option does that.

This simple lsof pipe to grep will do the job:

```
$ lsof -i +M | grep "\["
```

This works because `-i` selects Internet socket files, `+M` enables portmap registration reporting, and only output lines with opening square brackets will have registrations.

When portmap registration reporting is enabled by default, because the `lsof` builder constructed it that way, `+M` is not necessary. (The `lsof` help panel, produced with ``lsof -h`` will display the default portmapper registration reporting state.) However, specifying `+M` when reporting is already enabled is acceptable, as is specifying `-M` when reporting is already disabled.

Digression: `lsof` will accept ``+'` or ``-'` as a prefix to most options. (That isn't documented in the man page or help panel to reduce confusion and complexity.) The `-i` option is as acceptable as `+i`, so the above example could be written a little more tersely as:

```
$ lsof +Mi | grep "\["
```

But be careful to use the ```Mi"` ordering, since ```iM"` implies `M` is an address argument to ``i'`.

### 3.18.3 Why doesn't `lsof` report portmap registrations for some ports?

`lsof` reports portmap registrations for local TCP and UDP ports only. It identifies local ports this way:

- \* The port appears in the local address section of the kernel structure that contains it.
- \* The port appears in the foreign address section of a kernel structure whose local and foreign Internet addresses are the same.
- \* The port appears in the foreign address section of a kernel address structure whose Internet address is `INADDR_LOOPBACK` (127.0.0.1).

Following these rules, `lsof` ignores foreign portmapped ports. That's done for reasons of efficiency and possible security prohibitions. Contacting all remote portmappers could take a long time and be blocked by network difficulties

(i.e., be inefficient). Many firewalls block portmapper access for security reasons.

Lsof may occasionally ignore portmap registration information for a legitimate local port by virtue of its local port rules. This can happen when a port appears in the foreign part of its kernel structure and the local and foreign Internet addresses don't match (perhaps because they're on different interfaces), and the foreign Internet address isn't INADDR\_LOOPBACK (127.0.0.1).

#### 3.18.4 Why doesn't lsof report portmap registrations for some Solaris versions?

In some versions of Solaris -- 9 and 10 are known to exhibit this problem -- lsof is unable to display portmap registrations.

This portmap registration reporting failure occurs when the Solaris netconfig field (in /etc or etc/inet) has its first two non-comment lines enabling tcp6 and udp6. When netconfig is configured in that fashion, lsof's attempt to read the portmap via an RPC function fails.

I don't have an explanation for the failure, but this comment in the netconfig(4) man page appears to have some bearing on the problem:

```
# The following two entries starting with udp6 and tcp6 are
# meant to be used for IPv6. If you have Ipv6 enabled on your
# machine then you can uncomment these two lines to enable
# RPC and NFS to use the Ipv6 stack.
...
#udp6 tpi_clts    v inet6 udp /dev/udp6 -
#tcp6 tpi_cots_ord v inet6 tcp /dev/tcp6 - "
```

My interpretation of that comment is that there is a different RPC interface to the portmap when IPv6 is enabled. However, I can't find any documentation on it in the RPC man pages. If anyone has information on it, please send it to me at <abe@purdue> and put "lsof Solaris portmap" in the subject line.

A work-around may be to move the ucp6 and tcp6 lines after the udp and txcp lines in netconfig. I don't know if that change has any unacceptable consequences, but it works for me on my Solaris 9 test system, and I have a report that it also works

on Solaris 10.

### 3.19 Why is `lsof | wc` bigger than my system's open file limit?

There is a strong temptation to count open files by piping lsof output to wc. If your purpose is to compare the number you get to some Unix system parameter that defines the number of open files your system can have, resist the temptation.

One reason is that lsof reports a number of "files" that don't occupy Unix file table space -- current working directories, root directories, jail directories, text files, library files, memory mapped files are some. Another reason is that lsof can report a file shared by more than one process that itself occupies only one file table slot.

If you want to know the number of open files that occupy file table slots, use the +ff option and process the lsof output's FILE\_ADDR column information with standard Unix tools like cut, grep, sed, and sort.

You might also consider using use lsof's field output with +ff, selecting the file struct address with -FF, and processing the output with an AWK or Perl script. See the list\_fields.awk, list\_fields.perl, and shared.perl5 scripts in the scripts/ subdirectory of the lsof distribution for hints on file struct post-processing filters.

### 3.20 Why doesn't lsof report file offset (position)?

Lsof won't report a file offset (position) value if the -s option (without parameters) has been specified, or if the dialect doesn't support the displaying of file offset (position). (Note that on selected dialects the help output, obtained with -h or -?, may show that the -s option can also be supplied the "p:s" parameters; for more information on that addition, see the answer to the "How are protocol state name exclusion and inclusion used?" question.)

That lsof is reporting only file size is indicated by the fact that the appropriate column header says SIZE instead of SIZE/OFF.

If lsof doesn't support the displaying of file offset

(position) -- e.g., for Linux /proc-based lsof -- the -h or -? output panel won't list the -o option.

Sometimes the availability of file offset information depends on the dialect's kernel. This is particularly true for socket file offsets.

Maintenance of offsets for pseudo-terminal devices varies by UNIX dialect and is related to how the dialect kernel implements pseudo-terminal support. Kernels like AIX, for example, that short-circuit the transfer of data between socket and pseudo devices to reduce TCP/IP daemon interrupt rates won't advance offsets in the TCP/IP daemon socket files. Instead they will advance offsets in the open standard I/O files of the shell child process where the pseudo-terminal devices are used.

When in doubt about the behavior of lsof in reporting file offset information, do some carefully measured experiments, consult the lsof sources, or contact me at <abe@purdue.edu> to discuss the matter. Please follow the reporting guidelines in the "How do I report an lsof bug?" section of this FAQ.

### 3.20.1 What does lsof report for size when the file doesn't really have one?

When a file has no true size -- e.g., it's a socket, a FIFO, or a pipe -- lsof tries to report the information it finds in the kernel that describes the contents of associated kernel buffers.

Thus, for example, size for most TCP/IP files is socket buffer size. The size of the socket read buffer is reported for read-only files; the size of the write buffer for write-only files; and the sum of the buffers sizes for read-write files.

## 3.21 Problems with path name arguments

### 3.21.1 How do I ask lsof to search a file system?

You can ask lsof to search for all open files on a file system by specifying its mounted path name as an lsof argument -- e.g.,

```
$ lsof /
```

Output of the mount command will show file system mounted path names. It will also show the mounted-on device path for the file system.

If the mounted-on device is a block device (the permission field in output of `ls -l <device>` starts with a ``b/`), you can specify it's name, too -- e.g.,

```
$ lsof /dev/sd0a
```

If the mounted-on device isn't a block device -- for example, some UNIX dialects call a CD-ROM device a character device (ls output starts with a ``c'`) -- you can force lsof to assume that the specified device names a file system with the `+f` option -- e.g.,

```
$ lsof +f -- /dev/sd0a
```

(Note: you must use ```--`" after `+f` or `-f` if a file name follows immediately, because `+f` and `-f` can be followed by characters that specify flag output selections.)

When you use `+f` and lsof can't match the device to a file system, lsof will issue a complaint.

The `+f` option may be used in some dialects to ask lsof to search for an NFS file system by its server name and server mount point. If the mount application reports an NFS file system mounted-on value that way, then this sample lsof request should work.

```
$ lsof +f -- fleet:/home/fleet/u5
```

Finally, you can use `-f` if you don't want a mounted file system path name to be considered a request to report all open files on the file system. This is useful when you want to know if anyone is using the file system's mounted path name. This example directs lsof to report on open access to the ``/` directory, including when it's being used as a current working or root directory.

```
$ lsof -f -- /
```

The lsof `-f` option performs the same function as `-f` does in some fuser implementations. However, since the lsof `-c` option was chosen for another purpose before the ``f` option

was added to lsof, +f was selected as the analogue to the fuser -c option. (Sorry for the potential confusion.)

### 3.21.2 Why

doesn't lsof find all the open files in a file system?

Lsof may not find all the open files in a file system for several reasons.

First, some processes with files open on the file system may have been changing status when lsof examined the process table, and lsof "missed" them. Remember, the kernel changes much faster than lsof can respond to the changes.

Second, be sure you have specified the file system correctly. Perhaps you specified a file instead. You can use lsof's -V option to have lsof report in detail on what it couldn't find. Make sure the report for the file system you specified says "file system." Here's some -V output:

```
$ lsof -V /tmp ./lsof.h ./lsof
COMMAND PID USER  FD  TYPE DEVICE SIZE/OFF INODE NAME
lsof    2688  abe  txt  VREG 18,1,7 1428583 226641 ./lsof
lsof    2689  abe  txt  VREG 18,1,7 1428583 226641 ./lsof
lsof: no file use located: ./lsof.h
```

You can also use lsof's +f option to force it to consider a path name as a file system. If lsof can't find a file system by the specified name, it will issue a complaint -- e.g.,

```
$ lsof +f -- /usr
lsof: not a file system: /usr
```

(/usr is a directory in the / file system.)

### 3.21.3 Why does the lsof exit code report it didn't find open files when some files were listed?

Sometimes lsof will list some open files, yet return a non-zero exit code, suggesting it hasn't found all the specified files.

The first thing you should do when you suspect lsof is incorrect is to repeat the request, adding the -V option. In the resulting report you may find that your file system specification really wasn't a file system specification,

just a file specification.

Finally, if you specify two files or two file systems twice, lsof will credit all matches to the first of the two and believe that there were no matches for the second. It's possible to specify a single file system twice with different path names by using both its mounted directory path name and mounted-one device name.

```
$ lsof +f -V spcuna:/sysprog /sysprog
COMMAND PID USER  FD  TYPE DEVICE SIZE/OFF INODE NAME
ksh    11092  abe  cwd  VDIR 39,0,1  1536 226562 /sysprog
(spcuna:/sysprog)
...
lsof: no file system use located: spcuna:/sysprog
```

All matches were credited to /sysprog; none to spcuna:/sysprog.

#### 3.21.4 Why won't lsof find all the open files in a directory?

When you give lsof a simple directory path name argument (not a file system mounted-on name), you are asking it to search for processes that have the directory open as a file, or as a process-specific directory -- e.g., root or current working directory.

If you want to list instances of open files inside the directory, you need to specify the individual path names of those files, or use the lsof +D and +d options.

See the answer to the question "Why are the +D and +d options so slow?" before you use +D or +d casually.

See the answer to the question "Why do the +D and +d options produce warning messages?" for an explanation of some process authority limitations of +D and +d.

#### 3.21.5 Why are the +D and +d options so slow?

The +D and +d options cause lsof to build a path name search list for a specified directory. +D causes lsof to descend the directory to its furthest subdirectory, while +d restricts it to the top level. In both cases, the specified directory itself is included in the search list. In both symbolic links are ignored.



Building such a search list can take considerable time, especially when the specified directory contains many files and subdirectories -- lsof must call the system readlink() and stat() functions for each file and directory. Storing the search list can cause lsof to use more than its normal amount of dynamic memory -- each file recorded in the search list consumes dynamic memory for its path name, characteristics, and search linkages. Using the list means lsof must search it for every open file in the system.

Building the search list for a directory specified on some file systems can be slow -- e.g., for an NFS directory with many files. Some file systems have special logging features that can introduce additional delays to the building of the search list -- e.g., NFS logging, or logging on a Solaris UFS file system. The bottom line is that slow search list construction may not be so much an lsof problem as a file system problem. (Hint: if you're using Solaris UFS logging, consider specifying the "logging,noatime" option pair to reduce the number of atime writes to the UFS logging queue and disk.)

A somewhat risky way to speed up lsof's building of the search list is to use lsof's "-O" option. It forces lsof to do all system calls needed to build the search list directly, rather than in a child process. While direct system calls are much faster, they can block in the kernel -- e.g., when an NFS server stops responding -- stopping lsof until the kernel operation unblocks.

As an example of the load +D can impose, consider that an `lsof +D ^` on a lightly loaded NeXT '040 cube with a 1GB root file system disk took 4+ minutes of real time. It also generated several hundred error messages about files and directories the lsof process didn't have permission to access with stat(2).

The bottom line is that +D and +d should be used cautiously. +D is more costly than +d for deeply nested directory trees, because of the full directory descent it causes. So use +d where possible. And you might need to consider the performance of the file system that holds the directory you name with +d or +D.

In view of these warnings, when is it appropriate to use +D or +d? Probably the most appropriate time is when you

would specify the directory's contents to `ls` with a shell globbing construct -- e.g., `ls *`. If that's what you need to do, `ls +d .` is probably more efficient than having the shell produce a directory list, form it into an argument vector, and pass the vector to `ls` for it to unravel.

See the answer to the question "Why do the `+D` and `+d` options produce warning messages?" for an explanation of some process authority limitations of `+D` and `+d`.

### 3.21.6 Why do the `+D` and `+d` options produce warning messages?

`+D` and `+d` option processing is limited by the authority of the `ls` process -- i.e., `ls` can only examine (with `lstat(2)` and `stat(2)`) files the owner of the process can access.

If the ownership, group membership, or permissions of the specified directory, file within it, or directory within it prevents the owner of the `ls` process from using `lstat(2)` or `stat(2)` on it, `ls` will issue a warning message, naming the path and giving the system's (`lstat(2)`'s or `stat(2)`'s) reason (`errno` explanation text) for refusing access.

As an example, assume user `abc` has a subdirectory in `/tmp`, owned by `abc` and readable, writable and searchable by only its owner. If user `def` asks `ls` to search for all `/tmp` references with `+D` or `+d`, `ls` will be unable to `lstat(2)` or `stat(2)` anything in `abc`'s private subdirectory, and will issue an appropriate warning.

`ls` warnings can usually be suppressed with the `-w` option. However, using `-w` with `+D` or `+d` means that there will be no indication why `ls` couldn't find an open reference to a restricted directory or something contained in it.

Hint: if you need to use `+D` or `+d` and avoid authority warnings, and if you have super-user power, `su` and use `ls` with `+D` or `+d` as root.

### 3.22 Why can't my C compiler find the `rpcent` structure definition?

When you try to compile `ls` your compiler may complain that the `rpcent` structure is undefined. The complaints may look like this:

```
>print.c: In function `fill_portmap':
>print.c:213: dereferencing pointer to incomplete type
>...
```

The most likely cause is that someone has allowed a BIND installation to update /usr/include/netdb.h (or perhaps /usr/include/rpc/netdb.h), removing the rpercent structure definition that lsof expects to find there.

Only Solaris has an automatic work-around. (See dlsof.h in dialects/sun.). The Solaris work-around succeeds because there is another header file, <rpc/rpercent.h>, with the rpercent structure definition, and there is a Solaris C pre-processor test that can tell when the BIND <netdb.h> is in place and hence <rpc/rpercent.h> must be included.

Doubtlessly there are similar work-arounds possible in other UNIX dialects whose header files have been "touched" by BIND, but in general I recommend restoration of the vendor's <netdb.h> and any other header files BIND might have replaced. (I think BIND replaces <resolv.h>, <sys/bitypes.h>, <sys/cdefs.h> -- and maybe others.)

### 3.23 Why doesn't lsof report fully on file "foo" on UNIX dialect "bar?"

Lsof sometimes won't report much information on a given file, or may even report an error message in its NAME column. That's usually because the file is of a special type -- e.g., in a file system specific to the UNIX dialect -- and I haven't used a system where the file appeared during my testing.

If you encounter such a situation, send me e-mail at <abe@purdue.edu> and we may be able to devise an addition to lsof that will report on the file in question. Please follow the reporting guidelines in the "How do I report an lsof bug?" section of this FAQ. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

### 3.24 Why do I get a complaint when I execute lsof that some library file can't be found?

On systems where the LIBPATH (or the equivalent) environment

variable is used to record the library search path in executable files when they are built, an incorrect value may make it impossible for the system to find the shared libraries needed to load lsof for execution.

This may be particularly true on systems like AIX >= 4.1.4, where the lsof

Makefile takes the precautionary step of using the `-bnolibpath` loader flag to insure that the path to the private static lsof library is not recorded in the lsof binary. Should `LIBPATH` be invalid when lsof is built, it will be recorded in the lsof binary as the default library path search order and lead to an inability to find libraries when lsof is executed.

So, if you get missing library complaints when you try to execute lsof, check `LIBPATH`, or whatever environment variable is used on your system to define library search order in executable files. Use the tools at your disposal to look at the library paths recorded in the lsof binary -- e.g., `chatr` on HP-UX, `dump` on AIX, `ldd` on Solaris.

Make sure, too, that when the correct library search path has been recorded in the executable file, the required library files exist at one or more of the search paths.

### 3.25 Why does lsof complain it can't open files?

When lsof begins execution, unless it has been asked to report only help or version information, typically it will attempt to access kernel memory and symbol files -- e.g., `/unix`, `/dev/kmem`. Even though lsof needs only permission to open these files for reading, read access to them might be restricted by ownerships and permission modes.

So the first step to diagnosing lsof problems with opening files is to use `ls(1)` to examine the ownerships and permission modes of the files that lsof wants to open. You may find that lsof needs to be installed with some type of special ownership or permission modes to enable it to open the necessary files for reading. See the "Installing lsof" section of `00README` for more information.

### 3.26 Why does lsof warn "compiled for x ... y; this is z."?

Unless warnings are suppressed (with `-w`) or the kernel

identity check symbol (HASKERNIDCK) definition has been deleted, all but one lsof dialect version (exception: /proc-based Linux lsof) compare the identity of the running kernel to that of the one for which lsof was constructed. If the identities don't match, lsof issues a warning like this:

```
lsof: WARNING: compiled for Solaris release 5.7; this is 5.6.
```

Two kernel identity differences can generate this warning -- the version number and the release number.

Build and running identity differences are usually significant, because they usually indicate kernels whose structures are different -- kernel structures commonly change at dialect version releases. Since lsof reads data from the kernel in the form of structures, it is sensitive to changes in them. The general rule is that an lsof compiled for one UNIX dialect version will not work correctly when run on a different version.

There are three work-arounds: 1) use `-w` to suppress the warning -- and risk missing other warnings; 2) permanently disable the identity check by deleting the definition of HASKERNIDCK in the dialect's `machine.h` header file -- with the same risk; or 3) rebuild lsof on the system where it is to be run. (Deleting HASKERNIDCK can be done with the `Customize` script or by editing `machine.h`.)

Generally checking kernel identity is a quick operation for lsof. However, it is potentially slow under AIX, where lsof must run `/usr/bin/oslevel`. To speed up lsof, use `-w` to suppress the `/usr/bin/oslevel` test. See "Why does AIX lsof start so slowly?" for more information.

### 3.27 How can I disable the kernel identity check?

The kernel identity check is controlled by the HASKERNIDCK definition. When it is defined, most dialects (exception: /proc-based Linux lsof) will compare the build-time kernel identity with the run-time one.

To disable the kernel identity check, disable the HASKERNIDCK definition in the dialect's `machine.h` header file. The `Customize` script can be used to do that in its section about the kernel identity check.

Caution: while disabling the kernel identity check may result in smaller lsof startup overhead, it comes with the risk of executing an lsof that may produce warning messages, error messages, incorrect output, or no output at all.

### 3.28 Why don't ps(1) and lsof agree on the owner of a process?

Generally the user ID lsof reports in its USER column is the process effective user ID, as found in the process structure. Sometimes that may not agree with what ps(1) reports for the same process.

There are sundry reasons for the difference. Sometimes ps(1) uses a different source for process information, e.g., the /proc file system or the psinfo structure. Sometimes the kernel is lax or confused (e.g., Solaris 2.5.1) about what ID to report as the effective user ID. Sometimes the system carries only one user ID in its process structure (some BSD derivatives), leaving lsof no choice.

The differences between lsof and ps(1) user identifications should be small and normally it will be apparent that the confusion is over a process whose application has changed to an effective user ID different from the real one.

### 3.29 Why doesn't lsof find an open socket file whose connection state is past CLOSE\_WAIT?

TCP/IP connections in states past CLOSE\_WAIT -- e.g., FIN\_WAIT\_1, CLOSING, LAST\_ACK, FIN\_WAIT\_2, and TIME\_WAIT -- don't always have open files associated with them. When they don't, lsof can't identify them. When the connection state advances from CLOSE\_WAIT, sometimes the open file associated with the connection is deleted.

### 3.30 Why don't machine.h definitions work when the surrounding comments are removed?

The machine.h header files in dialect subdirectories have some commented-out definitions like:

```
/* #define HASSYSDC "/your/choice/of/path */
```

You can't simply remove the comments and expect the definition to work. That's intended to make you think about what

value you are assigning to the symbol. The assigned value might have a system-specific convention. HASSYSDC, for example, might be `/var/db/lsof.dc` for FreeBSD, but it might be `/var/adm/lsof.dc` for Solaris.

Symbols defined in the `lsof` documentation are described in `00PORTING`, other `machine.h` comments, and other `lsof` documentation files. HASSYSDC, for example, is discussed in `00DCACHE`. When comments and documentation don't suffice, consult the source code for hints on how the symbol is used.

3.31 What do "can't read inpcb at 0x...", "no protocol control block", "no PCB, CANTSENDMORE, CANTRCVMORE", etc. mean?

Sometimes `lsof` will report "can't read inpcb at 0x00000000", "no protocol control block", "no PCB, CANTSENDMORE, CANTRCVMORE" or a similar message in the NAME column for open TCP socket files. These messages mean the file's socket structure lacks a pointer to the INternet Protocol Control Block (inpcb) where `lsof` expects to find connection addresses -- local and foreign ports, local and foreign IP addresses. The socket file has probably been submitted to the `shutdown(2)` function for processing.

In some implementations `lsof` issues the "no PCB, CANTSENDMORE, CANTRCVMORE" message, which tries to explain the absence of a protocol control block by showing the socket state settings that have been made by the `shutdown(2)` function.

If a non-zero address follows the "0x" in the "can't read inpcb" message, it means `lsof` couldn't read inpcb contents from the indicated address in kernel memory.

3.32 What do the "unknown file system type" warnings mean?

`lsof` may report a message similar to"

```
unknown file system type, v_op: 0x10472f10
```

in the NAME column for some files.

This means that `lsof` has encountered a vnode for the file whose operation switch address (from `v_op`) references a file system type for which there is no support in `lsof`.

After `lsof` identifies the file system type, it uses

pre-compiled code to locate the file system specific node for the file where lsof finds information like file size, device number, node number, etc.

To get some idea of what the file system type might be, use nm on your kernel symbol file to locate the symbol name that corresponds to the v\_op address -- e.g., on Solaris do:

```
$ nm -x /dev/ksyms | grep 0x10472f10
0x10472f10 ... |file_system_name_vnodeops
```

Where "file\_system\_name" is the clue to the unsupported file system.

Lsof doesn't use the v\_op address to identify file system types on all dialects. Sometimes it uses an index number it finds in the vnode. It will translate that symbol to a short name in the warning message -- e.g., "nfs3" -- if possible.

### 3.33 Installation

#### 3.33.1 How do I install lsof?

There is no "standard" way to install lsof. Too much depends on local conditions for me to be able to provide working install rules in the lsof make files. (The skeleton install rules you will find just give "hints.") See the "Installing lsof" section of 00README for a fuller explanation.

To install lsof you will need to consider these questions:

- \* Who should be able to use lsof? (See HASSECURITY and HASNOSOCKSECURITY in the "Security" section of 00README.)
- \* Where should lsof be installed? This is a decision mostly dictated by local conditions. Somewhere in /usr/local -- etc/ or sbin/ -- is a common choice.
- \* What permissions should I give the lsof executable? The answer to this varies by dialect. The make files have install rules that give hints. The "Installing lsof" section of 00README gives information, too.
- \* What if I want to install lsof in a shared file system



for machines that require different lsof configurations?  
See the next question and answer, "How do I install a common lsof when I have machines that need differently constructed lsof binaries?"

### 3.33.2 How do I install a common lsof when I have machines that need differently constructed lsof binaries?

A dilemma that faces some system administrators when they install lsof in a shared file system -- e.g., NFS -- is that they must have different lsof executables for different systems.

The answer is to build an lsof wrapper script that is executed in place of lsof. The script can use system commands to determine which lsof binary should be executed.

Consider this example. You have HP-UX machines with 32 and 64 bit kernels that share the /usr/local/sbin directory where you want to install lsof. Consequently, on each system you must use a different lsof executable, built for the system's bit size. (That's because lsof reads kernel structures, sized by the kernel's bit size.)

One answer is to install three things in /usr/local/sbin:  
1) a 32 bit lsof as lsof32; 2) a 64 bit lsof as lsof64;  
and 3) an lsof script. The script might look like this one, based on work by Amir J. Katz:

```
#!/bin/sh
x=`/usr/bin/getconf KERNEL_BITS` # returns 32 or 64
if /usr/bin/test "X$x" = "X32"
then
  lsof32 $*
else
  if /usr/bin/test "X$x" = "X64"
  then
    lsof64 $*
  else
    echo "Can't determine which lsof executable to use;"
    echo
    "getconf KERNEL_BITS says: $x"
    exit 1
  fi
fi
```

Solaris users should consult "How do I install lsof for

Solaris 7, 8 or 9?" for information on a similar trick using the Solaris isaexec command.

Users of other dialects might be able to use a command like `uname(1)` that can identify a distinguishing feature of the system to be incorporated in pre-installed lsof executable names. For example, use ``uname -r`` and install binaries with suffixes that match ``uname -r`` output.

### 3.34 Why do lsof 4.53 and above reject device cache files built by earlier lsof revisions?

When lsof revisions 4.53 run and encounter a device cache file built by an earlier revision, it will reject the file and build a new one. The rejection will be advertised with these messages:

```
lsof: WARNING: no /dev device in <name>: 2 sections
...
lsof: WARNING: created device cache file: <name>
```

This happens because the header line of the device cache file was changed at revision 4.53 to contain the number of the device on which the device directory resides. The old device cache file header line -- the "2 sections" line in the above warning message, now reads "2 sections, dev=600".

This is not a serious problem, since lsof automatically rebuilds the device cache file with the correct header line.

### 3.35 What do "like block special" and "like character special" mean in the NAME column?

When lsof comes across an open block or character file whose device, raw device and inode place it somewhere other than /dev (or /devices), lsof doesn't report the /dev (or /devices) name in the NAME column. Instead lsof reports the file system name and device or path name in the NAME column and parenthetically adds "like block special <path>" or "like character special <path>".

The value for <path> will point to a block or character device in /dev (or /devices) whose raw device number matches that of the open file being reported, but whose device number or node

number (or both) don't match.

Such an open file is connected to a device node that has been created in a directory other than /dev (or /devices.) See `mknod(8)` for information on how such nodes are created. (Generally one needs root power to create device nodes with `mknod`.)

### 3.36 Why does an `lsof` make fail because of undefined symbols?

When `lsof` is compiled via the `make` step and the final load step fails because of missing symbols, the problem may not be `lsof`. The problem may be that `ld`, called by the compiler as part of the `make` step, can't find some library that `lsof` needs.

First check the last compiler line of the make operation -- e.g., the last line with `cc` or `gcc` in it before the undefined symbol report -- for loader arguments, i.e., ones beginning with `-l`. Except for `-llsof` the rest name system libraries. (`-L./lib` precedes `-llsof` to tell the loader its location.)

Check that all the named system libraries exist. Look in `/lib` and `/usr/lib` as a start, but that may not be the only place system libraries live. Consult your dialect's documentation, e.g., the compiler and loader man pages, for other possible locations.

If some system library doesn't exist, that may mean it was never installed or was removed. You'll have to re-install the missing library.

You may find that all the system libraries `lsof` uses exist. Your next step might be to use `nm` and `grep` to see if any of them contain the undefined symbols.

```
$ nm library | grep symbol
```

If the undefined symbol exists in some library named by the `lsof` make step, then you might have a problem with some environment variable that controls the load step. The most common is `LD_LIBRARY_PATH`. It may have a setting that causes `ld` to ignore a directory containing a library `lsof` names. If this is the case, try unsetting `LD_LIBRARY_PATH` in the environment of the `ld` process -- e.g., do:

```
$ unset LD_LIBRARY_PATH
```

or

```
% unsetenv LD_LIBRARY_PATH
```

Consult your

ld man page for other environment variables

that might affect library searching -- e.g., LIBPATH, LPATH, SHLIB\_PATH, etc.

If the undefined function doesn't exist in any libraries lsof names, check other libraries. See if the function has a man page that names its library. If the latter is true, please let me know, because that is an lsof problem I need to fix.

If none of these solutions work for you, send me some documentation via e-mail at <abe@purdue.edu>. Include `uname -a` output, the output of the lsof `Configure ...` and `make` steps, and the contents of the environment in force when the `make` step was executed -- e.g., `env` or `printenv` output. If you've located the libraries lsof names, send me that information, too. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

### 3.37 Command Regular Expressions (REs)

#### 3.37.1 What are basic and extended regular expressions?

Lsof's ``-c" option allows the specification of regular expressions (REs), enclosed in two slash (/) characters and followed by these modifiers:

- b the RE is a basic RE.
- i ignore case.
- x the RE is an extended RE (the default).

Note: the characters of the regular expression may need to be quoted to prevent their expansion by the shell.

Example: this RE is an extended RE that matches exactly four characters, whose third may be an upper ('O') or lower case ('o') oh:

```
-c /^..o.$/i
```

For simplicity's sake, an RE that is acceptable to egrep(1) is usually called an extended RE.

REs suitable for the old line editor, `ed(1)`, are often called basic REs (and sometimes also called obsolete).

These are some ways basic REs usually differ from extended REs. (There are other differences.)

\* `\`, `+`, `?`, `{`, and `}` are ordinary characters.

\* `^` is an ordinary character except at the beginning of the RE.

\* `$` is an ordinary character except at the end of the RE.

\* `*` is an ordinary character if it appears at the beginning of the RE.

For more information on REs and the distinction between basic and extended REs, consult your dialect's man pages for `ed(1)`, `egrep(1)`, `sed(1)`, and possibly `regex(5)` or `regex(7)`.

### 3.37.2 Why can't I put a slash in a command regular expression?

Since a UNIX command name is the last part of a path to the command's executable, the `ls` command regular expression (RE) syntax uses slash (`/`) to mark the beginning and end of an RE. Slash may not appear in the RE and the `\` back-slash escape is ineffective for "hiding" it.

More likely than not, if you try to put a slash in an `ls` command RE, you'll get this response:

```
$ ls -s././ ...  
ls: invalid regexp modifier: /
```

`ls` is complaining the the first character it found after the second slash isn't an `ls` command RE modifier -- `'b'`, `'i'`, or `'x'`.

### 3.37.3 Why does `ls` say my command regular expression wasn't found?

When you use both forms of `ls`'s `-c` option -- `ls -c <command>` and `ls -c /RE/[m]` -- and ask that `ls` do a verbose search (`ls -V`), you may be surprised that

lsf will say that the regular expression wasn't found.

This can happen if the ``-c <command>" form matches first, because then the ``-c/RE/[m]" test will never have been applied. For example:

```
$ ./lsf -clsof -c/^..o.$/ -V -adcwd
COMMAND PID USER  FD  TYPE DEVICE SIZE/OFF NODE NAME
lsf    7850  abe  cwd  VDIR   6,0  2048 96442 / (/dev/sd0a)
lsf: no command found for regex: ^..o.$
```

The ``-clsof" option matched first, so the ``-c/^..o.\$/ option wasn't tested.

### 3.38 Why doesn't lsf report on shared memory segments?

Lsf reports on shared memory segments only if they're associated with an open file. That's consistent with lsf's mission -- to List Open Files. Shared memory segments with no file associations aren't open files.

That's not to say that a report on shared memory segments and their associated processes wouldn't be useful. But it calls for a new tool, not more baggage for lsf.

### 3.39 Why does lsf report two instances of itself?

When you ask lsf to report all open files and it has permission to do so, you may see two lsf processes in the output. The processes are connected via pipes -- e.g., here's an HP-UX 11 example.

```
COMMAND  PID USER  FD  TYPE  DEVICE ...
...
lsf    29450  abe   7w  PIPE 0x48732408 ...
lsf    29450  abe   8r  PIPE 0x48970808 ...
...
lsf    29451  abe   6r  PIPE 0x48732408 ...
lsf    29451  abe   9w  PIPE 0x48970808 ...
```

The first process will usually be the lsf you initiated; the second, an lsf child process that is used to isolate its parent process from kernel functions that can block -- e.g., readlink() or stat().

Information to and from the kernel functions is exchanged via the two pipes. When the parent process detects that

the child process has become blocked, it attempts to kill the child. Depending on the UNIX dialect that may succeed or fail, but the parent won't be blocked in any event.

See the "BLOCKS AND TIMEOUTS" and "AVOIDING KERNEL BLOCKS" sections of the lsof man page for more information on why the child process is used and how you can specify lsof options to avoid it. (Caution: that may be risky.)

### 3.40 Why does lsof report '\n' in device cache file error messages?

Lsof revisions prior to 4.58 may report '\n' in error messages it delivers about problems in the device cache file -- e.g.,

```
lsof: WARNING: no ...: 4 sections\n
```

That's deliberately done to show the exact contents of the device cache file line about which lsof is complaining, including its terminating NL (New Line) '\n' character. In the above example the line in the device cache file causing the lsof complaint contains "4 sections" and ends with a '\n'.

At revision 4.58 and above, device cache error messages like the one in the above example have been changed to read:

```
lsof: WARNING: no ...: line "4 sections"
```

The terminal '\n' is no longer reported, the line contents are enclosed in double quote marks (""), and the word "line" has been added as a prefix to denote that what follows is a line from the device cache file.

### 3.41 Kernel Symbol and Address Problems

#### 3.41.1 What does "lsof: WARNING: name cache hash size length error: 0" mean?

When run on some systems, lsof may issue this warning:

```
lsof: WARNING: name cache hash size length error: 0
```

That is an example from a FreeBSD system where lsof reads the kernel's `_nchash` variable and finds its value is zero.

Similar warnings include:

WARNING: kernel name cache size:

WARNING: can't read kernel's name cache:

WARNING: no name cache address

WARNING: name cache hash size length error:

WARNING: unusable name cache size:

These warnings are issued when lsof is attempting to read the kernel's name cache information. They are usually the result

of a mis-match between the addresses for kernel symbols lsof gets via nlist(2) and the addresses in use by the kernel.

lsof usually gets kernel symbol addresses from what it believes to be the kernel boot file. In FreeBSD, for example, that's the path returned by getbootfile(3), usually /kernel. The boot file can have other names in other UNIX dialects -- /unix, /vmunix, /bsd, /netbsd, /mach, /stand/vmunix, etc.

lsof will get incorrect (mismatched) addresses from the boot file if it has been replaced by a newer one which hasn't yet been booted -- e.g., if this is done in FreeBSD:

```
# mv /kernel /kernel.OLD
# mv /kernel.NEW /kernel
```

Until the FreeBSD system is rebooted, the booted kernel is /kernel.OLD, but getbootfile() says it is /kernel. If symbol addresses important to lsof in /kernel.OLD and /kernel don't match, the lsof WARNING messages result.

#### 3.41.2 Why does lsof produce "garbage" output?

Kernel name cache warnings may not be the only sign that lsof is using incorrect symbol addresses to read kernel values. If there's no reasonable test lsof can make on what it reads from the kernel, it may issue other warnings or even report nonsensical results.

The warnings may appear on STDERR, such as:

```
lsof: can't read proc table info
```



Or the warnings may appear in the NAME column as messages saying lsof can't read or interpret some kernel structure -- e.g.,

```
... NAME
... can't read file struct from 0x12345
```

One possible work-around is to point lsof's kernel symbol address gathering at the proper boot file. That can be done with lsof's -k option -- e.g.,

```
$ lsof -k /kernel.OLD
```

The best work-around is to make sure the standard boot file is properly sited -- e.g., if you've moved a new /kernel in place, boot it.

3.42 Why does lsof report open files when run as super user that it doesn't report when run with lesser privileges?

The most likely cause is that the HASSECURITY option was selected when the lsof executable was built.

If HASSECURITY is defined when lsof is built, and lsof is run with the privileges of a non-ROOT user, it will only list open files belonging to the user. The same lsof executable, when run with root user privileges, will list all open files.

However, if HASSECURITY and HASNOSOCKSECURITY are both defined when lsof is built, lsof will list open files belonging to the user and will also list anyone else's open socket files, provided their listing is selected with the "-i" option.

So first ask yourself if the process whose open files lsof won't list belong to a user other than the one under which you're running lsof, and are not open socket files. If either is true, use lsof's help (-h or -?) option and look for a line near the bottom of the help panel that says:

```
"... can list all files..."
```

If the leading "..." says "Only root" then HASSECURITY was defined when lsof was built. If the trailing "..." says "...", but anyone can list

socket files" then HASNOSOCKSECURITY was also defined.

Should you want an lsof not built with HASSECURITY defined, rerun the lsof Configure script. If you let Configure do customization, make sure you answer 'n' when it asks if you want to enable HASSECURITY and HASNOSOCKSECURITY. If you don't need to do customization, you can rebuild lsof with the "-n" option to Configure. Here's an example of such a rebuild sequence:

```
$ Configure -clean
$ Configure -n <dialect-abbreviation>
$ make
```

More information on the HASSECURITY and HASNOSOCKSECURITY options may be found in the "Security" section of the README file of the lsof distribution.

### 3.43 Test Suite Problems

#### 3.43.1 Errors all tests can report:

##### 3.43.1.1 Why do tests complain "ERROR!!! can't execute ../lsof"?

All tests in the test suite expect an executable lsof file to exist in the tests parent directory, ../lsof.

If there's none there, the tests/Makefile has a rule to make it, but there are probably circumstances where that rule may fail.

The work-around is to re-Configure and re-make lsof, then run the test suite.

##### 3.43.1.2 Why do tests complain "ERROR!!! can't find ..." a file?

Many tests create (or use from a supplied environment variable path) a test file and use lsof to find it. When lsof can't find the file, the tests report the error with messages of the form:

```
ERROR!!! can't find ... : <some file path>
or
ERROR!!! lsof couldn't find ...
```

These type of error messages mean that the lsof field output

delivered to the test didn't contain a file that the test could identify as the one it intended lsof to find. It might also mean that the process information -- command name, PID or parent PID -- didn't match what the test expected.

This could imply a bug in the test or a bug in lsof. Try using lsof to find a known file that is open. For example, while in the tests sub-directory, do this:

```
$ sleep 30 < Makefile
$ ../lsof Makefile
```

If lsof doesn't report that Makefile is open, then the fault may be with lsof. If lsof reports the file is open, search further in the test code for the failure cause.

#### 3.43.1.3 Why do some tests fail to compile?

If a test suite program fails to compile, it may be because I've never had an opportunity to compile the test on the particular UNIX version you are using.

See Appendix B in OOTEST for a list of the UNIX dialects where the test suite has been validated.

#### 3.43.1.4 Why do some tests always fail?

There are several tests in the optional group that have conflicting or special requirements:

LTbigf needs a dialect and file system that support large files.

LTlock won't work if the tests/ sub-directory is on an NFS file system.

LTnfs won't work if the tests/ sub-directory is not on an NFS file system.

So for two tests in particular, LTlock and LTnfs, one will generally fail.

Some failing tests can be run successfully by supplying to them a path to the appropriate type of file system with the -p option.

### 3.43.1.5 Why does the test suite say it hasn't been validated on my dialect?

When you use the default rule of the test suite's Makefile, it may issue this complaint:

```
$ cd tests
$ make
!!!WARNING!!!
```

This dialect or its particular version may not have been validated with the lsof test suite. Consequently some tests may fail or may not even compile.

```
!!!WARNING!!!
```

You are then given the opportunity to answer 'y' to have the test suite operation continue.

This message means that the tests/TestDB file in the tests sub-directory doesn't show that the test suite has been run with the combination of compiler flags found in tests/config.cflags. The tests might not run; they may encounter compiler failures.

See 00TEST for more information on the UNIX dialects where the test suite has been validated and on the workings of TestDB and its supporting scripts.

When the tests/Makefile "auto" rule is used, the message is more terse and the condition is fatal.

This suite has not been validated on:

```
<dialect_description>
```

No opportunity to continue is offered.

The tests/Makefile "silent" rule will skip checking for the validation footprint.

### 3.43.1.6 Why do the tests complain they can't stat() or open() /dev/mem or /dev/kmem?

When the tests detect that lsof for the dialect reads its information from kernel memory (i.e., the LT\_KMEM definition

is present in tests/config.cflags), and when the lsof executable path is ../lsof, the tests make sure they can stat() and open() for read access the relevant kernel memory devices, /dev/kmem and possibly /dev/mem.

If those stat() or open() operations fail, the tests issue an error message and quit. The message explains why the system rejected the operation in terms of system "errno" symbols and messages. More often than not the explanation will be that the process lacks permission to access the indicated device node.

One work-around is to give the lsof executable being tested the necessary permission -- e.g., via chgrp, chmod, etc. -- and set its path in the LT\_LSOF\_PATH environment variable. (See 00TEST.)

Another work-around is to make sure the process that runs the tests has the necessary permissions -- e.g., run it as root, or enable the process login to access the resources. For example, I can run the tests on my personal work-station because /dev/kmem and /dev/mem are readable by the "kmem" group and my login is in that group.

### 3.43.2 LTbigf test issues

#### 3.43.2.1 Why does the LTbigf test say that the dialect doesn't support large files?

Large file support is defined dialect by dialect in the lsof source files and Configure script. If large file support isn't defined there, it isn't defined in the LTbigf test.

If you think that's wrong for a particular dialect, contact me via e-mail at <abe@purdue.edu>. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

#### 3.43.2.2 Why does LTbigf complain about operations on its config.LTbigf\* file?

The LTbigf must be able to write a large file test (size > 32 bits) and seek within it and the process file ulimit size must permit the operation. If the default location

for the test file, tests/, isn't on a file system enabled for large file operations or if the process ulimit file block size is too small, lsof will get file operation errors, particularly when seeking

There may be a work-around. Specify the path to a file LTbigf can write in a file system enabled for large file operations a the -poption. Make sure that the ulimit file block size permits writing a large file. For example, presuming /scratch23 is large-file-enabled, and presuming you have permission to raise the ulimit file block size, this shell commands will allow the LTbigf test to run on AIX:

```
$ ./LTbigf -p /scratch23/abe/bigfile
```

(Note: syntax for the ulimit command varies by dialect and by shell. Discovering the proper variant is left to the reader.)

More information on this subject can be found in the LTbigf description in the 00TEST file. Of course, the LTbigf.c source file in tests/ is the ultimate source of information,

#### 3.43.2.3 Why does LTbigf warn that lsof doesn't return file offsets?

On some dialects (e.g., Linux) lsof can't report file offsets, because the data access method underlying lsof doesn't provide them. If LTbigf knows that lsof can't report file offsets for the dialect, it issues this warning:

```
LTbigf ... WARNING!!! lsof can't return file offsets
for this dialect, so offset tests have
been disabled.
```

LTbigf then performs the size test and skips the offset tests.

For more information see 00TEST and the "Why doesn't /proc-based lsof report file offsets (positions)?" Q&A of this file.

#### 3.43.3 Why does the LTbasic test complain "ERROR!!! lsof this ..." and "ERROR!!! lsof that ..."?

The LTbasic test program uses lsof to examine a running

lsof process. It looks for the lsof current working directory, executable (if possible), and kernel memory file (if applicable).

Failures to find those things result in the LTbasic error messages. More information on how LTbasic produces the error messages may be found in the LTbasic.c source file.

On HP-UX 11.11 and higher, for example, if the test's current working directory is on a loopback (LOFS) file system, LTbasic won't be able to find the current working directory of the lsof process because of a bug in the HP-UX kernel.

The solution for that HP-UX problem is to install an HP-UX patch. See the answer to the "Why doesn't PSTAT-based lsof report a CWD that is on a loopback (LOFS) file system?" question for more information on the patch.

#### 3.43.4 NFS test issues

##### 3.43.4.1 Why does the LTnfs test complain "couldn't find NFS file ..."?

The LTnfs test must work with an NFS test file.

After it opens the file it asks lsof to find it on an NFS file system. If the file isn't on an NFS file system, lsof won't find it, and the NFS test script complains and fails.

The work-around is to use -p option to supply a path to a regular NFS file (not a directory) that is on an NFS file system that LTnfs can read. Presuming /share/bin/file is such a file and can be opened for reading by the LTnfs test, this sample shell command could be used to run the LTnfs test successfully:

```
$ ./LTnfs -p /share/bin/file
```

(If the NFS file system is enabled for large files, the NFS test will produce the error message described in the following Q&A.)

#### 3.43.5 LTnlink test issues

##### 3.43.5.1 Why does the LTnlink test complain that its test file is on an NFS file system?

The LTnlink test may complain:

LTnlink ... WARNING!!! test file <path> is NFS mounted.

and then issue an explanation and a hint about using the -p option.

The LTnlist test does this because of the way NFS file links are managed when an NFS file is unlinked and the unlinking process still has the file open. Unlike with files on a local file system, when an NFS file that is still open is unlinked, its link count is not reduced.

The file name is changed to a name of the form .nfsxxxx and the link count is left unchanged until the process holding the file open closes it. That's done by NFS so it can keep proper track of the file on NFS clients and servers.

Since the link count isn't reduced when the LTnlink test program closes the NFS test file it still has open, lsof won't find it for LTnlink with a link count of zero. Consequently, LTnlink disables that test section and issues its warning.

The warning suggests that the unlink test section can be run by giving LTnlink a path to a test file with the -p option. That path must name a file LTnlink can write and unlink. Presuming /scratch23/abe/nlinkfile is on a local file system and the LTnlink test can write to it and unlink it, this sample shell command can be used to run the complete LTnlink test successfully:

```
$ LTnlink -p /scratch23/abe/nlinkfile
```

#### 3.43.5.2 Why does LTnlink delay and report "waiting for link count update: ..."?

On some UNIX dialects and file system combinations the updating of link count after a file has been unlinked can be delayed. Consequently, lsof won't be able to report the updated link count to LTnlink for a while.

When lsof doesn't report the proper link count to LTnlink, it sleeps and repeats the lsof call, using the "waiting for link count update: ..." message as a signal that it is waiting for the expected lsof response. The wait cycle duration is limited to approximately one minute.



### 3.43.5.3 Why does LTnlink fail because of an unlink error?

LTnlink may fail with an error similar to:

```
LTnlink ... ERROR!! unlink(<name>) failed: (Permission denied).
```

That message will be followed by a short explanation.

The error means that the kernel support for the file system on which the file <name> resides does not allow a process to unlink a file while it has the file open. (When LTnlink is run without the "-p path" option, it creates a <name> that begins with "./config.LTnlink" and ends with the LTnlink process ID number.)

An unlink failure of this type runs counter to original UNIX file system behavior, but it has been observed on some file system types, especially on the ZFS file system.

The work-around is to run LTnlink on a file system that allows a process to unlink a file it has open. Usually /tmp has that support. So, try running LTnlink this way:

```
$ ./LTnlink -p /tmp/<name>
```

where <name> is a unique name in /tmp of your choosing. To be safe, create a subdirectory in /tmp, named by your login:

```
$ rm -f /tmp/<login>
$ mkdir /tmp/<login>
$ ./LTnlink -p /tmp/<login>/<name>
```

### 3.43.6 LTdnlc test issues

#### 3.43.6.1 Why won't the LTdnlc test run?

Lsof is unable to access the DNLC cache on AIX, because the kernel symbols for the DNLC aren't exported. Contact IBM to learn why that decision was made.

The LTdnlc test won't work on Apple Darwin because lsof can't obtain reliable DNLC information.

The LTdnlc test may fail on other dialects. Failure causes include: a busy system with a DNLC that is changing rapidly; path name components too large for the DNLC; a file system

-- e.g., NFS, /tmp, loopback -- which doesn't fully participate in the DNLC; or DNLC limitations (Many DNLC implementations will only store path name components if they are 31 characters or less.)

If you suspect the file system doesn't fully participate in kernel DNLC processing, as a work-around rebuild and test lsof on one that does.

#### 3.43.6.2 What does the LTdnlc test mean by "... <path> found: 100.00%"?

Even when it succeeds the LTdnlc test will report:

```
LTdnlc ... /export/home/abe/src/lsof4/tests found: 100.00%
```

This message means that the LTdnlc test asked lsof to find the file at the indicated path five times and lsof found the full path name in the indicated percentage of calls. The LTdnlc test considers it a failure if the percentage falls below 50.0%

#### 3.43.6.3 Why does the DNLC test fail?

The DNLC test may fail when some component of the lsof tests/ sub-directory can't be cached by the kernel DNLC. Some kernels have a limit on the length of individual components (typically) 32.

#### 3.43.7 Why hasn't the test suite been qualified for 64 bit HP-UX 11 when lsof is compiled with gcc?

When I attempted to qualify lsof for HP-UX 11, compiled with gcc 3.0, the LTsock test failed. I traced the failure to a gcc compilation error. Because LTsock is an important test, I didn't feel that the test suite was qualified if it failed.

LTsock compiles and runs correctly on 64 bit HP-UX 11 when compiled with HP's ANSI-C.

#### 3.43.8 LTzsoff test issues

##### 3.43.8.1 Why does LTzsoff warn that lsof doesn't return file offsets?

On some dialects (e.g., Linux) lsof can't report file offsets, because the data access method underlying lsof

doesn't provide them. If LTszoff knows that lsof can't report file offsets for the dialect, it issues this warning:

```
LTszoff ... WARNING!!! lsof can't return file offsets
for this dialect, so offset tests have
been disabled.
```

LTszoff then performs the size test and skips the offset tests.

For more information see 00TEST and the "Why doesn't /proc-based lsof report file offsets (positions)?" Q&A of this file.

### 3.43.9 LTlock test issues

## 3.44 File descriptor list (the ``-d" option) problems

### 3.44.1 Why does lsof reject a ``-d" FD list?

lsof rejects ``-d" FD lists that contain both exclusions and inclusions with messages like:

```
lsof: exclude in an include list: ^1
lsof: include in an exclude list: 2
```

That's because ``-d" FD lists are processed as ORed lists, so it makes no sense for them to contain both exclusions and inclusions.

I.e., if a ``-d" FD list were to contain ``^cwd,1", the ``^cwd" member is useless, because the ``1" member dominates by saying "include only FD 1". That effectively excludes ``cwd" FD.

Note that lists may have multiple members of the same type, exclude or include. They are processed as an ORed set. If an FD isn't excluded by any member of an exclude list, it is selected. If an FD is included by any member of an include list, it is selected.

### 3.44.2 Why are file descriptors other than those in my FD list reported?

The FD list that follows ``-d" excludes or includes file descriptors, but unless the ``-a" (AND) option is specified, the FD list selections are ORed to the other selections.

For example, the following lsof command will cause all file descriptors to be listed for the lsof command, and all but the cwd descriptor for all other commands, probably not what was intended.

```
$ lsof -clsof -d^cwd
```

Hint: use ``-a" -- e.g.,

```
$ lsof -clsof -a -d^cwd
```

3.45 How can I supply device numbers for inaccessible NFS file systems?

When lsof can't get device numbers for inaccessible NFS file systems via stat(2) or lstat(2), it attempts to get them from the mount table's dev=xxx options. Successes are reported with a warning message that indicates the source of the device number and that output might be incomplete as a consequence of the warnings.

Some system mount tables -- e.g., Linux /proc/mounts -- don't have a dev=xxx option. In that case, and provided lsof for the dialect supports them, you can use the +m option to create a mount table supplement file and the "+m m" option to use it.

First check the lsof -h (help) output to see if the +m and "+m m" options are supported. If they are, use +m to create a mount table supplement file when all mounted file systems are accessible. Use "+m m" later to make the supplement available when some mounted file systems might not be available.

Here's an example that creates a mount supplement file in \$HOME/mnt-sup and later makes it available to lsof.

```
$ rm -f $HOME/mnt-sup
$ lsof +m > $HOME/mnt-sup
...
$ lsof +m $HOME/mnt-sup <other lsof options>
```

If lsof has to get the device number from the supplement, it will issue an informative warning message. The warning can be suppressed with lsof's -w option.

Caution! Since the mount table supplement file is static, it

is its supplier's responsibility to update it as file system mounts change.

For more information, consult the lsof man page. The "ALTERNATE DEVICE NUMBERS" section has useful information on how lsof acquires device numbers when stat(2) or lstat(2) fail.

### 3.46 Why won't lsof find open files on over-mounted file systems?

When a file system, /xyz for example, is mounted on the same mount point as another file system, /abc for example, running lsof with an argument of the path of the first file system's mount point -- the over-mounted one, /abc -- probably will not reveal any files open on /abc.

That's because lsof looks for open files on a file system by looking for files with the file system's device number. The two file systems usually have different device numbers and lsof determines the device number search key from the supplied name of the second file system.

A general work-around exists only for Linux. On that UNIX dialect, when you know the over-mounted file system's mount point path, you can ask lsof to report on all open files and grep that output for the path of the over-mounted file system mount point.

### 3.47 What can be done when lsof reports no more space?

Many lsof methods cache information in memory, using the dialects malloc() library function. When malloc() can't allocate the requested amount of memory, lsof exits with warning messages similar to this AIX message:

```
lsof: no more dev-ch space at pid 2257750: 0x82a8e600
```

Lsof then exits immediately and produces no more output.

A possible work-around is to increase the memory foot print of the shell that runs lsof. That is often done with the ulimit(1) shell command.

### 3.48 What if the lsof build encounters ar and ld problems?

The lsof main and library Makefiles use the library archiver,

ar, and the system loader, ld, applications. Improperly located, installed or configured versions of them may cause the lsof build to encounter errors with them.

The application producing the error should identify itself in its error messages.

The first thing to check the path of the application that is being used. Try `which ar` or `which ld` to see if perhaps the PATH used during the build might be causing the wrong archiver or loader to be used.

If the problem is with the use of the wrong archiver, and it's not possible to correct the PATH to it, try using the LSOF\_AR environment variable to specify the path to and arguments for the correct archiver. See 00XCONFIG for more information and note that LSOF\_AR must specify the path to the archive application and the arguments for it, less the terminating library and module name arguments.

If the problem is with the loader, there is no lsof work-around. That's because lsof calls the loader via the C compiler, so the problem must be fixed at the compiler (system) level.

3.49 Why does lsof -i report an open socket file for a process, but lsof -p on that process' ID report nothing?

The lsof in use was probably built with the HASSECURITY and HASNOSOCKSECURITY options and the process in question does not belong to the user of lsof.

The HASSECURITY option limits lsof output to processes owned by the user invoking lsof and the HASNOSOCKSECURITY option weakens that slightly to allow output of open socket file information for all processes.

For example, if process PID 12345 is owned by some user other than the one invoking lsof, and lsof has been compiled with the HASSECURITY and HASNOSOCKSECURITY options, the following lsof command will display the open socket files of process 12345:

```
$ lsof -p 12345 -a -i
```

This security restriction is described in the lsof(8) manual page.

## 4.0 AIX Problems

### 4.1 What is the Stale Segment ID bug and why is -X needed?

Kevin Ruderman reports that he has been informed by IBM that processes using the AIX 3.2.x, 4.1[.12345]], 4.2[.1], and 4.3.x kernel's `readx()` function can cause other AIX processes to hang because of what appears to be file system corruption.

This failure, known as the Stale Segment ID bug, is caused by an error in the AIX kernel's journaled segment memory handler that causes the kernel's `dir_search()` function erroneously to believe directory entries contain zeroes. The process using the `readx()` call need not be doing anything wrong. Usually the system must be under such heavy load that the segment ID being used in the `readx()` call has been freed and then reallocated to another process since it was obtained from kernel memory.

Lsof uses the `readx()` function to access library entry structures, based on the segment ID it finds in the `proc` structure of a process. Since IBM probably will never fix the kernel bug, I've added an AIX-specific option to lsof that controls its use of the `readx()` function.

By default lsof `readx()` use is disabled; specifying the `--X` option enables `readx()` use.

If you want to change the default `readx()` behavior of AIX lsof, change the `HASXOPT`, `HASXOPT_ROOT`, and `HASXOPT_VALUE` definitions in `dialects/aix/machine.h`. You can also use these definitions to enable or disable `readx()` -- consult the comments in `machine.h`. You may want to disable `readx()` use permanently if you plan to make lsof publicly executable.

When `HASXOPT_ROOT` is defined, lsof will restrict use of the `-X` option to processes whose real UID is root; if `HASXOPT_ROOT` isn't defined, any user may specify the `-X` option. The `Customize` script offers the option to change `HASXOPT_ROOT` when `HASXOPT` is defined and `HASXOPT_ROOT` is named in any dialect's `machine.h` header file.

I have never seen lsof cause a problem with its use of

readx(), but I believe there is some chance it could, given the right circumstances.

#### 4.1.1 Stale Segment ID APAR

Here are the details of the Stale Segment ID bug and IBM's response, provided by Kevin Ruderman.

##### AIX V3

APAR=ix49183

user process hangs forever in kernel due to file system corruption

STAT=closed prs TID=tx2527 ISEV=2 SEV=2

(A "closed prs" is one closed with a Permanent ReStriction.)

RCOMP=575603001 aix v3 for rs/6 RREL=r320

##### AIX V4 (internal defect, no apar #)

prefix p

name 175671

abstract KERMP: loop for ever in dir\_search()

##### Problem description:

1. Some user application -- e.g., lsof -- gets the segment ID (SID) for the process private segment of a target process from the process table.
2. The target process exits, deleting the process private segment.
3. The SID is reallocated for use as a persistent segment.
4. The user application runs again and tries to read the user area structure from /dev/mem, using the SID it read from the process table.
5. The loads done by the driver for /dev/mem cause faults in the directory; new blocks are allocated; the size changed; and zero pages created.
6. The next application that looks for a file in the affected directory hangs in the kernel's dir\_search() function because of the zero pages. This occurs because the kernel's dir\_search() function loops through the variable length entries one at a time, moving from one to the next by adding the length of the current entry to its



address to get the address of the next entry. This process should end when the current pointer passes the end of the known directory length.

However, while the directory length has increased, the entry length data has not, so when `dir_search()` reaches the zero pages, it loops forever, adding a length of

zero to the current pointer, never passing the end of the directory length. The application process is hung; it can't be killed or stopped.

IBM closed the problem with a PRS code (Permanent Restriction) under AIX Version 3 and had targeted a fix for AIX 4.2. They have recently (I became aware of it September 10, 1996) cancelled the defect report altogether and have indicated they are not going to fix the defect.

#### 4.2 Gcc Work-around for AIX 4.1x

When gcc is used to compile `lsof` for AIX 4.1x, it doesn't align one element of the user structure correctly. `Xlc` sees the `U_irss` element as a type "long long" and aligns it on an 8 byte boundary. That's because the default mode of `xlc` is `-qlonglong`; when `-qlonglong` is enabled, the `_LONG_LONG` symbol is also defined.

Gcc sees `U_irss` as a two element array of type `long`, because `_LONG_LONG` isn't defined. Hence gcc aligns the `U_irss` element array on a 4 byte boundary, rather than an 8 byte one, making the gcc incantation of the user structure 4 bytes shorter than `xlc`'s.

When the length of gcc's user structure is supplied as argument 4 to the undocumented `getuser()` function of the AIX kernel, `getuser()` rejects it as an incorrect size and returns `EINVAL`.

`Lsof` has a work-around for this problem. It involves a special test in the `Configure` script when the "aixgcc" `Configure` abbreviation is used -- e.g.,

```
$ Configure -n aixgcc
```

The test is to compile a small program with gcc and check the alignment of `U_irss`. If it's not aligned on an 8 byte boundary, the `Configure` script makes a special copy of

<sys/user.h> in ./dialects/aix/aix<AIX\_version> whose U\_irss will align properly, and generates compile time options to use it.

While I have tested this work-around only with 4.1.4, it should work with earlier versions of AIX 4.1. It does not work for AIX 4.2; a different work-around is employed there. (See the next section.)

If you want to use this technique to compile other AIX 4.1x programs with gcc for using getuser(), check the Configure script.

Stuart D. Gathman identified this gcc AIX alignment problem.

#### 4.3 Gcc and AIX 4.2[.1]

Alignment problems with gcc and AIX 4.2[.1] inside the user structure are more severe, because there are some new 64 bit types in AIX that gcc doesn't yet (as of 2.7.x) support. The <sys/user.h> U\_irss element problem, discussed in 4.3 above, doesn't exist in 4.2[.1].

The AIX lsof machine.h header file has a work-around, provided by Henry Grebler, that bypasses gcc alignment problems. Later versions of gcc (e.g., 2.8.x) will probably bypass the problems as well.

#### 4.4 Why won't lsof's Configure allow the use of gcc for AIX below 4.1?

Gcc can't reliably be used to compile lsof for AIX versions below AIX 4.1 because of possible kernel structure element alignment differences between it and xlc.

#### 4.5 What is an AIX SMT file type?

When you run AIX X clients with the DISPLAY environment variable set to ``:0.0" they communicate with the AIX X server via files whose kernel file structure has an undefined type (f\_type == 0xf) -- at least there's no definition for it in <sys/file.h>.

These are Shared Memory Transport (SMT) sockets, an artifact of AIXWindows, designed for more efficient data transfers between the X server and its clients.

Henry Grebler and David J. Wilson alerted me to the existence of these files. Mike Feldman and others helped me identify them as SMT sockets.

The curious reader can find more about SMT sockets in `/usr/lpp/X11/README.SMT`.

#### 4.6 Why does AIX lsof start so slowly?

When AIX lsof starts it compares the running kernel's identity to the one for which it was built, using `/usr/bin/oslevel`. That comparison can sometimes take a long time to complete, depending on the system's maintenance level and how recently it was examined with `oslevel`.

AIX revisions 4.67 and above for AIX 5 and above don't use `oslevel` to determine the kernel identity. They use `uname(2)` instead, and it is much faster.

You can skip the `oslevel` test by suppressing warning messages with lsof's `-w` option. Doing that carries with it the risk of missing other warning messages, however.

You can also disable the kernel identity check by disabling the definition of the `HASKERNIDCK` symbol by editing AIX `machine.h` header file or by using the `Customize` script to disable it.

See the "Why does lsof warn "compiled for x ... y; this is z.?" section for more information.

#### 4.7 Why does exec complain it can't find `libc.a[shr.o]`?

When you try to execute lsof you may get this complaint:

```
exec(): 0509-036 Cannot load program ./lsof because of
the following errors:
0509-022 Cannot load library libc.a[shr.o].
0509-026 System error: A file or directory in
the path name does not exist.
```

This is probably the result of making lsof when the `LIBPATH` environment variable contained a directory path that doesn't contain `libc.a`. You can see what `LIBPATH` contained when lsof was made by using the `dump` application on lsof. For

example, if LIBPATH contained /foo/bar when lsof was made, you will see this (partial) dump output:

```
$ dump -H lsof
...
***Import File Strings***
INDEX PATH          BASE      ...
0   /foo/bar
```

To correct the problem, revisit the lsof source directory and remake lsof this way:

```
$ unset LIBPATH; make (sh or ksh)
or
% unsetenv LIBPATH; make (csh or tcsh)
```

4.8 What does lsof mean when it says, "no PCB, CANTSENDMORE, CANTRCVMORE" in a socket file's NAME column?

When an AIX application calls shutdown(2) on an open socket file, but hasn't called close(2) on the file, the file will remain visible to lsof as an open socket file without any extended protocol information.

Lsof reports that state in the NAME column by saying that there is "no PCB" (Protocol Control Block) for the protocol (e.g., TCP in the NODE column). If the open socket file has the state variables SO\_CANTSENDMORE and SO\_CANTRCVMORE set -- i.e., from the shutdown(2) call -- lsof reports them with the CANTSENDMORE and CANTRCVMORE notes in the NAME column.

4.9 When the -X option is used on AIX 4.3.3, why does lsof disable it, saying "WARNING: user struct mismatch; -X option disabled?"

The -X option causes lsof to read the loader information of the user structure from virtual memory via the readx() system call. It does that with the user structure definition from <sys/user.h> that was compiled into the lsof executable.

On AIX 4.3.3 there are two different user structure definitions in two separate <sys/user.h> header files, distributed at different times by IBM. If lsof was compiled with one and the kernel on which lsof is being run was compiled with the other, lsof normally won't get correct loader information when it calls readx().

In an attempt to compensate for that difference, lsof makes an independent check of the loader information by getting the user structure's open file count via `readx()` and comparing it to the open file count obtained independently via `getprocs()`. When the two counts don't match, lsof tries to read the count (and re-read the loader information) with two offsets, based on observed differences between the two user structures.

When one of the three attempts produces a correct open file count, lsof uses its corresponding offset on subsequent readings of the loader information.

When none of the three attempts produces a correct open file count, lsof issues the `WARNING` message and disables `-X` processing.

To eliminate this problem, obtain an lsof binary that matches the kernel of the AIX 4.3.3 system where you want to run lsof. Compiling lsof on the target system is the preferred way to get a matching binary.

#### 4.10 Why doesn't the `-X` option work on my AIX 5L or 5.[123] system?

If your AIX 5L or 5.[123] system uses the ia64 architecture, lsof needs `setuid-root` permission to be able to do the processing that `-X` requires.

Check the output of ``uname -a`` to determine the architecture type.

The work-around is to give lsof `setuid-root` permission.

#### 4.11 Why doesn't `/usr/bin/oslevel` report the correct AIX version?

The `oslevel` man page says, "The `oslevel` command reports the level of the operating system using a subset of all filesets installed on your system."

You can see which fileset is below the expected level with `oslevel's -l` option. For example, if you believe your system is at AIX level 4.3.3, but `oslevel` reports 4.3.2, use this `oslevel` command to find the filesets below 4.3.3:

```
$ /usr/bin/oslevel -l 4.3.3.0
```

If you don't know what level argument to supply to oslevel's -l option, use oslevel's -q option first.

#### 4.11.1 Why doesn't /usr/bin/oslevel report the correct AIX version on AIX 5.1?

The subset list for oslevel on AIX 5.1 seems to include at least two filesets, xlsmp.msg.en\_US.rte and xlsmp.rte, that do not install from AIX 5.1 media with a 5.1.0.0 level. Hence, oslevel reports 5.0.0.0 instead of the expected 5.1.0.0.

If either xlsmp.msg.en\_US.rte or xlsmp.rte is installed, lsof's Configure script and run-time tests will identify the AIX version incorrectly. The run-time test will issue a complaint message of this form:

```
lsof: WARNING: compiled for AIX version xxx; this is yyy.
```

You can correct the Configure test by pre-defining the oslevel value, setting the correct value in the LSOF\_VSTR environment variable before running the Configure script -- e.g., to pre-define AIX 5.1 when using ksh, do this:

```
$ LSOF_VSTR=5.1.0.0 Configure -n aix
```

You can't affect oslevel output without uninstalling xlsmp.msg.en\_US.rte and xlsmp.rte. If you can't do that, you'll have to put up with the run-time complaint.

#### 4.12 Why does lsof for AIX 5.1 or above Power architecture complain about kernel bit size?

When you run an lsof binary on an AIX 5.1 or above Power system, it might complain:

```
lsof: FATAL: compiled for a 32 bit kernel.
```

```
The bit size of this kernel is 64.
```

or

```
exec: 0509-036 Cannot load program ./lsof because of  
the following errors:
```

```
0509-032 Cannot run a 64-bit program on a 32-bit  
machine.
```

Starting at lsof revision 4.61, lsof binaries for Power architecture systems running AIX 5.1 or above are closely

tied to the kernel bit size. Lsof must do that so it can read and understand kernel structures.

Lsof's Configure script tunes the lsof configuration so that the binary built in the make(1) step is adjusted to the kernel bit size.

An lsof binary knows the bit size for which it was constructed, tests the bit size of the kernel under which it is running, and objects if the two sizes don't match. To see the bit size for which lsof was constructed, run it with its -v option and look for these lines in the output:

```
configuration info: 32 bit kernel  
or  
configuration info: 64 bit kernel
```

(Note: these lines will appear only in -v output for AIX 5.1 and above lsof binaries, built for Power architecture.)

You can see the kernel bit size test method in the aix stanza of the lsof Configure script and in the get\_kernel\_access() function of the lsof ../dialects/aix/dproc.c source file.

There is more information on pre-defining the kernel bit size when building lsof in Configure, 00PORTING, and 00XCONFIG.

The only work-around is to use an lsof binary built to match the running kernel bit size.

#### 4.13 What can't gcc be used to compile lsof on the ia64 architecture for AIX 5 and above?

Gcc can't be used to compile lsof on the ia64 architecture for AIX 5 and above because I haven't had access to a system that has a working gcc compiler. The gcc compiler on my one and only ia64 AIX 5.1 test system, provided by IBM, didn't work at all.

#### 4.14 Why does lsof get a segmentation fault when compiled with gcc for a 64 bit Power architecture AIX 5.1 kernel?

When lsof is configured with the lsof "aixgcc" Configure abbreviation, the resulting lsof executable may cause a segmentation violation when it is run. I've observed this

with gcc version 2.9-aix43-010414-7.

As far as I have been able to tell, the segmentation fault is the result of a gcc compilation, loading, or library error. Watching lsof run with gcc's companion debugger, gdb, shows no error in the lsof source code that might explain the fault.

The only work-around I know is to use the IBM C compiler in place of gcc -- i.e., use the "aix" lsof Configure abbreviation.

#### 4.15 Why does lsof ignore AFS on my AIX system?

The lsof Configure script quits on AIX when AFS is present, the AIX version is greater than 4.3.3.0 or the AFS version is greater than 3.5. That's because I have no test systems available for those AIX and AFS version combinations.

When the lsof Configure script detects an AIX and AFS version combination that is unsupported, it will report:

```
!!!FATAL: Lsof does not support
AFS on this combination of
  AIX and AFS versions. To disable AFS, set the
  value of the AIX_HAS_AFS environment variable to
  "no".
```

The only work-around is to set the AIX\_HAS\_AFS environment variable as explained in the error message:

```
$ AIX_HAS_NSF=no; export AIX_HAS_NSF
$ ./Configure -n aix
```

#### 4.16 Why does lsof report "system paging space is low" and exit?

When AIX paging space runs low, the AIX kernel sends a SIGDANGER signal to processes, warning them that they should reduce their memory usage.

When lsof receives that signal, it issues the following fatal error message and exits:

```
lsof: FATAL: system paging space is low.
```

A possible work-around is to limit the amount of information lsof must cache in its process memory with the "-c", "-g", "-l" and "-p" options.



Also see the answer to the "What can be done when lsof reports no more space?" question.

#### 4.17 Why does lsof have a compilation problem on AIX 5.3 above maintenance level 1?

On some AIX 5.3 systems with maintenance levels 2 and higher installed, lsof 4.77 and below may not compile properly. The compiler complains the snapshotObject structure definition, needed by <j2/j2\_inode.h>, is missing.

That problem is fixed in the 4.78 revision.

### 5.0 Apple Darwin Problems

#### 5.1 What do /dev/kmem-based and libproc-based mean?

Lsof for Apple Darwin currently uses /dev/kmem to read kernel data structures from which it gathers and reports open file information. That version of lsof is called /dev/kmem-based lsof.

At an upcoming release lsof will use a library called libproc to obtain information about open files. That version of lsof will be called libproc-based lsof.

The /dev/kmem-based lsof sources may be found in the kmem subdirectory of the dialects/darwin branch of the lsof source tree. When the supporting version of Apple Darwin is released, the libproc-based lsof sources will be found in .../dialects/darwin/libproc.

#### 5.2 /dev/kmem-based Apple Darwin Questions

##### 5.2.1 Why does Configure ask for a path to the Darwin XNU kernel header files?

When lsof was ported to Apple Darwin by Allan Nathanson at revision 4.53, some kernel header files needed by lsof weren't being exported by the developers. (That's still true at lsof revision 4.76.)

At first a shell script that Allan provided would get the missing header files by checking them out from the CVS

root. Although the script was updated from time to time, eventually the re-organization of Darwin sources has made it impossible to update the script to do an automatic download of the missing header files.

At lsof revision 4.69 and above it is necessary for the Darwin lsof builder to download the Darwin XNU kernel headers before attempting to build lsof. The download may be done via a web browser, starting at this URL:

```
http://www.opensource.apple.com/darwinsource/index.html
```

Once there, select the link to the Mac OS X version that matches the one on the system where lsof is to be built.

Follow that link's "[ Source ]" link. Once there, select the tar.gz link of the xnu\* entry near the bottom of the page. That entry should have a name that matches the xnu\* name shown by `uname -a` -- e.g., if `uname` reports:

```
$ uname -a
... root:xnu/xnu-517.7.21 ...
```

Then the appropriate xnu\* entry is xnu-517.7.21. Clicking its link should lead to an "Apple Open Source" page requesting an Apple ID and password.

Enter them if they're available. If an Apple ID and password are not available, get them by following the instructions on the page -- i.e., follow the `signin.apple.com` link.

Once a valid Apple ID and its password have been entered, the download will begin. Select the saving of the downloaded xnu\*.tar.gz file in an appropriate place on the Mac OS X system.

Once the download completes, install it. Use `gunzip` to decompress the download and `tar` to extract the archive -- e.g.,

```
$ gunzip -c xnu-517.7.21.tar.gz
| tar xf -
```

Remember the absolute path to the extracted archive. That is its installed place. E.g., if the xnu-517.7.21.tar archive was extracted to the lsof builder's home directory, its full installation path will be something like:

~/xnu-517.7.21

Now run the lsof Configure script. When it asks for the path to the installed Darwin XNU kernel header files, supply the path to the gunzip'd and extracted xnu\* archive -- e.g.,  
~/xnu-517.7.21.

The path to the Darwin XNU kernel headers may also be supplied to the Configure script in the DARWIN\_XNUDIR environment variable, eliminating the need to enter it interactively -- e.g.,

```
$ DARWIN_XNUDIR=~/xnu-344.49 ./Configure -n darwin
```

#### 5.2.1.1 Why does Configure complain that Darwin XNU kernel header files are missing?

These are some reasons why the lsof Configure script might claim that Darwin XNU header files are missing:

- \* The wrong path to them was specified.
  
- \* The files and directories in the path are not readable and searchable -- i.e., check the modes and ownerships.
  
- \* The downloaded archive doesn't match the Mac OS X version of the system.

If in doubt, revisit the Darwin XNU kernel header file download instructions in the answer to the question "Why does Configure ask for a path to the Darwin XNU kernel header files?"

If Configure still can't find Darwin XNU kernel header files, contact me via e-mail at <abe@purdue.edu> for help. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

#### 5.2.2 Why doesn't Apple Darwin lsof report text file information?

At the first port of lsof to Apple Darwin, revision 4.53, insufficient information was available -- logic and header files -- to permit the installation of VM space scanning for text files. As of lsof 4.70 it is still not available.

Text file support will be added to Apple Darwin lsof after the necessary information becomes available.

### 5.2.3 Why

doesn't Apple Darwin lsof support IPv6?

At the first port of lsof to Apple Darwin, revision 4.53, Apple Darwin lacked IPv6 support. IPv6 became available in Apple Darwin version 1.5 and support for it was added to lsof then.

### 5.2.4 Why does lsof complain about a mismatch between the release for which lsof was compiled and the booted Mac OS X release?

When lsof is started on the "Gold Master" Darwin release (aka Mac OS X), it complains:

```
lsof: compiled for 1.0 release; this is 1.3.2.
```

This happens because the lsof binary released with Mac OS X was built on a system whose release number (1.0) doesn't match that of the released system -- usually 1.3.x. Lsof makes this check because UNIX dialect OS changes are often accompanied by header file changes that affect lsof.

In this specific case, this error can be ignored. If you don't want to do that, get the lsof distribution and build lsof so its built-on and running-on Mac OS X release numbers match.

### 5.2.5 Why does

lsof for Apple Darwin 8 and higher report "stat(...): ..." in the NAME column?

Lsof for Apple Darwin 8 may report messages like these in the NAME column:

```
stat(/private/var/run/asl_prune): No such file or directory
or
stat(/private/var/db/netinfo/local.nidb/Config): Permission denied
```

Those messages indicate that lsof was unable to collect open file information for the paths enclosed in "stat(...)" with the stat(2) function, because the function encountered the reported error.

A work-around for the "Permission denied" error is to run lsof with elevated privileges -- e.g., when logged on as the super user.

If the stat(2) error message is "No such file or directory", the file probably has been unlinked (removed) and there is no lsof work-around.

#### 5.2.6 What are the limitations of Apple Darwin lsof link count reporting?

Lsof for Apple Darwin cannot report link count information reliably.

For Apple Darwin below 8 link count information is not always available in the kernel node structures available to lsof.

When link count information is available, however, it includes link counts of zero. Thus, using lsof's +L1 option may result in the finding of some files whose link counts are zero.

Lsof can report only some link count information for Apple Darwin 8 and above. Link count information is only available for files where lsof can assemble the full file path and has permission to apply stat(2) to it. (See the answer to the "Why does lsof for Apple Darwin 8 and higher report "stat(...): ..." in the NAME column?" question for more information on stat(2) failures.)

Apple Darwin 8 and above files that have been unlinked and thus have a link count of zero cannot be found by stat(2) -- i.e., stat(2) returns a "No such file or directory" error. As a result lsof never displays link counts of zero and the use of lsof's +L1 option to find them always fails.

#### 5.2.7 Why does Apple Darwin report process group IDs incorrectly?"

The kmem version of lsof for Apple Darwin does not report process group IDs correctly when requested to do so with its ``-g" option. This is a bug that surfaced after the libproc version was released and access to kmem test systems has prevented patching the bug.

If you are using the kmem version and would like a fix for this problem, please send e-mail to me <abe@purdue.edu>. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

### 5.3 Libproc-based Apple Darwin Questions

## 6.0 BSD/OS BSDI Problems

### 6.0.5 Statement of deprecation

As of lsof revision 4.76 support for BSDI BSD/OS has been dropped. The 4.76 distribution of lsof for BSDI BSD/OS may be found on [lsof.itap.purdue.edu](http://lsof.itap.purdue.edu) in `pub/tools/unix/lsof/OLD/src`.

## 7.0 DEC OSF/1, Digital UNIX, and Tru64 UNIX Problems

### 7.1 Why does lsof complain about non-existent /dev/fd entries?

When you run lsof for Digital UNIX 3.2, lsof may complain:

```
lsof: can't lstat /dev/fd/xxx:  
No such file or directory  
lsof: can't lstat /dev/fd/yyy: No such file or directory
```

(Or it may warn about other missing /dev/fd paths.) When you do an `ls /dev/fd` none of the missing paths are listed.

This is caused by a bug in the DEC library function `getdirentries()`. For some reason, when /dev/fd is a file system mount point, `getdirentries()` returns an incorrect size for it to `readdir()`. (Lsof calls `readdir()` in its `ddev.c readdev()` function.) Because of the incorrect size, `readdir()` goes past the end of the /dev/fd directory buffer, encounters random paths and returns them to lsof. Lsof then attempts to `lstat(2)` the random paths, gets error replies from `lstat(2)`, and complains about the paths.

Duncan McEwan discovered this error and has reported it to DEC. Duncan also supplied an alternate `readdir()` function as a work-around. I've incorporated his `readdir()` in `dialects/osf/ddev.c` (as the static `ReadDir()` function) with some slight modifications, and enabled its use when the `USELOCALREADDIR` symbol is defined.

The `Configure` script defines `USELOCALREADDIR` for Digital UNIX version and 3.2. If you don't want to use Duncan's local `readdir()` function, edit the `Makefile` and remove `-DUSELOCALREADDIR` from the `CFGF` string. When DEC releases a corrected `getdirentries()` function, I'll modify the `Configure` script to stop defining `USELOCALREADDIR`.

### 7.2 Why does the Digital UNIX V3.2 ld complain about Ots\* symbols?

When you compile lsof on your Digital UNIX V3.2 system, ld may complain:

```
ld:
Unresolved:
knlist
_OtsRemainder32Unsigned
_OtsDivide64Unsigned
_OtsRemainder64Unsigned
_OtsDivide32Unsigned
_OtsMove
_OtsDivide32
_OtsRemainder32
*** Exit 1
```

Chris Eleveld reports this happens on Digital UNIX V3.2 systems after the Fortran compiler has been installed.

The best work-around seems to be to remove -lml from the CFGL string in the Makefile produced by Configure -- i.e., change:

```
CFGL= -lml
to
CFGL=
```

According to the V3.2 man page for nlist(3), this shouldn't work, but my testing shows that it does. Although I haven't been able to test this second work-around, you might try adding -lots to CFGL, rather than removing -lml -- i.e., change:

```
CFGL= -lml
to
CFGL= -lml -lots
```

WARNING: my testing also shows that the V2.0 nlist(3) man page means what it says when it calls for -lml -- lsof loaded without -ml under V2.0 can't locate the proc (process) table address.

**DON'T REMOVE -lml FROM THE DIGITAL UNIX V2.0 MAKEFILE.**

If you run into this problem, please let me know what problem you encountered and how you solved it.

### 7.3 Why can't lsof locate named pipes (FIFOs) under V3.2?

While lsof for V3.2 can report on named pipes (FIFOs), it can't find them by name. That appears to happen because of the way the V3.2 kernel lstat(2) function reports named pipe device numbers.

The V3.2 kernel reports the device number as 0xffffffff, while the kernel structures for named pipes that lsof examines contain the device number of the file system on which the named pipe resides.

Consequently, lsof can't match the device and inode number pair it receives from applying lstat(2) to the named pipe with any device and inode number pair it finds when scanning kernel structures.

I don't have a work-around. You can, of course, ask for full lsof output and use a post-processing filter (e.g., grep) to locate the named pipe of interest.

This problem doesn't exist under V2.0.

### 7.4 Why does lsof use the wrong configuration header files?

For example, why can't the lsof compilation find cpus.h?

DEC OSF/1, Digital UNIX, and Tru64 UNIX configuration header files describe the hardware and software environment for which your kernel boot file was constructed. For example, /sys/<name>/cpus.h defines the number of CPUs in its NCPUS #define.

Lsof searches for the configuration header file subdirectory in /sys (/usr/sys for Digital UNIX version 4.0 and Tru64 UNIX) by converting the first host name component to capital letters -- e.g., TOMIS is derived from tomis.bio.purdue.edu. If that subdirectory exists, lsof uses header files from it. (Configure reports what subdirectory is being used.)

If Configure doesn't find a host-name derived subdirectory, it prompts you for the entry of a subdirectory name. If you can't find one, quit Configure and run the kernel generation process to create a proper configuration subdirectory. If you don't identify a proper configuration subdirectory and you try to compile lsof, the compiler will complain about missing header files -- e.g., a missing



cpus.h.

Once you have located or generated a proper configuration subdirectory, rerun Configure. If you have generated a configuration subdirectory whose name is derived from the host name, Configure will find and use it. If not, you will have to specify its name to Configure.

### 7.5 Why

does lsof indicate incomplete paths with " -- " for Tru64 UNIX 5.1 files?

When lsof can't find a component of a path in the kernel's name cache (aka DNLC), or can't determine that the left-most component has as its parent the file system root, it uses an "incomplete path" notation. That notation begins with the file system root name, followed by " -- ", followed by the consecutive path name components lsof was able to find in the DNLC -- e.g., "/ -- init".

Because the DNLC was significantly redesigned in Tru64 UNIX 5.1, lsof's handling of the cache had to be completely redone. As part of the DNLC redesign a name cache entry parameter lsof formerly used to locate the file system root of a path was removed. With help from Chang Song I've been able to implement an alternate method for detecting the root of these file system types: AdvFS (MSFS), CDFS, DVDFS, FDFS, NFS, NFS3, and UFS.

When lsof doesn't know how to identify the root for a file system type, it will resort to the " -- " incomplete path notation.

### 7.6 Why doesn't lsof report link count, node number, and size for some Tru64 5.x CFS files?

lsof reports link count, node number, and size for open CFS files as recorded in their kernel node structure's cached attributes. Sometimes not all attributes are cached on the system where lsof runs, so lsof cannot report them.

### 7.7 Why does lsof say it can't read the kernel name list or proc table on Digital UNIX 4.x or Tru64 UNIX?

By default on Digital UNIX 4 and Tru64 UNIX lsof reads the addresses for kernel symbols with the knlist(3) function. That function can fail, for example, when the kloadsvr

daemon isn't running or is malfunctioning. When that happens, lsof may abort with one of these error messages:

```
lsof: can't read kernel name list from knlist(3): ...
```

or

```
lsof: can't read proc table info
```

The first message suggests a complete knlist(3) or kloadsvr failure; the second, a partial one.

If you know

the name of the file from which the running system was booted, e.g., /vmunix, you can use lsof's -k option to direct it to read kernel symbol addresses from the name list of that file --

```
$ lsof -k /vmunix ...
```

If that works, then knlist(3) is malfunctioning and you need to fix it.

## 8.0 FreeBSD Problems

### 8.1 Why doesn't lsof report on open kernfs files?

lsof doesn't report on open FreeBSD kernfs files because the structures lsof needs aren't defined in the kernfs.h header file in /sys/misc/kernfs.

### 8.2 Why doesn't lsof work on my FreeBSD system?

If lsof doesn't work on your FreeBSD system, first make sure you have the latest lsof revision. See the answer to the "Where do I get lsof?" question for information on how to get the latest lsof revision.

Once you have gotten the latest lsof revision, Configure and make it. If Configure fails -- e.g., it complains about an unknown FreeBSD version -- then lsof probably hasn't been ported to your FreeBSD version yet, and there's no need to go any further. Follow the answer to the "How do I report an lsof bug" to report the Configure complaint to me.

If you are able to Configure and make lsof, run its test suite. (See the answer to the "Is there a test suite?"

question for more information on how to use lsof's test suite.)

If lsof still fails, make sure your kernel sources, kernel header files, kernel boot file, standard header files and libraries are synchronized. They should all be built from the same CVS refresh. (Don't forget to do a "make buildworld" followed by a "make installworld".) If they aren't, then the KVM library or lsof may be using kernel structure definitions that don't match the booted kernel; or lsof may fail to compile properly because of header files in /usr/src/sys/sys and /usr/include/sys that don't match.

If you have synchronized your kernel, header files and libraries, and still can't get lsof to work, follow the steps in the answer to the "How do I report an lsof bug" question to report the problem to me.

### 8.3 Why doesn't lsof work on the RELEASE version of CURRENT?

Lsof tracks the CURRENT release of the current leading edge FreeBSD version, because my access to leading edge FreeBSD is limited to FreeBSD.org reference systems, all running the CURRENT release.

Sometimes that tracking leads to changes in lsof that won't work on an earlier RELEASE version of the current leading edge version.

When that happens, please send e-mail to me <abe@purdue.edu>. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

### 8.4 Why does kvm\_open() complain it can't find some file?

If lsof issues this complaint:

```
lsof: kvm_open(execfile=/boot/kernel/kernel,  
corefile=/dev/mem: No such file or directory
```

Your FreeBSD system might not have a /dev/mem device. If not, create one -- e.g., as root do:

```
# mknod /dev/mem c <major> 0  
# chmod 440 /dev/mem  
# chgrp kmem
```

/dev/mem

For <major> use /dev/kmem's major device number.

You may have to run kldload, too -- again as root do:

```
# kldload mem
```

## 8.5 FreeBSD ZFS Problems

### 8.5.1 Why does FreeBSD lsof report "WARNING: no ZFS support has been defined."?

Lsof issues that message when it detects a file on a ZFS file system, but has not been built with support for ZFS. Lsof's Configure script detects support can be added for ZFS when it finds this file:

```
/usr/src/sys/contrib/opensolaris/uts/common/fs/zfs/sys/zfs_znode.h
```

That header file and others in the OpenSolaris files in /usr/src enable lsof to extract information about ZFS files from the kernel structures associated with them.

### 8.6 Why can't Configure create lsof\_owner.h for FreeBSD 6 and above?

Lsof may report:

```
Creating ./lockf_owner.h from /usr/src/sys/kern/kern_lockf.c
FATAL ERROR: can't read /usr/src/sys/kern/kern_lockf.c
FATAL ERROR: ./lockf_owner.h creation failed (see 00FAQ)
```

or

```
Creating ./lockf_owner.h
from /usr/src/sys/kern/kern_lockf.c
FATAL ERROR: ./lockf_owner.h creation failed (see 00FAQ)
```

Those messages mean that lsof's Configure script failed to create a local header file, ./lockf\_owner.h, needed to use the new kernel file locking code of some versions of FreeBSD 6 and above.

The changes that implement that new locking code alter the lockf structure in <sys/lockf.h> and introduce a new structure, lockf\_entry, to that header file. When Configure detects the presence of the lockf\_entry definition in <sys/lockf.h>, it tries to construct the local header file, ./lockf\_owner.h.

Configure has to do that because an unfortunate side effect of

the new kernel file locking code is that `<sys/lockf.h>` doesn't contain the `lockf_owner` structure definition referenced in its own `lockf` structure. `Lsof` needs to access elements of that `lockf_owner` structure to determine if a lock belongs to the process that has a file open.

The missing `lockf_owner` structure definition is in the kernel source file, typically `/usr/src/sys/kern/kern_lockf.c`. `Configure` tries to extract the `lockf_owner` structure definition from `kern_lockf.c` into `Lsof`'s local header file, `./lockf_owner.h`. If `Configure` can't do that, it reports:

```
FATAL ERROR: ./lockf_owner.h creation failed
```

If `Configure` can't even read `kern_lockf.c`, it first reports:

```
FATAL ERROR: can't read /usr/src/sys/kern/kern_lockf.c
```

The work-around for this problem is to update the FreeBSD kernel `/usr/src` tree (e.g., do a `CVSup` or `csup`) on the system where `Lsof` is to be built and then do a "make buildworld" followed by a "make installworld".

#### 8.6.1 Why are there `lockf` structure compiler errors for FreeBSD 6.0 and higher `Lsof`?

If, when compiling `Lsof`, the compiler complains with error messages like:

```
dnode.c: In function 'get_lock_state':  
dnode.c:113: error: 'struct lockf' has no member named 'lf_flags'  
dnode.c:115: error: 'struct lockf' has no member named 'lf_id'  
...
```

Then `Lsof` is being built on a system that has new kernel file locking code and `Lsof`'s `Configure` script failed to build a local `lockf_owner.h` header file with a structure definition `Lsof` needs.

See the "Why can't `Configure` create `Lsof_owner.h` for FreeBSD 6 and above?" section for more information and a work-around.

#### 8.6.2 Why don't `/usr/src/sys/sys/lockf.h` and `/usr/include/sys/lockf.h` match?

This mismatch can cause the errors explained in the answer to

the "Why are there lockf structure compiler errors for FreeBSD 6.0 and higher lsof?" question.

If /usr/src/sys/sys/lockf.h has been updated with a CVSup or csup, the new lockf.h won't be propagated to /usr/include/sys until the "make buildworld" and "make installworld" steps have been completed.

## 8.7 FreeBSD and clang

As of lsof revision 4.87, lsof may be compiled with clang.

### 8.7.1 Why does clang complain about VOP\_FSYNC?

There is an error in the Solaris ZFS compatibility vnode.h header file with use of VOP\_FSYNC before it is defined. No work-around is possible that will eliminate the clang compile-time warning message about the invalid declaration of the VOP\_FSYNC function.

## 9.0 HP-UX Problems

### 9.1 What do /dev/kmem-based and PSTAT-based mean?

Lsof for HP-UX 11.0 and below uses /dev/kmem to read kernel data structures from which it gathers and reports open file information. That version of lsof is called /dev/kmem-based lsof.

Starting with HP-UX 10.10, finding definitions for the necessary kernel structures became more difficult as HP no longer distributed header files in /usr/include that defined all kernel structures. So I started "inventing" structure definitions by using Q4 to display them.

By HP-UX 11, the process of invention became extremely intensive to support. Following a patch to the ipc\_s structure in early 1999, my invented definition of that structure became incorrect. Although I was able to devise a work-around test for the patch with Q4, it was clear that my inventions were bound to cause more problems.

Discussion with HP about the patch led to my proposing that an lsof API in the HP-UX kernel was the proper solution. Much to my surprise, HP agreed. I believe Carl Davidson

was the prime mover behind that decision, but I know others participated, among them Louis Huemiller, Rich Rauenzahn, and Sailu Yallapragada. I am indebted to these folks and HP for their willingness to do this work.

The API was added to the PSTAT interface in a project named PEGE, Pstat Enhancements for Glance and Lsof. Louis and Sailu did the bulk of the design and implementation work and testing began in March, 2000

HP-UX 11.11 is the first version that provides PSTAT support for lsof. HP-UX versions in between 11.0 and 11.11 -- all Beta versions as far as I can determine -- have no lsof support.

See the "PSTAT-based HP-UX lsof Questions" section for questions and answers specific to PSTAT-based HP-UX lsof. The next section, "Why doesn't a /dev/kmem-based HP-UX lsof compilation use -O?" covers /dev/kmem-based HP-UX lsof.

The /dev/kmem-based lsof sources may be found in the kmem subdirectory of the dialects/hpux branch of the lsof source tree. The PSTAT-based lsof sources may be found in .../dialects/hpux/pstat.

## 9.2 /dev/kmem-based HP-UX lsof Questions

The sources for /dev/kmem-based lsof for HP-UX may be found in lsof\_<revision>/dialects/hpux/kmem.

Lsof's Configure shell script decides to use these sources when it finds that the /usr/include/sys/pstat subdirectory doesn't exist.

Lsof can be forced to use the /dev/kmem sources by setting "/dev/kmem" in the HPUX\_BASE environment variable. Consult the Configure shell script and OOPTIONS for more information.

### 9.2.1 Why doesn't a /dev/kmem-based HP-UX lsof compilation use -O?

If you only have the standard (bundled) HP-UX C compiler and haven't purchased and installed the optional one, then you can't use cc's -O option. The HP-UX cc(1) man page says this:

"Options

Note that in the following list, the `cc` and `c89` options `-A`, `-G`, `-g`, `-O`, `-p`, `-v`, `-y`, `+z`, and `+Z` are not supported by the C compiler provided as part of the standard HP-UX operating system. They are supported by the C compiler sold as an optional separate product."

Lsof's Configure script tries to detect what C compiler product you have installed by examining your compiler. If that examination reveals a standard (bundled) compiler, lsof avoids using `-O`.

If the Configure compiler test fails, the C compiler will complain that it doesn't support `-O`. You can suppress that complaint with this make invocation:

```
$ make DEBUG=""
```

### 9.2.2 Why doesn't the `/dev/kmem`-based CCITT support work under 10.x?

Pasi Kaara, who originally provided the HP-UX CCITT support, reports that it no longer works under HP-UX 10.x. Consequently, at lsof revision 4.02 it has been disabled.

### 9.2.3 Why can't `/dev/kmem`-based lsof be compiled with ``cc -Aa`` or ``gcc -ansi`` under HP-UX 10.x?

Some HP-UX 10.x header files, needed by lsof, can't be compiled properly in `ANSI_C` mode; structure element definition and alignment problems result. The `f_offset` member of the file structure, for example, is incorrect.

This ANSI-C obstacle extends to using the `-Aa` option of the HP C compiler and the `-ansi` option of `gcc`.

### 9.2.4 Why does `/dev/kmem`-based lsof complain about no C compiler?

Lsof's Configure script looks in `/bin` and `/usr/ccs/bin` for an HP C compiler, because it needs to know if the compiler is the standard (bundled) one or the optional separate product. If it finds no compiler in either place, Configure quits after complaining:

```
No executable cc in /bin or /usr/ccs/bin
```

If you don't have a C compiler in either of these standard places, you should consider installing it. If you have `gcc` installed, you can use it by declaring the ```hpuxgcc```



abbreviation to lsof's Configure script.

If you have a C compiler in a non-standard location, you can use the HPUX\_CC[12] environment variables to name the path to it. Consult the 00XCONFIG file of the lsof distribution for more information.

#### 9.2.5 Why does Configure complain about q4 for /dev/kmem-based lsof for HP-UX 11?

When you run Configure on an HP-UX 11 system, it may complain:

```
!!!ERROR!!! !!!ERROR!!! !!!ERROR!!! !!!ERROR!!!  
Configure can't use /usr/contrib/bin/q4 to examine the ipis_s  
structure. You must do that yourself, report the result in  
the HPUX_IPC_S_PATCH environment variable, then repeat the  
Configure step. Consult the Configure script's use of  
/usr/contrib/bin/q4 and the 00XCONFIG file for information  
on ipis_s testing and the setting of HPUX_IPC_S_PATCH.  
!!!ERROR!!! !!!ERROR!!! !!!ERROR!!! !!!ERROR!!!
```

This message states that Configure cannot use q4 from /usr/contrib/bin to examine the kernel's boot image for the ipis\_s structure. Maybe q4 hasn't been installed, or perhaps Configure can't execute it.

Lsof needs to gather information about ipis\_s to determine if the ipis\_s structure is defined in the kernel boot image, if the ipis\_s structure of the kernel boot image has an ipis\_msgsqueued member, and if the ipc\_s structure of the kernel boot image uses has an ipc\_ipis member.

The ipis\_s structure isn't described in any header file HP-UX releases with HP-UX 11. It appears in the private lsof header file ../dialects/hpux/kmem/hpux11/ipc\_s.h. Lsof gets local and remote connection addresses (IP and port numbers) from ipc\_s, so an incorrect ipc\_s definition may cause incorrect reporting of TCP/IP connection addresses. It definitely will cause incorrect reporting on 32 bit kernels. In any case lsof should be compiled with a correct ipis\_s definition no matter the kernel bit size, so the Configure script always tests for it when the HP-UX version is 11.

For lsof's Configure script to gather the necessary ipis\_s information q4

needs to be installed in /usr/contrib/bin  
and the kernel boot image, /stand/vmunix, needs to have  
been processed with pxdb. If either is untrue, lsof issues  
the above error message, perhaps preceded by q4 messages.  
(Note: lsof's use of q4 may also fail if q4 can't execute  
nm -- e.g., it can't find /usr/bin/nm, or there is a  
conflicting, private version of nm earlier in the path.)

If /stand/vmunix hasn't been processed by pxdb, the q4  
messages will include:

```
q4: (error) vmunix not pxdb'd  
or  
q4: (warning) /stand/vmunix has not been processed by pxdb.
```

It's possible to make a suitable private copy of /stand/vmunix  
for configuring lsof. That requires /opt/langtools/bin/pxdb  
or the q4 version of pxdb from /usr/contrib/bin/q4pxdb.  
The path to the result is supplied to the lsof Configure  
script in the HPUX\_BOOTFILE environment variable. Configure  
still requires /usr/contrib/bin/q4.

The following sample Bourne shell commands make a private  
copy of /stand/vmunix  
in /tmp, process it with pxdb or  
q4pxdb, and supply its path to lsof's Configure script in  
HPUX\_BOOTFILE.

```
$ cp /stand/vmunix /tmp/vmunix.lsof  
  
$ /opt/langtools/bin/pxdb /tmp/vmunix.lsof  
or  
$ /usr/contrib/bin/q4pxdb /tmp/vmunix.lsof  
  
... pxdb messages ...  
$ HPUX_BOOTFILE=/tmp/vmunix.lsof Configure -n hpux
```

It may also be necessary to use q4 outside the lsof Configure  
script. In that case q4 can be used to determine the state of  
ipis\_s and ipc\_s with these q4 commands:

```
$ /usr/contrib/bin/q4 /stand/vmunix  
...  
q4> fields -c struct ipc_s  
...  
q4> fields -c struct ipis_s
```

Look in the q4 output for the ipc\_ipis member of the ipc\_s

structure, and look in the q4 output for the ipis\_s structure for the ipis\_msgsqueued member. If ipc\_s has ipc\_ipis but ipis\_s lacks ipis\_msgsqueued, set HPUX\_IPC\_S\_PATCH environment variable to "1". If ipc\_s has ipc\_ipis and ipis\_s has ipis\_msgsqueued, set HPUX\_IPC\_S\_PATCH to "2" -- e.g.,

```
$ HPUX_IPC_S_PATCH=1
Configure -n hpux
or
$ HPUX_IPC_S_PATCH=2 Configure -n hpux
```

If ipc\_s has no ipc\_ipis member, set HPUX\_IPC\_S\_PATCH to "N" -- e.g., use this Configure step:

```
$ HPUX_IPC_S_PATCH=N Configure -n hpux
```

9.2.6 When compiling /dev/kmem-based lsof for HP-UX 11 what do the "aCC runtime: ERROR..." messages mean?

When the lsof Makefile asks the HP-UX unbundled compiler to load lsof, it may complain:

```
/bin/cc -o lsof -DHPUXV=1100 -DHASVXFS -DHPUXKERNBITS=64 \
-I/home/abe/src/lsof4/dialects/hpux/kmem/hpux11 +DD64 \
-DHAS_IPC_S_PATCH=2 -I/home/abe/src/lsof4/dialects/hpux/kmem \
-DLSOF_VSTR="B.11.00\" -g dfile.o dmnt.o dnode.o dnode1.o \
dnode2.o dproc.o dsock.o dstore.o arg.o main.o misc.o \
node.o print.o proc.o store.o usage.o -L./lib -llsof -lelf \
-lnsl
aCC runtime: ERROR: Unexpected use of shared libraries
aCC runtime: ERROR: Read aCC manpage, +A option
/usr/lib/nls/loc/locales.1//is_IS.iso88591
```

This is a bug in the HP-UX national language support. (Notice the last message with "locales" in it?) Complain to HP -- then use this work-around before executing make:

```
$ unset LANG
$ make
```

9.2.7 Why doesn't /dev/kmem-based lsof for HP-UX 11 report VxFS file link counts, node numbers, and sizes correctly?

This is usually the result of running an lsof binary whose revision number is less than 4.57 on a system that has OnlineJFS support installed. It can also happen with lsof 4.57 binaries when the OnlineJFS support with which they

were built doesn't match the OnlineJFS status of the system on which they are run.

The OnlineJFS status of lsof 4.57 and higher binaries can be determined by running:

```
$ lsof -v 2>&1 | grep HASONLINEJFS
```

If that shell pipe produces output, lsof was compiled with OnlineJFS support enabled; no output, disabled.

If OnlineJFS is installed on an HP-UX 11 system the `/sbin/fs/vxfs/subtype` executable exists and outputs "vxfs3.3" when run.

The problem occurs because the optional OnlineJFS support installation doesn't update `<sys/fs/vx_inode.h>`. Consequently lsof can be compiled with an incorrect definition of the `vx_inode` structure and look for link counts, node numbers, and sizes in the wrong places in the structure.

The current response I have gotten from HP is that no `<sys/fs/vx_inode.h>` update will be provided for OnlineJFS.

I've addressed this problem temporarily with a work-around (hack) in lsof revision 4.57.

#### 9.2.8 Why can't `/dev/kmem`-based lsof be built with gcc for 64 bit HP-UX 11?

When Configure is given the "hpuxgcc" abbreviation, the HP-UX version is 11, and the kernel bit size is 64, the lsof Configure script may abort with the messages:

```
!!!!!!!!!!!!!!!! FATAL ERROR !!!!!!!!!!!!!!!
```

```
APPARENTLY GCC CANNOT BUILD 64 BIT EXECUTABLES.  
A COMPILER MUST BE USED THAT CAN. SEE 00FAQ  
FOR MORE INFORMATION.
```

(This is the "more information" in 00FAQ.)

This means the Configure script compiled a test program with gcc the result wasn't an ELF-64 binary. lsof tries two gcc modes, one with no options and another with the `-mlp64` option, before it concludes gcc can't be used.

See the "How can I acquire a gcc for building lsof for 64 bit HP-UX 11?" answer for information on where you might be able to get a gcc for HP-UX 11 that can produce ELF-64 executables.

#### 9.2.8.1 How can I acquire a gcc for building lsof for 64 bit HP-UX 11?

Check this HP URL:

[http://h21007.www2.hp.com/dspp/tech/tech\\_TechSoftwareDetailPage\\_IDX/1,1703,547,00.html](http://h21007.www2.hp.com/dspp/tech/tech_TechSoftwareDetailPage_IDX/1,1703,547,00.html)

(That's one very long link; be careful you cut 'n paste it all.)

In November 2001 that URL led to a web page whose title was "gcc for hp-ux 11." The page offered a link for downloading a 64 bit gcc 3.0 compiler for HP-UX 11.0 and 11i. Rich Rauenzahn of HP installed that compiler on an HP test system he allows me to use and I successfully built a 64 bit lsof with it.

The HP package may install the 64 bit capable gcc in `/usr/local/pa20_64/bin/gcc`, so you may have to adjust your path or set the `LSOF_CC` environment variable to compensate.

#### 9.2.9 Why does `/dev/kmem`-based lsof for HP-UX 11 report "unknown file system type" for some open files?

The lsof binary being used probably doesn't have support for the VxFS file system.

To confirm that, check ``lsof -v`` output for `"-DHASVXFS"`. If it's not present, lsof doesn't have VxFS support.

You also need to establish that lsof really is complaining about VxFS files by checking the kernel boot file for the symbol associated with the hexadecimal address reported in the "unknown file system type" message -- e.g., `"v_op: 0x8711c8"`. Use `nm(1)` to do that:

```
$ nm -x /stand/vmunix | grep 8711c8
```

If `nm` reports the symbol associated with the address is `vx_vnodeops`, then lsof is complaining about an open VxFS file.

The solution in that case is to build lsof yourself (The

bundled C compiler will do it.), making sure that lsof's Configure script detects the presence of VxFS. Configure does that by finding these two header files:

```
/usr/include/sys/fs/vx_hpux.h
/usr/include/sys/fs/vx_inode.h
```

If the system where you are building lsof doesn't have those header files, but does have VxFS, you might be able to install the header files by installing the HP JournalFS package from the CoreOS CD -- in particular the file set JournalFS.VXFS-PRG and its associated patch, PHKL\_18543. (My thanks to Steve Bonds for that information.)

Finally, if you find that lsof isn't complaining about VxFS when it complains about an unknown file system type, send e-mail to me <abe@purdue.edu> for further assistance. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

#### 9.2.10 Why does the ANSI-C compiler complain about comments in HP-UX 11 header files?

When compiling lsof on HP-UX 11, the HP ANSI-C compiler's pre-processor, cpp, may complain about comments in HP-UX header files

-- e.g.,

```
cpp: "/usr/include/sys/cdfs.h", line 232: warning 2028:
Found comment inside comment started on line 232.
cpp: "/usr/include/sys/cdnode.h", line 196: warning 2028:
Found comment inside comment started on line 196.
cpp: "/usr/include/nfs/snode.h", line 30: warning 2028:
Found comment inside comment started on line 30
```

This is not a problem with lsof. It is a problem with the HP-UX header files; they have non-compliant ANSI-C comment sequences in them -- e.g.,

```
<sys/cdfs.h>: 232
/* struct cdfs *cdfs_link; /* linked list of file systems */
```

The initial "/\*" is not terminated by an ending "\*/" before the appearance of a second "/\*".

#### 9.2.11 Why does dnode1.c cause the HP-UX 11 compiler to complain that <sys/fs/vx\_inode.h> is missing or incorrect?

If CFLAGS in the lsof Makefile for an HP-UX 11 compilation includes HASONLINEJFS, indicating the system has OnlineJFS support, lsof needs the <sys/fs/vx\_inode.h> header file.

Sometimes it is missing from /usr/include/sys/fs.

<sys/fs/vx\_inode.h> is a header file that must be obtained from Veritas. If that proves impossible, please contact me via e-mail at <abe@purdue.edu>. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

### 9.3 PSTAT-based HP-UX lsof Questions

The sources for PSTAT-based lsof for HP-UX may be found in lsof\_<revision>/dialects/hpux/pstat.

lsof's Configure shell script decides to use these sources when it finds that the /usr/include/sys/pstat subdirectory exists.

lsof can be forced to use the PSTAT-based sources by setting "pstat" in the HPUX\_BASE environment variable. Consult the Configure shell script and 00XPORTING for more information.

#### 9.3.1 Why does PSTAT-based lsof complain about pst\_static and other PSTAT structures?

When lsof starts it may issue one of these fatal error messages:

```
lsof: FATAL: can't determine PSTAT static size
lsof: FATAL: can't read <n> bytes of pst_static
```

```
lsof: FATAL: pst_static doesn't contain <name>_size
lsof: FATAL: <name>_size should be <n>
```

These messages indicate that lsof's tests for the proper level of PSTAT support have failed. The structure names, given in <name>, and sizes, given in <n>, identify the support deficiency more precisely.

You may need to upgrade the PSTAT support in your kernel to be able to use PSTAT-based lsof.

#### 9.3.2 Why does PSTAT-based lsof complain it can't read pst\_\*

structures?

Lsof may put messages like the following in the NAME column of its output.

```
can't read cwd pst_filedetails: Permission denied
can't read mem pst_filedetails: Permission denied
can't read rtd pst_filedetails: Permission denied
can't read txt pst_filedetails: Permission denied
can't read pst_filedetails: Permission denied
can't read 3 stream structures: Permission denied
can't read pst_socket: Permission denied
```

These messages indicate that the lsof binary lacks the authority to read the name structures for processes other than ones belonging to the UID under which lsof is running. Authority to read the structures of other processes is limited to root processes -- i.e., lsof must have setuid-root permission if it is to list open files for arbitrary processes.

If you want to eliminate these errors, you must run lsof as root or install it with setuid-root permission.

### 9.3.3 Why does PSTAT-based lsof rebuild the device cache file after each reboot?

After each HP-UX rebuild, the first time a user runs lsof it will report:

```
lsof: WARNING: device cache mismatch: /dev/tun...
lsof: WARNING: created device cache file: /<user_path>
```

This happens because the device numbers on /dev/tun\* device nodes are recalculated at each reboot. When lsof detects a change in the device number of a /dev/tun\* file, it rebuilds its local device cache file.

### 9.3.4 Why doesn't PSTAT-based lsof report TCP addresses for telnetd's open socket files?

When lsof can't report TCP addresses for telnetd's open socket files it is because an unpatched PSTAT kernel interface doesn't report the addresses to lsof.

This has been addressed in PSTAT kernel patch PHKL\_24047.



It is available from the HP IT Resource Center at:

<http://itrc.hp.com>

In the page's "maintenance / support" box select the "individual patches" link. Once at its page, select the "hp-ux" link. On that page select the "Series 800" or "Series 700" radio button and select "11.11" from the pull-down list to the right of the button. Under "search or browse the path list" select "Search by Patch IDs" from the pull down list, enter PHKL\_24047 in the following text box, and select search. That should lead to information about PHKL\_24047 and a link for downloading it. (You may have to log in first and you may have to create a login identity by registering before you can log in.)

Some time in March 2006 the PHKL\_24047 patch was "lost" by the HP-UX networking lab. It has been "found" again in August 2006 and will be re-released as a GRO patch "some time." I don't yet know when that will be. You must contact HP to learn about the availability of the GRO patch.

### 9.3.5 Why does PSTAT-based lsof cause an HP-UX 11.11 kernel panic?

When PSTAT-based lsof runs on some HP-UX 11.11 kernels, the kernel may panic. Symptoms include:

Console message:

```
0xFBE000301100EF00 00000000 0000EF00 -  
type 31 = legacy PA HEX chassis-code
```

/var/adm/syslog:

```
... vmunix: Trap Type 15 (Data page fault)  
... vmunix: Instruction Address (pcsq.pcoq) = 0x...
```

The panic is caused by a bug in the way PSTAT's pstat\_getstream() function obtains module names from streams managed by the otsam stream driver (part of OSI Transport Services). Lsof calls pstat\_getstream() when it encounters an open otsam stream file. An HP-UX 11.11 system uses otsam if otsam appears in /stand/system.

HP-UX 11.11 patch PHKL\_24507 (available some time after July

15, 2001) fixes the pstat\_getstream() bug. See the information in the answer to the "Why doesn't PSTAT-based

lsof report TCP addresses for telnetd's open socket files?"  
question for information on how to obtain the patch.

### 9.3.6 Why doesn't PSTAT-based lsof report a CWD that is on a loopback (LOFS) file system?

When PSTAT-based lsof reports on processes whose current working directory (CWD) is on a loopback file system, lsof can't report the open CWD file. The reason is that the HP-UX 11.11 and above kernel's loopback file system code is not passing the CWD file ID to the kernel's pstat(2) code. Hence lsof is given no information on the lofs CWD.

The problem was first reported to me by Ermin Borovac and an internal bug report was filed with the HP-UX file system group on October 26, 2004. That report has now been answered by the patch PHKL\_33200 -- s700\_800 11.11 lofs cumulative patch. The HP IT Resource Center (<http://itrc.hp.com>) is a source for the patch.

### 9.3.7 Why

do some swinstall packages for PSTAT-based HP-UX 11.11 packages complain about setgid and setuid bits?

First, let me explain that I do not provide lsof swinstall packages for lsof. Others provide them and they should be contacted about problems with their packages.

However, I have become aware of a problem with one package about which I have some information I can share. The problem shows up in these swinstall messages:

```
ERROR: Unknown owner and/or group for file
"/usr/local/bin/lsof". SUID and/or SGID bit was
not set.
ERROR: Failed installing fileset "lsof.lsof-RUN,r=4.73".
Check the above output for details.
```

The swpackage SUID/SGID functionality was restricted by changes for POSIX compliance, breaking backward compatibility. The patch PHCO\_27671 allows SUID/SGID for uid/gid of 0 only, as a compromise between backward compatibility and POSIX conformance.

If the setuid bit is to be set on the executable, the UID  
and  
GID of the executable must be 0 (zero).

### 9.3.8 Why won't the bundled C compiler build PSTAT-based lsof for

## PA-RISC HP-UX 11.23?

A PA-RISC HP-UX 11.23 bundled C compiler dated May 2005 or later will not build PSTAT-based lsof. It will deliver error messages related to the system's <gssapi/gssapi.h> header file.

There is nothing wrong with that header file or lsof. The problem is that the bundled C compiler can't cope with the gssapi.h header file.

The work-around is to use the HP ANSI C compiler. Using gcc is not a satisfactory work-around. See the answer to the "Why won't gcc build PSTAT-based lsof for PA-RISC HP-UX 11.23?" question for more information.

### 9.3.9 Why won't gcc build PSTAT-based lsof for PA-RISC HP-UX 11.23?

Gcc will not even compile PSTAT-based lsof revisions below 4.77 for PA-RISC HP-UX 11.23 dated May 2005 or later. It reports errors in lsof's print.c fill\_portmap() function about missing members of the rpercent structure. That happens because gcc defines \_XOPEN\_SOURCE\_EXTENDED which disables the definition of the rpercent structure in <netdb.h>.

Using the HP bundled C compiler is not a viable work-around. That is explained in the answer to the "Why won't the bundled C compiler build PSTAT-based lsof for PA-RISC HP-UX 11.23?"

While an lsof revision 4.77 or higher can be compiled with gcc, the results are unreliable. lsof will compile, but it occasionally produces segment faults when it runs. I have not been able to reproduce the failure reliably or locate a debugger that will work with the gcc-compiled lsof.

The only reliable work-around is to use the HP ANSI C compiler.

### 9.3.10 Why does PSTAT-based lsof complain, "FATAL: pst\_stream\_size should be: 672; is 72" on HP-UX 11.11 and above?

This message indicates a mismatch between the PSTAT header files used to build lsof (<sys/pstat.h> and those in the /usr/include/sys/pstat subdirectory), and those that built the running kernel.

Unfortunately the June

2008 patch set for HP-UX 11.23 creates this inconsistency, because it does not contain all the patches needed to match the kernel with the PSTAT header files. Even more serious is that the missing patches update the kernel's PSTAT support to provide TCP/UDP endpoint information to lsof from TCP/TLI streams.

The patch inconsistency comes about because, while the following patch is installed,

PHKL\_36577 1.0 PM-PSTAT section 2 manpage changes

other kernel patches are not.

The PHKL\_36577 patch updates the PSTAT header files and manual pages to match kernel changes that other patches with the following numbers (or patches that contain or supersede them) contain:

PHNE\_36575 1.0 Cumulative STREAMS Patch  
PHNE\_37670 1.0 cumulative ARPA Transport patch  
PHNE\_37851 1.0 NFS cumulative patch

Those patches implement the kernel changes that support the delivery of information promised in patch PHKL\_36577.

The work-around is to install the missing patches.

#### 9.4 Why

won't the HP-UX depot install?

I don't distribute lsof depots, so I can't support them.

From time to time depots prepared by various sites -- e.g., usually HP-UX software collection sites -- will contain errors that cause installation of the depot to fail.

Do not contact me when this happens. Instead, contact the administrator of the site that prepared the depot.

As should be clear from the bulk of the lsof documentation, I do not recommend you use pre-built lsof binaries in any form. Instead, I recommend you obtain the lsof source distribution and build lsof yourself.

#### 10.0 Linux

## 10.1 What do /dev/kmem-based and /proc-based lsof mean?

At approximately Linux 2.1.72 and exactly at lsof revision 4.23 support for Linux forks. The first fork, containing the oldest lsof form is based on access to kernel memory structures, and is called /dev/kmem-based lsof. A /dev/kmem-based lsof is heavily intertwined with the Linux kernel version, its header files, and its system map file. Typically a /dev/kmem-based lsof needs only setgid permission to local all open file information.

After approximately Linux 2.1.72 and at revision 4.23 lsof obtains all its information from the /proc file system. That lsof is called the /proc-based lsof. A /proc-based lsof does not read kernel memory, needs neither kernel header files nor the system map file, and is less likely to be affected by Linux kernel changes. However, it does require setuid-root permission to list all open files, and it can't report file offsets (positions).

After revision 4.52 the /dev/kmem-based Linux sources for lsof are no longer distributed. Information about them may be found in the 00INDEX and README files at:

<ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/OLD/src>

## 10.2 /proc-based Linux lsof Questions

### 10.2.1 Why doesn't /proc-based lsof report file offsets (positions)?

/proc-based lsof revisions 4.79 and above can only report file offsets (positions) for the files of Linux kernels 2.6.22 and above.

During its initialization /proc-based lsof tests to see if offset information can be obtained. If it cannot, lsof disables offset reporting. If the -o option was selected, lsof also issues this warning:

lsof: WARNING: can't report offset; disregarding -o.

### 10.2.2 Why does /proc-based lsof report "can't identify protocol" for some socket files?

/proc-based lsof may report:

```
COMMAND PID ... TYPE ... NODE NAME
pump 226 ... sock ... 309 can't identify protocol
```

This means that it can't identify the protocol (i.e., the AF\_\* designation) being used by the open socket file. Lsof identifies protocols by matching the node number associated with the /proc/<PID>/fd entry to the node numbers found in selected files of the /proc/net sub-directory. Currently /proc-based lsof examines these protocol files:

```
/proc/net/ax25 (untested)
/proc/net/icmp
/proc/net/ipx (needs kernel patch)
/proc/net/netlink
```

```
/proc/net/packet
/proc/net/raw
/proc/net/raw6
/proc/net/sctp/assocs
/proc/net/sctp/eps
/proc/net/sockstat
/proc/net/sockstat6
/proc/net/tcp
/proc/net/tcp6
/proc/net/udp
/proc/net/udp6
/proc/net/udplite
/proc/net/udplite6
/proc/net/unix
```

If /proc-based lsof says it can't identify the protocol for an open socket file, you may be able to identify the protocol yourself by using `grep` to look for the specific node number in the files of /proc/net -- e.g.,

```
$ grep <node_number> /proc/net/*
```

You may not be able to find the desired node number, because not all kernel protocol modules fully support /proc/net information.

If you find a matching node number in a /proc/net file that is not currently being processed by lsof, contact me via e-mail at <abe@purdue.edu>. I'll discuss adding support to /proc-based lsof for the protocol of the /proc/net file with you. Make sure "lsof" appears in the "Subject:"

line so my e-mail filter  
won't classify your letter as Spam.

The code that matches node numbers of open IPX protocol  
socket files to those in /proc/net/ipx requires Jonathan  
Sergent's Linux 2.1.79 patch to /usr/src/linux/net/ipx/af\_ipx.c.  
The patch, suitable for input to Larry Wall's patch program,  
may be found in the lsof distribution file:

```
.../dialects/linux/proc/patches/net_ipx_af_ipx.c.patch
```

#### 10.2.3 Why does /proc-based lsof warn about unsupported formats?

Lsof may issue the following warning:

```
lsof: WARNING: unsupported format: /proc/net/<file>
```

if the header line of the indicated <file> in /proc/net --  
ax25, ipx, raw, tcp, udp, or unix -- doesn't match what  
lsof expects to find.

When the header line of a /proc/net file isn't what lsof  
expects, lsof probably can't parse the rest of the file  
correctly and doesn't try. As a result, lsof can't report  
any NAME column information (e.g., local and remote addresses)  
for socket files bound to the indicated  
network protocol.

If you get this warning, please send me e-mail at <abe@purdue.edu>.  
Include the contents of the file lsof claims has an unsupported  
format. Make sure "lsof" appears in the "Subject:" line so my  
e-mail filter won't classify your letter as Spam.

#### 10.2.4 Why does /proc-based lsof report "(deleted)" after a path name?

The "(deleted)" notation following a path name in /proc-based  
lsof's NAME column comes from the /proc/<PID>/fd/<FD> entry  
for the open file. It's the Linux kernel's way of indicating  
the file is open but has been unlinked (rm'd).

#### 10.2.5 Why doesn't /proc-based lsof report full open file information for all processes?

/proc-based lsof can only report on processes whose /proc  
files it has permission to read. /proc normally grants  
permission to read all its files only to root or to the  
owning user ID.

Without permission to read most /proc files, lsof can only report full information for processes belonging to the user who is running

lsof. /proc-based lsof may be able to report some information for all processes, depending on the permissions of their associated /proc files, but usually /proc-based lsof won't be able to access the files in /proc/<PID>/fd/ that describe regular open files.

If you want /proc-based lsof to report on all processes, you must install it with setuid-root permission.

#### 10.2.6 Why won't Customize offer to change HASDCACHE or WARNDEVACCESS for /proc-based lsof?

/proc-based lsof doesn't read device information from /dev or the device cache file, so it makes no sense to change the state of device cache processing or /dev node accessibility warnings.

#### 10.2.7 /proc-based lsof Linux NFS questions

##### 10.2.7.1 Why can't lsof find files on an accessible NFS file system?

On occasion lsof may be unable to identify that an open file is on an NFS file system. This is most likely the result of a bug in the way the Linux kernel supplies information to the reader of /proc/mounts (lsof) -- sometimes that pseudo-file is truncated by the kernel.

One way to see if this is the case is to search for the NFS file system in /proc/mounts -- e.g.,

```
$ grep <NFS_file_system_mount_point> /proc/mounts
```

If you get no output or the third word of the output isn't "nfs", then lsof won't consider the file system an NFS file system.

A second test is to look at the end of /proc/mounts -- e.g.,

```
$ tail /proc/mounts
```

If tail reports "# truncated" then /proc/mounts is incomplete because of a Linux kernel bug. The bug is documented at:



<http://www.xss.co.at/sysinfo/mounts.html>

The bug is fixed in Linux kernel 2.4.18, and possibly in some earlier Linux kernel versions.

#### 10.2.7.2 Why can't lsof find files on an inaccessible NFS file system?

If lsof issues this message about a Linux file system, mounted from an NFS server:

```
lsof: WARNING: can't stat() nfs file system /xxx/yyy
```

Then lsof won't be able to find any open files on the file system.

That's because of an inadequacy in the Linux /proc file system. Its /proc/mounts file doesn't give the device doublet (major and minor numbers) of the file system as do many UNIX systems (e.g., Solaris). The only way lsof can get the device doublet for a Linux file system is to call stat(2) on the file system path, which fails if the NFS server isn't accessible.

When lsof doesn't know the device doublet of a file system, it can't find open files on the inaccessible file system, because it can't match the doublets of open files to the doublet of the inaccessible file system.

This topic is covered extensively in lsof(8) in its ALTERNATE DEVICE NUMBERS and BLOCKS AND TIMEOUTS sections.

#### 10.2.8 Why doesn't /proc-based Linux lsof report socket options and values, socket state flags, and TCP options and values?

The Linux /proc file system doesn't report socket options and values, socket states, and TCP options and values to lsof.

#### 10.2.9 Does /proc-based Linux lsof use a device cache?

No.

The Linux /proc/<PID>/fd/\* entries provide device names to lsof via readlink(2). It is not necessary to enable device cache processing for /proc-based Linux lsof via the Customize script or modifications to the Linux machine.h header file.

#### 10.2.10 Why doesn't /proc-based Linux lsof report any or all file structure

values for its +fcfgGn option?

/proc-based lsof revisions 4.79 and above can only report some file structure values for Linux kernels below 2.6.22.

When running on Linux kernels at 2.6.22 and above lsof 4.79 can report some file flag values -- i.e., in response to the +fg or +fG options. The flag values are obtained from the /proc/<PID>/fdinfo/ files introduced at Linux kernel 2.6.22.

/proc-based Linux lsof tests its availability to obtain file flag values at initialization. If values are not available, lsof disables file flag reporting. If the flags were requested with +fg or +fG, lsof displays this warning:

```
lsof: WARNING: can't report
file flags; disregarding +f.
```

As a special note, when Linux lsof can report flag bits, it will not report 'R' for a read-only file. There is no read-only flag bit O\_\* symbol in <fcntl.h> (or <bits/fcntl.h>) and lsof reports only bits that are set. The absence of O\_RDWR and O\_WRONLY flag bits implies the file is read-only.

### 10.3 Special Linux file types

#### 10.3.1 Why is ``DEL" reported as a Linux file type?

Lsof usually reports entries from the Linux /proc/<PID>/maps file with ``mem" in the TYPE column. However, when lsof can't stat(2) a path in the process' ``maps" file and the ``maps" file entry contains ``(deleted)", indicating the file was deleted after it had been opened, lsof reports the file type as ``DEL".

#### 10.3.2 Why is ``unknown" reported as a Linux file type?

Lsof may report a Linux file's type as ``unknown" in the TYPE column when lsof can't obtain complete stat(2) results for the file.

Usually the NAME column will contain a ``(stat: xxx)" error message, but that could have been suppressed with the lsof ``-w" option.

### 10.4 Linux ``mem" Entry Problems

10.4.1 What do ``path dev=xxx" and ``path inode=yyy" mean in the NAME column of Linux ``mem" file types?

When the device or inode number in the process' ``maps" file entry doesn't match the stat(2) results from the file path, lsof reports the inconsistent information from the stat(2) of the path parenthetically after the path in the NAME column in one of these forms:

(path dev=xxx)            only the device number, ``xxx", from a stat(2) of the ``maps" file entry path differs from the ``maps" file entry value reported in the DEVICE column.

(path inode=yyy)        only the inode number, ``yyy", from a stat(2) of the ``maps" file entry path differs from the ``maps" file entry value reported in the NODE column.

(path dev=xxx inode=yyy) Both device and inode numbers differ.

lsof reports the ``maps" file device number in the DEVICE column and the inode number in the NODE column.

When device and inode mismatches occur, lsof suppresses the reporting of link count and size. See the answer to the "Why is neither link count nor size reported for some Linux ``DEL" and ``mem" file types?" question for more information.

Device and inode inconsistencies can occur when a file at a ``maps" path is replaced after the process has started, or when a different file system with similar path names is mounted on top of the original file system.

The device inconsistency parenthetical messages can be suppressed with lsof's ``-w" option.

10.4.2 Why is neither link count nor size reported for some Linux ``DEL" and ``mem" file types?

Link count and size are not reported for some entries from the process' ``maps" file because a stat(2) of the entry file path

failed or stat(2) delivered device or inode numbers that don't match the ones in the ``maps" entry.

When

the stat(2) device or inode numbers don't match those in the ``maps" file entry, it is likely that the stat(2) results don't apply to the file that was originally mapped by the process and whose path appears in the ``maps" file entry, so lsof tries to avoid reporting possibly incorrect information.

See the answer to the "What do ``path dev=xxx" and ``path inode=yyy" mean in the NAME column of Linux ``mem" file types?" for more information on how mismatched stat(2) device and inode numbers are reported.

## 10.5 Special Linux NAME column messages

### 10.5.1 What does ``(stat: xxx)" mean in the NAME column of Linux files?

When lsof tried to stat(2) the path in the NAME column, the stat(2) system call failed and produced an error message of ``xxx".

This situation usually occurs if the lsof process lacks permission to stat(2) the path -- e.g., the lsof executable lacks root permission, or lsof is attempting to stat(2) a path on an NFS device mounted with the root\_squash option.

The message can be suppressed with lsof's ``-w" option.

### 10.5.2 What does ``(readlink: xxx)" mean in the NAME column of Linux files?

When lsof tried to convert the /proc/<PID>/fd path, reported in the NAME column, to its full and more meaningful path, the readlink(2) system call used to do the conversion failed. The readlink(2) failure message is ``xxx".

This situation usually occurs if the lsof process lacks permission to readlink(2) some part of the path -- e.g., the lsof executable lacks root permission, or lsof is attempting to stat(2) a path on an NFS device mounted with the root\_squash option.

The message can be suppressed with lsof's ``-w" option.

## 10.6 Why is ``NOFD" reported as a Linux file type?

When lsof lacks permission to use opendir() on the fd/ subdirectory of a process' /proc/<PID> directory, it reports a single file of the type ``NOFD" (for no file descriptors).

Lsof reports the the /proc/<PID>/path in the NAME column, followed by "(opendir: xxx)", where ``xxx" is the error message returned by opendir().

The ``NOFD" entry can be suppressed with lsof's ``-w" option.

## 10.7 Why does Linux lsof report a NAME column value that begins with ``/proc"?

When lsof has problems processing a ``/proc/<PID>" entry -- e.g., it can't convert the entry to a full and more meaningful path name, or it can't access the /proc/<PID>/fd subdirectory with opendir() -- it will report the /proc/<PID> path in the NAME column.

## 10.8 Linux /proc/net/tcp\* and /proc/net/udp\* issues

### 10.8.1 Why use the Linux -X option?

If you're not interested in TCP/IP socket information for a particular use of lsof, adding the -X option will make lsof run more quickly, because -X inhibits the reading of the /proc/net/tcp\* and /proc/net/udp\* files. For example, you may only be interested in knowing what process has a particular file open.

When the Linux system has a large number of open TCP/IP socket files, the time savings provided by -X can be significant.

### 10.8.2 Why does lsof say ``-i is useless when -X is specified"?

If -X is specified, lsof can't report much information on open TCP/IP socket files. However, lsof's -i option requests that information. Hence, the two options conflict and can't be used together.

### 10.8.3 Why does lsof say ``can't identify protocol (-X specified)"?

If the Linux lsof -X option is specified and an open socket file can't be identified without accessing the /proc/net/tcp\*

and /proc/net/udp\* files, lsof will report that it can't identify the socket's protocol and that the failure may be caused by the -X specification

## 11.0 NetBSD Problems

### 11.1 Why doesn't lsof report on open kernfs files?

Lsof doesn't report on open NetBSD kernfs files because the structures lsof needs aren't defined in the kernfs.h header file in /sys/misc/kernfs.

### 11.2 Why doesn't lsof report on open files on: file descriptor file systems; /proc file systems; 9660 (CD-ROM) file systems; MS-DOS (floppy disk) file systems; or kernel file systems?

Lsof is not able to report on open files on certain file system if /usr/src/sys/msdosfs didn't exist when the lsof Configure script ran and lsof was made. /usr/src/sys/msdosfs contains header files lsof needs for collecting data on certain file system files.

You can tell if an lsof executable above) lacks support for a file system if the following test of `lsof -v` produces nothing:

```
$ lsof -v 2>&1 | grep <support_enabled_definition>
```

The <support-enabled\_definition> will be:

File System Type Definition Note

-----

File descriptor HASFDESCFS

/proc HASPROCFS

9660 HAS9660FS

MS-DOS HASMSDOSFS (lsof 4.61 and above)

Kernel HASKERNFS

The work-around is to install /usr/src/sys, rerun the lsof Configure script, and remake lsof.

### 11.3 Why does lsof produce confusing results for nullfs file systems?

Consider this report from /sbin/mount:

```
/usr/home  
on /home type null (local)
```

(According to `/sbin/mount /usr/home` is the mounted-on device and `/home` is the mounted-on directory.)

When `lsdf` is asked to report on open files on `/home`, it will report them as files on `/usr/home` instead. That's an artifact of the NetBSD kernel's dynamic name lookup cache (DNLC) and the way the kernel handles nullfs mounted-on directories.

While `lsdf` will report all open files on `/home` when given `/home` as a file system directory argument, even though reporting them as located on `/usr/home`, `lsdf` will not find the same files when asked to report on all open files on `/usr/home` when given `/usr/home` as a file system device argument. That's because from the mount perspective `/usr/home` is equivalent to a device, but from the device perspective it is still a directory.

So, what this `lsdf` command reports:

```
$ lsdf /home  
... NAME  
... /usr/home/...
```

Won't be duplicated by this `lsdf` command:

```
$ lsdf /usr/home
```

Another way to look at this confusing `/home` and `/usr/home` example is to consider what `stat(2)` reports. For `/home` `stat(2)` reports a device doublet that matches what `lsdf` finds in open file node structures, while the device doublet `stat(2)` reports for `/usr/home` won't match what `lsdf` finds. Nor does the mode reported by `stat(2)` indicate a block devices, as is the expected case.

There is no simple answer to this confusion, nor is there even a simple explanation. Simply be aware that when supplying file system arguments to `lsdf` on NetBSD, use the mounted-on directory name for a nullfs as the `lsdf` argument, and don't be surprised when the `NAME` column reports the mounted-on device name.

#### 11.4 NetBSD header file problems

#### 11.4.1 Why can't the compiler find some NetBSD header files?

If the compiler's pre-processor complains it can't find some header files when it compiles lsof source files, /usr/include and /usr/src may not have all the header files lsof needs.

As a work-around use the NETBSD\_SYS environment variable to specify to lsof the location of the additional header files -- e.g.,

```
% setenv NETBSD_SYS /my_source  
% ./Configure -n netbsd
```

or

```
$ NETBSD_SYS=/my_source ./Configure -n netbsd
```

Caution: using this work-around may cause the lsof Configure script to activate or omit different features, depending on where it finds the header files that determine the state of the features.

#### 11.4.2 Why does NetBSD lsof produce incorrect output?

If the NetBSD system's kernel was built from header files that don't match those in /usr/include -- e.g., //usr/src has the ones from which the kernel was built -- lsof may build, but won't produce correct output.

As a possible work-around, try directing the C compiler to select header files from /usr/src before it selects them from /usr/include. That can be done with the DEBUG make string -- e.g.,

```
$ make DEBUG="-I/usr/src -I/usr/include"
```

If that work-around fails, try using the LSOF\_INCLUDE and NETBSD\_SYS environment variables to swap /usr/include and /usr/src when running the Configure script, then use the make DEBUG string when running make -- e.g.,

```
$ LSOF_INCLUDE=/usr/src; export LSOF_INCLUDE  
$ NETBSD_SYS=/usr/include; export NETBSD_SYS  
$ ./Configure -n netbsd  
$ make DEBUG="-I/usr/src -I/usr/include"
```



## 11.5 Why isn't lsof feature xxx enabled for NetBSD?

Lsof's Configure script enables NetBSD features by locating and examining header files associated with the features, and based on what it finds, setting compile-time definitions in Makefiles. (See 00PORTING for a list of the definitions.)

When Configure doesn't find header files or doesn't find appropriate values in header files, that may mean the header file tree lsof is searching is incomplete or out of date.

Lsof normally looks for NetBSD header files in /usr/include. It can also be directed to look in other directories -- e.g., /sys -- if told to do so with the contents of the LSOF\_INCLUDE and NETBSD\_SYS environment variables.

To determine what header file enables a missing feature, check the NetBSD stanza in the Configure script. Then check the locations it checks for the indicated header files and contents.

See 00XCONFIG for more information on LSOF\_INCLUDE and NETBSD\_SYS.

## 12.0 NEXTSTEP and OPENSTEP Problems

### 12.1 Why can't lsof report on 3.1 lockf() or fcntl(F\_SETLK) locks?

Lsof has code to test for locks defined with lockf() or fcntl(F\_SETLK) under NEXTSTEP 3.1, but that code has never been tested. I couldn't test it, because my NEXTSTEP 3.1 lockf() and fcntl(F\_SETLK) functions return "Invalid argument" every way I have tried to invoke them.

If your NEXTSTEP 3.1 system does allow you to use lockf() and fcntl(F\_SETLK) and lsof doesn't report locks set with them, then the code in ../dialects/next/dnode.c probably isn't correct. Please contact me via e-mail at <abe@purdue.edu> and tell me how you got your lockf() and fcntl(F\_SETLK) system calls to work. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

### 12.2 Why doesn't lsof compile for NEXTSTEP with AFS?

I no longer have a NEXTSTEP test system that has AFS. Changes to lsof since I once had a test system have caused me to change the AFS code in NEXTSTEP without being able to test the changes.

If you need AFS support for NEXTSTEP and can't get it to compile, please contact me. Perhaps we can jointly fix the problems.

## 13.0 OpenBSD Problems

### 13.1 Why doesn't lsof support kernfs on my OpenBSD system?

lsof supports the kernel file system on OpenBSD versions whose `/sys/miscfs/kernfs/kernfs.h` (or `<miscfs/kernfs/kernfs.h>` header file correctly defines the `kern_target` structure. The lsof Configure script's `openbsd` stanza checks for the presence of the structure's `kt_name` element and activates kernfs support for the `CFLAGS -DHASKERNFS` definition only when it finds `kt_name`.

The `kernfs.h` header file is scheduled to be updated in the OpenBSD 2.1 release, according to Kenneth Stailey, who authored its changes.

### 13.2 Will lsof work on OpenBSD on non-x86-based architectures?

I've not tested lsof on an OpenBSD system that uses a non-x86-based architecture, but I've had one report that lsof 4.33 compiles and works on OpenBSD for the `pmax` architecture (decstation 3100).

### 13.3 `<sys/pipe.h>` problems

#### 13.3.1 Why does the compiler claim `nbpq` isn't defined?

When compiling lsof on some (older) OpenBSD SPARC versions, the compiler may complain:

```
In file included from ../dlsof.h:191,
  from ../lsof.h:166,
  from fino.c:52:
/usr/include/sys/pipe.h:83: `nbpq' undeclared here
(not in a function)
/usr/include/sys/pipe.h:83: size of array `ms' has
non-integer type
```

This happens because `<sys/pipe.h>` uses NBPG from `<machine/param.h>` to size the ``ms'` array, and some OpenBSD systems define NBPG in terms of a kernel integer variable, `nbpg`.

Lsof

revisions 4.46 and above have a hack to `dlsof.h`, developed by Volker Borchert that avoids the compiler problem for SPARC OpenBSD 2.3. The hack might work for other OpenBSD SPARC versions, but hasn't been tested there.

If you want to enable the hack for your OpenBSD SPARC version, modify this code in `.../dialects/n+obsd/dlsof.h`:

```
# if defined(OPENBSDV)
# if OPENBSDV==2030 && defined(__sparc__)
# if defined(nbpg)
#undef nbpg
# endif /* defined(nbpg) */
#define nbpg 4096 /* WARNING!!! ... */
# endif /* OPENBSDV==2030 && defined(__sparc__) */
#include <sys/pipe.h>
#endif /* defined(OPENBSDV) */
```

You will probably want to change the second `#if` test to match your OpenBSD version. You may also want to change what value is assigned to `nbpg`. See the next section, "What value should I assign to `nbpg`?"

### 13.3.2 What value should I assign to `nbpg`?

If you need to enable the `nbpg` hack, described in "Why does the compiler claim `nbpg` isn't defined?", you may also need to assign a value other than 4096 to `nbpg`. 4096 works for the sun4c processor and should work for sun4m, but 8192 may be needed for sun4.

Check `<machine/param.h>` and other OpenBSD documentation to determine the correct `nbpg` assignment.

### 13.4 Why doesn't `lsof` report on open MS-DOS file system (floppy disk) files?

`lsof` is not able to report on open MS-DOS file system files if `/usr/src/sys/msdosfs` didn't exist when the `lsof` Configure script ran and `lsof` was made. `/usr/src/sys/msdosfs` contains

header files lsof needs for collecting data on MS-DOS file system files.

You can tell if an lsof executable (revisions 4.61 and above) lacks MS-DOS file system support if the following command reports nothing:

```
$ lsof -v 2>&1 | grep HASMSDOSFS
```

The work-around is to install /usr/src/sys, rerun the lsof Configure script, and remake lsof.

### 13.5 Why isn't lsof feature xxx enabled for OpenBSD?

#### Lsof's Configure

script enables OpenBSD features by locating and examining header files associated with the features, and based on what it finds, setting compile-time definitions in Makefiles. (See 00PORTING for a list of the definitions.)

When Configure doesn't find header files or doesn't find appropriate values in header files, that may mean the header file tree lsof is searching is incomplete or out of date.

Lsof normally looks for OpenBSD header files in /usr/include and /sys. It can also be directed to look in other directories if told to do so with the contents of the LSOF\_INCLUDE and NETBSD\_SYS environment variables.

To determine what header file enables a missing feature, check the OpenBSD stanza in the Configure script. Then check the locations it checks for the indicated header files and contents.

See 00XCONFIG for more information on LSOF\_INCLUDE and NETBSD\_SYS.

### 14.0 Output Problems

#### 14.1 Why do the lsof column sizes change?

Lsof dynamically sizes its output columns each time it runs to make sure that each column takes the minimum space. Column parsing -- e.g., with awk -- is possible, because each column is guaranteed to be separated from the preceding one by at least one space, and no column except the last

(NAME) contains embedded spaces.

#### 14.2 Why does the offset have ``0t' and ``0x" prefixes?

The offset value that appears in the SIZE/OFF column has ``0t' and ``0x" prefixes to distinguish it from size values that may appear in the same column.

Normally if the offset value is less than 100,000,000 (8 digits), it appears in decimal with a ``0t' prefix; over 99,999,999, in hexadecimal with a ``0x" prefix.

A decimal offset is handy, for example, when tracking the progress of an outbound ftp transfer. When lsof reports on the ftp process, it will report the size of the file being sent with its open descriptor; it will report the progress of the transfer via the offset of the outbound open ftp data socket descriptor.

The ``-o [n]" option may be used to specify the maximum number of decimal digits to be printed after ``0t" before lsof switches to the hexadecimal digits after ``0x". As already noted, the default decimal digit count is 8.

#### 14.3 What are the values printed in the FILE\_FLAG column and why is 0x<value> sometimes included?

The two comma separated lists, separated by a semicolon, printed in the FILE-FLAG column (when the "+fg" option is specified), are short-hand names or hexadecimal values for the bits lsof finds in the f\_flag or f\_flags member of file structures for files (the first list, the one before the semicolon), and process open files flags found in various kernel structures, often named "pofile" (the second list, the one after the semicolon).

Lsof determines the short-hand names from symbols in the <fcntl.h>, <linux/fs.h>, <sys/fcntl.h>, <sys/fcntlcom.h>, <sys/file.h>, and <sys/user.h> header files.

See the discussion of FILE-FLAG in the OUTPUT section of the lsof man page, and the FF\_\* and POF\_\* symbols in lsof.h for a list of the names.

Bits with no names defined for them are represented by an 0x<value> member of the comma-separated list -- a hexadecimal

integer. When "+fG" is specified (instead of "+fg"), lsof will list all flag values as two hexadecimal integers, separated by a semicolon.

When "-FG" is specified to get the flags in an output field, the format defaults to hexadecimal. You can get names instead by following "-FG" with "+fg" -- e.g.,

```
$ lsof -FG +fg ...
```

However, when you precede "-FG" with "+fg" -- e.g.,

```
$ lsof +fg -FG
```

the format will be hexadecimal; order is important.

#### 14.3.1 Why doesn't lsof display FILE\_FLAG values for my dialect?

All versions of lsof except the /proc-based Linux lsof report FILE-FLAG values. Lsof can't obtain FILE-FLAG information from the Linux /proc interface.

#### 14.4 Network Addresses

##### 14.4.1 Why does lsof's -n option cause IPv4 addresses, mapped to IPv6, to be displayed in IPv6 notation?

When you use the -n option to tell lsof to display numeric network addresses, and an IPv4 address has been mapped to IPv6, lsof displays the address in IPv6 format and puts "ipv4" in the TYPE column. That combination indicates the IPv4 address has been mapped to IPv6.

For example, the IPv4 address 1.2.3.4, when mapped to an IPv6 address, will be displayed by lsof as:

```
[::ffff:1.2.3.4]
```

The enclosing brackets are lsof's signal that this is an IPv6 address. Inside the brackets is a standard IPv6 address, reported by inet\_ntop(). The first two colons, signifying zeroes in the first 64 bits of the IPv6 address, and the hexadecimal ffff in the next 32 bits, indicate that the last 32 bits contains a mapped IPv4 address, which is then displayed in IPv4 dot notation.

##### 14.5 Why does lsof output \x, ^x, or \xnn for characters

sometimes?

Lsof displays only printable ASCII characters. Lsof considers a character printable if `isprint(3)` says it is. If `isprint(3)` says a character isn't printable, the lsof man page explains:

"... Non-printable characters are printed in one of three forms: the C `\\[bfrnt]` form; the control character `^` form (e.g., `^^@`); or hexadecimal leading `\\x` form (e.g., `\\xab`). Space is non-printable in the COMMAND column (`\\x20`) and printable elsewhere."

14.5.1 Why is space considered a non-printable character in command names?

Space is considered an unprintable character in command names because it is sometimes possible to hide the full command name from scripts that parse `ps(1)` output by embedding a space in the name.

14.6 Why doesn't lsof print all the characters of a command name?

By default lsof prints the first nine characters of the names of commands associated with processes. If more characters are required, the "w" value of the "+c w" option may be used to specify a larger width.

If "w" is zero (0) lsof will print all characters of all command names up to the limit of the number of characters supplied by the particular UNIX dialect. When reporting command names, lsof replaces non-printable characters as discussed in the answer to "Why does lsof output `\\x`, `^x`, or `\\xnn` for characters sometimes?"

See the answer to the "Why is space considered a non-printable character in command names?" question for an explanation of why spaces are replaced by the `\\x20` representation in command names.

The number of command name characters supplied to lsof by UNIX dialects in files and structures varies by dialect. For example, Linux 2.4.27 supplies lsof the first 15 characters of command names and Solaris 9 supplies 16. Thus, even if "w" is zero (0), lsof can't report more characters for command names

on those two UNIX dialects than they provide lsof.

14.7 Why does lsof reject some -c command names, saying their lengths are "> what system provides (nn)"?

The command name length that a specific system provides varies from dialect to dialect. As noted in the answer to the "Why doesn't lsof print all the characters of a command name?" question, Linux and Solaris provide a limited number of command name characters.

When more characters are specified in the parameter to the -c option, lsof considers it an error and issues a fatal error message -- e.g.,

```
lsof: "-c xxxxyyyy" length (8) > what system provides (7)
```

The only work-around is to specify no more characters to -c than the system provides to lsof.

14.8 Why does lsof sometimes print TYPE numbers instead of names?

When lsof can't convert a type number to a name for printing in the TYPE column, it will report the number as four octets.

14.9 Marker line format problems

14.9.1 Why won't lsof accept a marker line format?

Lsof's Configure script must find the localtime(3) and strftime(3) functions in the dialect's C library in order to enable support for marker line formats.

Check the output of lsof's -v option for the presence of -DHAS\_STRFTIME in the compiler flags. If it isn't there, Configure didn't find the necessary two C library functions.

If you think lsof should have found the functions, make a copy of the C test program in the Configure script that it uses to find the functions. Then use the copy, or a more informative modification of it, to learn why Configure can't find the functions. You can find that program by searching for strftime.

14.9.2 Why does lsof reject the NL (%n) marker line format?



When repeat mode and field output (with -F) have both been specified, lsof won't allow new line (NL) formats to be specified with ``%n". That's because the marker line is always guaranteed to be a single line.

There is no work-around to this restriction.

#### 14.10 How are protocol state name exclusion and inclusion used?

Protocol state name inclusion and exclusion with the ``-s p:s" option and its arguments have some issues to consider. Note: the ``-s p:s" option is only available when the help output, obtained with -h or -?, shows it; it was a recent addition to lsof and is supported only on dialects where it could be tested.

First, there is the problem of determining what state names, if any, the dialect produces. Try running this lsof command to find them:

```
$ lsof -i
```

Knowing the state names of interest, the next problem is to decide on the lsof options and their parameters that will produce the desired output. Here some examples are probably the most useful.

To list only TCP socket files in LISTEN and CLOSE\_WAIT states, use:

```
$ lsof -itcp -stcp:listen,close_wait
```

or

```
$ lsof -iTCP -sTCP:LISTEN,CLOSE_WAIT
```

Case isn't important to lsof in protocol and state names.

To exclude TCP socket files in CLOSE\_WAIT state, use:

```
$ lsof -itcp -stcp:^close_wait
```

Note the `^' preceding close\_wait; it selects exclusion. You can mix included and excluded names in a comma separated list, but you may not include and exclude the same name for the same protocol.

To list TCP files in LISTEN state and UDP files in Idle state,

use:

```
$ lsof -i -stcp:listen -sudp:idle
```

Note: if you don't accompany the ``-s p:s" list option and arguments with the -i option, lsof will list all other regular files, while applying the specified inclusion and exclusion specifications to network files. Generally, then, you want to use -i with -s.

#### 14.10.1 Why doesn't my dialect support state name exclusion and inclusion?

When state name inclusion and exclusion was added, I had access to test systems for AIX, Darwin, FreeBSD, Linux, PSTAT-based HP-UX and Solaris.

Therefore, I was unable to add and test the support to any other UNIX dialects.

If a dialect has the support, then the HASTCPUDPSTATE definition in its machine.h header file will be active; if not, it will be absent or commented out.

If your dialect doesn't have the support and you want it added, you will have to provide me Internet access to a test host, where

I can compile lsof and have the credentials to test the changes the support requires. If that's possible for you, please contact me via e-mail at <abe@purdue.edu>. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

### 15.0 Pyramid Version Problems

#### 15.0.5 Statement of deprecation

As of lsof revision 4.52 support for all Pyramid versions has been dropped. Contact me via e-mail at <abe@purdue.edu> if you are interested in obtaining the last lsof Pyramid distribution. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

### 16.0 SCO Problems

#### 16.1 SCO OpenServer Problems

### 16.1.1 How can I avoid segmentation faults when compiling lsof?

If you have an older SCO OpenServer compiler, it may get a segmentation fault when compiling some lsof modules. That appears to happen because of the `-Ox` optimization action requested in the lsof Makefile.

Try changing `-Ox` to `-O` with this make invocation:

```
$ make DEBUG=-O
```

Bela Lubkin supplied this tip and Steve Williams verified it.

### 16.1.2 Where is libsocket.a?

If you compile lsof and the loader says it can't find the socket library, `libsocket.a`, called by the `-lsocket` option in the lsof compile flags, you probably are running an SCO OpenServer release earlier than 5.0 and don't have the TCP/IP Development System package installed.

You may have the necessary header files, because you have the TCP/IP run-time package installed, but if you don't have the TCP/IP Development System package installed, you won't have `libsocket.a`.

Your choices are to install the TCP/IP Development System package or upgrade to OpenServer Release 5.0. You will find `libsocket.a` in 5.0 -- you'll find all the libraries and header files there, in fact -- and you can use `gcc` to compile lsof if you don't want to install the 5.0 Development System package.

### 16.1.3 Why do I get "warning C4200" messages when I compile lsof?

When you compile lsof under OSR 3.2v4.2 (and perhaps under earlier versions as well), you may get many compiler warning messages of the form:

```
node.c(183) : warning C4200: previous declarator is not compatible with default argument promotion
```

In my opinion this is a bug in the OSR compiler. Because the compiler cannot handle full ANSI-C prototypes, it assumes default types for function parameters as it encounters

untyped in a function prototype -- e.g., in this function declaration from node.c,

```
readrnode(ra, r)
KA_T ra;
struct rnode *r;
{
...

```

the compiler assigns default int types to the ra and r arguments.

Then, when the compiler encounters the fully typed parameters after the function skeleton and sees parameters with types that don't match the assumptions it previously made, it whines about its own assumptions.

You can ignore these messages.

## 16.2 SCO|Caldera UnixWare Problems

### 16.2.1 Why doesn't lsof

compile on my UnixWare 7.1.1 or above system?

When you Configure lsof with the "uw" abbreviation and try to compile it for UnixWare 7.1.1, you may get compiler error messages like this:

```
UX:acomp: ERROR: "dproc.c", line 98:
undefined struct/union member: p_pgidp
```

This suggests that you probably have a non-stop cluster UnixWare 7.1.1 system. Its <sys/proc.h> header file differs from the one on the system where I did the lsof port to UnixWare 7.1.1. I currently don't have access to a non-stop cluster system to be able to develop changes to lsof that would make it compile and work there.

If you have a non-stop cluster UnixWare 7.1.1 system, want lsof for it, and can offer me a test account on the system, please contact me via e-mail at <abe@purdue.edu>. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

If you have a system with nsc\_cfs and can offer me a test account on it, please contact me via e-mail

at <abe@purdue.edu>.

Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

### 16.2.2 Why does lsof complain about node\_self() on my UnixWare 7.1.1 or above system?

If lsof exits immediately after issuing this message:

```
can't identify process NSC node; node_self(): <message>
```

It means that lsof has been built to run on a NonStop Cluster (NSC) UnixWare 7.1.1 or higher system and can't get the number of the node on which it is running. Lsof uses the node number to determine the path to the kernel boot file.

You can tell if lsof has been built for NSC by looking for "-DHAS\_UW\_NSC" in lsof's "-v" option output.

If the system on which you're trying to run lsof isn't running an NSC kernel, you will need to build a non-NSC lsof.

### 16.2.3 Why does UnixWare 7.1.1 or above complain about -lcluster, node\_self(), or libcluster.so?

When you build, compile, and load lsof for UnixWare 7.1.1 and above, ld may complain that it can't find the -lcluster library or that the node\_self symbol is undefined. When you try to run an existing lsof binary it may complain that libcluster.so can't be found.

These messages mean the tests made by Configure on your system led it to believe your system is running a NonStop Cluster (NSC) kernel, or the lsof binary you're trying to use was built on a NonStop Cluster system. If an lsof binary was built for NSC, this shell command produces output:

```
$ strings <lsof_binary> | grep HAS_UW_NSC
```

If that's not the case, and you can rebuild lsof, set the UW\_HAS\_NSC environment variable to "N" and do this:

```
$ Configure -n clean  
$ UW_HAS_NSC=N
```

```
$ export UW_HAS_NSC
$ Configure -n uw
$ make
```

You can also edit Makefile and lib/Makefile. Remove -DHAS\_UW\_NSC from the CFGF strings. Remove -lcluster from the CFGL strings. Then run make again.

If you have an existing NSC lsof binary and you want one for a non-NSC system, you will have to build lsof yourself on the system where you want to use it. (That's always a good idea anyway.)

#### 16.2.4 Why does UnixWare 7.1.1 or above lsof complain it can't read the kernel name list?

If lsof complains:

```
can't read kernel name list from <path>
```

It means that lsof can't find the booted kernel image file at <path>. On NonStop Cluster (NSC) UnixWare 7.1.1 or higher systems lsof determines the booted file path by examining this file:

```
/stand/node_self/boot
```

If examining that file doesn't lead to an NSC path, lsof uses:

```
/stand/1/unix
```

On non-NSC systems lsof expects the booted kernel image to be in /stand/unix.

If your booted kernel image is in a different place, use lsof's "-k <path>" option to specify its path.

#### 16.2.5 Why doesn't lsof report link count, node number, and size for some UnixWare 7.1.1 or above CFS files?

Lsof reports link count, node number, and size for open CFS files as recorded in their kernel node structure's cached attributes. Sometimes not all attributes are cached on the node where lsof runs, so lsof cannot report them.

## 16.2.6 Why doesn't lsof report open files on all UnixWare 7.1.1 NonStop Cluster (NSC) nodes?

Lsof can only report on files open on the node on which it runs, because the information lsof reports comes from the private kernel memory of the node. This may mean that asking lsof to find a specific open file, or use of a specific Internet address or port, may not report all open instances on nodes other than the one used to run lsof.

You can use the NSC `onnode(1)` command to run lsof on specific nodes, or the `onall(1)` command to run lsof on all nodes -- e.g.,

```
$ onall lsof [options] 2>&1 | less
```

or

```
$ onnode node-number lsof [options] 2>&1 | less
```

Note that, when lsof is run all nodes, the path name component assembly results it reports in its NAME column may vary, because the dynamic name cache from which lsof gets the components is private to the kernel of each node.

Also

note the use of shell redirection in the examples to merge the standard error file information from `onnode` and `onall` with lsof's standard output file output. That will put the `onnode` and `onall` node announcements in proper sequence with lsof's output.

## 16.2.7 Why doesn't lsof report the UnixWare 7.1.1 NonStop Cluster (NSC) node a process is using?

To induce lsof to report the node on which a process runs would be a significant, non-standard modification to lsof. It has much wider implications than merely the printing of a number in an output column. I'm not currently (April 2001) prepared to undertake such a modification.

If you want node-specific NSC information about open files, run lsof under the control of `onall(1)` or `onnode(1)`.

```
$ onall lsof [options] 2>&1 | less
```

or

```
$ onnode node-number lsof [options] 2>&1 | less
```

## 16.2.8 Why does the compiler complain about missing UnixWare 2.1[.x]

header files?

SCO|Caldera didn't ship the following header files  
with  
UnixWare 2.1 through 2.1.3:

<fs/proc/prdata.h>  
<fs/procfs/prdata.h>  
<sys/fs/fifonode.h>  
<sys/fs/namenode.h>

Lsof needs those header files for its compilation. Contact  
SCO|Caldera to get copies of those header files.

If you can't get the header files from SCO|Caldera, please  
contact me via e-mail at <abe@purdue.edu>. Make sure "lsof"  
appears in the "Subject:" line so my e-mail filter won't  
classify your letter as Spam.

## 17.0 Sun Problems

### 17.0.5 Statement of deprecation

Lsof support for SunOS 4.1.x was last tested at revision 4.51.  
Contact me via e-mail at <abe@purdue.edu> if you're interested in  
obtaining it. Make sure "lsof" appears in the "Subject:" line so  
my e-mail filter won't classify your letter as Spam.

### 17.1 My Sun gcc-compiled lsof doesn't work -- why?

Gcc can be used to build lsof successfully. However, an  
improperly installed Sun gcc compiler will usually not  
produce a working lsof.

If your Sun gcc-compiled lsof doesn't report  
anything, or  
reports ``can't read proc table," or gcc refuses to compile  
lsof without error, check that the gcc step that "fixes"  
Sun header files was run on the system where you're using  
gcc to compile lsof. As an alternative, if you have the  
SunPro C 5.0 compiler or later available, use it to compile  
lsof -- e.g., use the solariscc Configure abbreviations.

### 17.2 How can I make lsof compile with gcc under Solaris 2.[456], 2.5.1, 7, 8 or 9?

Presuming your gcc-specific header files are wrong for



Solaris, edit the lsof Configure-generated Makefile and lib/Makefile and make this change:

```
CFGF= -Dsolaris=20400 ...  
to  
CFGF= -Dsolaris=20400 -D__STDC__=0 -I/usr/include ...
```

or change:

```
CFGF= -Dsolaris=20500 ...  
to  
CFGF= -Dsolaris=20500 -D__STDC__=0 -I/usr/include ...
```

or change:

```
CFGF= -Dsolaris=20501 ...  
to  
CFGF= -Dsolaris=20501 -D__STDC__=0 -I/usr/include ...
```

This is only a temporary work-around. You really should instruct gcc to update your gcc-specific header files or install a recent gcc (e.g., 3.2), which has no need for private copies of Solaris include files.

### 17.3 Why does Solaris Sun C complain about system header files?

You're probably trying to use /usr/ucb/cc if you get compiler complaints like:

```
cc -O -Dsun -Dsolaris=20300 ...  
"/usr/include/sys/machsig.h", line 81: macro BUS_OBJERR  
redefines previous macro at "/usr/ucbinclude/sys/signal.h",  
line 444
```

Note the reference to "/usr/ucbinclude/sys/signal.h". It reveals that the BSD Compatibility Package C compiler is in use. Lsof requires the ANSI C version of the Solaris C compiler, usually found in /usr/opt/bin/cc or /opt/SUNWspro/bin/cc.

Try adding a CC string to the lsof Makefile that points to the Sun ANSI C version of the Sun C compiler -- e.g.,

```
CC= /usr/opt/bin/cc  
or  
CC= /opt/SUNWspro/bin/cc.
```

#### 17.4 Why doesn't lsof work under my Solaris 2.4 system?

If lsof doesn't work under your Solaris 2.4 system -- e.g., it produces no output, little output, or the output is missing command names or file descriptors -- you may have a pair of conflicting Sun patches installed.

Solaris patch 101945-32 installs a kernel that was built with a <sys/auxv.h> header file whose NUM\_\*\_VECTORS definitions don't match the ones in the <sys/auxv.h> updated by Solaris patch 102303-02.

NUM\_\*\_VECTORS in the kernel of patch 101945-32 are smaller than the ones in the <sys/auxv.h> of patch 102303-02. The consequence is that when lsof is compiled with the <sys/auxv.h> whose NUM\_\*\_VECTORS definitions are larger than the ones used to compile the patched kernel, lsof's user structure does not align with the one that the kernel employs.

If you have these two patches installed, contact Sun and complain about the mis-match.

You may be able to work around the problem by editing /usr/include/sys/auxv.h to have the following NUM\_\*\_VECTORS definitions:

```
#define NUM_GEN_VECTORS 4
#define NUM_SUN_VECTORS
8
```

The Configure script issues a prominent WARNING that you should try the work-around.

I thank Leif Hedstrom for identifying the offending patches.

#### 17.5 Where are the Solaris header files?

If you try to compile lsof under Solaris and get a compiler complaint that it can't find system header files, perhaps you forgot to add the header file package, SUNWhea.

#### 17.6 Where is the Solaris /usr/src/uts/<architecture>/sys/machparam.h?

When you try to Configure lsof for Solaris 2.[23456], 2.5.1, and 7 -- e.g., on a `uname -m` == sun4m system -- Configure complains:

```
grep: /usr/src/uts/sun4m/sys/machparam.h:
No such file or directory
grep: /usr/src/uts/sun4m/sys/machparam.h:
No such file or directory
```

And when you try to compile the configured lsof, cc or gcc complains:

```
dproc.c:530: `KERNELBASE' undeclared (first use this function)
```

The explanation is that somehow your Solaris system doesn't have the header files in /usr/src/uts it should have. Perhaps someone removed the directory to save space. Perhaps you're using a gcc installation, copied from another system. In any event, you will have to load the header files from the SUNWhea package of your Solaris distribution.

KERNELBASE is an important symbol to lsof -- it keeps lsof from sending an illegal kernel value to kvm\_read() where a segmentation violation might result (a bug in the kvm library). Lsof can get illegal kernel values because it reads kernel values slowly with kvm\_read() calls that the kernel is changing rapidly.

Lsof doesn't need KERNELBASE at Solaris 2.5 and above, because it has a KERNELBASE value whose address lsof can find with /dev/ksyms and whose value it can read with kvm\_read(). Under Solaris 2.5 /usr/src/uts has moved to /usr/platform.

#### 17.7 Why does Solaris lsof say "can't read proc table"?

When lsof collects data on processes, using the kvm\_\*() functions to scan the kernel's proc structure table, it checks to make sure it has identified a reasonable number of them -- a minimum of three. When lsof can't identify three processes during a scan, it repeats the scan.

When five scans fail to yield three processes, lsof issues the fatal message:

```
lsof: can't read proc table
```

and exits.

Usually lsof fails to identify three processes during a

scan because its idea of the form of the proc structure differs from that being used by the kernel. Since the proc structure is defined in <sys/proc.h> and other /usr/include header files, the root cause of a proc structure discrepancy usually can be found in the composition of /usr/include.

One common way that /usr/include header files can be incorrect is that gcc was used to compile lsof, gcc used its special (i.e., "fixed") header files instead of the ones in /usr/include, and the special gcc header files weren't updated when Solaris was. Answers to these questions:

My Sun gcc-compiled lsof doesn't work -- why?

How can I make lsof compile with gcc under Solaris 2.[456], 2.5.1, 7, 8 or 9?

Why does Solaris Sun C complain about system header files?

discuss the gcc header file problem and offer suggestions on how to fix it or work around it.

It may also be that you are trying to run a version of lsof that was compiled on an older version of Solaris. For example, an lsof executable, compiled for Solaris 2.4, will produce the "can't read proc table" message if you try to run it under Solaris 2.5. If you have compiled lsof under Solaris 2.5 and it still won't work, see if the header files in /usr/include have been updated to 2.5, or still represent a previous version of Solaris.

Another source of header file discrepancies to consider is the Solaris patch level and whether a binary kernel patch was not matched with a corresponding header file update. See the "Why doesn't lsof work under my Solaris 2.4 system?" question for an example of one in Solaris 2.4 -- there may be other such patch conflicts I don't know about.

#### 17.8 Why does Solaris lsof complain about a bad cached clone device?

When lsof revisions below 4.04 have been run on a Solaris system and have been allowed to create a device cache file, the running of revisions 4.04 and above on the same systems may produce this complaint:

lsof: bad cached clone device: ...

lsof: WARNING: created device cache file: ...

This is the result of a change in the device cache file that took place at lsof revision 4.04. The change introduced a node number into the clone device lines of the device cache file and was done in such a way that lsof could detect device cache files whose clone lines don't have node numbers (lines created by previous lsof revisions) and recognize the need to regenerate the device cache file.

#### 17.9 Why doesn't Solaris make generate .o files?

Solaris /usr/ccs/bin/make won't generate .o files from .c files if /usr/share/lib/make/make.rules is missing. It may be found in and installed from the SUNWsport package.

#### 17.10 Why does lsof report some Solaris 2.3 and 2.4 lock types as `N`?

For Solaris 2.3 with patch P101318 installed at level 45 or above, and for all versions of Solaris 2.4, NFS locks are represented by a NFS-specific kernel lock structure that sometimes lacks a read or write lock type indicator. When lsof encounters such a lock structure, it reports the lock type as `N`.

#### 17.11 Why does lsof Configure say "WARNING: no cc in ..."?

When lsof's Configure script is executed with the solariscc abbreviation it tries to make sure it's using the Sun C compiler and not the UCB substitute from /usr/ucb/cc. Thus, it looks for cc in the "standard" Sun compiler location, /opt/SUNWspro/bin.

If Configure can't find cc there, it issues the warning:

```
lsof: WARNING: no cc in /opt/SUNWspro/bin;  
using cc without path.
```

and uses cc for the compiler name, letting the shell find cc with its PATH environment variable.

You can tell Configure where to find your cc with the SOLARIS\_CC\_DIR cross-configuration environment variable. (See 00XCONFIG for more information on SOLARIS\_CC\_DIR). For example, use this Configure shell command:

SOLARIS\_CCDDIR=/usr/special/bin Configure -n solariscc

(SOLARIS\_CCDDIR should be the full path to the directory containing your cc.)

## 17.12 Solaris 7, 8 and 9 Problems

### 17.12.1 Why does lsof say the compiler isn't adequate for Solaris 7, 8 or 9?

Solaris 7, 8 and 9 kernels come in two flavors, 32 and 64 bit. 64 bit kernels run on machines that support the SPARC v9 instruction set architecture. Separate executables for some programs, -- e.g., ones using libkvm like lsof -- must be built for 32 and 64 bit kernels.

Previous Sun (e.g., SC4.0) and earlier gcc compilers will build lsof for 32 bit kernels, but they won't build it for 64 bit kernels. Compilers that will build lsof for 64 bit Solaris 7, 8 and 9 kernels are the Sun WorkShop Compilers C 5.0 and above, and recent gcc versions, e.g., 3.2.

When given the `--xarch=v9` flag, the C 5.0 compiler and above, and associated loader and 64 bit libraries will build a 64 bit lsof executable; when given the `-m64` or `-mcpu=v9` (deprecated) flags, an appropriate gcc compiler will build a 64 bit lsof executable.

When the lsof Configure script detects a 64 bit kernel is in use (e.g., by executing `/bin/isainfo -kv``), and when it finds that the specified compiler is inappropriate, it complains with these messages:

For gcc:

```
!!!!WARNING!!!=====!!!WARNING!!!=====!!!WARNING!!!!
"!
"! LSOF NEEDS TO BE CONFIGURED FOR A 64 BIT KERNEL, BUT !"
"! THIS GCC DOESN'T SUPPORT THE BUILDING OF 64 BIT !"
"! SOLARIS EXECUTABLES. LSOF WILL BE CONFIGURED FOR A !"
"! 32 BIT echo KERNEL. !"
"!
!!!!WARNING!!!=====!!!WARNING!!!=====!!!WARNING!!!!
```

For

Sun C:

```

!!!WARNING!!!=====!!!WARNING!!!=====!!!WARNING!!!
!
! LSOF NEEDS TO BE CONFIGURED FOR A 64 BIT KERNEL, BUT |
! THE VERSION OF SUN C AVAILABLE DOESN'T SUPPORT THE !
! -xarch=v9 FLAG. LSOF WILL BE CONFIGURED FOR A 32 BIT !
! KERNEL.
!
!!!WARNING!!!=====!!!WARNING!!!=====!!!WARNING!!!

```

17.12.2 Why does Solaris 7, 8 or 9 lsof say "FATAL: lsof was compiled for..."?

Solaris 7, 8 or 9 lsof may say:

```

lsof: FATAL: lsof was compiled for a xx bit kernel,
but this machine has booted a yy bit kernel.

```

```

Where: xx = 32 or 64
yy = 64 or 32

```

(xx and yy won't match.)

This message indicates that lsof was compiled for one size kernel and is being asked to execute on a different size one. That's not possible for programs like lsof that use libkvm.

Depending on the instruction sets for which you need Solaris 7, 8 or 9 lsof, you may need two or more versions of lsof, compiled for each kernel size, installed for use with /usr/lib/isaexec. See the "How do I install lsof for Solaris 7, 8 or 9?" section of this document for more information on that.

17.12.3 How do I build lsof for a 64 bit Solaris kernel under a 32 bit Solaris kernel?

If your Solaris system has an appropriate compiler (e.g., WorkShop Compilers C 5.0 and above, or a recent gcc like 3.2) and the 64 bit libraries have been installed, you can force lsof's Configure script to build a 64 bit version of lsof with:

```

$ SOLARIS_KERNBITS=64 Configure -n solariscc

```

The SOLARIS\_KERNBITS environment variable is part of the lsof cross-configuration support, described in the 00XCONFIG

file of the lsof distribution.

#### 17.12.4 How do I install lsof for Solaris 7, 8 or 9?

If you are installing lsof where it will be used only under the bit size kernel for which it was built, no special installation is required.

If, however, you are installing different versions of lsof for different bit sizes -- e.g., for use on a 64 bit NFS server and from its 32 bit clients -- you should read the man page for isaexec(3C) and install lsof according to its instructions.

The executable at the directory where lsof is to be found should be a hard link to /usr/lib/isaexec or a copy of it. In the directory there must be instruction architecture subdirectories -- e.g., .../sparc/ and .../sparcv9/. The lsof for 64 bit size kernels is installed in the .../sparcv9/ subdirectory; the one for 32 bit size kernels, in .../sparc/.

For example, if you're installing 32 and 64 bit lsof executables in /usr/local/etc, you would:

```
# cd /usr/local/etc
# ln /usr/lib/isaexec lsof
# mkdir sparc sparcv9
# install the 32 bit lsof as sparc/lsof
# install the 64 bit lsof as sparcv9/lsof
# chmod, chown, and chgrp sparc/lsof and
sparcv9/lsof appropriately
```

Lsof permissions and ownerships are the same whether one or more lsof executables are being installed, with or without the /usr/lib/isaexec hard link.

#### 17.12.5 Why does my Solaris 7, 8 or 9 system say it cannot execute lsof?

When you attempt to execute lsof, your Solaris 7, 8 or 9 shell may complain:

```
ksh: ./lsof: cannot execute
```

If the lsof executable exists and has the proper execution permissions, this error may be the result of trying to



execute an lsof, built for a 64 bit kernel, on a 32 bit kernel.

This will tell you about the lsof executable:

```
$ file lsof
lsof: ELF 64-bit MSB executable SPARCV9 Version 1,
dynamically linked, not stripped
```

The "64-bit" notation indicates the binary was built for a 64 bit kernel. To see the running kernel bit size, use this command:

```
$ isainfo -kv
32-bit sparc kernel modules
```

The "32-bit" notation indicates a 32 bit kernel has been booted.

The only work-around is to obtain, or Configure and make, an lsof for the appropriate kernel bit size. If you Configure and make lsof on the kernel where you wish to run it the proper compiler, the lsof Configure step will generate Makefiles that can be used with make to build an appropriate lsof executable.

To compile a 64 bit lsof, you must have an appropriate compiler -- i.e., Sun WorkShop Compilers C 5.0 or higher or a recent gcc like 3.2.

17.12.6 What gcc will produce 64 bit Solaris 7, 8 and 9 executables?  
8 and 9 executables?

Properly built and installed recent gcc versions -- e.g., 3.2 -- will build lsof for 64 bit Solaris kernels.

If you update your gcc version to 3.2 or later, make sure the private gcc header files become current -- i.e., clear out any private header files from a previous gcc or Solaris installation before installing the new ones, or build to a new --prefix root and replace the old root with it after the build and installation are complete.

17.12.7 Why does lsof on my Solaris 7, 8 or 9 system say, "can't read namelist from /dev/ksyms?"

You're probably trying to use an lsof executable built for an earlier Solaris release on a 64 bit Solaris 7, 8 or 9 kernel. The output from ``lsof -v`` will tell you the build environment of your lsof executable. You should also have gotten a warning message that lsof is compiled for a different Solaris version than the one under which it is running -- something like this:

```
lsof: WARNING: compiled for Solaris release X; this is Y
```

You need to build lsof on the system where you want to use it. For 64 bit Solaris 7, 8 and 9 you need a compiler that can generate 64 bit Solaris executables -- e.g., the Sun Workshop 5 C compiler or later, or a recent gcc version like 3.2. See the "Why does lsof say the compiler isn't adequate for Solaris 7, 8 or 9?" section and the ones following it for a discussion of building lsof for 64 bit Solaris 7, 8 or 9.

### 17.13 Solaris and COMMON

#### 17.13.1 What does COMMON

mean in the NAME column for a Solaris VCHR file?

When lsof puts COMMON or (COMMON) in the NAME column of a Solaris VCHR file, it means that the file is handled by the special file system functions of the kernel through a common vnode.

#### 17.13.2 Why does a COMMON Solaris VCHR file sometimes seem to have an incorrect minor device number?

When lsof reports on an open file in a Solaris special file system that uses a COMMON vnode, and the file is a VCHR file, lsof tries to locate the associated device node by looking for matches on the major and minor device numbers first.

If no major and minor match results, lsof then looks for a match on pseudo and clone device files. (See `/devices/pseudo`.) Those device nodes are matched specially by either their major or minor device numbers, but not both. Hence, when lsof finds a match under those special conditions, it may report a value in its output DEVICE column that differs from one of the major and minor numbers of the device node.

Here's an example from a sun4m Solaris 7 system:

```
$ ls -li /devices/pseudo/pm@0:pm
151261 crw-rw-rw- 1 root  sys  117, 0 ...
$ lsof /devices/pseudo/pm@0:pm
COMMAND ... DEVICE ...  NODE NAME
powerd    117,1 ... 151261 /devices/pseudo/pm@0:pm (COMMON)
Xsun     ... 117,0 ... 151261 /devices/pseudo/pm@0:pm
```

Note that the DEVICE value for the file with (COMMON) in its name field has a different minor device number (1) from what ls reports (0), while the DEVICE value for the file without (COMMON) matches the ls output exactly. Both match on the major device number, 117. The minor device number mis-match is a result of the way the Solaris kernel handles special file system common vnodes, and it's the reason lsof puts (COMMON) after the name to signal that a mis-match is possible.

#### 17.14 Why don't lsof and Solaris pfiles reports always match?

/usr/proc/bin/pfiles for Solaris 2.6, 7, 8, and 9 also reports information on open files for processes. Sometimes the information it reports differs from what lsof reports.

There are several reasons why this might be true. First, because pfiles is a Sun product, based on Sun kernel features, its developers have a better chance of knowing exactly how open file information is organized. I sometimes have to guess at how kernel file structure linkages are constructed by gleaning hints from header files.

Second, lsof is aimed at providing information, specifically device and node numbers, that can be used to identify named file system objects -- i.e., path names. Thus, lsof tries to make sure its device and node numbers match those reported by stat(2). Pfiles doesn't always report numbers that match stat(2) -- e.g., for files using clone and pseudo devices via common vnodes like the nlist() /dev/ksyms usage.

Here's the Solaris 7 COMMON VCHR example again with additional pfiles output:

```
$ ls -li /devices/pseudo/pm@0:pm
151261 crw-rw-rw-
1 root  sys  117, 0 ...
$ lsof /devices/pseudo/pm@0:pm
```

```
vic1: 10 = lsof /dev/pm
COMMAND ... DEVICE ... NODE NAME
powerd ... 117,1 ... 151261 /devices/pseudo/pm@0:pm (COMMON)
Xsun ... 117,0 ... 151261 /devices/pseudo/pm@0:pm
$ pfiles ...
0: S_IFCHR ... dev:32,24 ino:61945 ... rdev:117,1
...
14: S_IFCHR ... dev:32,24 ino:151261 ... rdev:117,0
```

Note that the NODE number, reported by lsof, matches what ls(1) and stat(2) report, while the ino value pfiles reports doesn't. Lsof also indicates with the (COMMON) notation that the DEVICE number is a pseudo one, derived from the character device's value. The lsof DEVICE value matches the pfiles rdev value, correct behavior for a character device, but pfiles gives no sign that it's not possible to find that character device number in /devices with ls(1) or stat(2).

17.15 Why does lsof say, "kvm\_open(namelist=default, core=default): Permission denied?"

Lsof needs permission to read from the /dev/kmem and /dev/mem memory devices. Access to them is opened via a call to the kvm\_open() library function and it reports the indicated message.

You must give lsof permission to read the memory devices. The super user can almost always do that, but other lsof users can do it if some group -- e.g., sys -- has permission to read the memory devices, and the lsof binary is installed with the group's ownership and with the setgid permission bit enabled.

17.16 Why is lsof slow on my busy Solaris UFS file system?

Lsof may be slow on a busy Solaris UFS file system when UFS logging has been enabled with the "logging" mount option. That option can significantly increase disk operations under certain conditions -- e.g., when a lot of files are accessed quickly.

When only the "logging" option is specified to mount, all file accesses (atime updates) are logged to the UFS logging queue. Each atime update requires two writes to the disk to complete it.

If

you want to do UFS logging -- and there are reliability advantages to it -- consider using the "logging.noatime" mount options instead. That will shift atime updates from the logging queue to fewer and independent asynchronous operations, consequently making the UFS logging queue a smaller bottleneck.

Consult mount\_ufs(1M) for more information on the logging and noatime options.

(My thanks to Casper Dik for this tip on improving the performance of UFS logging.)

17.17 Why is lsof so slow on my Solaris 8 or 9 system?

Solaris 8 has a post-release feature upgrade modifying kernel name cache (DNLC) handling that can slow lsof throughput dramatically. The feature, sometimes called negative DNLC caching, is standard in Solaris 9.

As best I can tell, when you install the Solaris 8 MU1 package, you get negative DNLC caching. If this pipe produces any output, your system has negative DNLC caching.

```
$ nm /dev/ksyms | grep negative_cache_vnode
```

The reason negative DNLC caching perturbs lsof is that a single vnode address (found in the negative\_cache\_vnode kernel variable) is used to mark entries in the DNLC that are not (the negative part) found on disk.

Since a single vnode address (the DNLC key lsof uses) can represent many (I've seen upwards of 30,000.) DNLC entries, their presence overloads lsof's internal DNLC hashing function. An overloaded hash function is a slow hash function, and lsof's slows to a crawl when it encounters thousands of keys that produce the same value when the lsof DNLC hash function is applied to them.

The solution is simple -- ignore negative DNLC cache keys. They don't represent path name components lsof can use. Lsof revisions 4.50 and above have an addition that ignores them and the performance of those lsof revisions improves significantly when presented with negative DNLC cache keys.

If you don't have an lsof revision at 4.51 or later, there's

a work-around. Use lsof's ``-C" option. It disables lsof's DNLC caching. Of course, that also inhibits the reporting of any path name components from the kernel DNLC. When ``-c" is used, lsof will continue to report file system and character device paths.

## 17.18 Solaris and VxFS

### 17.18.1 Why doesn't lsof support VxFS 3.4 on Solaris 2.6, and above?

Lsof will not support VxFS version 3.4 on Solaris 2.6 and above unless some files from VxFS Update 2 have been installed. VxFS 3.4 FCS and VxFS 3.4 update 1 lack the header files lsof normally uses to obtain information from the VxFS 3.4 kernel node structure, vx\_inode. VxFS 3.4 Update 2 provides a method whereby lsof can obtain the necessary vx\_inode information from the vxfsu\_get\_ioffsets() function in Veritas utility libraries.

The utility libraries (32 bit and 64 bit versions) may be found in /opt/VRTSvxfs/lib. An ancillary header file may be found in /opt/VRTSvxfs/include/sys/fs/vx\_libutil.h. Documentation of the vxfsu\_get\_ioffsets(3) function may be found in /opt/VRTS/man/man3/vxfsu\_get\_ioffsets.3.

Those files of VxFS 3.4 Update 2 may be downloaded from:

[ftp://ftp.veritas.com/pub/support/vxfs\\_34.i64243.tar](ftp://ftp.veritas.com/pub/support/vxfs_34.i64243.tar)

The vxfs\_34.i64243.tar archive will unpack into an i64243 directory containing these files:

```
$ ls i64243
README
libvxfsutil.sol26.sums
libvxfsutil.sol26.tar.Z
libvxfsutil.sol27.sums
libvxfsutil.sol27.tar.Z
libvxfsutil.sol28.sums
libvxfsutil.sol28.tar.Z
```

Read README. Select the \*.tar.Z file appropriate for your Solaris version. Its contents will unpack into /opt/VRTS and /opt/VRTSvxfs, so you will need sufficient permission -- e.g., do it as root -- to unpack the uncompressed archive. Once you've done that, it's a good idea to compare the

checksums of the archive you unpacked with the ones recorded in the appropriate \*.sums file. Use `sum -r` to verify the checksums.

For example, if you want the Solaris 8 version, uncompress and unpack libvxfstutil.sol28.tar.Z -- e.g.,

```
$ su
...
# cd i6423
# zcat libvxfstutil.sol28.tar.Z | tar xf -
```

That should create these new files and subdirectories with the indicated checksums:

```
File or subdirectory  sum -r

/opt/VRTSvxfs/include/vxfstutil.h 03938
/opt/VRTSvxfs/lib/libvxfstutil.a 51794
/opt/VRTSvxfs/lib/sparcv9/
/opt/VRTSvxfs/lib/sparcv9/libvxfstutil.a 07420
/opt/VRTS/man/man3/
/opt/VRTS/man/man3/vxfstu_get_ioffsets.3 62480
```

Once these files are in place, run lsof's Configure script for the solaris or solariscc abbreviation. Configure will locate the appropriate VxFS 3.4 Update 2 files and set up for the making of an lsof that will properly display open VxFS 3.4 file information.

17.18.2 Why does lsof report "vx\_inode: vxfstu\_get\_ioffsets error" for open Solaris 2.6 and above VxFS 3.4 and above files?

Even when lsof supports VxFS 3.4 and above on Solaris 2.6 and above, it may report "vx\_inode: vxfstu\_get\_ioffsets error" in the NAME column for all VxFS files.

The usual cause is that lsof doesn't have permission to read the file at the end of the /dev/vxportal symbolic link. If, for example, lsof has been installed setgid(sys), then the /dev/vxportal symbolic link destination should be owned by the sys group and readable by it.

Update 2 for VxFS 3.4 sets the modes of the /dev/vxportal symbolic link destination to 0640 and the group ownership to sys. But I have had a report that the modes are wrong

in a VxFS 4.0 installation.

Another cause may be that the system has more than one version of VxFS installed (Only one can be active.), and Isof's Configure script did not choose the header files and libraries for the active VxFS version. Configure opts for VxFS 4.0 and above header files and libraries (in /opt/VRTS) in preference to those for VxFS below 4.0 (in /opt/VRTSvxfs).

Look for the directories /opt/VRTS and /opt/VRTSvxfs. If you have /opt/VRTS, make sure its header and library symbolic links point to those of the active VxFS version.

If you have both directories, look at the CFLAGS that Configure constructed for making Isof and see which directory path follows a -I option. If that doesn't match the directory path of the active VxFS version, try pointing Configure at the correct directory with the SOLARIS\_VXFSINCL environment variable -- e.g.,

```
$ SOLARIS_VXFSINCL=/opt/.../include ./Configure -n solaris
```

### 17.18.3 Why does Solaris Configure claim there is no VxFS library?

The Isof Configure script, when configuring for Solaris, may report:

```
FATAL: no VxFS .../libvxfsutil.a
```

That fatal error message indicates Isof has found the VxFS utility library's header files, but can't find the library itself in the expected location adjacent to the header files.

One possible cause is an incorrect symbolic link from /opt/VRTS/lib/sparcv9/libvxfsutil.a to the library's real location. (Some VxFS distributions declared the link incorrectly.) Use `ls -lL` on that path to see if it exists.

If it doesn't exist, the link may be missing an additional leading "../" component.

If the problem is a missing "../" from the library's link, you can correct the link or check with Veritas/Symantec for the patch that corrects it.

If the problem is not a missing "../", and you know the libvxfsutil.a location, you can define its path in the



SOLARIS\_VXFSLIB environment variable before running the lsof Configure script. (See 00XCONFIG for information about using the SOLARIS\_VXFSLIB environment variable.)

If you have no libvxfutil.a, you must obtain it from Veritas/Symantec or find it in your VxFS installation package.

#### 17.18.4 Why doesn't Solaris lsof report VxFS path name components?

Solaris lsof will report path name components for VxFS versions that use the common Solaris Dynamic Name Lookup Cache (DNLC) or on some file systems of VxFS versions that support the VxFS Reverse Name Lookup (RNL) facility.

VxFS versions 3.3 (approximately) and below use the common Solaris DNLC. (I haven't been able to determine exactly when VxFS stopped using the DNLC.) For versions above that boundary, but below 4.0, lsof can't report path name components.

At VxFS 4.0 and above, lsof can be compiled to use the VxFS RNL facility for reporting path names. If "-DHASVXFSRNL" appears in the compiler flags section of lsof "-v" option output, then the lsof Configure script detected the VxFS RNL facility and lsof has been compiled to use it.

Lsof's use of the RNL facility can fail when the VxFS file system disk layout version is below 6. In that case, lsof can report no path name components. For more information, see the vxfs\_inotopath(3) manual page. any of the following commands will show the disk layout version for a VxFS file system, when supplied the block device or mount point on which the file system is mounted.

```
fstyp -v <block_device>  
or  
mkfs -m <block_device>  
or  
vxupgrade <mount_point>
```

You must have permission to read the block device -- e.g., be the root user.

You may also be able to upgrade an older disk layout to one that will work with the RNL. See the vxupgrade(1M) man page for more information on that.

When lsof can't report VxFS path name components, it reports the file system mount point and the path name of device on which it is mounted. The device path name is enclosed in parentheses.

#### 17.18.5 Why does Solaris 10 lsof report scrambled VxFS paths?

Solaris 10 lsof may report a bogus, scrambled path for an open VxFS file, when lsof obtains the path from a vnode's cached path. Veritas/Symantec reports that their Solaris 10 implementation has bugs in the way it handles the Solaris 10 vnode cached path and those bugs will be fixed in an upcoming patch some time after August 15, 2005.

When Solaris 10 lsof reports a path for an open VxFS file obtained via the VxFS Reverse Name Lookup facility, the path will be correct.

Also see the answers to the questions "Why does Solaris 10 lsof sometimes report the wrong path name?" and "Why doesn't Solaris lsof report VxFS path name components?"

#### 17.19 Large file problems

##### 17.19.1 Why does lsof complain it can't stat(2) a Solaris 2.5.1 large file?

When given an argument that is the path to a Solaris 2.5.1 file, enable for large file operations with the `O_LARGEFILE` `open(2)` option, lsof complains that it can't `stat(2)` the file. That's because lsof isn't using a `stat(2)` call and associated structure enabled for large files.

This error has been fixed, starting at lsof revision 4.58 for Solaris 2.6 and above. That fix won't work on Solaris 2.5.1 and I no longer have access to a Solaris 2.5.1 test system to develop a separate fix.

The work-around is to avoid specifying a `O_LARGEFILE` path as an argument to lsof on Solaris 2.5.1. Instead use a combination of lsof and `grep` to achieve the same results, albeit more clumsily.

##### 17.20 Why does lsof get a segmentation fault on 64 bit Solaris 8 using NIS+?

I have received a report from Gary Craig that lsof produces a segmentation fault on his 64 bit Solaris 8 system using NIS+. Via an independent test program we have exonerated lsof and tracked the fault to the NIS+ `__nis_server_name()` function in the C name server library, `-lnsl`.

Lsof causes the `__nis_server_name()` NIS+ function to be called by calling `getservent()` to read entries of the port number to service name map.

The only Sun bug ID that appears to describe the problem is 4304244, although its text is unclear enough to leave room for doubt.

Until Sun eliminates the `__nis_server_name()` segmentation fault cause, a work-around for lsof is to use its `"-P"` option, causing lsof to avoid port to service name lookups.

#### 17.21 Will lsof crash the Solaris kernel?

I've received and investigated one report that it has when the Sun hardware (a QME interface) was faulty. Today (May 23, 2002) I've learned that Sun has reports of kernel crashes caused by `adb`, `lsof`, and `mdb`.

The Sun investigation pinpointed a problem in the `/dev/kmem` kernel driver and there is a Sun bug report, 4344513, about the problem. There is a fix in Solaris 9, and patches for Solaris 7 and 8 (SPARC and x86).

To see if your Solaris system is fixed, look for a `/devices/pseudo/*allkmem` node.

Extensive address filtering was added to lsof revision 4.50 to forestall what I then (July 2001) believed to be only the possibility that lsof might crash Solaris. However, the filtering isn't perfect, since a filtered address might become invalid after lsof has filtered it but before lsof has delivered it to `/dev/kmem`. That filtering work is described in `.../dialects/sun/solaris_kaddr_filters`, also available at:

[ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/solaris\\_kaddr\\_filters](ftp://lsof.itap.purdue.edu/pub/tools/unix/lsof/solaris_kaddr_filters)

The best and safest work-around is to upgrade to Solaris 9 or install an appropriate patch or its equivalent from this list:

Solaris SPARC x86  
Version Patch Patch

```
=====
7 106541-20 106542-20
8 108528-14 108529-14
```

17.22 Why does lsof on Solaris 7, 8, or 9 report a `kvm_open()` failure?

When lsof is started on some Solaris 7, 8, and 9 systems it may report:

```
lsof: kvm_open(namelist=default, corefile=default): \
No such file or directory
```

Lsof revisions 4.65 and later will first report:

```
lsof: cannot stat /dev/allkmem
```

The second message, not delivered in lsof revisions below 4.65, explains the cause of the `kvm_open()` failure; it can't find `/dev/allkmem`.

`/dev/allkmem` is a device added to Solaris 7 and 8 in patches and in the Solaris 9 FCS. See the preceding "Will lsof crash the Solaris kernel?" section for more information on `/dev/allkmem` and the patches.

The `kvm_open(3KVM)` function in the KVM library of patched Solaris 7 and 8 systems and in Solaris 9 expects to find `/dev/allkmem` and exits on error when it does not.

If you have installed the patch that updated your KVM library to a version that expects `/dev/allkmem` to be present and it is not, you may need to reconfigure your system's devices with `devfsadm(1M)` or enter "boot -r" to the OpenBoot monitor's prompt (usually "ok").

17.23 Solaris and SAM-FS

17.23.1 Why does Solaris lsof report "(limited SAM-FS info)"?

Lsof 4.68 and above report "(limited SAM-FS info)" on Solaris in the NAME column after the path or file system name for all files it finds on SAM-FS file systems.

That's because no more information is known about the composition of the nodes that follow SAM-FS vnodes. If you can provide that information, please contact me via e-mail at <abe@purdue.edu>. Make sure "lsof" appears in the "Subject:" line so my e-mail filter won't classify your letter as Spam.

#### 17.23.2 Why can't lsof locate named SAM-GS files?

Solaris lsof 4.68 and above can't locate files on SAM-FS file systems when the files are named as lsof arguments because lsof doesn't know how to locate open SAM-FS file device and node number information. (See also 'Why does Solaris lsof report "(limited SAM-FS info)?')

#### 17.24 Lsof and Solaris 10 zones

##### 17.24.1 How can I make lsof list the Solaris zone?

Use the lsof "-z [z]" option.

##### 17.24.2 Why doesn't lsof work in a Solaris 10 zone?

When run from within a Solaris 10 zone, lsof will usually report:

```
lsof: can't stat(/devices): No such file or directory
```

That's because a Solaris zone usually has no /devices subdirectory, a restriction of the zone implementation intended to limit the ability of zone processes to control global system resources, including physical devices.

While a zone may have a /dev subdirectory, that subdirectory usually lacks the /dev/allkmem, /dev/mem and /dev/kmem devices lsof and the KVM library it uses require.

The work-around is to run lsof in the global zone. When it is run in a global zone lsof will be able to report on processes running in any zone, including the global zone.

##### 17.24.3 Why does lsof complain it can't stat() Solaris 10 zone file systems?

When run from the global zone on Solaris 10 lsof may complain:

lsof: WARNING: can't stat() 15 zone file systems;  
using dev= options

The warning message means lsof found the reported number of file system entries in the mount table for which it didn't have permission to get stat(2) results, but which had "zone=" and "dev=" mount table options.

That is a normal restriction of Solaris 10 zones. Since the lsof warning message indicates it was able to find "dev=" options for the file systems, lsof will probably work correctly.

One work-around is to relax the restrictions on zone mount points, so that lsof can stat() them. While that may be possible by changing directory modes or group ownerships, it is probably not a good idea, because it weakens the restrictions zones are intended to provide.

Another work-around is to suppress the warning message with lsof's "-w" option. The down side of that is that it causes the suppression of all warning messages, leading to the possibility that some non-stat() warning messages will be suppressed.

## 17.25 Solaris 10 problems

### 17.25.1 Why does Solaris 10 lsof sometimes report the wrong path name?

When a path name component is renamed -- e.g., with mv(1) -- Solaris 10 lsof may report the old component for an open file that used the component in its path before the rename. That's because Solaris 10 lsof reports the path name cached in the open file's vnode and the Solaris 10 kernel doesn't update the open vnode's cached path name when a component of it is changed.

When an open file is deleted -- e.g., with rm(1) -- the path name by which it was opened remains cached in the vnode. Lsof can be instructed to display that path name with the -X option. The path name might be incorrect because of the rename problem described above. See the answer to the 'What does "(deleted)" mean in the NAME column of a Solaris 10 open file?' question for more information.

Lsof is sometimes able to detect that cached path name is

incorrect. In that case lsof may report only the mounted-on directory and device of the file system or it may report that the path name is of questionable accuracy by appending a trailing "(?)" to it in the NAME column.

See the answer to the "Why does Solaris 10 lsof sometimes report only the mounted-on directory and device?" and 'What does "(?)" mean in the NAME column of a Solaris 10 open file?' questions for more information.

#### 17.25.2 Why does Solaris 10 lsof sometimes report only the mounted-on directory and device?

For some regular open files lsof may report only the mounted-on directory and device of the file system on which the file resides. That's because lsof was able to determine that the path name cached in the open file's vnode is incorrect.

lsof detects the cached path name is incorrect by applying stat(2) to it, provided that no error was detected when stat(2) was applied to the file system mounted-on directory during lsof setup. If a mounted-on directory stat(2) error was detected during setup, lsof does no cached path name analysis and simply reports it.

When the application of stat(2) to the cached path name returns a no-entry reply (the ENOENT error number), lsof concludes the path no longer exists (i.e., has been unlinked) and reports the mounted-on directory and device of the file system. That behavior can be modified with the -X option in lsof revisions 4.77 and above. See the answer to the 'What does "(deleted)" mean in the NAME column of a Solaris 10 open file?' for more information.

When the application of stat(2) to the cached path name returns a permission error reply (the EACCES or EPERM error numbers), lsof reports the cached path name and adds a trailing "(?)" to indicate the reported path name is of questionable accuracy. See the answer to the question 'What does "(?)" mean in the NAME column of a Solaris 10 open file?' for more information.

If the application of stat(2) to the cached path name yields any other error reply, lsof reports the mounted-on directory and device of the file system.

When the application of stat(2) to the cached path name

succeeds, lsof compares the reported device and node numbers to what it has obtained for the open file from kernel structures. If they match, lsof reports the cached path name. If they don't match, lsof instead reports the mounted-on directory and device of the file system.

A work-around that allows lsof to apply stat(2) successfully to cached path names is to give lsof sufficient permission to do it -- i.e., run lsof as the root user.

17.25.3 What does "(deleted)" mean in the NAME column of a Solaris 10 open file?

When the -X option is specified to Solaris 10 lsof, it will report in its NAME column the path name cached for a deleted file in its vnode. The path name will be followed by "(deleted)".

Note that the path name cached in a file's vnode is the path name by which the file was opened. It is not updated by the Solaris kernel when any path name component is changed. Hence, it may not represent the final path name the open file had.

See the answer to the "Why does Solaris 10 lsof sometimes report the wrong path name?" question for more information on how changing a path name component affects the correctness of a what lsof reports.

17.25.4 What does "(?)" mean in the NAME column of a Solaris 10 open file?

When lsof encounters a path name cached in the open file's vnode that stat(2) reports lsof lacks permission to access, lsof adds "(?)" to the path name reported in the NAME column to indicate the path name is of questionable accuracy.

See the answers to the "Why does Solaris 10 lsof sometimes report the wrong path name?" and "Why does Solaris 10 lsof sometimes report only the mounted-on directory and device?" questions for more information on why lsof may report a path name of questionable accuracy.

A work-around that allows lsof to apply stat(2) successfully to cached path names is to give lsof sufficient permission to do it -- i.e., run lsof as the root user.



## 17.26 Solaris contract file problems

### 17.26.1 Why doesn't lsof report size, link count and node number for Solaris 10 contract files?

Lsof doesn't report size, link count or node number for Solaris 10 contract files because I don't know how to obtain them from contract file kernel structures.

### 17.26.2 Why can't lsof locate a Solaris 10 contract file by path name?

Because lsof can't find the node number of Solaris contract files, it can't match the device and node numbers it gets from applying `stat(2)` to the contract file path name with what it finds in kernel data.

## 17.27 Solaris 10 and above ZFS problems

### 17.27.1 Why does Configure warn that ZFS support is not enabled?

To provide ZFS support it is necessary that lsof have access to the definitions of ZFS structures used by the kernel.

Those definitions are made available to lsof when it runs by the `libctl` library.

If lsof's Configure script finds that ZFS is indicated by the presence of the `<sys/fs/zfs.h>` header file, but the `libctl` library is not indicated via the `<libctl.h>` header file, the script concludes that ZFS support is not possible and issues the following warning:

```
WARNING: ZFS support not enabled; libctf.h missing.
```

Install `libctf` support to remedy this problem.

## 17.28 Problems with Solaris 9 and above

### 17.28.1 Why does the compiler complain about `lgrp_root` on Solaris 9 and above?

When compiling lsof 4.84 on later Solaris 9 and 10 systems, the compiler may report the following error:

```
/usr/include/sys/lgrp.h", line ...: identifier redeclared: lgrp_root
```

This error results from a conflict between usage of `lgrp_root`

in both `<sys/lgrp.h>` and `<sys/lgrp_user.h>` when `_KMEMUSER` or `_KERNEL` is `#define'd` before `<sys/lgrp.h>` is `#include'd`. This problem is noted in Sunsolve bug ID 5064229.

The work-around is to use lsof revision 4.85 sources.

## 18.0 Lsof Features

### 18.1 Why doesn't lsof report on /proc entries on my system?

/proc file system support is generally available only for BSD, SYSV R4 dialects, and Tru64 UNIX (Digital UNIX, DEC OSF/1). It's also available for Linux, and Pyramid DC/OSx and Reliant UNIX.

Even on some SYSV R4 dialects I encountered many problems while trying to incorporate /proc file system support. The chief problem is that some vendors don't distribute the header file that describes the /proc file system node -- usually called `prdata.h`.

### 18.2 How do I disable the device cache file feature or alter it's behavior?

To disable the device cache file feature for a dialect, remove the `HASDCACHE` definition from the `machine.h` file of the dialect's `machine.h` header file. You can also use `HASDCACHE` to change the default prefix (``.lsof'`) of the device cache file.`

Be sure you consider disabling the device cache file feature carefully.

Having a device cache file significantly reduces lsof startup overhead by eliminating a full scan of `/dev` (or `/devices`) once the device cache file has been created. That full scan also overloads the kernel's name cache with the names of the `/dev` (or `/devices`) nodes, reducing the opportunity for lsof to find path name components of open files.

If you're worried about the presence of mode 0600 device cache files in the home directories of the real user IDs that execute lsof, consider these checks that lsof makes on the file before using it:

1. To read the device cache file, lsof must gain permission from access(2).
2. The device cache file's modes must be 0600 (0644 if lsof is reading a system-wide device cache file) and its size non-zero.
3. There must be a correctly formatted section count line at the beginning of the file.
4. Each section must have a header line with a count that properly numbers the lines in the section.

Legal

sections are device, clone, pseudo-device, and CRC.

5. The lines of a section must have the proper format.
6. All lines are included in a 16 bit CRC, and it is recorded in a non-checksummed section line at the end of the file.
7. The checksum computed when the file is read must match the checksum recorded when the file was written.
8. The checksum section line must be followed by end-of-information.
9. lsof must be able to get matching results from stat(2) on a randomly chosen entry of the device section.

For more information on the device cache file, read the 00DCACHE file of the lsof distribution.

#### 18.2.1 What's the risk with a perverted device cache file?

Even with the checks that lsof makes on the device cache file, it's conceivable that an intruder could modify it so it would pass lsof's tests.

The only serious consequence I know of this change is the removal of a file whose major device number identifies a socket

from some user ID's device cache file. When such a device has been removed from the device cache file, and when lsof doesn't detect the removal, lsof may not be able

to identify socket files when executed by the affected user ID. Only certain dialects are at risk to this attack -- e.g., SCO OpenServer and Solaris 2.x, 7, 8, and 9.

If you're tracking a network intruder with lsof, that could be important to you. If you suspect that someone has corrupted the device cache file you're using, I recommend you use lsof's -Di option to tell it to ignore it and use the contents of /dev (or /devices) instead; or remove the device cache file (usually .lsof\_hostname, where hostname is the first component of the host's name returned by gethostname(2)) from the user ID's home directory and let lsof create a new one for you.

#### 18.2.2 How do I put the full host name in a personal device cache file path?

Lsof constructs the personal device cache file path name from a format specified in the HASPERSDC #define in the dialect's machine.h header file. As distributed HASPERSDC declares the path to be ``.lsof\_'' plus the first component of the host name with the format ``.lsof\_%L".

If you want to change the way lsof constructs the personal device cache file path name, you can change the HASPERSDC #define and recompile lsof. If, for example, you #define HASPERSDC to be ``.lsof\_%l" (note the lower case `l'), Configure and remake lsof, then the personal device cache file path will be ``.lsof\_'' plus the host name returned by gethostname(2).

See the 00DCACHE file of the lsof distribution for more information on the formation of the personal device cache file path and the use of the HASPERSDC #define.

#### 18.2.3 How do I put the personal device cache file in /tmp?

Change the HASPERSDC definition in your dialect's machine.h header file.

When you redefine HASPERSDC, make sure you put at least one user identification conversion in it to keep separate the device cache files for each user of lsof. Also give some thought to including the ``%0" conversion to define an alternate path for setuid-root and root processes.

Here's a definition that puts a personal device cache file in /tmp with the name ``.lsof\_login\_hostname\_pers".

```
#define HASPERSDC "/tmp/.lsof_%u_%l_pers"
```

Thus the /tmp personal device cache file path for login "abe" on host "lsof.itap.purdue.edu" would be:

```
/tmp/.lsof_abe_lsof.itap.purdue.edu_pers
```

You can add the User ID (UID) with the "%U" conversion and the first host name component with the ``%L" conversion.

CAUTION: be careful using absolute paths like /tmp lest lsof processes that are setuid-root or whose real UID is root be used to exploit some security weakness via /tmp. Elect instead to add an alternate path for those processes with the ``%0" conversion. Here's an extension of the previous HASPERSDC format for /tmp that declares an alternate path:

```
#define HASPERSDC "/tmp/.lsof_%u_%l_pers%0%h/.lsof_%L"
```

When the lsof process is setuid-root or its real UID is root, presuming root's home directory is `/ and the host's name is ``lsof.itap.purdue.edu", the extended format yields:

```
/.lsof_vic
```

### 18.3 Why doesn't lsof know about AFS files on my favorite dialect?

lsof currently supports AFS for these dialects:

- AIX 4.1.4 (AFS 3.4a)
- Linux 1.2.13 (AFS 3.3)
- NEXTSTEP 3.2 (AFS 3.3)
- Solaris 2.[56] (AFS 3.4a)

It may recognize AFS files on other versions of these dialects, but I have no way to test that. lsof may report correct information for AFS files on other dialects, but I can't test that either.

AFS support must be custom crafted for each UNIX dialect and then tested. If lsof supports your favorite dialect, but doesn't recognize its AFS files, probably I don't have access to a test system. If you want AFS support badly

for your dialect, consider helping me do the development and testing.

18.3.1 Why doesn't lsof report node numbers for all AFS volume files, or how do I reveal dynamic module addresses to lsof?

When AFS is implemented via dynamic kernel modules -- e.g., in NEXTSTEP -- lsof can't obtain the addresses of AFS variables in the kernel that it uses to identify AFS vnodes. It can guess that a vnode is assigned to an AFS file and it can obtain other information about AFS files, but it has trouble computing AFS volume node numbers.

To determine node numbers for AFS volumes other than the root volume, /afs, lsof needs access to a hashed volume structure pointer table. When it can't find the address of that table, because AFS support is implemented via dynamic kernel modules, lsof will return blanks in the INODE column for AFS volume files. Lsof can identify the root volume's node number (0), and can compute the node numbers for all other AFS files.

If you have a name list file that contains the addresses of the AFS dynamic modules -- e.g., you saved module symbols when you created a loadable module kernel with modload(8) by specifying -sym -- lsof may be able to find the kernel addresses it needs in that file.

Lsof looks up AFS dynamic kernel addresses for these dialects at these default paths:

NEXTSTEP 3.2 /usr/vice/etc/afs\_loadable

A different path to a name list file with AFS dynamic kernel addresses may be specified with the -A option, when the -A option description appears in lsof's -h or -? (help) output.

If any addresses appear in the -A name list file that also appear in the regular kernel name list file -- e.g., /vmunix -- they must match, or lsof will silently ignore the -A addresses on the presumption that they are out of date.

Found in path(s):

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/00FAQ

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*
* 4. This notice may not be removed or altered.
*/
/*
* If this is a regular file with a non-numeric FD, it may be the
* executable.
*/
```

Found in path(s):

```
*/opt/cola/permits/2134360459_1722972872.2498574/0/lsf-4-95-0-orig-1-tar-
bz2/lsf_4.95.0.linux/tests/LTbasic.c
```

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\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/util.c  
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\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/tests/LTdnlc.c  
\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/tests/LTsock.c



\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/tests/LTunix.c  
\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/tests/LTlock.c  
\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/tests/LTnlink.c  
\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/tests/LTbigf.c  
\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/tests/LTnfs.c  
\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/tests/LTszoff.c

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/\*

\* GetOpt() -- Local get option

\*

\* Liberally adapted from the public domain AT&T getopt() source,  
\* distributed at the 1985 UNIFORM conference in Dallas

\*

\* The modifications allow '?' to be an option character and allow  
\* the caller to decide that an option that may be followed by a  
\* value doesn't have one -- e.g., has a default instead.

\*/

Found in path(s):

\* /opt/cola/permits/2134360459\_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-bz2/lsof\_4.95.0.linux/main.c

No license file was found, but licenses were detected in source scan.

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```

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Found in path(s):

```
* /opt/cola/permits/2134360459_1722972872.2498574/0/lsof-4-95-0-orig-1-tar-
```

```
bz2/lsof_4.95.0.linux/scripts/list_fields.awk
```

# 1.149 python-cryptography 41.0.7-4ubuntu0.1

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## 1.150 libnftnl 1.2.6-2build1

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```

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```

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## 1.168 sysstat 12.6.1-2

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## 1.171 fdisk 2.39.3

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NR	START	END	SECTORS	SIZE	NAME	UUID
1	32	7679	7648	3.7M		8f8378c0-01
2	7680	16383	8704	4.3M		8f8378c0-02
5	7936	12799	4864	2.4M		
6	12544	16127	3584	1.8M		

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```
x ?"U@,5 @mISmIN<GimCN7g1u|E
43mI,5WEV @@ WEV @mImImIAmImImI0mImImI*mImI
A0mImImI...
lost+found...
```

```
;9GimCN7g
```

```
!"#$%&'()*+,-
./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
```

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!"#$%&'()*+,-
./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
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```
!"#$%&'()*+,-
./0123456789:;<=>?@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]^_`abcdefghijklmnopqrstuvwxyz{|}~
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!"#$%&'()*+,-
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<signature of Ty Coon>, 1 April 1989
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<!DOCTYPE html>
<html xmlns="http://www.w3.org/1999/xhtml"><head><title>jslicense labels</title></head>
<body>
<table id="jslicense-labels1">
<tr>
<td><a href="js/info.js">js/info.js</a></td>
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<td><a href="js/modernizr.js">js/modernizr.js</a></td>
</tr>
</table>
</body></html>
```

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-- the author, Sean M. Burke, sburke@cpan.org

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1 Chapter

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1 Chapter

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1 Chapter

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```

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# 1.185 distro-info 1.7build1

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Upstream-Name: distro-info

Upstream-Contact: Benjamin Drung <bdrung@debian.org>

Files: \*

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# 1.186 gstreamer 1.24.2-1

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Any executables

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# 1.187 libuv 1.48.0-1.1build1

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src/bsd\_getopt.c

src/err.c

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include/bsd/sys/time.h  
include/bsd/timeconv.h  
include/bsd/vis.h  
man/bitstring.3bsd  
man/errc.3bsd  
man/explicit\_bzero.3bsd  
man/fgetln.3bsd  
man/fgetwln.3bsd  
man/fpurge.3bsd  
man/funopen.3bsd  
man/getbsize.3bsd  
man/heapsort.3bsd  
man/nlist.3bsd  
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man/queue.3bsd  
man/radixsort.3bsd  
man/reallocarray.3bsd  
man/reallocf.3bsd  
man/setmode.3bsd  
man/strmode.3bsd  
man/strnstr.3bsd  
man/strtoi.3bsd  
man/strtou.3bsd  
man/unvis.3bsd  
man/vis.3bsd  
man/wcslcpy.3bsd  
src/getbsize.c  
src/heapsort.c  
src/merge.c  
src/nlist.c  
src/pwcache.c  
src/radixsort.c  
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man/arc4random.3bsd  
man/fmtcheck.3bsd  
man/humanize\_number.3bsd  
man/stringlist.3bsd  
man/timeval.3bsd  
src/fmtcheck.c  
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man/closefrom.3bsd  
man/expand\_number.3bsd  
man/flopen.3bsd  
man/getpeereid.3bsd  
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man/readpassphrase.3bsd

man/strncpy.3bsd

man/strtonum.3bsd

src/arc4random.c

src/arc4random\_linux.h

src/arc4random\_uniform.c

src/arc4random\_unix.h

src/arc4random\_win.h

src/closefrom.c

src/freezero.c

src/getentropy\_aix.c

src/getentropy\_bsd.c

src/getentropy\_hpux.c

src/getentropy\_hurd.c

src/getentropy\_linux.c

src/getentropy\_osx.c

src/getentropy\_solaris.c

src/getentropy\_win.c

src/readpassphrase.c

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## 1.190 dosfs-tools 4.2-1.1build1

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# 1.192 libeatmydata 131-1ubuntu1

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```

```
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@end
smallexample
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```

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@heading Appendix: How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the ``copyright" line and a pointer to where the full notice is found.

@smallexample

@var{one line to give the program's name  
and a brief idea of what it does.}

Copyright (C) @var{yyyy} @var{name of author}

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@end smallexample

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If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

@smallexample

Gnomovision version

69, Copyright (C) @var{year} @var{name of author}

Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.

This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

@end smallexample

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You should also get your employer (if you work as a programmer) or your school, if any, to sign a ``copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

@example

Yoyodyne, Inc., hereby disclaims all copyright interest in the program  
`Gnomovision' (which makes passes at compilers) written by James Hacker.

@var{signature of Ty Coon}, 1 April 1989

Ty Coon, President of Vice

@end example

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- the libintl.jar Java library,
- the GNU.Gettext.dll C# library,
- the gettext.sh shells script function library.

The following parts are under the GPL, see file COPYING in the toplevel directory:

- the `_programs_` gettext, ngettext, envsubst,
- the documentation.

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Version 2.1, February 1999

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Any executables

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For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

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A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square

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5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative

work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely



defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

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Version 2.1, February 1999

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For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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# 1.197 man-db 2.12.0-4build2

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```
Gnomovision version 69, Copyright (C) year name of author
Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.
This is free software, and you are welcome to redistribute
it
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w' and `show c' should show the appropriate  
parts of the General Public License. Of course, the commands you use may  
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```
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```

```
<signature of Ty Coon>, 1 April 1989
```

```
Ty Coon, President of Vice
```

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# 1.201 libjpeg-turbo 2.1.5-2ubuntu2

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=====

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## 1.202 gobject-introspection 1.80.1-1

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```

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```
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## 1.204 pygobject 3.48.2-1

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Any

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# 1.205 screen 4.9.1-1build1

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The

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```
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```

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```

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\#
```

```
.ig
```

```
***Template for creating a copyright page, DOCTYPE CHAPTER***
```

```
.
```

Mom documents comprised of chapters using DOCTYPE CHAPTER require the START macro to begin each chapter, and the COLLATE macro to join it to the subsequent chapter.

```
.
```

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```
.
```

Copyright pages are not identified by a title or heading, however they require a TITLE in order to be included in PDF viewer outlines and the Table of Contents. Supplying '.TITLE "Copyright"' but disabling the DOCHEADER achieves both these requirements.

```
.
```

Pagination

should also be disabled for the copyright page. Both docheader and pagination should be re-enabled before the START of the first chapter.

```
..
```

```
.
```

```
.\ " Cover setup
```

```
.
```

```
.\ " By default, mom uses the last TITLE macro before START for the  
\ " title that appears on the cover. Since the TITLE is "Copyright,"  
\ " mom needs to be told explicitly to use a different title.
```

```
.
```

```
.\ " Cover and PDF viewer setup
```

```
.
```

```
.DOCTITLE "Book Title"
```

```

.TITLE DOC_COVER \
"\*[$DOCTITLE]" \ " Title for the cover page
.AUTHOR \
"Book Author"
.DOC_COVER \
TITLE AUTHOR
.PDF_TITLE \
"DOCTYPE CHAPTER with copyright page" \ " For PDF viewer titlebar
.
.\" Copyright page setup
.
.PRINTSTYLE TYPESET
.DOCTYPE DEFAULT \ " Copyright page is not a chapter.
.
.DOCHHEADER off 1i \ " Turn off docheader for copyright page.
.
    \ " Begin text 1 inch from page top.
.PAGINATION off \ " Disable pagination for copyright page.
.
.TITLE "Copyright" \ " Required for the PDF viewer outline; does not
.
    \ " get printed because docheader is disabled.
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.
.START \ " Begin example copyright page
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.SP
.LEFT
Copyright \[co]2019 Copyright Holder
.SP
Additional information...
.TOC_AFTER_HERE \ " Place TOC after copyright page.
.
.COLLATE
.
.\" Chapter setup
.
.DOCTYPE CHAPTER \ " Begin using DOCTYPE CHAPTER.
.TITLE \
"\*[$DOCTITLE]" \ " Needed for page headers.
.
    \ " Only required

```



before first chapter.

.CHAPTER 1

.CHAPTER\_TITLE \

"Sample Chapter"

.DOCHEADER \ " Re-enable docheader.

.PAGINATE \ " Re-enable pagination.

.PAGENUMBER 1

.

.START \ " Begin first chapter.

.PP

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.\" Local Variables:

.\" mode: nroff

.\" End:

.\" vim: filetype=groff:

-\*- text -\*-

AUTHOR

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K1L 7A3

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This program comes with ABSOLUTELY NO WARRANTY; for details type `show w'.  
This is free software, and you are welcome to redistribute it  
under certain conditions; type `show c' for details.
```

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grn preprocessor

=====

grn, written by Barry Roitblat <[barry@rentonww.com](mailto:barry@rentonww.com)> and David

Slattengren <slatteng@Xinet.COM>, was part of the Berkeley device-independent troff distribution. The files contain no AT&T code and are in the public domain. Historically, the original package could be found at <<http://ftp.cs.wisc.edu/pub/misc/grn.tar.Z>>.

```
src/preproc/grn/gprint.h
src/preproc/grn/hdb.cpp
src/preproc/grn/hgraph.cpp
src/preproc/grn/hpoint.cpp
src/preproc/grn/main.cpp
```

gxditview output driver

=====

gxditview is based on the X Window System (Version 11)'s "xditview" program, and is licensed under the same terms as the rest of X11R5.

```
src/devices/xditview/DESC.in
src/devices/xditview/Dvi.c
src/devices/xditview/Dvi.h
src/devices/xditview/DviP.h
src/devices/xditview/FontMap-X11
src/devices/xditview/GXditview.ad
src/devices/xditview/Menu.h
src/devices/xditview/ad2c
src/devices/xditview/device.c
src/devices/xditview/device.h
src/devices/xditview/draw.c
src/devices/xditview/font.c
src/devices/xditview/gray1.bm
src/devices/xditview/gray2.bm
src/devices/xditview/gray3.bm
src/devices/xditview/gray4.bm
src/devices/xditview/gray5.bm
src/devices/xditview/gray6.bm
src/devices/xditview/gray7.bm
src/devices/xditview/gray8.bm
src/devices/xditview/gxditview.man
src/devices/xditview/lex.c
src/devices/xditview/page.c
src/devices/xditview/parse.c
src/devices/xditview/xdit.bm
src/devices/xditview/xdit_mask.bm
src/devices/xditview/xditview.c
```

```
src/include/DviChar.h
src/include/XFontName.h
```

src/libs/libxutil/DviChar.c  
src/libs/libxutil/XFontName.c

mdoc  
macro package

=====

mdoc uses the BSD "three-clause" license; that is, it is subject to the advertising clause rescission.

tmac/doc.tmac  
tmac/doc-old.tmac  
tmac/mdoc/doc-common  
tmac/mdoc/doc-ditroff  
tmac/mdoc/doc-nroff  
tmac/mdoc/doc-syms  
tmac/groff\_mdoc.7.man

me  
macro package

=====

"me" uses the BSD "three-clause" license; that is, it is subject to the advertising clause rescission.

tmac/e.tmac  
tmac/groff\_me.man  
doc/meintro.me  
doc/meintro\_fr.me  
doc/meref.me

Hyphenation patterns

=====

groff's hyphenation pattern files are adapted from those used by various TeX-related projects.

\* "tmac/hyphen.cs" is renamed from "czhyphen.tex", and obtained from <http://dante.ctan.org/CTAN/macros/cstex/base/csplain.tar.gz>.

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\* "tmac/hyphen.den" and "tmac/hyphen.det" are renamed from "dehyphn-x-2017-03-31.pat" and "dehypht-x-2017-03-31.pat", respectively, in the "dehyph-exptl-0.41" package.

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```
.\" -*- mode: text; coding: utf-8; -*-
```

```
\#
```

```
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```

```
\#
```

```
\# Copying and distribution of this file, with or without modification,
```

```
\# are permitted in any medium without royalty provided the copyright
```

```
\# notice and this notice are preserved.
```

```
\#
```

```
.ig
```

```
***Template for created a copyright page, DOCTYPE DEFAULT***
```

Mom documents comprised of titled sections using DOCTYPE DEFAULT  
(e.g. a collection of articles or a book of short stories by  
different authors) require the START macro to begin each new  
section, and the COLLATE macro to join it to the subsequent section.

.

A copyright page (also called an edition page) should be treated  
as a titled section. The text of the copyright page is entered  
after START and joined to the next major section (i.e. the beginning  
of a document's content) with COLLATE.

.

Copyright pages are not identified by a title or heading, however  
they require a TITLE in order to be included in PDF viewer outlines  
and, if desired,

the Table of Contents. Supplying '.TITLE "Copyright"'  
but disabling the DOCHEADER achieves both these requirements.

.

Pagination should also be disabled for the copyright page. Both  
docheader and pagination should be re-enabled before the START of  
the first (titled) section of the document.

..

.

```
.\" Cover and PDF viewer setup
```

.

```
.\" By default, mom uses the last TITLE macro before START for the
```

```
.\" title that appears on the cover. Since the TITLE is "Copyright,"
```

```
.\" mom needs to be told explicitly to use a different title.
```

.

```
.TITLE DOC_COVER \
```

```
"Document Title"
```

```
.EDITOR DOC_COVER \
```

```

"Document Editor"
.ATTRIBUTE_STRING DOC_COVER \
"Edited by"
.DOC_COVER \
TITLE EDITOR
.PDF_TITLE \
"DOCTYPE DEFAULT with copyright page" \ For PDF viewer titlebar
.
.\ " Copyright page setup
.
.PRINTSTYLE TYPESET
.DOCHEADER off 1i \ Turn off docheader for copyright page.
.
    \ Begin text 1 inch from page top.
.PAGINATION off \ Disable pagination for copyright page.
.
.TITLE
"Copyright" \ Required for PDF viewer outline; does not
.
    \ get printed because docheader is disabled.
.
.NO_TOC_ENTRY \ So copyright page is not included in the TOC
.
.START \ Begin copyright page
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Attention: Permissions Coordinator, at the address below.
.SP
.LEFT
Copyright \[co]2019 Copyright Holder
.SP
Additional information...
.TOC_AFTER_HERE \ Place TOC after copyright page.
.
.COLLATE
.
.\ " Sample article setup
.
.TITLE \
"Sample article" \ Title of first article
.AUTHOR \
"Article Author"
.DOCHEADER
    \ Re-enable docheader.
.PAGINATE \ Re-enable pagination.

```



.PAGENUMBER 1

.

.START

.PP

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.TOC

.\" Local Variables:

.\" mode: nroff

.\" End:

.\" vim: filetype=groff:

# 1.210 xmlsec 1.2.39-5build2

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#### References

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<http://www.aleksey.com/pipermail/xmlsec/2003/005488.html>

<http://www.aleksey.com/pipermail/xmlsec/attachments/20030729/0e25648e/attachment.htm>

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<http://www.aleksey.com/pipermail/xmlsec/2003/005581.html>

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<http://www.aleksey.com/pipermail/xmlsec/2006/007410.html>

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## 1.213 protobuf-c 1.4.1-1ubuntu4

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cmd/krb5/iprof/iprof_hdr.h
cmd/krb5/kadmin/server/iprofd_svc.c
cmd/krb5/kproplog/kproplog.c
cmd/krb5/slave/kpropd_rpc.c
lib/gss_mechs/mech_krb5/et/kdb5_err.c
lib/gss_mechs/mech_spnego/mech/gssapiP_spnego.h
lib/gss_mechs/mech_spnego/mech/spnego_mech.c
lib/krb5/kadm5/kadm_host_srv_names.c
lib/krb5/kdb/kdb_convert.c
lib/krb5/kdb/kdb_hdr.h
lib/krb5/kdb/kdb_log.c
lib/krb5/kdb/kdb_log.h
lib/libgss/g_accept_sec_context.c
lib/libgss/g_acquire_cred.c
lib/libgss/g_canon_name.c
lib/libgss/g_compare_name.c
lib/libgss/g_context_time.c
lib/libgss/g_delete_sec_context.c
lib/libgss/g_dsp_name.c
lib/libgss/g_dsp_status.c
lib/libgss/g_dup_name.c
lib/libgss/g_exp_sec_context.c
```

lib/libgss/g\_export\_name.c  
lib/libgss/g\_glue.c  
lib/libgss/g\_imp\_name.c  
lib/libgss/g\_imp\_sec\_context.c  
lib/libgss/g\_init\_sec\_context.c  
lib/libgss/g\_initialize.c  
lib/libgss/g\_inquire\_context.c  
lib/libgss/g\_inquire\_cred.c  
lib/libgss/g\_inquire\_names.c  
lib/libgss/g\_process\_context.c  
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lib/libgss/g\_rel\_oid\_set.c  
lib/libgss/g\_seal.c  
lib/libgss/g\_sign.c  
lib/libgss/g\_store\_cred.c  
lib/libgss/g\_unseal.c  
lib/libgss/g\_userok.c  
lib/libgss/g\_utils.c  
lib/libgss/g\_verify.c  
lib/libgss/gssd\_pname\_to\_uid.c  
uts/common/gssapi/include/gssapi\_err\_generic.h  
uts/common/gssapi/include/mechglueP.h

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lib/gssapi/mechglue/g\_accept\_sec\_context.c  
lib/gssapi/mechglue/g\_acquire\_cred.c  
lib/gssapi/mechglue/g\_canon\_name.c  
lib/gssapi/mechglue/g\_compare\_name.c  
lib/gssapi/mechglue/g\_context\_time.c  
lib/gssapi/mechglue/g\_delete\_sec\_context.c  
lib/gssapi/mechglue/g\_dsp\_name.c  
lib/gssapi/mechglue/g\_dsp\_status.c  
lib/gssapi/mechglue/g\_dup\_name.c  
lib/gssapi/mechglue/g\_exp\_sec\_context.c  
lib/gssapi/mechglue/g\_export\_name.c  
lib/gssapi/mechglue/g\_glue.c  
lib/gssapi/mechglue/g\_imp\_name.c  
lib/gssapi/mechglue/g\_imp\_sec\_context.c  
lib/gssapi/mechglue/g\_init\_sec\_context.c  
lib/gssapi/mechglue/g\_initialize.c  
lib/gssapi/mechglue/g\_inquire\_context.c

lib/gssapi/mechglue/g\_inquire\_cred.c  
lib/gssapi/mechglue/g\_inquire\_names.c  
lib/gssapi/mechglue/g\_process\_context.c  
lib/gssapi/mechglue/g\_rel\_buffer.c  
lib/gssapi/mechglue/g\_rel\_cred.c  
lib/gssapi/mechglue/g\_rel\_name.c  
lib/gssapi/mechglue/g\_rel\_oid\_set.c  
lib/gssapi/mechglue/g\_seal.c  
lib/gssapi/mechglue/g\_sign.c  
lib/gssapi/mechglue/g\_store\_cred.c  
lib/gssapi/mechglue/g\_unseal.c  
lib/gssapi/mechglue/g\_userok.c  
lib/gssapi/mechglue/g\_utils.c  
lib/gssapi/mechglue/g\_verify.c  
lib/gssapi/mechglue/gssd\_pname\_to\_uid.c  
lib/gssapi/mechglue/mglueP.h  
lib/gssapi/mechglue/oid\_ops.c  
lib/gssapi/spnego/gssapiP\_spnego.h  
lib/gssapi/spnego/spnego\_mech.c

and the initial implementation of incremental propagation, including the following new or changed files:

include/iprop\_hdr.h  
kadmin/server/ipropd\_svc.c  
lib/kdb/iprop.x  
lib/kdb/kdb\_convert.c  
lib/kdb/kdb\_log.c  
lib/kdb/kdb\_log.h  
lib/krb5/error\_tables/kdb5\_err.et  
kprop/kpropd\_rpc.c  
kprop/kproplog.c

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## 1.217 python-distro 1.9.0-1

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# 1.218 libnvme 1.8-3build1

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the



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## 1.228 libxpm 3.5.17-1build2

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# 1.229 python-systemd 235-1build4

## 1.229.1 Available under license :

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Both were inspired by Twisted

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## Blinker Documentation

=====

.. image:: \_static/blinker-named.png  
:align: center

Blinker provides fast & simple object-to-object and broadcast signaling for Python objects.

The core of Blinker is quite small but provides powerful features:

- a global registry of named signals
- anonymous signals
- custom name registries
- permanently or temporarily connected receivers
- automatically disconnected receivers via weak referencing
- sending arbitrary data payloads
- collecting return values from signal receivers
- thread safety

Blinker was written by Jason Kirtand and is provided under the MIT License. The library supports Python 3.8 or later; or PyPy3.9 or later.

## Decoupling With Named Signals

-----

Named signals are created with `:func:`signal``:

.. code-block:: python

```
>>> from blinker import signal
>>> initialized = signal('initialized')
>>> initialized is signal('initialized')
True
```

Every call to `signal('name')` returns the same signal object, allowing unconnected parts of code (different modules, plugins, anything) to all use the same signal without requiring any code sharing or special imports.

## Subscribing to Signals

-----

:meth:`Signal.connect` registers a function to be invoked each time the signal is emitted. Connected functions are always passed the object that caused the signal to be emitted.

.. code-block:: python

```
>>> def subscriber(sender):
...     print(f"Got a signal sent by {sender!r}")
...
>>> ready = signal('ready')
>>> ready.connect(subscriber)
<function subscriber at 0x...>
```

## Emitting Signals

-----

Code producing events of interest can :meth:`Signal.send` notifications to all connected receivers.

Below, a simple ``Processor`` class emits a ``ready`` signal when it's about to process something, and ``complete`` when it is done. It passes ``self`` to the :meth:`~Signal.send` method, signifying that that particular instance was responsible for emitting the signal.

.. code-block:: python

```
>>> class Processor:
...     def __init__(self, name):
...         self.name = name
...
...     def go(self):
...         ready = signal('ready')
...         ready.send(self)
...         print("Processing.")
...         complete = signal('complete')
...         complete.send(self)
...
...     def __repr__(self):
...         return f'<Processor {self.name}>'
...
>>> processor_a = Processor('a')
>>> processor_a.go()
Got a signal sent by <Processor a>
Processing.
```

Notice the ``complete`` signal in ``go()``? No receivers have connected to ``complete`` yet, and that's a-ok. Calling `:meth:`~Signal.send`` on a signal with no receivers will result in no notifications being sent, and these no-op sends are optimized to be as inexpensive as possible.

## Subscribing to Specific Senders

-----

### The default

connection to a signal invokes the receiver function when any sender emits it. The `:meth:`~Signal.connect`` function accepts an optional argument to restrict the subscription to one specific sending object:

.. code-block:: python

```
>>> def b_subscriber(sender):
...     print("Caught signal from processor_b.")
...     assert sender.name == 'b'
...
>>> processor_b = Processor('b')
>>> ready.connect(b_subscriber, sender=processor_b)
<function b_subscriber at 0x...>
```

This function has been subscribed to ``ready`` but only when sent by ``processor\_b``:

.. code-block:: python

```
>>> processor_a.go()
Got a signal sent by <Processor a>
Processing.
>>> processor_b.go()
Got a signal sent by <Processor b>
Caught signal from processor_b.
Processing.
```

## Sending and Receiving Data Through Signals

-----

Additional keyword arguments can be passed to `:meth:`~Signal.send``. These will in turn be passed to the connected functions:

.. code-block::

python

```
>>> send_data = signal('send-data')
>>> @send_data.connect
... def receive_data(sender, **kw):
...     print(f"Caught signal from {sender!r}, data {kw!r}")
...     return 'received!'
...
>>> result = send_data.send('anonymous', abc=123)
Caught signal from 'anonymous', data {'abc': 123}
```

The return value of `:meth:`~Signal.send`` collects the return values of each connected function as a list of (``receiver function``, ``return value``) pairs:

.. code-block:: python

```
>>> result
[(<function receive_data at 0x...>, 'received!)]
```

### Muting signals

-----

To mute a signal, as may be required when testing, the `:meth:`~Signal.muted`` can be used as a context decorator:

.. code-block:: python

```
sig = signal('send-data')
with sig.muted():
    ...
```

### Anonymous Signals

-----

Signals need not be named. The `:class:`Signal`` constructor creates a unique signal each time it is invoked. For example, an alternative implementation of the

Processor from above might provide the processing signals as class attributes:

.. code-block:: python

```
>>> from blinker import Signal
>>> class AltProcessor:
...     on_ready = Signal()
```

```

... on_complete = Signal()
...
... def __init__(self, name):
...     self.name = name
...
... def go(self):
...     self.on_ready.send(self)
...     print("Alternate processing.")
...     self.on_complete.send(self)
...
... def __repr__(self):
...     return f'<AltProcessor {self.name}>'
...

```

``connect`` as a Decorator

-----

You may have noticed the return value of :meth:`~Signal.connect` in the console output in the sections above. This allows ``connect`` to be used as a decorator on functions:

.. code-block:: python

```

>>> apc = AltProcessor('c')
>>> @apc.on_complete.connect
... def completed(sender):
...     print(f"AltProcessor {sender.name} completed!")
...
>>> apc.go()
Alternate processing.
AltProcessor
c completed!

```

While convenient, this form unfortunately does not allow the ``sender`` or ``weak`` arguments to be customized for the connected function. For this, :meth:`~Signal.connect\_via` can be used:

.. code-block:: python

```

>>> dice_roll = signal('dice_roll')
>>> @dice_roll.connect_via(1)
... @dice_roll.connect_via(3)
... @dice_roll.connect_via(5)
... def odd_subscriber(sender):
...     print(f"Observed dice roll {sender!r}.")
...
>>> result = dice_roll.send(3)
Observed dice roll 3.

```

## Optimizing Signal Sending

-----

Signals are optimized to send very quickly, whether receivers are connected or not. If the keyword data to be sent with a signal is expensive to compute, it can be more efficient to check to see if any receivers are connected first by testing the `:attr:~Signal.receivers`` property:

```
.. code-block:: python
```

```
>>> bool(signal('ready').receivers)
True
>>> bool(signal('complete').receivers)
False
>>> bool(AltProcessor.on_complete.receivers)
True
```

Checking for a receiver listening for a particular sender is also possible:

```
.. code-block:: python
```

```
>>> signal('ready').has_receivers_for(processor_a)
True
```

## Documenting Signals

-----

Both named and anonymous signals can be passed a ```doc``` argument at construction to set the pydoc help text for the signal. This documentation will be picked up by most documentation generators (such as sphinx) and is nice for documenting any additional data parameters that will be sent down with the signal.

See the documentation of the `:obj:~receiver_connected`` built-in signal for an example.

## Async receivers

-----

Receivers can be coroutine functions which can be called and awaited via the `:meth:~Signal.send_async`` method:

```
.. code-block:: python
```

```
sig = blinker.Signal()

async def receiver():
    ...

sig.connect(receiver)
await sig.send_async()
```

This however requires that all receivers are awaitable which then precludes the usage of `:meth:`~Signal.send``. To mix and match the `:meth:`~Signal.send_async`` method takes a ```_sync_wrapper``` argument such as:

```
.. code-block:: python
```

```
sig = blinker.Signal()

def receiver():
    ...

sig.connect(receiver)

def wrapper(func):

    async def inner(*args, **kwargs):
        func(*args, **kwargs)

    return inner

await sig.send_async(_sync_wrapper=wrapper)
```

The equivalent usage for `:meth:`~Signal.send`` is via the ```_async_wrapper``` argument. This usage is will depend on your event loop, and in the simple case whereby you aren't running within an event loop the following example can be used:

```
.. code-block:: python
```

```
sig = blinker.Signal()

async def receiver():
    ...

sig.connect(receiver)
```

```

def wrapper(func):

    def inner(*args, **kwargs):
        asyncio.run(func(*args, **kwargs))

    return inner

await sig.send(_async_wrapper=wrapper)

```

Call receivers in order of registration

-----

It can be advantageous to call a signal's receivers in the order they were registered. To achieve this the storage class for receivers should be changed from an (unordered) set to an ordered set,

```

.. code-block:: python

from blinker import Signal
from ordered_set import OrderedSet

Signal.set_class = OrderedSet

```

Please note that ``ordered\_set`` is a PyPI package and is not installed with blinker.

API Documentation

-----

All public API members can (and should) be imported from ``blinker``:

```

from blinker import ANY, signal

```

```

.. currentmodule:: blinker.base

```

Basic Signals

+++++

```

.. autodata:: blinker.base.ANY

```

```

.. autodata:: blinker.base.receiver_connected

```

```

.. autoclass:: Signal

```

```

:members:

```

```

:undoc-members:

```



## Named Signals

+++++

```
.. function:: signal(name, doc=None)
```

Return the :class:`NamedSignal` \*name\*, creating it if required.

Repeated calls to this function will return the same signal object.

Signals are created in a global

:class:`Namespace`.

```
.. autoclass:: NamedSignal
```

```
:show-inheritance:
```

```
:members:
```

```
.. autoclass:: Namespace
```

```
:show-inheritance:
```

```
:members: signal
```

```
.. autoclass:: WeakNamespace
```

```
:show-inheritance:
```

```
:members: signal
```

## Changes

=====

```
.. include:: ../CHANGES.rst
```

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# 1.234 libmodule-scandeps-perl 1.35-1

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[This is the first released version of the library GPL. It is  
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<one line to give the library's name and a brief idea of what it does.>  
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<name of author>
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library `Frob' (a library for tweaking knobs) written by James Random Hacker.

<signature of Ty Coon>, 1 April 1990

Ty Coon, President of Vice

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# 1.238 libevdev 1.13.1+dfsg-1build1

## 1.238.1 Available under license :

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# 1.239 libsort-naturally-perl 1.03-4

## 1.239.1 Available under license :

No license file was found, but licenses were detected in source scan.

```
---
abstract: 'sort lexically, but sort numeral parts numerically'
author:
  - 'Sean M. Burke <sburke@cpan.org>'
build_requires:
  ExtUtils::MakeMaker: 0
configure_requires:
  ExtUtils::MakeMaker: 0
dynamic_config: 1
generated_by: 'ExtUtils::MakeMaker version 6.62, CPAN::Meta::Converter version 2.120921'
license: perl
meta-spec:
  url: http://module-build.sourceforge.net/META-spec-v1.4.html
  version: 1.4
name: Sort-Naturally
no_index:
  directory:
    - t
    - inc
requires:
  perl: 5
resources:
  repository: https://github.com/bingos/sort-naturally
  version: 1.03
```

Found in path(s):

```
* /opt/cola/permits/2148525114_1724000799.792454/0/libsort-naturally-perl-1-03-orig-1-tar-gz/Sort-Naturally-1.03/META.yml
```

No license file was found, but licenses were detected in source scan.

README for Sort::Naturally

Time-stamp: "2001-05-25 21:17:33 MDT"

Sort::Naturally

[extracted from the Pod...]

NAME

Sort::Naturally -- sort lexically, but sort numeral parts numerically

SYNOPSIS

```
@them = nsort(qw(
foo12a foo12z foo13a foo 14 9x foo12 fooa foolio Foolio Foo12a
));
print join(' ', @them), "\n";
```

Prints:

```
9x 14 foo fooa foolio Foolio foo12 foo12a Foo12a foo12z foo13a
```

(Or "foo12a" + "Foo12a" and "foolio" + "Foolio" and might be switched, depending on your locale.)

## DESCRIPTION

This module exports two functions, `nsort` and `ncmp`; they are used in implementing my idea of a "natural sorting" algorithm. Under natural sorting, numeric substrings are compared numerically, and other word-characters are compared lexically.

This is the way I define natural sorting:

- o

Non-numeric word-character substrings are sorted

lexically, case-insensitively: "Foo" comes between "fish" and "fowl".

- o Numeric substrings are sorted numerically: "100" comes after "20", not before.

- o `\W` substrings (neither words-characters nor digits) are ignored.

- o Our use of `\w`, `\d`, `\D`, and `\W` is locale-sensitive: `Sort::Naturally` uses a `use locale` statement.

- o When comparing two strings, where a numeric substring in one place is not up against a numeric substring in another, the non-numeric always comes first. This is fudged by reading pretending that the lack of a number substring has the value -1, like so:

```
foo    => "foo", -1
foobar => "foo", -1, "bar"
foo13  => "foo", 13,
foo13xyz => "foo", 13, "xyz"
```

That's so that "foo" will come before "foo13", which will come before



"foobar".

- o The start of a string is exceptional: leading non-\W (non-word, non-digit) components are ignored, and numbers come before letters.
- o I define "numeric substring" just as sequences matching `m/\d+/-` -- scientific notation, commas, decimals, etc., are not seen. If your data has thousands separators in numbers ("20,000 Leagues Under The Sea" or "20.000 lieues sous les mers"), consider stripping them before feeding them to `nsort` or `ncmp`.

[end Pod extract]

## INSTALLATION

You install `Sort::Naturally`, as you would install any perl module library, by running these commands:

```
perl Makefile.PL
make
make test
make install
```

If you want to install a private copy of `Sort::Naturally` in your home directory, then you should try to produce the initial Makefile with something like this command:

```
perl Makefile.PL LIB=~/.perl
```

See `perldoc perlmodinstall` for more information on installing modules.

## DOCUMENTATION

POD-format documentation is included in `Naturally.pm`. POD is readable with the `'perldoc'` utility. See `ChangeLog` for recent changes.

## SUPPORT

Questions, bug reports, useful code bits, and suggestions for `Sort::Naturally` should just be sent to me at [sburke@cpan.org](mailto:sburke@cpan.org)

## AVAILABILITY

The latest version of Sort::Naturally is available from the Comprehensive Perl Archive Network (CPAN). Visit <http://www.perl.com/CPAN/> to find a CPAN site near you.

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Found in path(s):

```
* /opt/cola/permits/2148525114_1724000799.792454/0/libsort-naturally-perl-1-03-orig-1-tar-gz/Sort-Naturally-1.03/README
```

No license file was found, but licenses were detected in source scan.

=head1 NAME

Sort::Naturally -- sort lexically, but sort numeral parts numerically

=head1 SYNOPSIS

```
@them = nsort(qw(
  foo12a foo12z foo13a foo 14 9x foo12 fooa foolio Foolio Foo12a
));
print join(' ', @them), "\n";
```

Prints:

```
9x 14 foo fooa foolio Foolio foo12 foo12a Foo12a foo12z foo13a
```

(Or "foo12a" + "Foo12a" and "foolio" + "Foolio" and might be switched, depending on your locale.)

=head1 DESCRIPTION

This module exports two functions, C<nsort> and C<ncmp>; they are used in implementing my idea of a "natural sorting" algorithm. Under natural sorting, numeric substrings are compared numerically, and other

word-characters are compared lexically.

This is the way I define natural sorting:

=over

=item \*

Non-numeric word-character substrings are sorted lexically, case-insensitively: "Foo" comes between "fish" and "fowl".

=item \*

Numeric substrings are sorted numerically:

"100" comes after "20", not before.

=item

\*

\W substrings (neither words-characters nor digits) are I<ignored>.

=item \*

Our use of \w, \d, \D, and \W is locale-sensitive: Sort::Naturally uses a C<use locale> statement.

=item \*

When comparing two strings, where a numeric substring in one place is I<not> up against a numeric substring in another, the non-numeric always comes first. This is fudged by reading pretending that the lack of a number substring has the value -1, like so:

```
foo    => "foo", -1
foobar => "foo", -1, "bar"
foo13  => "foo", 13,
foo13xyz => "foo", 13, "xyz"
```

That's so that "foo" will come before "foo13", which will come before "foobar".

=item \*

The start of a string is exceptional: leading non-\W (non-word, non-digit) components are ignored, and numbers come I<before> letters.

=item \*

I define "numeric substring" just as sequences matching `m/\d+/-` -- scientific notation, commas, decimals, etc., are not seen. If your data has thousands separators in numbers ("20,000 Leagues Under The Sea" or "20.000 lieues sous les mers"), consider stripping them before feeding them to `C<nsort>` or `C<ncmp>`.

=back

=head2 The `nsort` function

This function takes a list of strings, and returns a copy of the list, sorted.

This is what most people will want to use:

```
@stuff = nsort(...list...);
```

When `nsort` needs to compare non-numeric substrings, it uses Perl's `C<lc>` function in scope of a `<use locale>`. And when `nsort` needs to lowercase things, it uses Perl's `C<lc>` function in scope of a `<use locale>`. If you want `nsort` to use other functions instead, you can specify them in an arrayref as the first argument to `nsort`:

```
@stuff = nsort( [  
    \&string_comparator, # optional  
    \&lowercaser_function # optional  
  ],  
  ...list...  
);
```

If you want to specify a string comparator but no lowercaser, then the options list is `C<[\&comparator, "]>` or `C<[\&comparator]>`. If you want to specify no string comparator but a lowercaser, then the options list is `C<[" , \&lowercaser]>`.

Any comparator you specify is called as `C<$comparator-E<gt>($left, $right)>`, and, like a normal Perl `C<cmp>` replacement, must return -1, 0, or 1 depending on whether the left argument is stringwise less than, equal to, or greater than the right argument.

Any lowercaser function you specify is called as `C<$lowercased = $lowercaser-E<gt>($original)>`. The routine must not modify its `C<$_[0]>`.

=head2 The `ncmp` function

Often, when sorting non-string values like this:

```
@objects_sorted = sort { $a->tag cmp $b->tag } @objects;
```

...or even in a Schwartzian transform, like this:

```
@strings =
  map $_->[0]
  sort { $a->[1] cmp $b->[1] }
  map { [$_, make_a_sort_key_from($_)] }
  @_
;
```

...you might want something that replaces not `C<sort>`, but `C<cmp>`. That's what `Sort::Naturally`'s `C<ncmp>` function is for. Call it with the syntax `C<ncmp($left,$right)>` instead of `C<$left cmp $right>`, but otherwise it's a fine replacement:

```
@objects_sorted = sort { ncmp($a->tag,$b->tag) } @objects;
```

```
@strings =
  map $_->[0]
  sort { ncmp($a->[1], $b->[1]) }
  map { [$_, make_a_sort_key_from($_)] }
  @_
;
```

Just as with `C<nsort>` can take different a string-comparator and/or lowercaser, you can do the same with `C<ncmp>`, by passing an arrayref as the first argument:

```
ncmp( [
  \&string_comparator, # optional
  \&lowercaser_function # optional
],
  $left, $right
)
```

You might get string comparators from `L<Sort::ArbBiLex|Sort::ArbBiLex>`.

=head1 NOTES

=over

=item \*

This module is not a substitute for  
L<Sort::Versions|Sort::Versions>! If  
you just need proper version sorting, use I<that!>

=item \*

If you need something that works I<sort of> like this module's  
functions, but not quite the same, consider scouting thru this  
module's source code, and adapting what you see. Besides  
the functions that actually compile in this  
module, after the POD,  
there's several alternate attempts of mine at natural sorting  
routines, which are not compiled as part of the module, but which you  
might find useful. They should all be I<working> implementations of  
slightly different algorithms  
(all of them based on Martin Pool's C<nsort>) which I eventually  
discarded in favor of my algorithm. If you are having to  
naturally-sort I<very large> data sets, and sorting is getting  
ridiculously slow, you might consider trying one of those  
discarded functions -- I have a feeling they might be faster on  
large data sets. Benchmark them on your data and see. (Unless  
you I<need> the speed, don't bother. Hint: substitute C<sort>  
for C<nsort> in your code, and unless your program speeds up  
drastically, it's not the sorting that's slowing things down.  
But if it I<is> C<nsort> that's slowing things down, consider  
just:

```
if(@set >= SOME_VERY_BIG_NUMBER) {  
    no locale; # vroom vroom  
    @sorted = sort(@set); # feh, good enough  
} elsif(@set >= SOME_BIG_NUMBER) {  
    use locale;  
    @sorted = sort(@set); # feh, good enough  
} else {  
    # but keep it pretty for normal cases  
    @sorted = nsort(@set);  
}
```

=item \*

If you do adapt the routines in this module, email me; I'd  
just be interested in hearing about it.

=item \*

Thanks to the EFNet #perl people for encouraging this module,  
especially magister and a-mused.

=back

=head1 COPYRIGHT AND DISCLAIMER

Copyright 2001, Sean M. Burke C<sburke@cpan.org>, all rights reserved. This program is free software; you can redistribute it and/or modify it under the same terms as Perl itself.

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=head1 AUTHOR

Sean M. Burke C<sburke@cpan.org>

=cut

##### END OF DOCS #####

#####  
#####

#####

BEGIN OLD STUFF #####

# We can't have "use integer;", or else (5 <=> 5.1) comes out "0" !

#-----

```
sub nsort {  
    my($cmp, $lc);  
    return @_ if @_ < 2; # Just to be CLEVER.
```

```
    my($x, $i); # scratch vars
```

```
    # And now, the GREAT BIG Schwartzian transform:
```

```
    map  
        $_->[0],
```

```
    sort {  
        # Uses $i as the index variable, $x as the result.  
        $x = 0;
```

```

$i = 1;
DEBUG and print "\nComparing ", map("${_}", @$a),
    ' ', map("${_}", @$b), ", "... \n";

while($i < @$a and $i < @$b) {
    DEBUG and print " comparing $i: {$a->[$i]} cmp {$b->[$i]} => ",
        $a->[$i] cmp $b->[$i], "\n";
    last if ($x = ($a->[$i] cmp $b->[$i])); # lexicographic
    ++$i;

    DEBUG and print " comparing $i: {$a->[$i]} <=> {$b->[$i]} => ",
        $a->[$i] <=> $b->[$i], "\n";
    last if ($x = ($a->[$i]
<=> $b->[$i])); # numeric
    ++$i;
}

DEBUG and print "{$a->[0]} : {$b->[0]} is ",
    $x || (@$a <=> @$b) || 0
    , "\n"
;
$x || (@$a <=> @$b) || ($a->[0] cmp $b->[0]);
# unless we found a result for $x in the while loop,
# use length as a tiebreaker, otherwise use cmp
# on the original string as a fallback tiebreaker.
}

map {
    my @bit = ($x = defined($_) ? $_ : "");

    if($x =~ m/^[+]?(?=\d|\.\d)\d*(?!\.d*)?(?:[Ee](?:[+]?[d+])?)\z/s) {
        # It's entirely purely numeric, so treat it specially:
        push @bit, " ", $x;
    } else {
        # Consume the string.
        while(length $x) {
            push @bit, ($x =~ s/^(D+)/s) ? lc($1) : "";
            push @bit, ($x =~ s/^(d+)/s) ? $1 : 0;
        }
    }
}
DEBUG and print "$bit[0] => ", map("${_}", @bit), "\n";

# End result: [original bit      , (text, number), (text, number), ...]
# Minimally: [0-length original bit,]
# Examples:
# ['10'
=> " ", 10,      ]
# ['fo900' => 'fo', 900,      ]

```



```

# ['foo10' => 'foo', 10,      ]
# ['foo9.pl' => 'foo', 9,  , '.pl', 0 ]
# ['foo32.pl' => 'foo', 32,  , '.pl', 0 ]
# ['foo325.pl' => 'foo', 325,  , '.pl', 0 ]
# Yes, always an ODD number of elements.

\@bit;
}
@_;
}

#-----
# Same as before, except without the pure-number trap.

sub nsorts {
return @_ if @_ < 2; # Just to be CLEVER.

my($x, $i); # scratch vars

# And now, the GREAT BIG Schwartzian transform:

map
$_->[0],

sort {
# Uses $i as the index variable, $x as the result.
$x = 0;
$i = 1;
DEBUG and print "\nComparing ", map("{$_}", @$a),
    ' ', map("{$_}", @$b), ", "..."\n";

while($i < @$a and $i < @$b) {
    DEBUG and print " comparing $i: {$a->[$i]} cmp {$b->[$i]} => ",
        $a->[$i] cmp $b->[$i], "\n";
    last if ($x = ($a->[$i] cmp $b->[$i])); # lexicographic
    ++$i;

    DEBUG and print " comparing $i: {$a->[$i]} <=> {$b->[$i]} => ",
        $a->[$i] <=> $b->[$i], "\n";
    last if ($x = ($a->[$i] <=> $b->[$i])); # numeric
    ++$i;
}

DEBUG and print "{$a->[0]} : {$b->[0]} is ",
    $x || (@$a <=> @$b) || 0
    ,"\n"
;
$x || (@$a <=> @$b) || ($a->[0] cmp $b->[0]);

```

```

# unless we found a result for $x in the while loop,
# use length as a tiebreaker, otherwise use cmp
# on the original string as a fallback tiebreaker.
}

map {
my @bit = ($x = defined($_) ? $_ : "");

while(length $x) {
push @bit, ($x =~ s/^(D+)/s) ? lc($1) : "";
push @bit, ($x =~ s/^(d+)/s) ? $1 : 0;
}
DEBUG and print "$bit[0] => ", map("{$_} ", @bit), "\n";

# End result: [original bit , (text, number), (text, number), ...]
# Minimally: [0-length original bit,]
# Examples:
# ['10' => "
, 10, ]
# ['fo900' => 'fo', 900, ]
# ['foo10' => 'foo', 10, ]
# ['foo9.pl' => 'foo', 9, ',.pl', 0 ]
# ['foo32.pl' => 'foo', 32, ',.pl', 0 ]
# ['foo325.pl' => 'foo', 325, ',.pl', 0 ]
# Yes, always an ODD number of elements.

\@bit;
}
@_;
}

#-----
# Same as before, except for the sort-key-making

sub nsort0 {
return @_ if @_ < 2; # Just to be CLEVER.

my($x, $i); # scratch vars

# And now, the GREAT BIG Schwartzian transform:

map
$_->[0],

sort {
# Uses $i as the index variable, $x as the result.
$x = 0;
$i = 1;

```

```

DEBUG and print "\nComparing ", map("${_}", @a),
      ': ', map("${_}", @b), , "...\\n";

while($i < @a and $i < @b) {
  DEBUG and print " comparing $i: {a->[$i]} cmp {b->[$i]} => ",
    $a->[$i] cmp $b->[$i], "\\n";
  last
if ($x = ($a->[$i] cmp $b->[$i])); # lexicographic
  ++$i;

  DEBUG and print " comparing $i: {a->[$i]} <=> {b->[$i]} => ",
    $a->[$i] <=> $b->[$i], "\\n";
  last if ($x = ($a->[$i] <=> $b->[$i])); # numeric
  ++$i;
}

DEBUG and print "{a->[0]} : {b->[0]} is ",
  $x || (@a <=> @b) || 0
, "\\n"
;
$x || (@a <=> @b) || ($a->[0] cmp $b->[0]);
# unless we found a result for $x in the while loop,
# use length as a tiebreaker, otherwise use cmp
# on the original string as a fallback tiebreaker.
}

map {
  my @bit = ($x = defined($_) ? $_ : "");

  if($x =~ m/^[+-]?(?=\d|\.\d)\d*(?!\.\d*)?(?:[Ee](?:[+-]?\d+)?\z/s) {
    # It's entirely purely numeric, so treat it specially:
    push @bit, "", $x;
  } else {
    # Consume the string.
    while(length $x) {
      push @bit, ($x =~ s/^(D+)/s) ? lc($1) : "";
      # Secret sauce:
      if($x =~ s/^(d+)/s) {
        if(substr($1,0,1) eq '0' and
$1 != 0) {
          push @bit, $1 / (10 ** length($1));
        } else {
          push @bit, $1;
        }
      } else {
        push @bit, 0;
      }
    }
  }
}

```

```

}
DEBUG and print "$bit[0] => ", map("${_} ", @bit), "\n";

\@bit;
}
@_;
}

#-----
# Like nsort0, but WITHOUT pure number handling, and WITH special treatment
# of pulling off extensions and version numbers.

sub nsortf {
return @_ if @_ < 2; # Just to be CLEVER.

my($x, $i); # scratch vars

# And now, the GREAT BIG Schwartzian transform:

map
$_->[0],

sort {
# Uses $i as the index variable, $x as the result.
$x = 0;
$i = 3;
DEBUG and print "\nComparing ", map("${_}", @$a),
': ', map("${_}", @$b), , "... \n";

while($i < @$a and $i < @$b) {
DEBUG and print " comparing $i: {$a->[$i]} cmp {$b->[$i]} => ",
$a->[$i] cmp $b->[$i], "\n";
last if ($x = ($a->[$i]
cmp $b->[$i])); # lexicographic
++$i;

DEBUG and print " comparing $i: {$a->[$i]} <=> {$b->[$i]} => ",
$a->[$i] <=> $b->[$i], "\n";
last if ($x = ($a->[$i] <=> $b->[$i])); # numeric
++$i;
}

DEBUG and print "{$a->[0]} : {$b->[0]} is ",
$x || (@$a <=> @$b) || 0
, "\n"
;
$x || (@$a <=> @$b ) || ($a->[1] cmp $b->[1])
|| ($a->[2] <=> $b->[2]) || ($a->[0] cmp $b->[0]);

```

```

# unless we found a result for $x in the while loop,
# use length as a tiebreaker, otherwise use the
# lc'd extension, otherwise the version, otherwise use
# the original string as a fallback tiebreaker.
}

map {
my @bit = ( ($x = defined($_) ? $_ : ""), "", 0 );

{
# Consume the string.

# First, pull off any VAX-style version
$bit[2] = $1 if $x =~ s/^(d+)/;

# Then pull off any apparent extension
if( $x !~ m/^\.+$/s and # don't mangle ".", "..", or "..."
    $x =~
s/(\.[^\.;]*)$/sg
    # We could try to avoid catching all-digit extensions,
    # but I think that's getting /too/ clever.
) {
    $i = $1;
    if($x =~ m<[^\\\:\/]$>s) {
        # We didn't take the whole basename.
        $bit[1] = lc $i;
        DEBUG and print "Consuming extension \"$1\"\n";
    } else {
        # We DID take the whole basename. Fix it.
        $x = $1; # Repair it.
    }
}
}

push @bit, "", -1 if $x =~ m/^\./s;
# A hack to make .-initial filenames sort first, regardless of locale.
# And -1 is always a sort-firster, since in the code below, there's
# no allowance for filenames containing negative numbers: -1.dat
# will be read as string '-' followed by number 1.

while(length $x) {
    push @bit, ($x =~ s/^(D+)/s) ? lc($1) : "";
    # Secret sauce:
    if($x =~ s/^(d+)/s) {
        if(substr($1,0,1) eq '0' and $1 != 0) {
            push @bit, $1 / (10
** length($1));
        } else {
            push @bit, $1;

```

```
    }
  } else {
    push @bit, 0;
  }
}
}
```

DEBUG and print "\$bit[0] => ", map("\${\$\_} ", @bit), "\n";

```
\@bit;
}
@_;
}
```

# yowza yowza yowza.

Found in path(s):

```
* /opt/cola/permits/2148525114_1724000799.792454/0/libsort-naturally-perl-1-03-orig-1-tar-gz/Sort-Naturally-1.03/lib/Sort/Naturally.pm
```

# 1.240 python-tz 2024.1-2

## 1.240.1 Available under license :

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# 1.241 run-one 1.17-0ubuntu2

## 1.241.1 Available under license :

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Version 3, 29 June 2007

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## 1.242 mdurl 0.1.2-1

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Found in path(s):

\* /opt/cola/permits/2148526047\_1724000856.2981057/0/python-click-8-1-6-orig-1-tar-gz/click-8.1.6/LICENSE.rst

No license file was found, but licenses were detected in source scan.

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Found in path(s):

\* /opt/cola/permits/2148526047\_1724000856.2981057/0/python-click-8-1-6-orig-1-tar-gz/click-8.1.6/src/click/parser.py

No license file was found, but licenses were detected in source scan.

.. \_contrib:

=====

click-contrib

=====

As the number of users of Click grows, more and more major feature requests are made. To users it may seem reasonable to include those features with Click; however, many of them are experimental or aren't practical to support generically. Maintainers have to choose what is reasonable to maintain in Click core.

The `click-contrib` GitHub organization exists as a place to collect third-party packages that extend Click's features. It is also meant to ease the effort of searching for such extensions.

Please note that the quality and stability of those packages may be different than Click itself. While published under a common organization, they are still separate from Click and the Pallets maintainers.

.. `_click-contrib`: <https://github.com/click-contrib/>

Found in path(s):

\* `/opt/cola/permits/2148526047_1724000856.2981057/0/python-click-8-1-6-orig-1-tar-gz/click-8.1.6/docs/contrib.rst`

# 1.246 fonts-ubuntu 0.869+git20240321-

## 0ubuntu1

### 1.246.1 Available under license :

-----  
UBUNTU FONT LICENCE Version 1.0  
-----

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Ubuntu Font Family Licensing FAQ

#### Stylistic Foundations

The Ubuntu Font Family is the first time that a libre typeface has been designed professionally and explicitly with the intent of developing a public and long-term community-based development process.

When developing an open project, it is generally necessary to have firm foundations: a font needs to maintain harmony within itself even across many type designers and writing systems. For the [1]Ubuntu Font Family, the process has been guided with the type foundry Dalton Maag setting the project up with firm stylistic foundation covering several left-to-right scripts: Latin, Greek and Cyrillic; and right-to-left scripts: Arabic and Hebrew (due in 2011).

With this starting point the community will, under the supervision of [2]Canonical and [3]Dalton Maag, be able to build on the existing font

sources to expand their character coverage. Ultimately everybody will be able to use the Ubuntu Font Family in their own written languages across the whole of Unicode (and this will take some time!).

## Licensing

The licence chosen by any free software project is one of the foundational decisions that sets out how derivatives and contributions can occur, and in turn what kind of community will form around the project.

Using a licence that is compatible with other popular licences is a powerful constraint because of the [4]network effects: the freedom to share improvements between projects allows free software to reach high-quality over time. Licence-proliferation leads to many incompatible licences, undermining the network effect, the freedom to share and ultimately making the libre movement that Ubuntu is a part of less effective. For all kinds of software, writing a new licence is not to be taken lightly and is a choice that needs to be thoroughly justified if this path is taken.

Today it is not clear to Canonical what the best licence for a font project like the Ubuntu Font Family is: one that starts life designed by professionals and continues with the full range of community development, from highly commercial work in new directions to curious beginners' experimental contributions. The fast and steady pace of the Ubuntu release cycle means that an interim libre licence has been necessary to enable the consideration of the font family as part of Ubuntu 10.10 operating system release.

Before taking any decision on licensing, Canonical as sponsor and backer of the project has reviewed the many existing licenses used for libre/open fonts and engaged the stewards of the most popular licenses in detailed discussions. The current interim licence is the first step in progressing the state-of-the-art in licensing for libre/open font development.

The public discussion must now involve everyone in the (comparatively new) area of the libre/open font community; including font users, software freedom advocates, open source supporters and existing libre font developers. Most importantly, the minds and wishes of professional type designers considering entering the free software business community must be taken on board.

Conversations and discussion has taken place, privately, with

individuals from the following groups (generally speaking personally on behalf of themselves, rather than their affiliations):

- \* [5]SIL International
- \* [6]Open Font Library
- \* [7]Software Freedom Law Center
- \* [8]Google Font API

#### Document embedding

One issue highlighted early on in the survey of existing font licences is that of document embedding. Almost all font licences, both free and unfree, permit embedding a font into a document to a certain degree. Embedding a font with other works that make up a document creates a "combined work" and copyleft would normally require the whole document to be distributed under the terms of the font licence. As beautiful as the font might be, such a licence makes a font too restrictive for useful general purpose digital publishing.

The situation is not entirely unique to fonts and is encountered also with tools such as GNU Bison: a vanilla GNU GPL licence would require anything generated with Bison to be made available under the terms of the GPL as well. To avoid this, Bison is [9]published with an additional permission to the GPL which allows the output of Bison to be made available under any licence.

The conflict between licensing of fonts and licensing of documents, is addressed in two popular libre font licences, the SIL OFL and GNU GPL:

- \* [10]SIL Open Font Licence: When OFL fonts are embedded in a document, the OFL's terms do not apply to that document. (See [11]OFL-FAQ for details.
- \* [12]GPL Font Exception: The situation is resolved by granting an additional permission to allow documents to not be covered by the GPL. (The exception is being reviewed).

The Ubuntu Font Family must also resolve this conflict, ensuring that if the font is embedded and then extracted it is once again clearly under the terms of its libre licence.

#### Long-term licensing

Those individuals involved, especially from Ubuntu and Canonical, are interested in finding a long-term libre licence that finds broad favour across the whole libre/open font community. The deliberation during the past months has been on how to licence the Ubuntu Font Family in the short-term, while knowingly encouraging everyone to pursue a long-term goal.

\* [13]Copyright assignment will be required so that the Ubuntu Font Family's licensing can be progressively expanded to one (or more) licences, as best practice continues to evolve within the libre/open font community.

\* Canonical will support and fund legal work on libre font licensing.

It is recognised that the cost and time commitments required are likely to be significant. We invite other capable parties to join in supporting this activity.

The GPL version 3 (GPLv3) will be used for Ubuntu Font Family build scripts and the CC-BY-SA for associated documentation and non-font content: all items which do not end up embedded in general works and documents.

### Ubuntu Font Licence

For the short-term only, the initial licence is the [14]Ubuntu Font License (UFL). This is loosely inspired from the work on the SIL OFL 1.1, and seeks to clarify the issues that arose during discussions and legal review, from the perspective of the backers, Canonical Ltd. Those already using established licensing models such as the GPL, OFL or Creative Commons licensing should have no worries about continuing to use them. The Ubuntu Font Licence (UFL) and the SIL Open Font Licence (SIL OFL) are not identical and should not be confused with each other. Please read the terms precisely. The UFL is only intended as an interim license, and the overriding aim is to support the creation of a more suitable and generic libre font licence. As soon as such a licence is developed, the Ubuntu Font Family will migrate to it made possible by copyright assignment in the interim. Between the OFL 1.1, and the UFL 1.0, the following changes are made to produce the Ubuntu Font Licence:

\* Clarification:

1. Document embedding (see [15]embedding section above).
2. Apply at point of distribution, instead of receipt
3. Author vs. copyright holder disambiguation (type designers are authors, with the copyright holder normally being the funder)
4. Define "Propagate" (for internationalisation, similar to the GPLv3)
5. Define "Substantially Changed"
6. Trademarks are explicitly not transferred
7. Refine renaming requirement

Streamlining:

8. Remove "not to be sold separately" clause
9. Remove "Reserved Font Name(s)" declaration

A visual demonstration of how these points were implemented can be

found in the accompanying coloured diff between SIL OFL 1.1 and the  
Ubuntu Font Licence 1.0: [16]ofl-1.1-ufl-1.0.diff.html

## References

1. <http://font.ubuntu.com/>
  2. <http://www.canonical.com/>
  3. <http://www.daltonmaag.com/>
  4. [http://en.wikipedia.org/wiki/Network\\_effect](http://en.wikipedia.org/wiki/Network_effect)
  5. <http://scripts.sil.org/>
  6. <http://openfontlibrary.org/>
  7. <http://www.softwarefreedom.org/>
  8. <http://code.google.com/webfonts>
  9. <http://www.gnu.org/licenses/gpl-faq.html#CanIUseGPLToolsForNF>
  10. [http://scripts.sil.org/OFL\\_web](http://scripts.sil.org/OFL_web)
  11. [http://scripts.sil.org/OFL-FAQ\\_web](http://scripts.sil.org/OFL-FAQ_web)
  12. <http://www.gnu.org/licenses/gpl-faq.html#FontException>
  13. <https://launchpad.net/~uff-contributors>
  14. <http://font.ubuntu.com/ufl/ubuntu-font-licence-1.0.txt>
  15. <http://font.ubuntu.com/ufl/FAQ.html#embedding>
  16. <http://font.ubuntu.com/ufl/ofl-1.1-ufl-1.0.diff.html>
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1.0. <https://launchpad.net/ubuntu-font-licence>

# 1.247 libestr 0.1.11-1build1

## 1.247.1 Available under license :

libestr is available under the terms of the GNU LGPL v2.1 or above (full  
text below).

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Version 2.1, February 1999

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```
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```

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```
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<signature of Ty Coon>, 1 April 1989
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Ty Coon, President of Vice
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8x13B.bdf 8x13Bc.bdf 8x13.bdf 8x13c.bdf 8x13-IL2.bdf 8x13O.bdf  
9x15B.bdf 9x15Bc.bdf 9x15.bdf 9x15c.bdf 9x15B-IL2.bdf 9x15-IL2.bdf  
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75dpi-courB12-IL2.bdf 75dpi-courB14.bdf 75dpi-courB14c.bdf  
75dpi-courB14-IL2.bdf 75dpi-courR12.bdf 75dpi-courR12c.bdf  
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100dpi-lutBS14-IL2.bdf 100dpi-lutBS14.bdf 100dpi-lutBS19-IL2.bdf  
100dpi-lutRS10.bdf 100dpi-lutRS10-IL2.bdf 100dpi-lutRS08.bdf  
100dpi-lutRS08-IL2.bdf 100dpi-lutRS14-IL2.bdf 100dpi-lutRS14.bdf  
100dpi-lutRS19-IL2.bdf 75dpi-lutBS12.bdf 75dpi-lutBS12c.bdf  
75dpi-lutBS12-IL2.bdf 75dpi-lutBS14.bdf 75dpi-lutBS14c.bdf  
75dpi-lutBS14-IL2.bdf 75dpi-lutRS12.bdf 75dpi-lutRS12c.bdf  
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# 1.263 libterm-readkey-perl 2.38-2build4

## 1.263.1 Available under license :

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```
#!/ perl

package Term::ReadKey;

# This also needs to be adjusted in the generated code below
# and in the Makefile.PL
use vars qw($VERSION);

$VERSION = '2.38';

use Config;
use File::Basename qw(&basename &dirname);
use File::Spec;
use Cwd;

# List explicitly here the variables you want Configure to
# generate. Metaconfig only looks for shell variables, so you
# have to mention them as if they were shell variables, not
# %Config entries. Thus you write
# $startperl
# to ensure Configure will look for $Config{startperl}.
# Wanted: $archlibexp

# This forces PL files to create target in same directory as PL file.
# This is so that make depend always knows where to find PL derivatives.
my $origdir = cwd;
my $dir = dirname($0);
chdir $dir;
my $file = 'ReadKey.pm';

open OUT, ">", $file or die "Can't create $file: $!";

print "Creating $file\n";

print OUT <<'!FIRSTPART';
# -*- buffer-read-only: t -*-
#
# This file
# is auto-generated. ***ANY*** changes here will be lost
#
package Term::ReadKey;
```

```
use strict;
use warnings;
```

=head1 NAME

Term::ReadKey - A perl module for simple terminal control

=head1 SYNOPSIS

```
use Term::ReadKey;
ReadMode 4; # Turn off controls keys
while (not defined ($key = ReadKey(-1))) {
    # No key yet
}
print "Get key $key\n";
ReadMode 0; # Reset tty mode before exiting
```

=head1 DESCRIPTION

Term::ReadKey is a compiled perl module dedicated to providing simple control over terminal driver modes (cbreak, raw, cooked, etc..) support for non-blocking reads, if the architecture allows, and some generalized handy functions for working with terminals. One of the main goals is to have the functions as portable as possible, so you can just plug in "use Term::ReadKey" on any architecture and have a good likelihood of it working.

Version 2.30.01:

Added handling of arrows, page up/down, home/end, insert/delete keys under Win32. These keys emit xterm-compatible sequences.

Works with Term::ReadLine::Perl.

=over 4

=item ReadMode MODE [, Filehandle]

Takes an integer argument or a string synonym (case insensitive), which can currently be one of the following values:

INT SYNONYM DESCRIPTION

0 'restore' Restore original settings.

1 'normal' Change to what is commonly the default mode, echo on, buffered, signals enabled, Xon/Xoff possibly enabled, and 8-bit mode possibly disabled.

- 2 'noecho' Same as 1, just with echo off. Nice for reading passwords.
- 3 'cbreak' Echo off, unbuffered, signals enabled, Xon/Xoff possibly enabled, and 8-bit mode possibly enabled.
- 4 'raw' Echo off, unbuffered, signals disabled, Xon/Xoff disabled, and 8-bit mode possibly disabled.
- 5 'ultra-raw' Echo off, unbuffered, signals disabled, Xon/Xoff disabled, 8-bit mode enabled  
if parity permits,  
and CR to CR/LF translation turned off.

These functions are automatically applied to the STDIN handle if no other handle is supplied. Modes 0 and 5 have some special properties worth mentioning: not only will mode 0 restore original settings, but it cause the next ReadMode call to save a new set of default settings. Mode 5 is similar to mode 4, except no CR/LF translation is performed, and if possible, parity will be disabled (only if not being used by the terminal, however. It is no different from mode 4 under Windows.)

If you just need to read a key at a time, then modes 3 or 4 are probably sufficient. Mode 4 is a tad more flexible, but needs a bit more work to control. If you use ReadMode 3, then you should install a SIGINT or END handler to reset the terminal (via ReadMode 0) if the user aborts the program via C<^C>. (For any mode, an END handler consisting of "ReadMode 0" is actually a good idea.)

If you are executing another program that may be changing the terminal mode, you will either want to say

```
ReadMode 1;      # same as ReadMode 'normal'
system('someprogram');
ReadMode 1;
```

which resets the settings after the program has run, or:

```
$somemode=1;
ReadMode 0;      # same as ReadMode 'restore'
system('someprogram');
ReadMode 1;
```

which records any changes the program may have made, before resetting the mode.

=item ReadKey MODE [, Filehandle]

Takes an integer argument, which can currently be one of the following values:

- 0 Perform a normal read using `getc`
- 1 Perform a non-blocked read
- >0 Perform a timed read

If the filehandle is not supplied, it will default to `STDIN`. If there is nothing waiting in the buffer during a non-blocked read, then `undef` will be returned. In most situations, you will probably want to use `C<ReadKey -1>`.

I<NOTE> that if the OS does not provide any known mechanism for non-blocking reads, then a `C<ReadKey -1>` can die with a fatal error. This will hopefully not be common.

If `MODE` is greater than zero, then `ReadKey` will use it as a timeout value in seconds (fractional seconds are allowed), and won't return `C<undef>` until that time expires.

I<NOTE>, again, that some OS's may not support this timeout behaviour.

If `MODE` is less than zero, then this is treated as a timeout of zero, and thus will return immediately if no character is waiting. A `MODE` of zero, however, will act like a normal `getc`.

I<NOTE>, there are currently some limitations with this call under Windows. It may be possible that non-blocking reads will fail when reading repeating keys from more than one console.

=item ReadLine MODE [, Filehandle]

Takes an integer argument, which can currently be one of the following values:

- 0 Perform a normal read using `scalar(<FileHandle>)`
- 1 Perform a non-blocked read
- >0 Perform a timed read

If there is nothing waiting in the buffer during a non-blocked read, then `undef` will be returned.

I<NOTE>, that if the OS does not provide any known mechanism for non-blocking reads, then a `C<ReadLine 1>` can die with a fatal

error. This will hopefully not be common.

I<NOTE> that a non-blocking test is only performed for the first character in the line, not the entire line. This call will probably B<not> do what you assume, especially with C<ReadMode> MODE values higher than 1. For example, pressing Space and then Backspace would appear to leave you where you started, but any timeouts would now be suspended.

B<This call is currently not available under Windows>.

=item GetTerminalSize [Filehandle]

Returns either an empty array if this operation is unsupported, or a four element array containing: the width of the terminal in characters, the height of the terminal in character, the width in pixels, and the height in pixels. (The pixel size will only be valid in some environments.)

I<NOTE>, under Windows, this function must be called with an B<output> filehandle, such as C<STDOUT>, or a handle opened to C<CONOUT\$>.

=item SetTerminalSize WIDTH,HEIGHT,XPIX,YPIX [, Filehandle]

Return -1 on failure, 0 otherwise.

I<NOTE> that this terminal size is only for B<informative> value, and changing the size via this mechanism will B<not> change the size of the screen. For example, XTerm uses a call like this when it resizes the screen. If any of the new measurements vary from the old, the OS will probably send a SIGWINCH signal to anything reading that tty or pty.

B<This call does not work under Windows>.

=item GetSpeed [, Filehandle]

Returns either an empty array if the operation is unsupported, or a two value array containing the terminal in and out speeds, in B<decimal>. E.g, an in speed of 9600 baud and an out speed of 4800 baud would be returned as (9600,4800). Note that currently the in and out speeds will always be identical in some OS's.

B<No speeds are reported under Windows>.

=item GetControlChars [, Filehandle]

Returns an array containing key/value pairs suitable for a hash. The pairs consist of a key, the name of the control character/signal, and the value



of that character, as a single character.

B<This call does nothing under Windows>.

Each key will be an entry from the following list:

DISCARD  
DSUSPEND  
EOF  
EOL  
EOL2  
ERASE  
ERASEWORD  
INTERRUPT  
KILL  
MIN  
QUIT  
QUOTENEXT  
REPRINT  
START  
STATUS  
STOP  
SUSPEND  
SWITCH  
TIME

Thus, the following will always return the current interrupt character, regardless of platform.

```
%keys = GetControlChars;  
$int = $keys{INTERRUPT};
```

```
=item SetControlChars [, Filehandle]
```

Takes an array containing key/value pairs, as a hash will produce. The pairs should consist of a key that is the name of a legal control character/signal, and the value should be either a single character, or a number in the range 0-255. SetControlChars will die with a runtime error if an invalid character name is passed or there is an error changing the settings. The list of valid names is easily available via

```
%cchars  
= GetControlChars();  
@cnames = keys %cchars;
```

B<This call does nothing under Windows>.

```
=back
```

=head1 AUTHOR

Kenneth Albanowski <kjahds@kjahds.com>

Currently maintained by Jonathan Stowe <jns@gellyfish.co.uk>

=head1 SUPPORT

The code is maintained at

<https://github.com/jonathanstowe/TermReadKey>

Please feel free to fork and suggest patches.

=head1 LICENSE

Prior to the 2.31 release the license statement was:

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without any warranty; without even the implied warranty of merchantability  
or fitness for a particular purpose.

=cut

use vars qw(\$VERSION);

```

$VERSION = '2.38';

require Exporter;
require DynaLoader;

use vars qw(@ISA @EXPORT_OK @EXPORT);

@ISA = qw(Exporter DynaLoader);

# Items to export into callers namespace by default
# (move infrequently used names to @EXPORT_OK below)

@EXPORT = qw(
  ReadKey
  ReadMode
  ReadLine
  GetTerminalSize
  SetTerminalSize
  GetSpeed
  GetControlChars
  SetControlChars
);

@EXPORT_OK = qw();

bootstrap Term::ReadKey;

# Should we use LINES and COLUMNS to try and get the terminal size?
# Change this to zero
# if you have systems where these are commonly
# set to erroneous values. (But if either are near zero, they won't be
# used anyhow.)

use vars qw($UseEnv $CurrentMode %modes);

$UseEnv = 1;

$CurrentMode = 0;

%modes = (
    original => 0,
    restore  => 0,
    normal   => 1,
    noecho   => 2,
    cbreak   => 3,
    raw      => 4,
    'ultra-raw' => 5
);

```

```

# reduce Carp memory footprint, only load when needed
sub croak { require Carp; goto &Carp::croak; }
sub carp { require Carp; goto &Carp::carp; }

sub ReadMode
{
  my $mode = $modes{ lc $_[0] }; # lowercase is canonical
  my $fh = normalizehandle( ( @_ > 1 ? $_[1] : \*STDIN ) );

  if ( defined($mode) ) { $CurrentMode = $mode }
  elsif ( $_[0] =~ /\d/ ) { $CurrentMode = $_[0] }
  else { croak("Unknown terminal mode `$_[0]'"); }

  SetReadMode($CurrentMode, $fh);
}

sub normalizehandle
{
  my ($file) = @_; # allows fake signature
  optimization

  no strict;
  # print "Handle = $file\n";
  if ( ref($file) ) { return $file; } # Reference is fine

  # if ($file =~ /\^*/) { return $file; } # Type glob is good
  if ( ref( \ $file ) eq 'GLOB' ) { return $file; } # Glob is good

  # print "Caller = ",(caller(1))[0],"\n";
  return \*{ ( ( caller(1) )[0] ) . "::$file" };
}

sub GetTerminalSize
{
  my $file = normalizehandle( ( @_ > 0 ? $_[0] : \*STDOUT ) );

  my (@results, @fail);

  if ( &termsoptions() & 1 ) # VIO
  {
    @results = GetTermSizeVIO($file);
    push( @fail, "VIOGetMode call" );
  }
  elsif ( &termsoptions() & 2 ) # GWINSZ
  {
    @results = GetTermSizeGWINSZ($file);
    push( @fail, "TIOCGWINSZ ioctl" );
  }
}

```

```

}
elseif ( &termsoptions() & 4 )          # GSIZE
{
    @results = GetTermSizeGSIZE($file);
    push( @fail, "TIOCGSIZE ioctl" );
}
elseif ( &termsoptions() & 8
)          # WIN32
{
    @results = GetTermSizeWin32($file);
    push( @fail, "Win32 GetConsoleScreenBufferInfo call" );
}
else
{
    @results = ();
}

if ( @results < 4 and $UseEnv )
{
    my ($C) = defined( $ENV{COLUMNS} ) ? $ENV{COLUMNS} : 0;
    my ($L) = defined( $ENV{LINES} ) ? $ENV{LINES} : 0;
    if ( ( $C >= 2 ) and ( $L >= 2 ) )
    {
        @results = ( $C + 0, $L + 0, 0, 0 );
    }
    push( @fail, "COLUMNS and LINES environment variables" );
}

if ( @results < 4 && $^O ne 'MSWin32')
{
    my ($prog) = "resize";

    # Workaround for Solaris path silliness
    if ( -f "/usr/openwin/bin/resize" ) {
        $prog = "/usr/openwin/bin/resize";
    }

    my ($resize) = scalar( ^$prog 2 > /dev/null );
    if ( defined $resize
        and ( $resize =~ /COLUMNS\s*=\s*(\d+)/
            or $resize =~ /setenv\s+COLUMNS\s+'?(\d+)/ )
        )
    {
        $results[0] = $1;
        if ( $resize =~ /LINES\s*=\s*(\d+)/
            or $resize =~ /setenv\s+LINES\s+'?(\d+)/ )
        {
            $results[1] = $1;
        }
    }
}

```

```

        @results[ 2, 3 ] = ( 0, 0 );
    }
    else
    {
        @results = ();
    }
}
else
{
    @results = ();
}
push( @fail, "resize program" );
}

if ( @results < 4 && $^O ne 'MSWin32' )
{
    my ($prog) = "stty size";

    my ($stty) = scalar(`$prog 2>/dev/null`);
    if (defined $stty
        and ( $stty =~ /\(d+\) (\d+)/ )
        )
    {
        $results[0] = $2;
        $results[1] = $1;
        @results[ 2, 3 ] = ( 0, 0 );
    }
    else
    {
        @results = ();
    }
    push( @fail, "stty program" );
}

if ( @results != 4 )
{
    carp("Unable to get Terminal Size."
        . join( "", map( " The $_ didn't
work.", @fail ) ));
    return undef;
}

@results;
}

!FIRSTPART

close OUT;

```

```

# preload the XS module needed for the blockoptions() expansions below
# does not work with miniperl
package Term::ReadKey;
require DynaLoader;
our @ISA = qw(DynaLoader);

print "Bootstrapping the XS for blockoptions: ";
bootstrap Term::ReadKey or die;
print blockoptions()."\n";

open OUT, ">>", $file or die "Can't append to $file: $!";
print OUT "# blockoptions: \n";
if ( &blockoptions() & 1 ) # Use nodelay
{
    print OUT "#nodelay\n";
    if ( &blockoptions() & 2 ) #poll
    {
        print OUT <<"!NO!SUBS!";
    }
}
# poll
sub ReadKey {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if (defined $_[0] && $_[0] > 0) {
        if ($_[0]) {
            return undef if &pollfile($File,$_[0]) == 0;
        }
    }
    if (defined $_[0] && $_[0] < 0) { &setnodelay($File,1); }
    my $value = getc $File;
    if (defined $_[0] && $_[0] < 0) { &setnodelay($File,0); }
    $value;
}
sub ReadLine {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if (defined $_[0] && $_[0] > 0) {
        if ($_[0]) {
            return undef if &pollfile($File,$_[0]) == 0;
        }
    }
    if (defined $_[0] && $_[0] < 0) { &setnodelay($File,1) };
    my $value = scalar(<$File>);
    if (defined $_[0] && $_[0] < 0) { &setnodelay($File,0) };
    $value;
}
!NO!SUBS!

}
elsif ( &blockoptions() & 4 ) #select
{

```

```

    print OUT <<'!NO!SUBS!';
#select
sub ReadKey {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if (defined $_[0] && $_[0] > 0) {
        if ($_[0]) { return undef if &selectfile($File,$_[0]) == 0 }
    }
    if (defined $_[0] && $_[0] < 0) { &setnodelay($File,1); }
    my $value = getc $File;
    if (defined $_[0] && $_[0] < 0) { &setnodelay($File,0); }
    $value;
}
sub ReadLine {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if (defined $_[0] && $_[0] > 0) {
        if ($_[0]) { return undef if &selectfile($File,$_[0]) == 0 }
    }
    if (defined $_[0] && $_[0]
< 0) { &setnodelay($File,1) };
    my $value = scalar(<$File>);
    if (defined $_[0] && $_[0] < 0) { &setnodelay($File,0) };
    $value;
}
!NO!SUBS!

}
else
{ #nothing
    print OUT <<'!NO!SUBS!';
sub ReadKey {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if (defined $_[0] && $_[0] > 0) {
        # Nothing better seems to exist, so I just use time-of-day
        # to timeout the read. This isn't very exact, though.
        $starttime = time;
        $endtime = $starttime + $_[0];
        &setnodelay($File,1);
        my $value;
        while (time < $endtime) { # This won't catch wraparound!
            $value = getc $File;
            last if defined($value);
        }
        &setnodelay($File,0);
        return $value;
    }
    if (defined $_[0] && $_[0] < 0) { &setnodelay($File,1); }
    my $value = getc $File;
    if (defined $_[0] && $_[0] < 0) { &setnodelay($File,0); }
}

```



```

$value;
}
sub ReadLine {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if
    (defined $_[0] && $_[0] > 0) {
        # Nothing better seems to exist, so I just use time-of-day
        # to timeout the read. This isn't very exact, though.
        $starttime = time;
        $endtime = $starttime + $_[0];
        &setnodelay($File,1);
        my $value;
        while (time < $endtime) { # This won't catch wraparound!
            $value = scalar(<$File>);
            last if defined($value);
        }
        &setnodelay($File,0);
        return $value;
    }
    if (defined $_[0] && $_[0] < 0) { &setnodelay($File,1) };
    my $value = scalar(<$File>);
    if (defined $_[0] && $_[0] < 0) { &setnodelay($File,0) };
    $value;
}
!NO!SUBS!

}
}
else {
    print OUT "#no nodelay\n";

    if ( &blockoptions() & 2 ) # Use poll
    {
        print OUT <<"!NO!SUBS!";
    }
#poll
sub ReadKey {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if (defined $_[0] && $_[0] != 0) {
        return undef if &pollfile($File,$_[0]) == 0
    }
    getc $File;
}
sub ReadLine {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if (defined $_[0] && $_[0] != 0) {
        return undef if &pollfile($File,$_[0]) == 0;
    }
    scalar(<$File>);
}

```

```

}
!NO!SUBS!

}
elseif ( &blockoptions() & 4 ) # Use select
{
    print OUT <<'!NO!SUBS!';
#select
sub ReadKey {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if (defined $_[0] && $_[0] != 0) {
        return undef if &selectfile($File,$_[0]) == 0
    }
    getc $File;
}
sub ReadLine {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if (defined $_[0] && $_[0] != 0) {
        return undef if &selectfile($File,$_[0]) == 0;
    }
    scalar(<$File>);
}
!NO!SUBS!

}
elseif ( &blockoptions() & 8 ) # Use Win32
{
    print OUT <<'!NO!SUBS!';
#Win32
sub ReadKey {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if ($_[0] || $CurrentMode >= 3) {
        Win32PeekChar($File, $_[0]);
    } else {
    getc $File;
    }
    #if ($_[0]!=0) {return undef if !Win32PeekChar($File, $_[0])};
    #getc $File;
}
sub ReadLine {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    #if ($_[0]!=0) {return undef if !Win32PeekChar($File, $_[0])};
    #scalar(<$File>);
    if ($_[0]) {
        croak("Non-blocking ReadLine is not supported on this architecture")
    }
    scalar(<$File>);
}
}

```

!NO!SUBS!

```
}
else
{
    print OUT <<'!NO!SUBS!';
sub ReadKey {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if ($_[0]) {
        croak("Non-blocking ReadKey is not supported on this architecture")
    }
    getc $File;
}
sub ReadLine {
    my $File = normalizehandle((@_>1?$_[1]:\*STDIN));
    if ($_[0]) {
        croak("Non-blocking ReadLine is not supported on this architecture")
    }
    scalar(<$File>);
}
!NO!SUBS!

}
}
```

```
print OUT <<'EOF';
1;
# ex: set ro:
EOF
```

```
close OUT;
if (-s $file < 1000) {
    warn "WARNING: $file probably too small";
} else {
    print "Done\n";
}
```

Found in path(s):  
\* /opt/cola/permits/2148525555\_1724000826.00062/0/libterm-readkey-perl-2-38-orig-1-tar-gz/TermReadKey-2.38/ReadKey.pm.PL  
No license file was found, but licenses were detected in source scan.

/\*

-----

ppport.h -- Perl/Pollution/Portability Version 3.21

Automatically created by Devel::PPPport running under perl 5.014004.

Do NOT edit this file directly! -- Edit PPPort\_pm.PL and the includes in parts/inc/ instead.

Use 'perldoc ppport.h' to view the documentation below.

-----  
SKIP

=pod

=head1 NAME

ppport.h - Perl/Pollution/Portability version 3.21

=head1 SYNOPSIS

perl ppport.h [options] [source files]

Searches current directory for files if no [source files] are given

--help            show short help

--version        show version

--patch=file     write one patch file with changes

--copy=suffix    write changed copies with suffix

--diff=program   use diff program and options

--compat-version=version

    provide compatibility with Perl version

--cplusplus     accept C++ comments

--quiet          don't output anything except fatal errors

--nodiag        don't show diagnostics

--nohints       don't show hints

--nochanges     don't suggest changes

--nofilter      don't filter input files

--strip         strip all script and doc functionality from  
                 ppport.h

--list-provided    list provided API

--list-unsupported list unsupported API

--api-info=name    show Perl API portability information

=head1 COMPATIBILITY

This version of `F<ppport.h>` is designed to support operation with Perl installations back to 5.003, and has been tested up to 5.11.5.

=head1 OPTIONS

=head2 --help

Display a brief usage summary.

=head2 --version

Display the version of `F<ppport.h>`.

=head2 --patch=`I<file>`

If this option is given, a single patch file will be created if any changes are suggested. This requires a working diff program to be installed on your system.

=head2 --copy=`I<suffix>`

If this option is given, a copy of each file will be saved with the given suffix that contains the suggested changes. This does not require any external programs. Note that this does not automagically add a dot between the original filename and the suffix. If you want the dot, you have to include it in the option argument.

If neither `C<--patch>` or `C<--copy>` are given, the default is to simply print the diffs for each file. This requires either `C<Text::Diff>` or a `C<diff>` program to be installed.

=head2 --diff=`I<program>`

Manually set the diff program and options to use. The default is to use `C<Text::Diff>`, when installed, and output unified context diffs.

=head2 --compat-version=`I<version>`

Tell `F<ppport.h>` to check for compatibility with the given Perl version. The default is to check for compatibility with Perl version 5.003.

You can use this option to reduce the output of `F<ppport.h>` if you intend to be backward compatible only down to a certain Perl version.

=head2 --cplusplus

Usually, F<ppport.h> will detect C++ style comments and replace them with C style comments for portability reasons. Using this option instructs F<ppport.h> to leave C++ comments untouched.

=head2 --quiet

Be quiet. Don't print anything except fatal errors.

=head2 --nodiag

Don't output any diagnostic messages. Only portability alerts will be printed.

=head2 --nohints

Don't output any hints. Hints often contain useful portability notes. Warnings will still be displayed.

=head2 --nochanges

Don't suggest any changes. Only give diagnostic output and hints unless these are also deactivated.

=head2 --nofilter

Don't filter the list of input files. By default, files not looking like source code (i.e. not \*.xs, \*.c, \*.cc, \*.cpp or \*.h) are skipped.

=head2 --strip

Strip all script and documentation functionality from F<ppport.h>.

This

reduces the size of F<ppport.h> dramatically and may be useful if you want to include F<ppport.h> in smaller modules without increasing their distribution size too much.

The stripped F<ppport.h> will have a C<--unstrip> option that allows you to undo the stripping, but only if an appropriate C<Devel::PPPport> module is installed.

=head2 --list-provided

Lists the API elements for which compatibility is provided by F<ppport.h>. Also lists if it must be explicitly requested,

if it has dependencies, and if there are hints or warnings for it.

```
=head2 --list-unsupported
```

Lists the API elements that are known not to be supported by F<ppport.h> and below which version of Perl they probably won't be available or work.

```
=head2 --api-info=I<name>
```

Show portability information for API elements matching I<name>. If I<name> is surrounded by slashes, it is interpreted as a regular expression.

```
=head1 DESCRIPTION
```

In order for a Perl extension (XS) module to be as portable as possible across differing versions of Perl itself, certain steps need to be taken.

```
=over 4
```

```
=item *
```

Including this header is the first major one. This alone will give you access to a large part of the Perl API that hasn't been available in earlier Perl releases. Use

```
perl ppport.h --list-provided
```

to see which API elements are provided by ppport.h.

```
=item *
```

You should avoid using deprecated parts of the API. For example, using global Perl variables without the C<PL\_> prefix is deprecated. Also, some API functions used to have a C<perl\_> prefix. Using this form is also deprecated. You can safely use the supported API, as F<ppport.h> will provide wrappers for older Perl versions.

```
=item *
```

If you use one of a few functions or variables that were not present in earlier versions of Perl, and that can't be provided using a macro, you have to explicitly request support for these functions by adding one or more C<#define>s in your source code before the inclusion of F<ppport.h>.

These functions or

variables will be marked C<explicit> in the list shown by C<--list-provided>.

Depending on whether your module has a single or multiple files that use such functions or variables, you want either C<static> or global variants.

For a C<static> function or variable (used only in a single source file), use:

```
#define NEED_function
#define NEED_variable
```

For a global function or variable (used in multiple source files), use:

```
#define NEED_function_GLOBAL
#define NEED_variable_GLOBAL
```

Note that you mustn't have more than one global request for the same function or variable in your project.

Function / Variable	Static Request	Global Request
PL_parser	NEED_PL_parser	NEED_PL_parser_GLOBAL
PL_signals	NEED_PL_signals	NEED_PL_signals_GLOBAL
eval_pv()	NEED_eval_pv	NEED_eval_pv_GLOBAL
grok_bin()	NEED_grok_bin	NEED_grok_bin_GLOBAL
grok_hex()	NEED_grok_hex	NEED_grok_hex_GLOBAL
grok_number()	NEED_grok_number	NEED_grok_number_GLOBAL
grok_numeric_radix()	NEED_grok_numeric_radix	NEED_grok_numeric_radix_GLOBAL
grok_oct()	NEED_grok_oct	NEED_grok_oct_GLOBAL
load_module()	NEED_load_module	NEED_load_module_GLOBAL
my_snprintf()	NEED_my_snprintf	NEED_my_snprintf_GLOBAL
my_sprintf()	NEED_my_sprintf	NEED_my_sprintf_GLOBAL
my_strlcat()	NEED_my_strlcat	NEED_my_strlcat_GLOBAL
my_strlcpy()	NEED_my_strlcpy	NEED_my_strlcpy_GLOBAL
newCONSTSUB()	NEED_newCONSTSUB	NEED_newCONSTSUB_GLOBAL
newRV_noinc()	NEED_newRV_noinc	NEED_newRV_noinc_GLOBAL
newSV_type()	NEED_newSV_type	NEED_newSV_type_GLOBAL
newSVpv_flags()	NEED_newSVpv_flags	NEED_newSVpv_flags_GLOBAL
newSVpv_share()	NEED_newSVpv_share	NEED_newSVpv_share_GLOBAL
pv_display()	NEED_pv_display	NEED_pv_display_GLOBAL
pv_escape()	NEED_pv_escape	NEED_pv_escape_GLOBAL
pv_pretty()	NEED_pv_pretty	NEED_pv_pretty_GLOBAL
sv_2pv_flags()	NEED_sv_2pv_flags	NEED_sv_2pv_flags_GLOBAL
sv_2pvbyte()	NEED_sv_2pvbyte	NEED_sv_2pvbyte_GLOBAL
sv_catpvf_mg()	NEED_sv_catpvf_mg	NEED_sv_catpvf_mg_GLOBAL



```

sv_catpvf_mg_nocontext()  NEED_sv_catpvf_mg_nocontext  NEED_sv_catpvf_mg_nocontext_GLOBAL
sv_pvn_force_flags()     NEED_sv_pvn_force_flags    NEED_sv_pvn_force_flags_GLOBAL
sv_setpvf_mg()           NEED_sv_setpvf_mg
NEED_sv_setpvf_mg_GLOBAL
sv_setpvf_mg_nocontext() NEED_sv_setpvf_mg_nocontext  NEED_sv_setpvf_mg_nocontext_GLOBAL
vload_module()           NEED_vload_module        NEED_vload_module_GLOBAL
vnewSVpvf()              NEED_vnewSVpvf          NEED_vnewSVpvf_GLOBAL
warner()                  NEED_warner              NEED_warner_GLOBAL

```

To avoid namespace conflicts, you can change the namespace of the explicitly exported functions / variables using the C<DPPP\_NAMESPACE> macro. Just C<#define> the macro before including C<ppport.h>:

```

#define DPPP_NAMESPACE MyOwnNamespace_
#include "ppport.h"

```

The default namespace is C<DPPP\_>.

=back

The good thing is that most of the above can be checked by running F<ppport.h> on your source code. See the next section for details.

=head1 EXAMPLES

To verify whether F<ppport.h> is needed for your module, whether you should make any changes to your code, and whether any special defines should be used, F<ppport.h> can be run as a Perl script to check your source code. Simply say:

```
perl ppport.h
```

The result will usually be a list of patches suggesting changes that should at least be acceptable, if not necessarily the most efficient solution, or a fix for all possible problems.

If you know that your XS module uses features only available in newer Perl releases, if you're aware that it uses C++ comments, and if you want all suggestions as a single patch file, you could use something like this:

```
perl ppport.h --compat-version=5.6.0 --cplusplus --patch=test.diff
```

If you only want your code to be scanned without any suggestions for changes, use:

```
perl ppport.h --nochanges
```

You can specify a different `C<diff>` program or options, using the `C<--diff>` option:

```
perl ppport.h --diff='diff -C 10'
```

This would output context diffs with 10 lines of context.

If you want to create patched copies of your files instead, use:

```
perl ppport.h --copy=.new
```

To display portability information for the `C<newSVpv<pv>>` function, use:

```
perl ppport.h --api-info=newSVpv<pv>
```

Since the argument to `C<--api-info>` can be a regular expression, you can use

```
perl ppport.h --api-info=/_nomg$/
```

to display portability information for all `C<_nomg>` functions or

```
perl ppport.h --api-info=/.</>
```

to display information for all known API elements.

=head1 BUGS

If this version of `F<ppport.h>` is causing failure during the compilation of this module, please check if newer versions of either this module or `C<Devel::PPPort>` are available on CPAN before sending a bug report.

If `F<ppport.h>` was generated using the latest version of `C<Devel::PPPort>` and is causing failure of this module, please file a bug report using the CPAN Request Tracker at [L<http://rt.cpan.org/>](http://rt.cpan.org/).

Please include the following information:

=over 4

=item 1.

The complete output from running "perl -V"

=item 2.

This file.

=item 3.

The name and version of the module you were trying to build.

=item 4.

A full log of the build that failed.

=item

5.

Any other information that you think could be relevant.

=back

For the latest version of this code, please get the C<Devel::PPPort> module from CPAN.

=head1 COPYRIGHT

Version 3.x, Copyright (c) 2004-2013, Marcus Holland-Moritz.

Version 2.x, Copyright (C) 2001, Paul Marquess.

Version 1.x, Copyright (C) 1999, Kenneth Albanowski.

This program is free software; you can redistribute it and/or modify it under the same terms as Perl itself.

=head1 SEE ALSO

See L<Devel::PPPort>.

=cut

use strict;

# Disable broken TRIE-optimization

```
BEGIN { eval '${^RE_TRIE_MAXBUF} = -1' if $] >= 5.009004 && $] <= 5.009005 }
```

```
my $VERSION = 3.21;
```

```
my %opt = (
```

```

quiet => 0,
diag => 1,
hints => 1,
changes => 1,
cplusplus => 0,
filter => 1,
strip => 0,
version => 0,
);

my($ppport) = $0 =~ /([\w.]+)$/;
my $LF = '(?:\r\n|[\r\n])'; # line feed
my $HS = "[\t]";          # horizontal whitespace

# Never use C comments in this file!
my $ccs = '/'. '*';
my
  $cce = '*'. '/';
my $rcs = quotemeta $ccs;
my $rce = quotemeta $cce;

eval {
  require Getopt::Long;
  Getopt::Long::GetOptions(\%opt, qw(
    help quiet diag! filter! hints! changes! cplusplus strip version
    patch=s copy=s diff=s compat-version=s
    list-provided list-unsupported api-info=s
  )) or usage();
};

if ($@ and grep /^-/, @ARGV) {
  usage() if "@ARGV" =~ /^--?h(?:elp)?$/;
  die "Getopt::Long not found. Please don't use any options.\n";
}

if ($opt{version}) {
  print "This is $0 $VERSION.\n";
  exit 0;
}

usage() if $opt{help};
strip() if $opt{strip};

if (exists $opt{'compat-version'}) {
  my($r,$v,$s) = eval { parse_version($opt{'compat-version'}) };
  if ($@) {
    die "Invalid version number format: '$opt{'compat-version'}'\n";
  }
}

```

```

die "Only Perl 5 is supported\n" if $r != 5;
die "Invalid version number: $opt{'compat-version'}\n" if $v >= 1000 || $s >= 1000;
$opt{'compat-version'} = sprintf "%d.%03d%03d", $r, $v, $s;
}
else {
$opt{'compat-version'} = 5;
}

```

```

my
%API = map { /^(w+)([^\w]*)([^\w]*)(\w*)$/
  ? ( $1 => {
    ($2      ? ( base   => $2 ) : ()),
    ($3      ? ( todo   => $3 ) : ()),
    (index($4, 'v') >= 0 ? ( varargs => 1 ) : ()),
    (index($4, 'p') >= 0 ? ( provided => 1 ) : ()),
    (index($4, 'n') >= 0 ? ( nothxarg => 1 ) : ()),
  } )
  : die "invalid spec: $_" } qw(

```

```

AvFILLp|5.004050||p
AvFILL|||
BhkDISABLE||5.019003|
BhkENABLE||5.019003|
BhkENTRY_set||5.019003|
BhkENTRY|||
BhkFLAGS|||
CALL_BLOCK_HOOKS|||
CLASS|||n
CPERLscope|5.005000||p
CX_CURPAD_SAVE|||
CX_CURPAD_SV|||
CopFILEAV|5.006000||p
CopFILEGV_set|5.006000||p
CopFILEGV|5.006000||p
CopFILESV|5.006000||p
CopFILE_set|5.006000||p
CopFILE|5.006000||p
CopSTASHPV_set|5.006000||p
CopSTASHPV|5.006000||p
CopSTASH_eq|5.006000||p
CopSTASH_set|5.006000||p
CopSTASH|5.006000||p
CopyD|5.009002|5.004050|p
Copy||5.004050|
CvPADLIST||5.008001|
CvSTASH|||
CvWEAKOUTSIDE|||
DEFSV_set|5.010001||p
DEFSV|5.004050||p

```

END\_EXTERN\_C|5.005000||p  
ENTER||  
ERRSV|5.004050||p  
EXTEND||  
EXTERN\_C|5.005000||p  
F0convert||n  
FREETMPS||  
GIMME\_V|5.004000|n  
GIMME||n  
GROK\_NUMERIC\_RADIX|5.007002||p  
G\_ARRAY||  
G\_DISCARD||  
G\_EVAL||  
G\_METHOD|5.006001||p  
G\_NOARGS||  
G\_SCALAR||  
G\_VOID|5.004000|  
GetVars||  
GvAV||  
GvCV||  
GvHV||  
GvSVn|5.009003||p  
GvSV||  
Gv\_AMupdate|5.011000|  
HEf\_SVKEY|5.004000|  
HeHASH|5.004000|  
HeKEY|5.004000|  
HeKLEN|5.004000|  
HePV|5.004000|  
HeSVKEY\_force|5.004000|  
HeSVKEY\_set|5.004000|  
HeSVKEY|5.004000|  
HeUTF8|5.010001|  
HeVAL|5.004000|  
HvENAMELEN|5.015004|  
HvENAMEUTF8|5.015004|  
HvENAME|5.013007|  
HvNAMELEN\_get|5.009003||p  
HvNAMELEN|5.015004|  
HvNAMEUTF8|5.015004|  
HvNAME\_get|5.009003||p  
HvNAME||  
INT2PTR|5.006000||p  
IN\_LOCALE\_COMPILETIME|5.007002||p  
IN\_LOCALE\_RUNTIME|5.007002||p  
IN\_LOCALE|5.007002||p  
IN\_PERL\_COMPILETIME|5.008001||p  
IS\_NUMBER\_GREATER\_THAN\_UV\_MAX|5.007002||p

IS\_NUMBER\_INFINITY|5.007002||p  
IS\_NUMBER\_IN\_UV|5.007002||p  
IS\_NUMBER\_NAN|5.007003||p  
IS\_NUMBER\_NEG|5.007002||p  
IS\_NUMBER\_NOT\_INT|5.007002||p  
IVSIZE|5.006000||p  
IVTYPE|5.006000||p  
IVdf|5.006000||p  
LEAVE|||  
LINKLIST||5.013006|  
LVRET|||  
MARK|||  
MULTICALL||5.019003|  
MY\_CXT\_CLONE|5.009002||p  
MY\_CXT\_INIT|5.007003||p  
MY\_CXT|5.007003||p  
MoveD|5.009002|5.004050|p  
Move||5.004050|  
NOOP|5.005000||p  
NUM2PTR|5.006000||p  
NVTYPE|5.006000||p  
NVef|5.006001||p  
NVff|5.006001||p  
NVgf|5.006001||p  
Newxc|5.009003||p  
Newxz|5.009003||p  
Newx|5.009003||p  
Nullav|||  
Nullch|||  
Nullcv|||  
Nullhv|||  
Nullsv|||  
OP\_CLASS||5.013007|  
OP\_DESC||5.007003|  
OP\_NAME||5.007003|  
ORIGMARK|||  
PAD\_BASE\_SV|||  
PAD\_CLONE\_VARS|||  
PAD\_COMPNAME\_FLAGS|||  
PAD\_COMPNAME\_GEN\_set|||  
PAD\_COMPNAME\_GEN|||  
PAD\_COMPNAME\_OURSTASH|||  
PAD\_COMPNAME\_PV|||  
PAD\_COMPNAME\_TYPE|||  
PAD\_RESTORE\_LOCAL|||  
PAD\_SAVE\_LOCAL|||  
PAD\_SAVE\_SETNULLPAD|||  
PAD\_SETSV|||

PAD\_SET\_CUR\_NOSAVE|||  
PAD\_SET\_CUR|||  
PAD\_SV1|||  
PAD\_SV|||  
PERLIO\_FUNCS\_CAST|5.009003||p  
PERLIO\_FUNCS\_DECL|5.009003||p  
PERL\_ABS|5.008001||p  
PERL\_BCDVERSION|5.019002||p  
PERL\_GCC\_BRACE\_GROUPS\_FORBIDDEN|5.008001||p  
PERL\_HASH|5.004000||p  
PERL\_INT\_MAX|5.004000||p  
PERL\_INT\_MIN|5.004000||p  
PERL\_LONG\_MAX|5.004000||p  
PERL\_LONG\_MIN|5.004000||p  
PERL\_MAGIC\_arylen|5.007002||p  
PERL\_MAGIC\_backref|5.007002||p  
PERL\_MAGIC\_bm|5.007002||p  
PERL\_MAGIC\_collxfrm|5.007002||p  
PERL\_MAGIC\_dbfile|5.007002||p  
PERL\_MAGIC\_dbline|5.007002||p  
PERL\_MAGIC\_defelem|5.007002||p  
PERL\_MAGIC\_envelem|5.007002||p  
PERL\_MAGIC\_env|5.007002||p  
PERL\_MAGIC\_ext|5.007002||p  
PERL\_MAGIC\_fm|5.007002||p  
PERL\_MAGIC\_glob|5.019002||p  
PERL\_MAGIC\_isaelem|5.007002||p  
PERL\_MAGIC\_isa|5.007002||p  
PERL\_MAGIC\_mutex|5.019002||p  
PERL\_MAGIC\_nkeys|5.007002||p  
PERL\_MAGIC\_overload\_elem|5.019002||p  
PERL\_MAGIC\_overload\_table|5.007002||p  
PERL\_MAGIC\_overload|5.019002||p  
PERL\_MAGIC\_pos|5.007002||p  
PERL\_MAGIC\_qr|5.007002||p  
PERL\_MAGIC\_regdata|5.007002||p  
PERL\_MAGIC\_regdatum|5.007002||p  
PERL\_MAGIC\_regex\_global|5.007002||p  
PERL\_MAGIC\_shared\_scalar|5.007003||p  
PERL\_MAGIC\_shared|5.007003||p  
PERL\_MAGIC\_sigelem|5.007002||p  
PERL\_MAGIC\_sig|5.007002||p  
PERL\_MAGIC\_substr|5.007002||p  
PERL\_MAGIC\_sv|5.007002||p  
PERL\_MAGIC\_taint|5.007002||p  
PERL\_MAGIC\_tiedelem|5.007002||p  
PERL\_MAGIC\_tiedscalar|5.007002||p  
PERL\_MAGIC\_tied|5.007002||p



PERL\_MAGIC\_utf8|5.008001||p  
PERL\_MAGIC\_uvar\_elem|5.007003||p  
PERL\_MAGIC\_uvar|5.007002||p  
PERL\_MAGIC\_vec|5.007002||p  
PERL\_MAGIC\_vstring|5.008001||p  
PERL\_PV\_ESCAPE\_ALL|5.009004||p  
PERL\_PV\_ESCAPE\_FIRSTCHAR|5.009004||p  
PERL\_PV\_ESCAPE\_NOBACKSLASH|5.009004||p  
PERL\_PV\_ESCAPE\_NOCLEAR|5.009004||p  
PERL\_PV\_ESCAPE\_QUOTE|5.009004||p  
PERL\_PV\_ESCAPE\_RE|5.009005||p  
PERL\_PV\_ESCAPE\_UNI\_DETECT|5.009004||p  
PERL\_PV\_ESCAPE\_UNI|5.009004||p  
PERL\_PV\_PRETTY\_DUMP|5.009004||p  
PERL\_PV\_PRETTY\_ELLIPSES|5.010000||p  
PERL\_PV\_PRETTY\_LTGT|5.009004||p  
PERL\_PV\_PRETTY\_NOCLEAR|5.010000||p  
PERL\_PV\_PRETTY\_QUOTE|5.009004||p  
PERL\_PV\_PRETTY\_REGPROP|5.009004||p  
PERL\_QUAD\_MAX|5.004000||p  
PERL\_QUAD\_MIN|5.004000||p  
PERL\_REVISION|5.006000||p  
PERL\_SCAN\_ALLOW\_UNDERSCORES|5.007003||p  
PERL\_SCAN\_DISALLOW\_PREFIX|5.007003||p  
PERL\_SCAN\_GREATER\_THAN\_UV\_MAX|5.007003||p  
PERL\_SCAN\_SILENT\_ILLDIGIT|5.008001||p  
PERL\_SHORT\_MAX|5.004000||p  
PERL\_SHORT\_MIN|5.004000||p  
PERL\_SIGNALS\_UNSAFE\_FLAG|5.008001||p  
PERL\_SUBVERSION|5.006000||p  
PERL\_SYS\_INIT3|5.010000|  
PERL\_SYS\_INIT|5.010000|  
PERL\_SYS\_TERM|5.019003|  
PERL\_UCHAR\_MAX|5.004000||p  
PERL\_UCHAR\_MIN|5.004000||p  
PERL\_UINT\_MAX|5.004000||p  
PERL\_UINT\_MIN|5.004000||p  
PERL\_ULONG\_MAX|5.004000||p  
PERL\_ULONG\_MIN|5.004000||p  
PERL\_UNUSED\_ARG|5.009003||p  
PERL\_UNUSED\_CONTEXT|5.009004||p  
PERL\_UNUSED\_DECL|5.007002||p  
PERL\_UNUSED\_VAR|5.007002||p  
PERL\_UQUAD\_MAX|5.004000||p  
PERL\_UQUAD\_MIN|5.004000||p  
PERL\_USE\_GCC\_BRACE\_GROUPS|5.009004||p  
PERL\_USHORT\_MAX|5.004000||p  
PERL\_USHORT\_MIN|5.004000||p

PERL\_VERSION|5.006000|p  
PL\_DBsignal|5.005000|p  
PL\_DBsingle||pn  
PL\_DBsub||pn  
PL\_DBtrace||pn  
PL\_Sv|5.005000|p  
PL\_bufend|5.019002|p  
PL\_bufptr|5.019002|p  
PL\_check|5.006000|  
PL\_compiling|5.004050|p  
PL\_comppad\_name||5.017004|  
PL\_comppad|5.008001|  
PL\_copline|5.019002|p  
PL\_curcop|5.004050|p  
PL\_curpad||5.005000|  
PL\_curstash|5.004050|p  
PL\_debstash|5.004050|p  
PL\_defgv|5.004050|p  
PL\_diehook|5.004050|p  
PL\_dirty|5.004050|p  
PL\_dowarn||pn  
PL\_errgv|5.004050|p  
PL\_error\_count|5.019002|p  
PL\_expect|5.019002|p  
PL\_hexdigit|5.005000|p  
PL\_hints|5.005000|p  
PL\_in\_my\_stash|5.019002|p  
PL\_in\_my|5.019002|p  
PL\_keyword\_plugin||5.011002|  
PL\_last\_in\_gv||n  
PL\_laststatval|5.005000|p  
PL\_lex\_state|5.019002|p  
PL\_lex\_stuff|5.019002|p  
PL\_linestr|5.019002|p  
PL\_modglobal||5.005000|n  
PL\_na|5.004050|pn  
PL\_no\_modify|5.006000|p  
PL\_ofsgv||n  
PL\_opfreehook||5.011000|n  
PL\_parser|5.009005|5.009005|p  
PL\_peekp||5.007003|n  
PL\_perl\_destruct\_level|5.004050|p  
PL\_perldb|5.004050|p  
PL\_ppaddr|5.006000|p  
PL\_rpeekp||5.013005|n  
PL\_rsfilters|5.019002|p  
PL\_rsfp|5.019002|p  
PL\_rs||n

PL\_signals|5.008001||p  
PL\_stack\_base|5.004050||p  
PL\_stack\_sp|5.004050||p  
PL\_statcache|5.005000||p  
PL\_stdingv|5.004050||p  
PL\_sv\_arenaroot|5.004050||p  
PL\_sv\_no|5.004050||pn  
PL\_sv\_undef|5.004050||pn  
PL\_sv\_yes|5.004050||pn  
PL\_tainted|5.004050||p  
PL\_tainting|5.004050||p  
PL\_tokenbuf|5.019002||p  
POP\_MULTICALL||5.019003|  
POPi|||n  
POPi|||n  
POPn|||n  
POPpbytex||5.007001|n  
POPpx||5.005030|n  
POPp|||n  
POPs|||n  
PTR2IV|5.006000||p  
PTR2NV|5.006000||p  
PTR2UV|5.006000||p  
PTR2nat|5.009003||p  
PTR2ul|5.007001||p  
PTRV|5.006000||p  
PUSHMARK|||  
PUSH\_MULTICALL||5.019003|  
PUSHi|||  
PUSHmortal|5.009002||p  
PUSHn|||  
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);

if
(exists $opt{'list-unsupported'}) {
my $f;
for $f (sort { lc $a cmp lc $b } keys %API) {
next unless $API{$f}{todo};
print "$f ", 'x'(40-length($f)), " ", format_version($API{$f}{todo}), "\n";
}
}
exit 0;

```

```

}

# Scan for possible replacement candidates

my(%replace, %need, %hints, %warnings, %depends);
my $replace = 0;
my($hint, $define, $function);

sub find_api
{
    my $code = shift;
    $code =~ s{
        /(?: \*[^*]*\*+(?:[^\$ccs][^*]*\*+)* /| /[\r\n]*)
        | "[^"\\]*(?:\\.["\\])*"
        | '[^"\\]*(?:\\.["\\])*' }{ }egsx;
    grep { exists $API{$_} } $code =~ /(\w+)/mg;
}

while (<DATA>) {
    if ($hint) {
        my $h = $hint->[0] eq 'Hint' ? \%hints : \%warnings;
        if (m{^\s*\s*(.*?)\s*$}) {
            for (@{$hint->[1]}) {
                $h->{$_} ||= ""; # suppress warning with older perls
                $h->{$_} .= "$1\n";
            }
        }
        else { undef $hint }
    }

    $hint = [$1, [split /,?\s+/, $2]]
        if m{^\s*$rccs\s+(Hint|Warning):\s+(\w+(?:,\s+\w+)*)\s*$};

    if ($define) {
        if ($define->[1] =~ /\$/) {
            $define->[1] .= $_;
        }
        else {
            if (exists $API{$define->[0]} && $define->[1] !~ /^DPPP_\(/) {
                my @n = find_api($define->[1]);
                push @{$depends{$define->[0]}}, @n if @n
            }
            undef $define;
        }
    }

    $define = [$1, $2] if m{^\s*#\s*define\s+(\w+)(?:\([^\)]*\))?\s+(.*)};
}

```

```

if ($function) {
  if (/^/) {
    if (exists $API{$function->[0]}) {
      my @n = find_api($function->[1]);
      push @{$depends{$function->[0]}}, @n if @n
    }
    undef $function;
  }
  else {
    $function->[1] .= $_;
  }
}

$function = [$1, " ] if m{^DPPP_(my_(\w+))};

$replace = $1 if m{^s*$rccs\s+Replace:\s+(\d+)\s+$rcce\s*$};
$replace{$2} = $1 if $replace
and m{^s*#\s*define\s+(\w+)(?:\([^\)]*\))?\s+(\w+)};
$replace{$2} = $1 if m{^s*#\s*define\s+(\w+)(?:\([^\)]*\))?\s+(\w+).*rccs\s+Replace\s+$rcce};
$replace{$1} = $2 if m{^s*$rccs\s+Replace (\w+) with (\w+)\s+$rcce\s*$};

if (m{^s*$rccs\s+(\w+(s*,\s*\w+)*)\s+depends\s+on\s+(\w+(s*,\s*\w+)*)\s+$rcce\s*$}) {
  my @deps = map { s/\s+//g; $_ } split /\s/, $3;
  my $d;
  for $d (map { s/\s+//g; $_ } split /\s/, $1) {
    push @{$depends{$d}}, @deps;
  }
}

$need{$1} = 1 if m{^#\s+defined\((NEED_(\w+)(?:_GLOBAL)?)\)};
}

for (values %depends) {
  my %s;
  $_ = [sort grep !$_{$_}++, @$_];
}

if (exists $opt{'api-info'}) {
  my $f;
  my $count = 0;
  my $match = $opt{'api-info'} =~ m!^(.*)/$! ? $1 : "\Q$opt{'api-info'}\E\$";
  for $f (sort { lc $a cmp lc $b } keys %API) {
    next unless $f =~ /$match/;
    print "\n=== $f ===\n\n";
    my $info = 0;
    if ($API{$f}{base} || $API{$f}{todo}) {
      my $base = format_version($API{$f}{base} || $API{$f}{todo});
    }
  }
}

```

```

print "Supported at least starting from perl-$base.\n";
$info++;
}
if ($API{$f}{provided}) {
my $todo = $API{$f}{todo} ? format_version($API{$f}{todo}) : "5.003";
print "Support by $ppport provided back to perl-$todo.\n";
print "Support needs to be explicitly requested by NEED_$.f.\n" if exists $need{$f};
print "Depends on: ", join(', ', @{$depends{$f}}), ".\n" if exists $depends{$f};
print "\n$hints{$f}" if exists $hints{$f};
print "\nWARNING:\n$warnings{$f}" if exists $warnings{$f};
$info++;
}
print "No portability information available.\n" unless $info;
$count++;
}
$count or print "Found no API matching '$opt{api-info}'.";
print "\n";
exit 0;
}

```

```

if (exists $opt{list-provided}) {
my $f;
for $f (sort { lc $a cmp lc $b } keys %API) {
next unless $API{$f}{provided};
my @flags;
push @flags, 'explicit' if exists $need{$f};
push @flags, 'depend' if exists $depends{$f};
push @flags, 'hint'
if exists $hints{$f};
push @flags, 'warning' if exists $warnings{$f};
my $flags = @flags ? ' [' . join(', ', @flags) . '] : ";
print "$f$flags\n";
}
exit 0;
}

```

```

my @files;
my @srcext = qw( .xs .c .h .cc .cpp -c.inc -xs.inc );
my $srcext = join '|', map { quotemeta $_ } @srcext;

```

```

if (@ARGV) {
my %seen;
for (@ARGV) {
if (-e) {
if (-f) {
push @files, $_ unless $seen{$_}++;
}
else { warn "'$_' is not a file.\n" }
}
}
}

```



```

}
else {
    my @new = grep { -f } glob $_
        or warn "'$_' does not exist.\n";
    push @files, grep { !$seen{$_}++ } @new;
}
}
}
else {
    eval {
        require File::Find;
        File::Find::find(sub {
            $File::Find::name =~ /($srcext)$/i
            and push @files, $File::Find::name;
        }, '.');
    };
    if ($@) {
        @files = map { glob ".*$_" } @srcext;
    }
}

if (!@ARGV || $opt{filter}) {
    my(@in, @out);
    my %xsc = map { /(.*)\.xs$/ ? ("1.c" => 1, "1.cc" => 1) : () } @files;
    for (@files) {
        my $out = exists $xsc{$_} || /\bQ$ppport\E$/i || !/($srcext)$/i;
        push @{$out ? \@out : \@in }, $_;
    }
    if (@ARGV && @out) {
        warning("Skipping the following files (use --nofilter to avoid this):\n| ", join "\n| ", @out);
    }
    @files = @in;
}

die "No input files given!\n" unless @files;

my(%files, %global, %revreplace);
%revreplace = reverse %replace;
my $filename;
my $patch_opened = 0;

for $filename (@files) {
    unless (open IN, "<$filename") {
        warn "Unable to read from $filename: $!\n";
        next;
    }

    info("Scanning $filename ...");
}

```

```

my $c = do { local $/; <IN> };
close IN;

my %file = (orig => $c, changes => 0);

# Temporarily remove C/XS comments and strings from the code
my @ccom;

$c =~ s{
  ( ^$HS*#$HS*include\b[^\r\n]+\b(?:\Q$ppport\E|XSUB\.h)\b[^\r\n]*
  | ^$HS*#$HS*(?:define|elif|if(?:def?))\b[^\r\n]* )
| ( ^$HS*#[^\r\n]*
  | "[^"\\]*(?:\\\[^\n]*)*"
  | '[^"\\]*(?:\\\[^\n]*)*'
  | /(?:\[^\n]*\n*\n(?:\[^\n]*\n*\n)* \| / [^\r\n]*
  )
)}{ defined $2 and push @ccom, $2;
  defined $1 ? $1 : "$ccs$#ccom$cce" }mgsex;

$file{ccom} = \@ccom;
$file{code} = $c;
$file{has_inc_ppport} = $c =~ /^$HS*#$HS*include[^\r\n]+\b\Q$ppport\E\b/m;

my $func;

for $func (keys %API) {
  my $match = $func;
  $match .= "$$replace{$func}" if exists $replace{$func};
  if ($c =~ /\b(?:Perl_)?($match)\b/) {
    $file{uses_replace}{$1}++ if exists $replace{$func} && $1 eq $replace{$func};
    $file{uses_Perl}{$func}++ if $c =~ /\bPerl_{$func}\b/;
    if (exists $API{$func}{provided}) {
      $file{uses_provided}{$func}++;
      if (!exists $API{$func}{base} || $API{$func}{base} > $opt{'compat-version'}) {
        $file{uses}{$func}++;
        my @deps = rec_depend($func);
        if (@deps) {
          $file{uses_deps}{$func} = \@deps;
          for (@deps) {
            $file{uses}{$_} = 0 unless exists $file{uses}{$_};
          }
        }
      }
      for ($func, @deps) {
        $file{needs}{$_} = 'static' if exists $need{$_};
      }
    }
  }
}

```

```

}
if (exists $API{$func}{todo} && $API{$func}{todo} > $opt{'compat-version'}) {
  if ($c =~ /\b$func\b/) {
    $file{uses_todo}{$func}++;
  }
}
}
}

while ($c =~ /^$HS*#$HS*define$HS+(NEED_(\w+?)(_GLOBAL)?)\b/mg) {
  if (exists $need{$2}) {
    $file{defined $3 ? 'needed_global' : 'needed_static'}{$2}++;
  }
  else { warning("Possibly wrong #define $1 in $filename") }
}

for (qw(uses needs uses_todo needed_global needed_static)) {
  for $func (keys % {$file{$_}}) {
    push @{$global{$_}{$func}}, $filename;
  }
}

$files{$filename} = \%file;
}

# Globally resolve NEED_'s
my $need;
for $need (keys % {$global{needs}}) {
  if (@{$global{needs}{$need}} > 1) {
    my @targets = @{$global{needs}{$need}};
    my @t = grep $files{$_}{needed_global}{$need}, @targets;
    @targets = @t if @t;
    @t = grep /\.xs$/i, @targets;
    @targets = @t if @t;
    my
$target = shift @targets;
    $files{$target}{needs}{$need} = 'global';
    for (@{$global{needs}{$need}}) {
      $files{$_}{needs}{$need} = 'extern' if $_ ne $target;
    }
  }
}

for $filename (@files) {
  exists $files{$filename} or next;

  info("=== Analyzing $filename ===");
}

```

```

my %file = %{$files{$filename}};
my $func;
my $c = $file{code};
my $warnings = 0;

for $func (sort keys %{$file{uses_Perl}}) {
  if ($API{$func}{varargs}) {
    unless ($API{$func}{nothxarg}) {
      my $changes = ($c =~ s{\b(Perl_$func\s*(\s*)(?!aTHX_?)()[^\s]*)})
        { $1 . ($2 eq ' ' ? 'aTHX' : 'aTHX_') . $2 }ge);
      if ($changes) {
        warning("Doesn't pass interpreter argument aTHX to Perl_$func");
        $file{changes} += $changes;
      }
    }
  }
  else {
    warning("Uses Perl_$func instead of $func");
    $file{changes} += ($c =~ s{\bPerl_$func(\s*)((\s*aTHX_?)?\s*)}
      {$func$1}g);
  }
}

for $func (sort keys %{$file{uses_replace}}) {
  warning("Uses $func instead of $replace{$func}");
  $file{changes} += ($c =~ s/\b$func\b/$replace{$func}/g);
}

for $func (sort keys %{$file{uses_provided}}) {
  if ($file{uses}{$func}) {
    if (exists $file{uses_deps}{$func}) {
      diag("Uses $func, which depends on ", join(', ', @{$file{uses_deps}{$func}}));
    }
    else {
      diag("Uses $func");
    }
  }
}
$warnings += hint($func);
}

unless ($opt{quiet}) {
  for $func (sort keys %{$file{uses_todo}}) {
    print "**** WARNING: Uses $func, which may not be portable below perl ",
      format_version($API{$func}{todo}), ", even with 'Sppport\n";
    $warnings++;
  }
}

```

```

for $func (sort keys %{$file{needed_static}}) {
    my $message = "";
    if (not exists $file{uses}{$func}) {
        $message = "No need to define NEED_$func if $func is never used";
    }
    elsif (exists $file{needs}{$func} && $file{needs}{$func} ne 'static') {
        $message = "No need to define NEED_$func when already needed globally";
    }
    if ($message) {
        diag($message);
        $file{changes} += ($c =~ s/^\$HS*#\$HS*define\$HS+NEED_$func\b.*$LF//mg);
    }
}

for $func (sort keys %{$file{needed_global}}) {
    my $message = "";
    if (not exists $global{uses}{$func}) {
        $message = "No need to define NEED_${func}_GLOBAL if $func is never used";
    }
    elsif (exists $file{needs}{$func}) {
        if ($file{needs}{$func} eq 'extern') {
            $message = "No need to define NEED_${func}_GLOBAL when already needed globally";
        }
        elsif ($file{needs}{$func} eq 'static') {
            $message = "No need to define NEED_${func}_GLOBAL when only used in this file";
        }
    }
    if ($message) {
        diag($message);
        $file{changes} += ($c =~ s/^\$HS*#\$HS*define\$HS+NEED_${func}_GLOBAL\b.*$LF//mg);
    }
}

$file{needs_inc_ppport} = keys %{$file{uses}};

if ($file{needs_inc_ppport}) {
    my $pp = "";

    for $func
(sort keys %{$file{needs}}) {
        my $type = $file{needs}{$func};
        next if $type eq 'extern';
        my $suffix = $type eq 'global' ? '_GLOBAL' : "";
        unless (exists $file{"needed_$type"}{$func}) {
            if ($type eq 'global') {
                diag("Files [@{$global{needs}{$func}}] need $func, adding global request");
            }
            else {

```

```

    diag("File needs $func, adding static request");
}
$pp .= "#define NEED_$func$suffix\n";
}
}

if ($pp && ($c =~ s/^(?=$HS*#$HS*define$HS+NEED_\w+)/$pp/m)) {
    $pp = "";
    $file{changes}++;
}

unless ($file{has_inc_ppport}) {
    diag("Needs to include '$ppport'");
    $pp .= qq(#include "$ppport"\n)
}

if ($pp) {
    $file{changes} += ($c =~ s/^(($HS*#$HS*define$HS+NEED_\w+.*?)/$1$pp/ms)
        || ($c =~ s/^(?=$HS*#$HS*include.*\Q$ppport\E)/$pp/m)
        || ($c =~ s/^(($HS*#$HS*include.*XSUB.*\s*?)/$1$pp/m)
        || ($c =~ s/^\$pp/);
}
}
else {
    if ($file{has_inc_ppport}) {
        diag("No need to include '$ppport'");
        $file{changes} += ($c =~ s/^\$HS*?#$HS*include.*\Q$ppport\E.*?$LF//m);
    }
}

# put back in our C comments
my $ix;
my $cpc = 0;
my @ccom = @{$file{ccom}};
for $ix (0 .. $#ccom) {
    if (!$opt{cplusplus} && $ccom[$ix] =~ s!^/!!) {
        $cpc++;
        $file{changes} += $c =~ s/$rccs$ix$rcce/$ccs$ccom[$ix] $cce/;
    }
    else {
        $c =~ s/$rccs$ix$rcce/$ccom[$ix]/;
    }
}

if ($cpc) {
    my $s = $cpc != 1 ? 's' : '';
    warning("Uses $cpc C++ style comment$s, which is not portable");
}

```

```

my $s = $warnings != 1 ? 's' : '';
my $warn = $warnings ? " ($warnings warning$s)" : "";
info("Analysis completed$warn");

if ($file{changes}) {
    if (exists $opt{copy}) {
        my $newfile = "$filename$opt{copy}";
        if (-e $newfile) {
            error("' $newfile' already exists, refusing to write copy of '$filename'");
        }
        else {
            local
            *F;
            if (open F, ">$newfile") {
                info("Writing copy of '$filename' with changes to '$newfile'");
                print F $c;
                close F;
            }
            else {
                error("Cannot open '$newfile' for writing: $!");
            }
        }
    }
    elsif (exists $opt{patch} || $opt{changes}) {
        if (exists $opt{patch}) {
            unless ($patch_opened) {
                if (open PATCH, ">$opt{patch}") {
                    $patch_opened = 1;
                }
                else {
                    error("Cannot open '$opt{patch}' for writing: $!");
                    delete $opt{patch};
                    $opt{changes} = 1;
                    goto fallback;
                }
            }
            mydiff(\*PATCH, $filename, $c);
        }
        else {
            fallback:
                info("Suggested changes:");
                mydiff(\*STDOUT, $filename, $c);
        }
    }
    else {
        my $s = $file{changes} == 1 ? '' : 's';
        info("$file{changes} potentially required change$s detected");
    }
}

```

```

    }
  }
  else {
    info("Looks good");
  }
}

close
PATCH if $patch_opened;

exit 0;

sub try_use { eval "use @_;"; return "$@" eq " }

sub mydiff
{
  local *F = shift;
  my($file, $str) = @_;
  my $diff;

  if (exists $opt{diff}) {
    $diff = run_diff($opt{diff}, $file, $str);
  }

  if (!defined $diff and try_use("Text::Diff")) {
    $diff = Text::Diff::diff($file, \$str, { STYLE => 'Unified' });
    $diff = <<HEADER . $diff;
--- $file
+++ $file.patched
HEADER
  }

  if (!defined $diff) {
    $diff = run_diff('diff -u', $file, $str);
  }

  if (!defined $diff) {
    $diff = run_diff('diff', $file, $str);
  }

  if (!defined $diff) {
    error("Cannot generate a diff. Please install Text::Diff or use --copy.");
    return;
  }

  print F $diff;
}

```



```

sub run_diff
{
my($prog, $file, $str) = @_;
my $tmp = 'dppptemp';
my $suf = 'aaa';
my $diff = "";
local *F;

while (-e "$tmp.$suf") { $suf++ }
$tmp = "$tmp.$suf";

if (open F, ">$tmp") {
print F $str;
close F;

if (open F, "$prog $file $tmp |") {
while (<F>)
{
s/^Q$tmp\E/$file.patched/;
$diff .= $_;
}
close F;
unlink $tmp;
return $diff;
}

unlink $tmp;
}
else {
error("Cannot open '$tmp' for writing: $!");
}

return undef;
}

sub rec_depend
{
my($func, $seen) = @_;
return () unless exists $depends{$func};
$seen = {%{$seen||{}}};
return () if $seen->{$func}++;
my %s;
grep !${$_}++, map { ($_, rec_depend($_, $seen)) } @{$depends{$func}};
}

sub parse_version
{

```

```

my $ver = shift;

if ($ver =~ /^(d+)\.(d+)\.(d+)$/) {
    return ($1, $2, $3);
}
elsif ($ver !~ /^(d+)\.[d_]+$/) {
    die "cannot parse version '$ver'\n";
}

$ver =~ s/_//g;
$ver =~ s/$/000000/;

my($r,$v,$s) = $ver =~ /(\d+)\.(\d{3})(\d{3})/;

$v = int $v;
$s = int $s;

if ($r < 5 || ($r == 5 && $v < 6)) {
    if ($s % 10) {
        die "cannot parse version '$ver'\n";
    }
}

return ($r, $v, $s);
}

sub format_version
{
    my $ver = shift;

    $ver =~ s/$/000000/;
    my($r,$v,$s) =
    $ver =~ /(\d+)\.(\d{3})(\d{3})/;

    $v = int $v;
    $s = int $s;

    if ($r < 5 || ($r == 5 && $v < 6)) {
        if ($s % 10) {
            die "invalid version '$ver'\n";
        }
        $s /= 10;

        $ver = sprintf "%d.%03d", $r, $v;
        $s > 0 and $ver .= sprintf "_%02d", $s;

        return $ver;
    }
}

```

```

return sprintf "%d.%d.%d", $r, $v, $s;
}

sub info
{
    $opt{quiet} and return;
    print @_, "\n";
}

sub diag
{
    $opt{quiet} and return;
    $opt{diag} and print @_, "\n";
}

sub warning
{
    $opt{quiet} and return;
    print "*** ", @_, "\n";
}

sub error
{
    print "*** ERROR: ", @_, "\n";
}

my %given_hints;
my %given_warnings;
sub hint
{
    $opt{quiet} and return;
    my $func = shift;
    my $rv = 0;
    if (exists $warnings{$func} && !$given_warnings{$func}++) {
        my $warn = $warnings{$func};
        $warn =~ s/^\!*** !mg;
        print "*** WARNING: $func\n", $warn;
        $rv++;
    }
    if ($opt{hints} && exists $hints{$func} && !$given_hints{$func}++) {
        my $hint = $hints{$func};
        $hint =~ s/^\ /mg;
        print
        " --- hint for $func ---\n", $hint;
    }
    $rv;
}

```

```

sub usage
{
my($usage) = do { local(@ARGV,$/)=($0); <> } =~ /^=head\d$HS+SYNOPSIS\s*^(.*?)\s*^=/ms;
my %M = ( 'T' => '*' );
$usage =~ s/^\s*perl\s+\S+/$^X $0/;
$usage =~ s/([A-Z])<([>]+)>/M{$1}$2M{$1}/g;

```

```
print <<ENDUSAGE;
```

Usage: \$usage

See perldoc \$0 for details.

ENDUSAGE

```

exit 2;
}

```

```
sub strip
```

```

{
my $self = do { local(@ARGV,$/)=($0); <> };
my($copy) = $self =~ /^=head\d\s+COPYRIGHT\s*^(.*?)^=\w+/ms;
$copy =~ s/^(?=\S+)/ /gms;
$self =~ s/^\$HS+Do NOT edit.*?(?=-)/$copy/ms;
$self =~ s/^\$SKIP.*(?:=__DATA__)/SKIP
if (\@ARGV && $ARGV[0] eq '--unstrip') {
eval { require Devel::PPPport };
\$_@ and die "Cannot require Devel::PPPport, please install.\n";
if (eval $Devel::PPPport::VERSION < $VERSION) {
die "$0 was originally generated with Devel::PPPport $VERSION.\n"
. "Your Devel::PPPport is only version $Devel::PPPport::VERSION.\n"
. "Please install a newer version, or --unstrip will not work.\n";
}
Devel::PPPport::WriteFile(\$_0);
exit 0;
}
print <<END;

```

Sorry, but this is a stripped version of \\$\_0.

To be able to use its original script and doc functionality,  
please try to regenerate this file using:

```
\$^X \$_0 --unstrip
```

END

```
/ms;
```

```

my($pl, $c) = $self =~ /(.*^__DATA__)(.*)/ms;
$c =~ s{
  /(?: \*[^\*]*\*+(?:[^\$ccs][^\*]*\*+)* /|/^\r\n)*
| ("^\\"*(?:\\.["\\"])*"
  | '^\\"*(?:\\.["\\"])*' )
| ($HS+) }{ defined $2 ? ' ' : ($1 || " ) }gsex;
$c =~ s!\s+#!mg;
$c =~ s!$LF#!mg;
$c =~ s!\s*#\s*#!mg;
$c =~ s!\s+#!mg;

```

```

open OUT, ">$0" or die "cannot strip $0: $!\n";
print OUT "$pl$c\n";

```

```

exit 0;
}

```

```

__DATA__
*/

```

Found in path(s):

```

* /opt/cola/permits/2148525555_1724000826.00062/0/libterm-readkey-perl-2-38-orig-1-tar-gz/TermReadKey-2.38/ppport.h

```

No license file was found, but licenses were detected in source scan.

Term::ReadKey 2.36 - Change terminal modes, and perform non-blocking reads.

Copyright (C) 1994-1999 Kenneth Albanowski.  
 2001-2016 Jonathan Stowe and others

This package is dual licensed. You can either choose to license it under the original terms which were:

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This module, ReadKey, provides ioctl control for terminals and Win32 consoles

so the input modes can be changed (thus allowing reads of a single character at a time), and also provides non-blocking reads of stdin, as well as several other terminal related features, including retrieval/modification of the screen size, and retrieval/modification of the control characters.

Installation requires MakeMaker 3.5 or higher (MakeMaker 3.7 is included with perl 5.001, so now is a good time to upgrade if you haven't already.)

To install, unpack somewhere, type "perl Makefile.PL", and then "make test". If the compilation and the tests are successful, then change to root and run "make install".

As of 2.17 the interactive test has been removed as the default for the convenience of automated installers, CPAN-Testers and so on. The non interactive tests whilst confirming that the module has built correctly and has a good chance of working correctly cannot determine whether the effect as observed on the screen is correct so you might want to run:

```
perl -Mblib
example/test.pl interactive
```

before you run 'make install'.

Also from 2.17 this module has to provide its own support for compilers that can't take function prototypes as with Perl 5.8.0 this last vestige of support for non-ANSI compilers will disappear. The requirement for an ANSI C compiler has been present since Perl 5.005 so it is likely that at some point in the future this module will follow that requirement too. If you have any difficulties with older Perl's please contact the maintainer.

The module has support for Win32 since version 2.10. Version 2.17 has been tested with ActivePerl build 623 and Visual Studio 6 and found to work as expected, but do not be surprised if it fails with another compiler or distribution. There are some limitations, with the ReadLine call being unavailable, and ReadKey possibly generating bad results if you are reading from multiple consoles, and key repeat is used. For Win32 users without a C compiler there is a precompiled version of this module available

as a package for ActivePerl, it is probably a few versions behind the latest release but has been reported to work well.

**VERY IMPORTANT:** In 2.00, the ReadKey/ReadLine arguments changed. Now, if you want a call that is non-blocking and returns immediately if no character is waiting, please call it with -1, instead of 1. Positive arguments now indicate a timeout, so 1 would wait a second before timing out.

As older versions will accept -1, it is recommended to change all code that uses ReadMode.

The terminal mode function is controlled by the "ReadMode" function, which takes a single numeric argument, and an optional filehandle. This argument should be one of the following:

- 0: (Reset) Restore original settings.
- 1: (Cooked) Change to what is commonly the default mode, echo on, buffered, signals enabled, Xon/Xoff possibly enabled, and 8-bit mode possibly disabled.
- 2: (Cooked-Invisible) Same as 1, just with echo off. Nice for reading passwords.
- 3: (CBreak) Echo off, unbuffered, signals enabled, Xon/Xoff possibly enabled, and 8-bit mode possibly enabled.
- 4: (Raw) Echo off, unbuffered, signals disabled, Xon/Xoff disabled, and 8-bit mode possibly disabled.
- 5: (Really-Raw) Echo off, unbuffered, signals disabled, Xon/Xoff disabled, 8-bit mode enabled if parity permits, and CR to CR/LF translation turned off.

If you just need to read a key at a time, then modes 3 or 4 are probably sufficient. Mode 4 is a tad more flexible, but needs a bit more work to control. If you use ReadMode 3, then you should install a SIGINT or END handler to reset the terminal (via ReadMode 0) if the user aborts the program via ^C. (For any mode, an END handler consisting of "ReadMode 0" is actually a good idea.)

Non-blocking support is provided via the ReadKey and ReadLine functions. If they are passed no argument, or an argument of zero, they will act like a normal `getc(STDIN)` or `scalar(<STDIN>)`. If they are passed a negative argument, then they will immediately return undef if no input is present. If passed a positive argument, then they will wait until that time in seconds has passed before returning undef. In most situations, you will probably want to use "ReadKey -1".

Note that a non-blocking ReadLine probably won't do what you expect, although it is perfectly predictable, and that the ReadMode will have to be 1 or 0 for it to make sense at all.

A routine is also provided to get the current terminal size, "GetTerminalSize". This will either return a four value array containing the width and height of the screen in characters and then in pixels, or nothing ( if the OS can't return that info). SetTerminalSize allows the stored settings to be modified. Note that this does `_not_` change the physical size of the screen, it will only change the size reported by GetTerminalSize, and other programs that check the terminal size in the same manner.

GetControlChars returns a hash containing all of the valid control characters, such as ("INTERRUPT" => "\x3", etc.). SetControlChars takes an array (or a hash) as a parameter that should consist of similar name/value pairs and will modify the control character settings.

Note that it is entirely possible that there are portability problems with the routines in ReadKey.xs. If you find any problems, including compilation failures, or control characters not supported by Set/GetControlChars, `_please_` tell me about them, by mailing the maintainer at [jns@gellyfish.co.uk](mailto:jns@gellyfish.co.uk), or lastly contacting [perl5-porters@perl.org](mailto:perl5-porters@perl.org). Any problems will get fixed if at all possible, but that's not going to happen if I don't know about them.

The code is available at <https://github.com/jonathanstowe/TermReadKey> so as ever patches are kindly welcomed, especially for platforms such as Windows that I am unable to test on.

Oh, you may also be interested in the Configure.pm module. It provides tools to make porting stuff easier -- calling the compiler, finding headers, etc.

It contains documentation inside it, and you are welcome to use it in your own modules. If you make use of it, I'd be grateful for a message sent to the above address.

Found in path(s):

```
* /opt/cola/permits/2148525555_1724000826.00062/0/libterm-readkey-perl-2-38-orig-1-tar-gz/TermReadKey-2.38/README
```

No license file was found, but licenses were detected in source scan.

---

abstract: 'Change terminal modes, and perform non-blocking reads.'

author:

- 'Kenneth Albanowski'
- 'Jonathan Stowe'

build\_requires:

ExtUtils::MakeMaker: '6.58'

configure\_requires:

ExtUtils::MakeMaker: '6.58'



dynamic\_config: 1  
generated\_by: 'ExtUtils::MakeMaker version 7.34, CPAN::Meta::Converter version 2.150010'  
license: perl  
meta-spec:  
url: <http://module-build.sourceforge.net/META-spec-v1.4.html>  
version: '1.4'  
name: TermReadKey  
no\_index:  
file:  
- Configure.pm  
package:  
- Configure  
provides:  
Term::ReadKey:  
file: ReadKey.pm.PL  
version: '2.38'  
resources:  
repository: <https://github.com/jonathanstowe/TermReadKey.git>  
version: '2.38'  
x\_serialization\_backend: 'CPAN::Meta::YAML version 0.018'

Found in path(s):  
\* /opt/cola/permits/2148525555\_1724000826.00062/0/libterm-readkey-perl-2-38-orig-1-tar-gz/TermReadKey-2.38/META.yml

# 1.264 byobu 6.11-0ubuntu1

## 1.264.1 Available under license :

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Version 3, 29 June 2007

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## 1.265 libtraceevent 1.8.2-1ubuntu2

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libtraceevent(3)

=====

NAME

----

tep\_parse\_event, tep\_parse\_format - Parse the event format information

SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
enum tep_errno *tep_parse_event*(struct tep_handle pass:[*]_tep_, const char pass:[*]_buf_, unsigned long _size_,  
const char pass:[*]_sys_);
```

```
enum tep_errno *tep_parse_format*(struct tep_handle pass:[*]_tep_, struct tep_event pass:[*]pass:[*]_eventp_,  
const char pass:[*]_buf_, unsigned long _size_, const char pass:[*]_sys_);
```

--

DESCRIPTION



-----  
The `*tep_parse_event()*` function parses the event format and creates an event structure to quickly parse raw data for a given event. The `_tep_` argument is the trace event parser context. The created event structure is stored in the `_tep_` context. The `_buf_` argument is a buffer with `_size_`, where the event format data is. The event format data can be taken from `tracefs/events/.../.../format` files. The `_sys_` argument is the system of the event.

The `*tep_parse_format()*` function does the same as `*tep_parse_event()*`. The only difference is in the extra `_eventp_` argument, where the newly created event structure is returned.

## RETURN VALUE

-----  
Both `*tep_parse_event()*` and `*tep_parse_format()*` functions return 0 on success, or `TEP_ERRNO_...` in case of an error.

## EXAMPLE

-----  
[source,c]  
--  
#include <event-parse.h>  
...  
struct tep\_handle \*tep = tep\_alloc();  
...  
char \*buf;  
int size;  
struct tep\_event \*event = NULL;  
buf = read\_file("/sys/kernel/tracing/events/ftrace/print/format", &size);  
if (tep\_parse\_event(tep, buf, size, "ftrace") != 0) {  
 /\* Failed to parse the ftrace print format \*/  
}  
  
if (tep\_parse\_format(tep, &event, buf, size, "ftrace") != 0) {  
 /\* Failed to parse the ftrace print format \*/  
}  
...  
--

## FILES

-----  
[verse]  
--  
\*event-parse.h\*  
Header file to include in order to have access to the library APIs.  
\*-ltraceevent\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*libtraceevent\*(3), \*trace-cmd\*(1)

## AUTHOR

-----

[verse]

--

\*Steven Rostedt\* <rostedt@goodmis.org>, author of \*libtraceevent\*.

\*Tzvetomir Stoyanov\* <tz.stoyanov@gmail.com>, author of this man page.

--

## REPORTING BUGS

-----

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## LICENSE

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## RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

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\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-parse\_event.txt

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libtraceevent(3)

=====

## NAME

----

tep\_get\_page\_size, tep\_set\_page\_size, tep\_get\_sub\_buffer\_data\_size, tep\_get\_sub\_buffer\_size - Get / set the size of a memory page on the machine, where the trace is generated

## SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
int *tep_get_page_size*(struct tep_handle pass:[*]_tep_);
```

```

void *tep_set_page_size*(struct tep_handle pass:[*]_tep_, int _page_size_);
int *tep_get_sub_buffer_size*(struct tep_handle pass:[*]_tep_);
int *tep_get_sub_buffer_data_size*(struct tep_handle pass:[*]_tep_);
int *tep_get_sub_buffer_commit_offset*(struct tep_handle pass:[*]_tep_);
--

```

## DESCRIPTION

-----

The `*tep_get_page_size()*` function returns the size of a memory page on the machine, where the trace is generated. The `_tep_` argument is trace event parser context.

The `*tep_set_page_size()*` function stores in the `_tep_` context the size of a memory page on the machine, where the trace is generated.

The `_tep_` argument is trace event parser context.

The `_page_size_` argument is the size of a memory page, in bytes.

The `*tep_get_sub_buffer_size()*` returns the size of each "sub buffer" of the ring buffer. The Linux kernel ring buffer is broken up into sections called sub buffers. This returns the size of those buffers.

The `*tep_get_sub_buffer_data_size()*` returns the size of just the data portion of the sub buffers.

The `*tep_get_sub_buffer_commit_offset()*` returns the offset on the sub buffer that holds the committed portion of data. This number contains the index from the data portion of the sub buffer that is the end of the last element on the sub buffer.

## RETURN VALUE

-----

The `*tep_get_page_size()*` function returns size of the memory page, in bytes.

The `*tep_get_sub_buffer_size()*` function returns the number of bytes each sub buffer is made up of.

The `*tep_get_sub_buffer_commit_offset()*` function returns the location on the sub buffer that contains the index of the last element.

## EXAMPLE

-----

[source,c]

--

```
#include <unistd.h>
```

```
#include <event-parse.h>
```

...

```
struct tep_handle *tep = tep_alloc();
...
int page_size = getpagesize();

tep_set_page_size(tep, page_size);

printf("The page size for this machine is %d\n", tep_get_page_size(tep));
```

--

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

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libtraceevent(3)

=====

NAME

----

tep\_event\_common\_fields, tep\_event\_fields - Get a list of fields for an event.

SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
struct tep_format_field pass:[*]pass:[*]*tep_event_common_fields*(struct tep_event pass:[*]_event_);
```

```
struct tep_format_field pass:[*]pass:[*]*tep_event_fields*(struct tep_event pass:[*]_event_);
```

--

DESCRIPTION

-----

The `*tep_event_common_fields()` function returns an array of pointers to common fields for the `_event_`. The array is allocated in the function and must be freed by `free()`. The last element of the array is `NULL`.

The `*tep_event_fields()` function returns an array of pointers to event specific fields for the `_event_`. The array is allocated in the function and must be freed by `free()`. The last element of the array is `NULL`.

RETURN VALUE

-----

Both `*tep_event_common_fields()` and `*tep_event_fields()` functions return an array of pointers to `tep_format_field` structures in case of success, or `NULL` in case of an error.

EXAMPLE

-----

[source,c]

--

```
#include <event-parse.h>
```

...

```
struct tep_handle *tep = tep_alloc();
```

...

```
int i;
```

```
struct tep_format_field **fields;
```

```
struct tep_event *event = tep_find_event_by_name(tep, "kvm", "kvm_exit");
```

```
if (event != NULL) {
```

```
    fields = tep_event_common_fields(event);
```

```
    if (fields != NULL) {
```

```

i = 0;
while (fields[i]) {
    /*
     walk through the list of the common fields
     of the kvm_exit event
    */
    i++;
}
free(fields);
}
fields = tep_event_fields(event);
if (fields != NULL) {
    i = 0;
    while (fields[i]) {
        /*
         walk through the list of the event specific
         fields of the kvm_exit event
        */
        i++;
    }
    free(fields);
}
}
...
--

```

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

--

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## RESOURCES

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<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

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\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-fields.txt

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libtraceevent(3)

=====

## NAME

----

libtraceevent - Linux kernel trace event library

## SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

Management of tep handler data structure and access of its members:

```
struct tep_handle pass:[*]*tep_alloc*(void);
void *tep_free*(struct tep_handle pass:[*]_tep_);
void *tep_ref*(struct tep_handle pass:[*]_tep_);
void *tep_unref*(struct tep_handle pass:[*]_tep_);
int *tep_get_ref*(struct tep_handle pass:[*]_tep_);
void *tep_set_flag*(struct tep_handle pass:[*]_tep_, enum tep_flag _flag_);
void *tep_clear_flag*(struct tep_handle pass:[*]_tep_, enum tep_flag _flag_);
bool *tep_test_flag*(struct tep_handle pass:[*]_tep_, enum tep_flag _flags_);
int *tep_get_cpus*(struct tep_handle pass:[*]_tep_);
void *tep_set_cpus*(struct tep_handle pass:[*]_tep_, int _cpus_);
int *tep_get_long_size*(struct tep_handle pass:[*]_tep_);
void *tep_set_long_size*(struct tep_handle
pass:[*]_tep_, int _long_size_);
int *tep_get_page_size*(struct tep_handle pass:[*]_tep_);
void *tep_set_page_size*(struct tep_handle pass:[*]_tep_, int _page_size_);
int *tep_get_sub_buffer_size*(struct tep_handle pass:[*]_tep_);
int *tep_get_sub_buffer_data_size*(struct tep_handle pass:[*]_tep_);
```

```

int *tep_get_sub_buffer_commit_offset*(struct tep_handle pass:[*]_tep_);
int *tep_get_header_page_size*(struct tep_handle pass:[*]_tep_);
int *tep_get_header_timestamp_size*(struct tep_handle pass:[*]_tep_);
bool *tep_is_old_format*(struct tep_handle pass:[*]_tep_);
int *tep_sterror*(struct tep_handle pass:[*]_tep_, enum tep_errno _errno_, char pass:[*]_buf_, size_t _buflen_);
struct kbuffer pass:[*]*tep_kbuffer*(struct tep_handle pass:[*]_tep_);

```

#### Register / unregister APIs:

```

int *tep_register_function*(struct tep_handle pass:[*]_tep_, char pass:[*]_name_, unsigned long long _addr_, char
pass:[*]_mod_);
int *tep_register_event_handler*(struct tep_handle pass:[*]_tep_, int _id_,
const char pass:[*]_sys_name_, const char pass:[*]_event_name_, tep_event_handler_func _func_, void
pass:[*]_context_);
int *tep_unregister_event_handler*(struct tep_handle pass:[*]_tep_, int id, const char pass:[*]_sys_name_, const char
pass:[*]_event_name_, tep_event_handler_func _func_, void pass:[*]_context_);
int *tep_register_print_string*(struct tep_handle pass:[*]_tep_, const char pass:[*]_fmt_, unsigned long long
_addr_);
int *tep_register_print_function*(struct tep_handle pass:[*]_tep_, tep_func_handler _func_, enum
tep_func_arg_type _ret_type_, char pass:[*]_name_, ...);
int *tep_unregister_print_function*(struct tep_handle pass:[*]_tep_, tep_func_handler _func_, char
pass:[*]_name_);
int *tep_get_function_count*(struct tep_handle *_tep_);

```

#### Trace printk parsing:

```

void *tep_print_printk*(struct tep_handle pass:[*]_tep_);
void *tep_print_funcs*(struct tep_handle pass:[*]_tep_);
void *tep_set_test_filters*(struct tep_handle pass:[*]_tep_, int test_filters);
void *tep_plugin_print_options*(struct
trace_seq pass:[*]_s);
int *tep_plugin_add_option*(const char pass:[*]_name_, const char pass:[*]_val_);

```

#### Meta data parsing:

```

int *tep_parse_saved_cmdlines*(struct tep_handle pass:[*]_tep_, const char pass:[*]_buf_);
int *tep_parse_printk_formats*(struct tep_handle pass:[*]_tep_, const char pass:[*]_buf_);
int *tep_parse_kallsyms*(struct tep_handle pass:[*]_tep_, const char pass:[*]_buf_);

```

#### Plugins management:

```

struct tep_plugin_list pass:[*]*tep_load_plugins*(struct tep_handle pass:[*]_tep_);
void *tep_unload_plugins*(struct tep_plugin_list pass:[*]_plugin_list_, struct tep_handle pass:[*]_tep_);
char pass:[*]pass:[*]*tep_plugin_list_options*(void);
void *tep_plugin_free_options_list*(char pass:[*]pass:[*]_list_);
int *tep_plugin_add_options*(const char pass:[*]_name_, struct tep_plugin_option pass:[*]_options_);
void *tep_plugin_remove_options*(struct tep_plugin_option pass:[*]_options_);
void *tep_print_plugins*(struct trace_seq pass:[*]_s_, const char pass:[*]_prefix_,
const char pass:[*]_suffix_, const struct tep_plugin_list pass:[*]_list_);
void *tep_load_plugins_hook*(struct tep_handle pass:[*]_tep_, const char pass:[*]_suffix_,
void (pass:[*]_load_plugin_)(struct tep_handle pass:[*]_tep_,
const char pass:[*]_path,

```



```

    const char pass:[*]name,
    void pass:[*]data),
    void pass:[*]_data_);
int *tep_add_plugin_path*(struct tep_handle pass:[*]tep, char pass:[*]path,
    enum tep_plugin_load_priority prio);

```

#### Event related APIs:

```

struct tep_event pass:[*]*tep_get_event*(struct tep_handle pass:[*]_tep_, int _index_);
struct tep_event pass:[*]*tep_get_first_event*(struct tep_handle pass:[*]_tep_);
int *tep_get_events_count*(struct tep_handle pass:[*]_tep_);
struct tep_event pass:[*]pass:[*]*tep_list_events*(struct tep_handle pass:[*]_tep_, enum tep_event_sort_type
_sort_type_);
struct tep_event pass:[*]pass:[*]*tep_list_events_copy*(struct tep_handle pass:[*]_tep_, enum tep_event_sort_type
_sort_type_);
void
*tep_print_event*(struct tep_handle pass:[*]_tep_, struct trace_seq pass:[*]_s_, struct tep_record pass:[*]_record_,
const char pass:[*]_fmt_, ...);

```

#### Event finding:

```

struct tep_event pass:[*]*tep_find_event*(struct tep_handle pass:[*]_tep_, int _id_);
struct tep_event pass:[*]*tep_find_event_by_name*(struct tep_handle pass:[*]_tep_, const char pass:[*]_sys_, const
char pass:[*]_name_);
struct tep_event pass:[*]*tep_find_event_by_record*(struct tep_handle pass:[*]_tep_, struct tep_record
pass:[*]_record_);
bool *tep_record_is_event*(struct tep_record pass:[*]record, struct tep_event pass:[*]event);

```

#### Parsing of event files:

```

int *tep_parse_header_page*(struct tep_handle pass:[*]_tep_, char pass:[*]_buf_, unsigned long _size_, int
_long_size_);
enum tep_errno *tep_parse_event*(struct tep_handle pass:[*]_tep_, const char pass:[*]_buf_, unsigned long _size_,
const char pass:[*]_sys_);
enum tep_errno *tep_parse_format*(struct tep_handle pass:[*]_tep_, struct tep_event pass:[*]pass:[*]_eventp_,
const char pass:[*]_buf_, unsigned long _size_, const char pass:[*]_sys_);

```

#### APIs related to fields from event's format files:

```

struct tep_format_field pass:[*]pass:[*]*tep_event_common_fields*(struct tep_event pass:[*]_event_);
struct tep_format_field pass:[*]pass:[*]*tep_event_fields*(struct tep_event pass:[*]_event_);
void pass:[*]*tep_get_field_raw*(struct trace_seq pass:[*]_s_, struct tep_event pass:[*]_event_, const char
pass:[*]_name_, struct tep_record pass:[*]_record_, int pass:[*]_len_, int _err_);
int *tep_get_field_val*(struct trace_seq pass:[*]_s_, struct tep_event pass:[*]_event_, const char pass:[*]_name_,
struct tep_record pass:[*]_record_, unsigned long long pass:[*]_val_, int _err_);
int *tep_get_common_field_val*(struct trace_seq pass:[*]_s_, struct tep_event pass:[*]_event_, const char
pass:[*]_name_, struct tep_record pass:[*]_record_, unsigned long long pass:[*]_val_, int _err_);
int *tep_get_any_field_val*(struct trace_seq pass:[*]_s_, struct
tep_event pass:[*]_event_, const char pass:[*]_name_, struct tep_record pass:[*]_record_, unsigned long long
pass:[*]_val_, int _err_);
int *tep_read_number_field*(struct tep_format_field pass:[*]_field_, const void pass:[*]_data_, unsigned long long
pass:[*]_value_);

```

Event fields printing:

```
void *tep_print_field_content*(struct trace_seq pass:[*]_s_, void pass:[*]_data_, int size, struct tep_format_field
pass:[*]_field_);
void *tep_print_fields*(struct trace_seq pass:[*]_s_, void pass:[*]_data_, int _size_, struct tep_event
pass:[*]_event_);
int *tep_print_num_field*(struct trace_seq pass:[*]_s_, const char pass:[*]_fmt_, struct tep_event pass:[*]_event_,
const char pass:[*]_name_, struct tep_record pass:[*]_record_, int _err_);
int *tep_print_func_field*(struct trace_seq pass:[*]_s_, const char pass:[*]_fmt_, struct tep_event pass:[*]_event_,
const char pass:[*]_name_, struct tep_record pass:[*]_record_, int _err_);
void *tep_record_print_fields*(struct trace_seq pass:[*]_s_,
struct tep_record pass:[*]_record_, struct tep_event pass:[*]_event_);
void *tep_record_print_selected_fields*(struct trace_seq pass:[*]_s_, struct tep_record pass:[*]_record_, struct
tep_event pass:[*]_event_, int _select_mask_);
```

Event fields finding:

```
struct tep_format_field pass:[*]*tep_find_common_field*(struct tep_event pass:[*]_event_, const char
pass:[*]_name_);
struct tep_format_field pass:[*]*tep_find_field*(struct tep_event_orformat pass:[*]_event_, const char
pass:[*]_name_);
struct tep_format_field pass:[*]*tep_find_any_field*(struct tep_event pass:[*]_event_, const char pass:[*]_name_);
```

Functions resolver:

```
int *tep_set_function_resolver*(struct tep_handle pass:[*]_tep_, tep_func_resolver_t pass:[*]_func_, void
pass:[*]_priv_);
void *tep_reset_function_resolver*(struct tep_handle pass:[*]_tep_);
const char pass:[*]*tep_find_function*(struct tep_handle pass:[*]_tep_, unsigned long long _addr_);
unsigned long long *tep_find_function_address*(struct tep_handle pass:[*]_tep_,
unsigned long long _addr_);
int *tep_find_function_info*(struct tep_handle pass:[*]_tep_, unsigned long long _addr_, const char
pass:[*]_name_,
unsigned long long pass:[*]_start_, unsigned long pass:[*]_size_);
```

Filter management:

```
struct tep_event_filter pass:[*]*tep_filter_alloc*(struct tep_handle pass:[*]_tep_);
enum tep_errno *tep_filter_add_filter_str*(struct tep_event_filter pass:[*]_filter_, const char pass:[*]_filter_str_);
enum tep_errno *tep_filter_match*(struct tep_event_filter pass:[*]_filter_, struct tep_record pass:[*]_record_);
int *tep_filter_streerror*(struct tep_event_filter pass:[*]_filter_, enum tep_errno _err_, char pass:[*]_buf, size_t
_bufflen_);
int *tep_event_filtered*(struct tep_event_filter pass:[*]_filter_, int _event_id_);
void *tep_filter_reset*(struct tep_event_filter pass:[*]_filter_);
void *tep_filter_free*(struct tep_event_filter pass:[*]_filter_);
char pass:[*]*tep_filter_make_string*(struct tep_event_filter pass:[*]_filter_, int
_event_id_);
int *tep_filter_remove_event*(struct tep_event_filter pass:[*]_filter_, int _event_id_);
int *tep_filter_copy*(struct tep_event_filter pass:[*]_dest_, struct tep_event_filter pass:[*]_source_);
int *tep_filter_compare*(struct tep_event_filter pass:[*]_filter1_, struct tep_event_filter pass:[*]_filter2_);
```

Parsing various data from the records:

```
int *tep_data_type*(struct tep_handle pass:[*]_tep_, struct tep_record pass:[*]_rec_);
int *tep_data_pid*(struct tep_handle pass:[*]_tep_, struct tep_record pass:[*]_rec_);
int *tep_data_preempt_count*(struct tep_handle pass:[*]_tep_, struct tep_record pass:[*]_rec_);
int *tep_data_flags*(struct tep_handle pass:[*]_tep_, struct tep_record pass:[*]_rec_);
```

Command and task related APIs:

```
const char pass:[*]*tep_data_comm_from_pid*(struct tep_handle pass:[*]_tep_, int _pid_);
struct cmdline pass:[*]*tep_data_pid_from_comm*(struct tep_handle pass:[*]_tep_, const char pass:[*]_comm_,
struct cmdline pass:[*]_next_);
int *tep_register_comm*(struct
tep_handle pass:[*]_tep_, const char pass:[*]_comm_, int _pid_);
int *tep_override_comm*(struct tep_handle pass:[*]_tep_, const char pass:[*]_comm_, int _pid_);
bool *tep_is_pid_registered*(struct tep_handle pass:[*]_tep_, int _pid_);
int *tep_cmdline_pid*(struct tep_handle pass:[*]_tep_, struct cmdline pass:[*]_cmdline_);
```

Endian related APIs:

```
int *tep_is_bigendian*(void);
unsigned long long *tep_read_number*(struct tep_handle pass:[*]_tep_, const void pass:[*]_ptr_, int _size_);
bool *tep_is_file_bigendian*(struct tep_handle pass:[*]_tep_);
void *tep_set_file_bigendian*(struct tep_handle pass:[*]_tep_, enum tep_endian _endian_);
bool *tep_is_local_bigendian*(struct tep_handle pass:[*]_tep_);
void *tep_set_local_bigendian*(struct tep_handle pass:[*]_tep_, enum tep_endian _endian_);
```

Control library logs:

```
int *tep_set_loglevel*(enum tep_loglevel _level_);
```

KVM plugin callbacks: (Defined by the application and compiled with -rdynamic)

```
const char pass:[*]*tep_plugin_kvm_get_func*(struct
tep_event pass:[*]event,
    struct tep_record pass:[*]record,
    unsigned long long pass:[*]paddr);
void *tep_plugin_kvm_put_func*(const char pass:[*]func);
```

Trace sequences:

```
*#include <trace-seq.h>*
void *trace_seq_init*(struct trace_seq pass:[*]_s_);
void *trace_seq_reset*(struct trace_seq pass:[*]_s_);
void *trace_seq_destroy*(struct trace_seq pass:[*]_s_);
int *trace_seq_printf*(struct trace_seq pass:[*]_s_, const char pass:[*]_fmt_, ...);
int *trace_seq_vprintf*(struct trace_seq pass:[*]_s_, const char pass:[*]_fmt_, va_list _args_);
int *trace_seq_puts*(struct trace_seq pass:[*]_s_, const char pass:[*]_str_);
int *trace_seq_putc*(struct trace_seq pass:[*]_s_, unsigned char _c_);
void *trace_seq_terminate*(struct trace_seq pass:[*]_s_);
int *trace_seq_do_fprintf*(struct trace_seq pass:[*]_s_, FILE pass:[*]_fp_);
int *trace_seq_do_printf*(struct trace_seq pass:[*]_s_);
```

kbuffer parsing:

```

#include <kbuffer.h>
struct kbuffer pass:[*]*kbuffer_alloc*(enum
kbuffer_long_size_size_, enum kbuffer_endian_endian_);
struct kbuffer pass:[*]*kbuffer_dup*(struct kbuffer pass:[*]_kbuf_);
void *kbuffer_free*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_load_subbuffer*(struct kbuffer pass:[*]_kbuf_, void pass:[*]_subbuffer_);
int *kbuffer_subbuffer_size*(struct kbuffer pass:[*]_kbuf_);
void pass:[*]*kbuffer_subbuffer*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_refresh*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_start_of_data*(struct kbuffer pass:[*]_kbuf_);
unsigned long long *kbuffer_timestamp*(struct kbuffer pass:[*]_kbuf_);
unsigned long long *kbuffer_subbuf_timestamp*(struct kbuffer pass:[*]_kbuf_, void pass:[*]_subbuf_);
void pass:[*]*kbuffer_read_event*(struct kbuffer pass:[*]_kbuf_, unsigned long long pass:[*]_ts_);
void pass:[*]*kbuffer_next_event*(struct kbuffer pass:[*]_kbuf_, unsigned long long pass:[*]_ts_);
void pass:[*]*kbuffer_read_at_offset*(struct kbuffer pass:[*]_kbuf_, int _offset_, unsigned long
long pass:[*]_ts_);
int *kbuffer_missed_events*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_event_size*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_curr_size*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_curr_offset*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_curr_index*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_read_buffer*(struct kbuffer pass:[*]_kbuf_, void pass:[*]_buffer_, int _start_, int _len_);
--

```

## DESCRIPTION

-----  
The libtraceevent(3) library provides APIs to access kernel tracepoint events, located in the tracefs file system under the events directory.

## ENVIRONMENT

-----  
[verse]

## TRACEEVENT\_PLUGIN\_DIR

Additional plugin directory. All shared object files, located in this directory will be loaded as traceevent plugins.

## FILES

-----  
[verse]

--  
\*event-parse.h\*

Header file to include in order to have access to the library APIs.

\*trace-seq.h\*

Header file to include in order to have access to trace sequences related APIs.

Trace sequences are used

to allow a function to call several other functions

to create a string of data to use.

`*-ltraceevent*`

Linker switch to add when building a program that uses the library.

--

SEE ALSO

-----

`*trace-cmd*(1)`

AUTHOR

-----

[verse]

--

`*Steven Rostedt* <rostedt@goodmis.org>`, author of `*libtraceevent*`.

`*Tzvetomir Stoyanov* <tz.stoyanov@gmail.com>`, author of this man page.

--

REPORTING BUGS

-----

Report bugs to `<linux-trace-devel@vger.kernel.org>`

LICENSE

-----

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RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

Found in path(s):

`*/opt/cola/permits/2148525021_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent.txt`

No license file was found, but licenses were detected in source scan.

libtraceevent(3)

=====

NAME

----

`tep_register_comm`, `tep_override_comm`, `tep_is_pid_registered`,  
`tep_data_comm_from_pid`, `tep_data_pid_from_comm`, `tep_cmdline_pid` -  
Manage pid to process name mappings.

SYNOPSIS

-----

[verse]

--

`*#include <event-parse.h>*`

`int *tep_register_comm*(struct tep_handle pass:[*]_tep_, const char pass:[*]_comm_, int _pid_);`

```

int *tep_override_comm*(struct tep_handle pass:[*]_tep_, const char pass:[*]_comm_, int _pid_);
bool *tep_is_pid_registered*(struct tep_handle pass:[*]_tep_, int _pid_);
const char pass:[*]*tep_data_comm_from_pid*(struct tep_handle pass:[*]_pevent_, int _pid_);
struct cmdline pass:[*]*tep_data_pid_from_comm*(struct tep_handle pass:[*]_pevent_, const char pass:[*]_comm_,
struct cmdline pass:[*]_next_);
int *tep_cmdline_pid*(struct tep_handle pass:[*]_pevent_, struct cmdline pass:[*]_cmdline_);
--

```

## DESCRIPTION

-----

These functions can be used to handle the mapping between pid and process name.

The library builds a cache of these mappings, which is used to display the name of the process, instead of its pid. This information can be retrieved from tracefs/saved\_cmdlines file.

The `*tep_register_comm()*` function registers a `_pid_ / process name` mapping. If a command with the same `_pid_` is already registered, an error is returned. The `_pid_` argument is the process ID, the `_comm_` argument is the process name, `_tep_` is the event context. The `_comm_` is duplicated internally.

The `*tep_override_comm()*` function registers a `_pid_ / process name` mapping. If a process with the same pid is already registered, the process name string is updated with the new one. The `_pid_` argument is the process ID, the `_comm_` argument is the process name, `_tep_` is the event context. The `_comm_` is duplicated internally.

The `*tep_is_pid_registered()*` function checks if a pid has a process name mapping registered. The `_pid_` argument is the process ID, `_tep_` is the event context.

The

`*tep_data_comm_from_pid()*` function returns the process name for a given pid. The `_pid_` argument is the process ID, `_tep_` is the event context. The returned string should not be freed, but will be freed when the `_tep_` handler is closed.

The `*tep_data_pid_from_comm()*` function returns a pid for a given process name. The `_comm_` argument is the process name, `_tep_` is the event context. The argument `_next_` is the cmdline structure to search for the next pid. As there may be more than one pid for a given process, the result of this call can be passed back into a recurring call in the `_next_` parameter, to search for the next pid. If `_next_` is NULL, it will return the first pid associated with the `_comm_`. The function performs a linear search, so it may be slow.

The `*tep_cmdline_pid()*` function returns the pid associated with a given `_cmdline_`. The `_tep_` argument is the event context.

## RETURN VALUE

-----

\*tep\_register\_comm()\* function returns 0 on success. In case of an error -1 is returned and errno is set to indicate the cause of the problem: ENOMEM, if there is not enough memory to duplicate the \_comm\_ or EEXIST if a mapping for this \_pid\_ is already registered.

\*tep\_override\_comm()\* function returns 0 on success. In case of an error -1 is returned and errno is set to indicate the cause of the problem: ENOMEM, if there is not enough memory to duplicate the \_comm\_.

\*tep\_is\_pid\_registered()\* function returns true if the \_pid\_ has a process name mapped to it, false otherwise.

\*tep\_data\_comm\_from\_pid()\* function returns the process name as string, or the string "<...>" if there is no mapping for the given pid.

\*tep\_data\_pid\_from\_comm()\* function returns a pointer to a struct cmdline, that holds a pid for a given process, or NULL if none is found. This result can be passed back into a recurring call as the \_next\_ parameter of the function.

\*tep\_cmdline\_pid()\* functions returns the pid for the give cmdline. If \_cmdline\_ is NULL, then -1 is returned.

## EXAMPLE

-----

The

following example registers pid for command "ls", in context of event \_tep\_ and performs various searches for pid / process name mappings:

[source,c]

--

```
#include <event-parse.h>
...
int ret;
int ls_pid = 1021;
struct tep_handle *tep = tep_alloc();
...
ret = tep_register_comm(tep, "ls", ls_pid);
if (ret != 0 && errno == EEXIST)
    ret = tep_override_comm(tep, "ls", ls_pid);
if (ret != 0) {
    /* Failed to register pid / command mapping */
}
...
if (tep_is_pid_registered(tep, ls_pid) == 0) {
    /* Command mapping for ls_pid is not registered */
}
```

```
...
const char *comm = tep_data_comm_from_pid(tep, ls_pid);
if (comm) {
    /* Found process name for ls_pid */
}
...
int pid;
struct cmdline *cmd = tep_data_pid_from_comm(tep, "ls", NULL);
while (cmd) {
    pid = tep_cmdline_pid(tep, cmd);
    /* Found pid for process "ls" */
    cmd = tep_data_pid_from_comm(tep, "ls", cmd);
}
--
```

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access  
to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

--

## REPORTING BUGS

-----

Report bugs to <linux-trace-devel@vger.kernel.org>

## LICENSE

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## RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>



Found in path(s):

`*/opt/cola/permits/2148525021_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-commands.txt`

No license file was found, but licenses were detected in source scan.

libtraceevent(3)

=====

NAME

----

`tep_read_number` - Reads a number from raw data.

SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
unsigned long long *tep_read_number*(struct tep_handle pass:[*]_tep_, const void pass:[*]_ptr_, int _size_);
```

--

DESCRIPTION

-----

The `*tep_read_number()*` function reads an integer from raw data, taking into account the endianness of the raw data and the current host. The `_tep_` argument is the trace event parser context. The `_ptr_` is a pointer to the raw data, where the integer is, and the `_size_` is the size of the integer.

RETURN VALUE

-----

The `*tep_read_number()*` function returns the integer in the byte order of the current host. In case of an error, 0 is returned.

EXAMPLE

-----

[source,c]

--

```
#include <event-parse.h>
```

...

```
struct tep_handle *tep = tep_alloc();
```

...

```
void process_record(struct tep_record *record)
```

```
{
```

```
    int offset = 24;
```

```
    int data = tep_read_number(tep,
```

```
    record->data + offset, 4);
```

```
/* Read the 4 bytes at the offset 24 of data as an integer */
```

}

...

--

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

--

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## RESOURCES

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<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

Found in path(s):

**\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-endian\_read.txt**

No license file was found, but licenses were detected in source scan.

libtraceevent(3)

=====

## NAME

----

tep\_plugin\_kvm\_get\_func, tep\_plugin\_kvm\_put\_func - Add function name for instruction pointer of kvm plugin

## SYNOPSIS

```
-----  
[verse]  
--  
*#include <event-parse.h>*
```

```
const char pass:[*]*tep_plugin_kvm_get_func*(struct tep_event pass:[*]event,  
    struct tep_record pass:[*]record,  
    unsigned long long pass:[*]paddr);  
void *tep_plugin_kvm_put_func*(const char pass:[*]func);  
--
```

## DESCRIPTION

-----

The functions `*tep_plugin_kvm_get_func()*` and `*tep_plugin_kvm_put_func()*` are not to be called by an application, but instead are to be defined by an application.

Certain events (like `kvm_exit` and `kvm_entry`) have the instruction pointer of where in the guest the context changed from guest to host. As the host only knows the instruction pointer and does not have information about what function in the guest that instruction pointer belongs to, it can only print the address.

But

the application may have more information about the guest, and know where the guest was when the exit occurred, and also even know the function name of that address.

The KVM plugin for `libtraceevent` is called on these events, and then calls `*tep_plugin_kvm_get_func()*` to see if that function can resolve the instruction pointer address to a real function name. If the return is non `NULL`, it will print the function in the output for that event.

These functions are currently defined as weak functions within the plugin, as to not require them to be defined elsewhere. For an application to override the weak function, it will need to define the function in a file that gets compiled with `*-rdynamic*`. That will tell the dynamic linker to examine that object file and use function names to resolve weak functions in other shared objects (in this case the KVM plugin shared object).

If the application defines `*tep_plugin_kvm_get_func()*`, it must use the above prototype. The `_event_` will hold the KVM event that has the instruction pointer field. The `_record_` will be the instance of that event. The application's function does not need to use these parameters, but they may be useful for finding the function name for the address. The `_paddr_` is a pointer to a 64 bit value (where

only 32 bits may be used on 32 bit machines). This value is the instruction pointer to look up. If the application knows the start address of the function as well, it can set `_paddr_` to that address, and the KVM plugin will also append a "+offset" to the function name where the offset is the original value in `_paddr_` minus the value in `_paddr_` when it is called. Finally, the application should return the function name as a nul terminated string if one is found.

If the returned string of `*tep_plugin_kvm_get_func()*` was allocated, the KVM plugin will call `*tep_plugin_kvm_put_func()*` when it is through with it, passing the value returned by `*tep_plugin_kvm_get_func()*` as `_func_`. This allows the application to free it if necessary.

## RETURN VALUE

-----

The `*tep_plugin_kvm_get_func()*` is not to be called by the application but instead is to be defined by the application. It should return a nul terminated string representing the function for the given instruction pointer passed to it by reference in `_paddr_`. It can then optionally update the `_paddr_` to a value that holds the start of the function. The string returned may be freed by the `*tep_plugin_kvm_put_func()*` that the application should define to clean up the string.

The below example needs to be compiled with the `*-rdynamic*` flag so that the dynamic linker can resolve the `*tep_plugin_kvm_get_func()*` and `*tep_plugin_kvm_put_func()*` functions.

When run against a trace.dat file produced by `*trace-cmd(1)*` recording the `kvm_exit` and `kvm_entry` events on a guest, and then the guest's `/proc/kallsyms` file is passed as the second parameter, the output produced will look something like:

[source,c]

```
--
CPU 0/KVM-20407 83156.177626
[000] kvm_exit   reason APIC_ACCESS rip 0xffffffffb0056ee2 exit native_apic_mem_write+0x2 info 10b0 0
CPU 0/KVM-20407 83156.177632 [000] kvm_entry   vcpu 0 rip 0xffffffffb0056ee8 enter
native_apic_mem_write+0x8
--
```

But without those callbacks, it would look like:

[source,c]

```
--
CPU 0/KVM-20407 83156.177626 [000] kvm_exit   reason APIC_ACCESS rip 0xffffffffb0056ee2 info 10b0 0
CPU 0/KVM-20407 83156.177632 [000] kvm_entry   vcpu 0 rip 0xffffffffb0056ee8
--
```

## EXAMPLE

-----

```

[source,c]
--
#include <stdio.h>
#include <stdlib.h>
#include <event-parse.h>
#include <trace-cmd.h>
#include <sys/stat.h>

static struct tep_handle *tep;

const char *tep_plugin_kvm_get_func(struct tep_event *event, struct tep_record *record,
    unsigned long long *paddr)
{
    const char *func;
    char *event_func;
    char *ename;

    func = tep_find_function(tep, *paddr);
    if (!func)
        return NULL;

    if (strcmp(event->name, "kvm_exit") == 0)
        ename = "exit";
    else
        ename = "enter";

    /*
     * Normally, passing
     * back func directly is sufficient and then
     * tep_plugin_kvm_put_func() would not be required. But this example
     * is showing how to handle allocation of the returned string.
     */
    event_func = malloc(strlen(ename) + strlen(func) + 2);
    if (!event_func)
        return NULL;
    sprintf(event_func, "%s %s", ename, func);

    *paddr = tep_find_function_address(tep, *paddr);

    return event_func;
}

void tep_plugin_kvm_put_func(const char *func)
{
    char *f = (char *)func;

    free(f);
}

```

```

static int show_event(struct tracecmd_input *handle, struct tep_event *event,
    struct tep_record *record, int cpu, void *data)
{
    static struct trace_seq seq;
    tep = data;

    if (!seq.buffer)
        trace_seq_init(&seq);

    trace_seq_reset(&seq);
    tep_print_event(tracecmd_get_tep(handle), &seq, record,
        "%s-%d\t%6.1000d [%03d] %s\t%s\n",
        TEP_PRINT_COMM, TEP_PRINT_PID,
        TEP_PRINT_TIME, TEP_PRINT_CPU,
        TEP_PRINT_NAME, TEP_PRINT_INFO);
    trace_seq_terminate(&seq);
    trace_seq_do_printf(&seq);
    return 0;
}

int main(int
    argc, char **argv)
{
    struct tracecmd_input *handle;
    struct tep_handle *guest_tep;
    struct stat st;
    FILE *fp;
    char *buf;

    if (argc < 3) {
        printf("usage: trace.dat guest_kallsyms_file\n");
        exit(-1);
    }

    handle = tracecmd_open(argv[1], 0);
    if (!handle) {
        perror(argv[1]);
        exit(-1);
    }

    /* Just for kallsyms parsing */
    guest_tep = tep_alloc();
    if (!guest_tep)
        exit(-1);

    if (stat(argv[2], &st) < 0) {
        perror(argv[2]);
    }
}

```

```

    exit(-1);
}

buf = malloc(st.st_size + 1);
if (!buf)
    exit(-1);

fp = fopen(argv[2], "r");
if (!fp) {
    perror(argv[2]);
    exit(-1);
}

if (fread(buf, st.st_size, 1, fp) < 0) {
    perror(argv[2]);
    exit(-1);
}

buf[st.st_size] = '\0';

if (tep_parse_kallsyms(guest_tep, buf) < 0) {
    printf("Failed to parse %s\n", argv[2]);
    exit(-1);
}
free(buf);

tracecmd_follow_event(handle, "kvm", "kvm_exit", show_event, guest_tep);
tracecmd_follow_event(handle, "kvm", "kvm_entry", show_event, guest_tep);

tracecmd_iterate_events(handle, NULL, 0,
    NULL, NULL);

tep_free(guest_tep);
tracecmd_close(handle);
}
--

```

## FILES

-----

[verse]

--

\*event-parse.h\*

Header file to include in order to have access to the library APIs.

\*-ltraceevent\*

Linker switch to add when building a program that uses the library.

--

SEE ALSO

-----  
\*libtraceevent\*(3), \*trace-cmd\*(1)

## REPORTING BUGS

-----  
Report bugs to <linux-trace-devel@vger.kernel.org>

## LICENSE

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## RESOURCES

-----  
<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

Found in path(s):

\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-kvm-plugin.txt

No license file was found, but licenses were detected in source scan.

libtraceevent(3)

=====

## NAME

----

tep\_register\_event\_handler, tep\_unregister\_event\_handler - Register /  
unregisters a callback function to parse an event information.

## SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
enum *tep_reg_handler* {  
    _TEP_REGISTER_SUCCESS_,  
    _TEP_REGISTER_SUCCESS_OVERWRITE_,  
};
```

```
int *tep_register_event_handler*(struct tep_handle pass:[*]_tep_, int _id_, const char pass:[*]_sys_name_, const  
char pass:[*]_event_name_, tep_event_handler_func _func_, void pass:[*]_context_);
```

```
int *tep_unregister_event_handler*(struct tep_handle pass:[*]tep, int id, const char pass:[*]sys_name, const char  
pass:[*]event_name, tep_event_handler_func func, void pass:[*]_context_);
```

```
typedef int (*pass:[*]tep_event_handler_func*)(struct trace_seq pass:[*]s, struct tep_record pass:[*]record, struct  
tep_event pass:[*]event, void pass:[*]context);
```

--



## DESCRIPTION

-----

The `*tep_register_event_handler()*` function registers a handler function, which is going to be called to parse the information for a given event. The `_tep_` argument is the trace event parser context. The `_id_` argument is the id of the event. The `_sys_name_` argument is the name of the system, the event belongs to. The `_event_name_` argument is the name of the event. If `_id_` is  $\geq 0$ , it is used to find the event, otherwise `_sys_name_` and `_event_name_` are used. The `_func_` is a pointer to the function, which is going to be called to parse the event information. The `_context_` argument is a pointer to the context data, which will be passed to the `_func_`. If a handler function for the same event is already registered, it will be overridden with the new one. This mechanism allows a developer to override the parsing of a given event. If for some reason the default print format is not sufficient, the developer can register a function for an event to be used to parse the data instead.

The `*tep_unregister_event_handler()*` function unregisters the handler function, previously registered with `*tep_register_event_handler()*`. The `_tep_` argument is the trace event parser context. The `_id_`, `_sys_name_`, `_event_name_`, `_func_`, and `_context_` are the same arguments, as when the callback function `_func_` was registered.

The `_tep_event_handler_func_` is the type of the custom event handler function. The `_s_` argument is the trace sequence, it can be used to create a custom string, describing the event. A `_record_` to get the event from is passed as input parameter and also the `_event_` - the handle to the record's event. The `_context_` is custom context, set when the custom event handler is registered.

## RETURN VALUE

-----

The `*tep_register_event_handler()*` function returns `_TEP_REGISTER_SUCCESS_` if the new handler is registered successfully or `_TEP_REGISTER_SUCCESS_OVERWRITE_` if an existing handler is overwritten. If there is not enough memory to complete the registration, `TEP_ERRNO__MEM_ALLOC_FAILED` is returned.

The `*tep_unregister_event_handler()*` function returns 0 if `_func_` was removed successfully or, -1 if the event was not found.

The `_tep_event_handler_func_` should return -1 in case of an error, or 0 otherwise.

## EXAMPLE

-----

[source,c]

```

--
#include <event-parse.h>
#include <trace-seq.h>
...
struct tep_handle *tep = tep_alloc();
...
int timer_expire_handler(struct trace_seq *s, struct tep_record *record,
    struct tep_event *event, void *context)
{
    trace_seq_printf(s, "hrtimer=");

    if (tep_print_num_field(s, "0x%llx", event, "timer", record, 0) == -1)
        tep_print_num_field(s, "0x%llx", event, "hrtimer", record, 1);

    trace_seq_printf(s, " now=");

    tep_print_num_field(s, "%llu", event, "now", record, 1);

    tep_print_func_field(s, " function=%s", event, "function", record, 0);

    return 0;
}
...
int ret;

ret = tep_register_event_handler(tep, -1, "timer", "hrtimer_expire_entry",
    timer_expire_handler, NULL);
if (ret < 0) {
    char buf[32];

    tep_strerror(tep, ret, buf, 32)
    printf("Failed
to register handler for hrtimer_expire_entry: %s\n", buf);
} else {
    switch (ret) {
    case TEP_REGISTER_SUCCESS:
        printf ("Registered handler for hrtimer_expire_entry\n");
        break;
    case TEP_REGISTER_SUCCESS_OVERWRITE:
        printf ("Overwrote handler for hrtimer_expire_entry\n");
        break;
    }
}
...
ret = tep_unregister_event_handler(tep, -1, "timer", "hrtimer_expire_entry",
    timer_expire_handler, NULL);
if (ret)
    printf ("Failed to unregister handler for hrtimer_expire_entry\n");

```

--

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*trace-seq.h\***

Header file to include in order to have access to trace sequences related APIs. Trace sequences are used to allow a function to call several other functions to create a string of data to use.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven**

Rostedt\* <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

--

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## RESOURCES

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**\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-reg\_event\_handler.txt**

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libtraceevent(3)

=====

## NAME

----

trace\_seq\_init, trace\_seq\_destroy, trace\_seq\_reset, trace\_seq\_terminate,  
trace\_seq\_putc, trace\_seq\_puts, trace\_seq\_printf, trace\_seq\_vprintf,  
trace\_seq\_do\_fprintf, trace\_seq\_do\_printf -  
Initialize / destroy a trace sequence.

## SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
*#include <trace-seq.h>*
```

```
void *trace_seq_init*(struct trace_seq pass:[*]_s_);  
void *trace_seq_destroy*(struct trace_seq pass:[*]_s_);  
void *trace_seq_reset*(struct trace_seq pass:[*]_s_);  
void *trace_seq_terminate*(struct trace_seq pass:[*]_s_);  
int *trace_seq_putc*(struct trace_seq pass:[*]_s_, unsigned char _c_);  
int *trace_seq_puts*(struct trace_seq pass:[*]_s_, const char pass:[*]_str_);  
int *trace_seq_printf*(struct trace_seq pass:[*]_s_, const char pass:[*]_fmt_, ...);  
int *trace_seq_vprintf*(struct trace_seq pass:[*]_s_, const char pass:[*]_fmt_, va_list _args_);  
int *trace_seq_do_printf*(struct  
    trace_seq pass:[*]_s_);  
int *trace_seq_do_fprintf*(struct trace_seq pass:[*]_s_, FILE pass:[*]_fp_);  
--
```

## DESCRIPTION

-----

Trace sequences are used to allow a function to call several other functions to create a string of data to use.

The `*trace_seq_init()` function initializes the trace sequence `_s_`.

The `*trace_seq_destroy()` function destroys the trace sequence `_s_` and frees all its resources that it had used.

The `*trace_seq_reset()` function re-initializes the trace sequence `_s_`. All characters already written in `_s_` will be deleted.

The `*trace_seq_terminate()` function terminates the trace sequence `_s_`. It puts the null character `pass:['\0']` at the end of the buffer.

The `*trace_seq_putc()` function puts a single character `_c_` in the trace sequence `_s_`.

The `*trace_seq_puts()` function puts a NULL terminated string `_str_` in the

trace sequence `_s_`.

The `*trace_seq_printf()*` function puts a formatted string `_fmt_` with variable arguments `..._` in the trace sequence `_s_`.

The `*trace_seq_vprintf()*` function puts a formatted string `_fmt_` with list of arguments `_args_` in the trace sequence `_s_`.

The `*trace_seq_do_printf()*` function prints the buffer of trace sequence `_s_` to the standard output `stdout`.

The `*trace_seq_do_fprintf()*` function prints the buffer of trace sequence `_s_` to the given file `_fp_`.

## RETURN VALUE

-----

Both `*trace_seq_putc()*` and `*trace_seq_puts()*` functions return the number of characters put in the trace sequence, or 0 in case of an error

Both `*trace_seq_printf()*` and `*trace_seq_vprintf()*` functions return 0 if the trace oversizes the buffer's free space, the number of characters printed, or a negative value in case of an error.

Both `*trace_seq_do_printf()*` and `*trace_seq_do_fprintf()*` functions return the number of printed characters, or -1 in case of an error.

## EXAMPLE

-----

```
[source,c]
--
#include <event-parse.h>
#include <trace-seq.h>
...
struct trace_seq seq;
trace_seq_init(&seq);
...
void foo_seq_print(struct trace_seq
*tseq, char *format, ...)
{
    va_list ap;
    va_start(ap, format);
    if (trace_seq_vprintf(tseq, format, ap) <= 0) {
        /* Failed to print in the trace sequence */
    }
    va_end(ap);
}
```

```

trace_seq_reset(&seq);

char *str = " MAN page example";
if (trace_seq_puts(&seq, str) != strlen(str)) {
    /* Failed to put str in the trace sequence */
}
if (trace_seq_putc(&seq, ':') != 1) {
    /* Failed to put ':' in the trace sequence */
}
if (trace_seq_printf(&seq, " trace sequence: %d", 1) <= 0) {
    /* Failed to print in the trace sequence */
}
foo_seq_print( &seq, " %d\n", 2);

trace_seq_terminate(&seq);
...

if (trace_seq_do_printf(&seq) < 0) {
    /* Failed to print the sequence buffer to the standard output */
}
FILE *fp = fopen("trace.txt", "w");
if (trace_seq_do_fprintf(&seq, fp) < 0) [
    /* Failed to print the sequence buffer to the trace.txt file */
}

trace_seq_destroy(&seq);
...
--

```

## FILES

-----

[verse]

--

\*event-parse.h\*

Header file to include in order to have access to the library APIs.

\*trace-seq.h\*

Header

file to include in order to have access to trace sequences related APIs.

\*-ltraceevent\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*libtraceevent\*(3), \*trace-cmd\*(1)

## AUTHOR

-----

[verse]

--

\*Steven Rostedt\* <rostedt@goodmis.org>, author of \*libtraceevent\*.

\*Tzvetomir Stoyanov\* <tz.stoyanov@gmail.com>, author of this man page.

--

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\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-tseq.txt

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libtraceevent(3)

=====

## NAME

----

tep\_load\_plugins, tep\_unload\_plugins, tep\_load\_plugins\_hook, tep\_add\_plugin\_path,  
tep\_plugin\_add\_option - Load / unload traceevent plugins.

## SYNOPSIS

-----

[verse]

--

```
##include <event-parse.h>
```

```
struct tep_plugin_list pass:[*]tep_load_plugins*(struct tep_handle pass:[*]tep_);
```

```
void *tep_unload_plugins*(struct tep_plugin_list pass:[*]_plugin_list_, struct tep_handle pass:[*]tep_);
```

```
void *tep_load_plugins_hook*(struct tep_handle pass:[*]tep_, const char pass:[*]_suffix_,
```

```
    void (pass:[*]_load_plugin_)(struct tep_handle pass:[*]tep,
```

```
        const char pass:[*]path,
```

```
        const char pass:[*]name,
```

```
        void pass:[*]data),
```

```
    void pass:[*]_data_);
```

```
int *tep_add_plugin_path*(struct tep_handle pass:[*]tep, char pass:[*]path,
```

```
    enum tep_plugin_load_priority prio);
```

```
int *tep_plugin_add_option*(const char pass:[*]_name_, const char pass:[*]_val_);
```

--

## DESCRIPTION

The

`*tep_load_plugins()*` function loads all plugins, located in the plugin directories. The `_tep_` argument is trace event parser context.

The plugin directories are :

[verse]

--

- Directories, specified in `_tep_>plugins_dir` with priority `TEP_PLUGIN_FIRST`
- System's plugin directory, defined at the library compile time. It depends on the library installation prefix and usually is `_(install_prefix)/lib/traceevent/plugins_`
- Directory, defined by the environment variable `_TRACEEVENT_PLUGIN_DIR_`
- User's plugin directory, located at `~/local/lib/traceevent/plugins_`
- Directories, specified in `_tep_>plugins_dir` with priority `TEP_PLUGIN_LAST`

--

Loading of plugins can be controlled by the `_tep_flags_`, using the

`*tep_set_flag()*` API:

[verse]

--

`_TEP_DISABLE_SYS_PLUGINS_` - do not load plugins, located in the system's plugin directory.

`_TEP_DISABLE_PLUGINS_` - do not load any plugins.

--

The `*tep_set_flag()*` API needs to be called before `*tep_load_plugins()*`, if

loading of all plugins is not the desired case.

The `*tep_unload_plugins()*` function unloads the plugins, previously loaded by `*tep_load_plugins()*`. The `_tep_` argument is trace event parser context. The `_plugin_list_` is the list of loaded plugins, returned by the `*tep_load_plugins()*` function.

The `*tep_load_plugins_hook()*` function walks through all directories with plugins and calls user specified `*load_plugin()*` hook for each plugin file. Only files with given `_suffix_` are considered to be plugins. The `_data_` is a user specified context, passed to `*load_plugin()*`. Directories and the walk order are the same as in `*tep_load_plugins()*` API.

The `*tep_add_plugin_path()*` functions adds additional directories with plugins in the `_tep_>plugins_dir` list. It must be called before `*tep_load_plugins()*` in order for the plugins from the new directories to be loaded. The `_tep_` argument is the trace event parser context. The `_path_` is the full path to the new plugin directory. The `_prio_`

argument specifies the loading priority order for the new directory of plugins. The loading priority is important in case of different versions of the same plugin located in multiple plugin directories. The last loaded



plugin wins. The priority can be:

[verse]

--

\_TEP\_PLUGIN\_FIRST\_ - Load plugins from this directory first

\_TEP\_PLUGIN\_LAST\_ - Load plugins from this directory last

--

Where the plugins in "TEP\_PLUGIN\_LAST" will take precedence over the plugins in the other directories.

The `*tep_plugin_add_option()*` sets options defined by a plugin. The `_name_` is the name of the option to set to `_val_`. Plugins can add options to change its behavior and `*tep_plugin_add_option()*` is used by the application to make those modifications.

## RETURN VALUE

-----

The `*tep_load_plugins()*` function returns a list of successfully loaded plugins, or NULL in case no plugins are loaded.

The `*tep_add_plugin_path()*` function returns -1 in case of an error, 0 otherwise.

## EXAMPLE

-----

[source,c]

--

```
#include
```

```
<event-parse.h>
```

...

```
struct tep_handle *tep = tep_alloc();
```

...

```
tep_add_plugin_path(tep, "~/dev_plugins", TEP_PLUGIN_LAST);
```

...

```
struct tep_plugin_list *plugins = tep_load_plugins(tep);
```

```
if (plugins == NULL) {
```

```
    /* no plugins are loaded */
```

```
}
```

...

```
tep_unload_plugins(plugins, tep);
```

...

```
void print_plugin(struct tep_handle *tep, const char *path,  
                 const char *name, void *data)
```

```
{
```

```
    printf("Found libtraceevent plugin %s/%s\n", path, name);
```

```
}
```

...

```
tep_load_plugins_hook(tep, ".so", print_plugin, NULL);
```

...

--

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**, **\*tep\_set\_flag\*(3)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

--

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## RESOURCES

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<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

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**\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-plugins.txt**

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libtraceevent(3)

=====

## NAME

----

tep\_get\_cpus, tep\_set\_cpus - Get / set the number of CPUs, which have a tracing buffer representing it. Note, the buffer may be empty.

## SYNOPSIS

```
-----  
[verse]  
--  
*#include <event-parse.h>*
```

int \*tep\_get\_cpus\*(struct tep\_handle pass:[\*]\_tep\_);  
void \*tep\_set\_cpus\*(struct tep\_handle pass:[\*]\_tep\_, int \_cpus\_);  
--

## DESCRIPTION

-----  
The \*tep\_get\_cpus()\* function gets the number of CPUs, which have a tracing buffer representing it. The \_tep\_ argument is trace event parser context.

The \*tep\_set\_cpus()\* function sets the number of CPUs, which have a tracing buffer representing it. The \_tep\_ argument is trace event parser context. The \_cpu\_ argument is the number of CPUs with tracing data.

## RETURN VALUE

-----  
The \*tep\_get\_cpus()\* functions returns the number of CPUs, which have tracing data recorded.

## EXAMPLE

```
-----  
[source,c]  
--  
#include <event-parse.h>  
...  
struct  
tep_handle *tep = tep_alloc();  
...  
tep_set_cpus(tep, 5);  
...  
printf("We have tracing data for %d CPUs", tep_get_cpus(tep));  
--
```

## FILES

```
-----  
[verse]  
--  
*event-parse.h*  
Header file to include in order to have access to the library APIs.  
*-ltraceevent*  
Linker switch to add when building a program that uses the library.  
--
```

## SEE ALSO

-----  
\*libtraceevent\*(3), \*trace-cmd\*(1)

## AUTHOR

-----  
[verse]

--  
\*Steven Rostedt\* <rostedt@goodmis.org>, author of \*libtraceevent\*.  
\*Tzvetomir Stoyanov\* <tz.stoyanov@gmail.com>, author of this man page.

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libtraceevent(3)  
=====

## NAME

----  
tep\_parse\_saved\_cmdlines, tep\_parse\_printk\_formats, tep\_parse\_kallsyms  
- Parsing functions to load mappings

## SYNOPSIS

-----  
[verse]  
--  
\*#include <event-parse.h>\*

```
int *tep_parse_saved_cmdlines*(struct tep_handle pass:[*]_tep_, const char pass:[*]_buf_);  
int *tep_parse_printk_formats*(struct tep_handle pass:[*]_tep_, const char pass:[*]_buf_);  
int *tep_parse_kallsyms*(struct tep_handle pass:[*]_tep_, const char pass:[*]_buf_);
```

--

## DESCRIPTION

-----

`*tep_parse_saved_cmdlines()*` is a helper function to parse content in the tracefs file system of the "saved\_cmdlines" file (stored in a string buffer passed in by `_buf_`) and loads the mapping of the process IDs (pid) to the comm names in the `_tep_` handler. The events store the pid and this is used to be able to show the process names associated to those process ids. It parses the string `_buf_` that holds the content of saved\_cmdlines and ends with a nul character (`\0`).

`*tep_parse_printk_formats()*` is a helper function to parse content in the tracefs file system of the "printk\_formats" file (stored in a string buffer passed in by `_buf_`) and loads the mapping of addresses of strings that may be referenced by events. Events only store the address of constant strings in the kernel, and the mapping of their address to the string is exported to user space in the `printk_formats` file. It parses the string `_buf_` that holds the content of `printk_formats` and ends with a nul character (`\0`).

`*tep_parse_kallsyms()*` is a helper function to parse the Linux kernel `/proc/kallsyms` format (stored in a string buffer passed in by `_buf_`) and load the functions into the `_tep_` handler such that function IP addresses can be mapped to their name when parsing events with `%pS` in the print format field. It parses the string `_buf_` that holds the content of `/proc/kallsyms` and ends with a nul character (`\0`).

## RETURN VALUE

-----

The

`*tep_parse_saved_cmdlines*()` function returns 0 in case of success, or -1 in case of an error.

The `*tep_parse_printk_formats*()` function returns 0 in case of success, or -1 in case of an error.

The `*tep_parse_kallsyms*()` function returns 0 in case of success, or -1 in case of an error.

## EXAMPLE

-----

[source,c]

--

...

```
#include <event-parse.h>
```

```
#include <tracefs.h>
```

```
#include <stdlib.h>
```

```
int load_cmdlines(struct tep_handle *tep)
{
    char *buf = NULL;
    int r;
```

```

buf = tracefs_instance_file_read(NULL, "saved_cmdlines", NULL);
if (!buf)
    return -1;
r = tep_parse_saved_cmdlines(tep, buf);
free(buf);
return r;
}

```

```

int load_print_strings(struct tep_handle *tep)
{
    char *buf = NULL;
    int r;

    buf = tracefs_instance_file_read(NULL, "printk_formats", NULL);
    if (!buf)
        return -1;
    r = tep_parse_printk_formats(tep, buf);
    free(buf);
    return r;
}

```

```

int load_kallsyms(struct
tep_handle *tep)
{
    char *line = NULL;
    char *buf = NULL;
    size_t sz = 0;
    FILE *fp;
    int len = 0;
    int r;

    fp = fopen("/proc/kallsyms", "r");
    while ((r = getline(&line, &sz, fp)) >= 0) {
        buf = realloc(buf, len + r + 1);
        memcpy(buf + len, line, r);
        len += r;
    }
    free(line);
    fclose(fp);
    if (!buf)
        return -1;
    buf[len] = 0;

    r = tep_parse_kallsyms(tep, buf);
    free(buf);
    return r;
}
...

```

--

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**, **\*tep\_register\_comm\*(3)**, **\*tep\_register\_function\*(3)**,  
**\*tep\_register\_print\_string\*(3)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir**

**Stoyanov\*** <tz.stoyanov@gmail.com>, coauthor of **\*libtraceevent\***.

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libtraceevent(3)

=====

## NAME

----

tep\_alloc, tep\_free, tep\_ref, tep\_unref, tep\_get\_ref, tep\_kbuffer - Create, destroy, manage

references of trace event parser context.

## SYNOPSIS

```
-----  
[verse]  
--  
*#include <event-parse.h>  
  
struct tep_handle pass:[*]*tep_alloc*(void);  
void *tep_free*(struct tep_handle pass:[*]_tep_);  
void *tep_ref*(struct tep_handle pass:[*]_tep_);  
void *tep_unref*(struct tep_handle pass:[*]_tep_);  
int *tep_get_ref*(struct tep_handle pass:[*]_tep_);  
struct kbuffer pass:[*]*tep_kbuffer*(struct tep_handle pass:[*]_tep_);  
--
```

## DESCRIPTION

-----  
These are the main functions to create and destroy `tep_handle` - the main structure, representing the trace event parser context. This context is used as the input parameter of most library APIs.

The `*tep_alloc()*` function allocates and initializes the tep context.

The `*tep_free()*` function will decrement the reference of the `_tep_` handler.

When

there is no more references, then it will free the handler, as well as clean up all its resources that it had used. The argument `_tep_` is the pointer to the trace event parser context.

The `*tep_ref()*` function adds a reference to the `_tep_` handler.

The `*tep_unref()*` function removes a reference from the `_tep_` handler. When the last reference is removed, the `_tep_` is destroyed, and all resources that it had used are cleaned up.

The `*tep_ref_get()*` functions gets the current references of the `_tep_` handler.

The `*tep_kbuffer()*` function allocates a kbuffer descriptor that can be used to parse raw data that is represented by the `_tep_` handle descriptor. It must be freed with `*kbuf_free(3)*`.

## RETURN VALUE

-----  
`*tep_alloc()*` returns a pointer to a newly created `tep_handle` structure. NULL is returned in case there is not enough free memory to allocate it.

`*tep_ref_get()*` returns the current references of `_tep_`.



If `_tep_` is NULL, 0 is returned.

`*tep_kbuffer()*` returns a kbuffer descriptor that can parse the raw data that represents the tep handle. Must be freed with `*kbuf_free(3)*`.

#### EXAMPLE

```
-----
[source,c]
--
#include <event-parse.h>

...
struct tep_handle *tep = tep_alloc();
...
int ref = tep_get_ref(tep);
tep_ref(tep);
if ( (ref+1) != tep_get_ref(tep)) {
    /* Something wrong happened, the counter is not incremented by 1 */
}
tep_unref(tep);
...
tep_free(tep);
...
--
```

#### FILES

```
-----
[verse]
--
*event-parse.h*
Header file to include in order to have access to the library APIs.
*-ltraceevent*
Linker switch to add when building a program that uses the library.
--
```

#### SEE ALSO

```
-----
*libtraceevent*(3), *trace-cmd*(1)
```

#### AUTHOR

```
-----
[verse]
--
*Steven Rostedt* <rostedt@goodmis.org>, author of *libtraceevent*.
*Tzvetomir Stoyanov* <tz.stoyanov@gmail.com>, author of this man page.
--
```

#### REPORTING BUGS

```
-----
```

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## RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

## Found

in path(s):

\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-handle.txt

No license file was found, but licenses were detected in source scan.

## libtraceevent(3)

=====

## NAME

----

tep\_filter\_alloc, tep\_filter\_free, tep\_filter\_reset, tep\_filter\_make\_string,  
tep\_filter\_copy, tep\_filter\_compare, tep\_filter\_match, tep\_event\_filtered,  
tep\_filter\_remove\_event, tep\_filter\_strerror, tep\_filter\_add\_filter\_str -  
Event filter related APIs.

## SYNOPSIS

-----

[verse]

--

```
##include <event-parse.h>*
```

```
struct tep_event_filter pass:[*]tep_filter_alloc*(struct tep_handle pass:[*]_tep_);  
void *tep_filter_free*(struct tep_event_filter pass:[*]_filter_);  
void *tep_filter_reset*(struct tep_event_filter pass:[*]_filter_);  
enum tep_errno *tep_filter_add_filter_str*(struct tep_event_filter pass:[*]_filter_, const char pass:[*]_filter_str_);  
int *tep_event_filtered*(struct tep_event_filter pass:[*]_filter_, int _event_id_);  
int *tep_filter_remove_event*(struct tep_event_filter pass:[*]_filter_, int _event_id_);  
enum tep_errno *tep_filter_match*(struct tep_event_filter pass:[*]_filter_,  
    struct tep_record pass:[*]_record_);  
int *tep_filter_copy*(struct tep_event_filter pass:[*]_dest_, struct tep_event_filter pass:[*]_source_);  
int *tep_filter_compare*(struct tep_event_filter pass:[*]_filter1_, struct tep_event_filter pass:[*]_filter2_);  
char pass:[*] *tep_filter_make_string*(struct tep_event_filter pass:[*]_filter_, int _event_id_);  
int *tep_filter_strerror*(struct tep_event_filter pass:[*]_filter_, enum tep_errno _err_, char pass:[*]buf, size_t  
    _buflen_);
```

--

## DESCRIPTION

-----

Filters can be attached to traced events. They can be used to filter out various events when outputting them. Each event can be filtered based on its parameters, described in the event's format file. This set of functions can be used to create, delete, modify and attach event filters.

The `*tep_filter_alloc()*` function creates a new event filter. The `_tep_` argument is the trace event parser context.

The `*tep_filter_free()*` function frees an event filter and all resources that it had used.

The `*tep_filter_reset()*` function removes all rules from an event filter and resets it.

The `*tep_filter_add_filter_str()*` function adds a new rule to the `_filter_`. The `_filter_str_` argument is the filter string, that contains the rule.

The `*tep_event_filtered()*` function checks if the event with `_event_id_` has `_filter_`.

The `*tep_filter_remove_event()*` function removes a `_filter_` for an event with `_event_id_`.

The `*tep_filter_match()*` function tests if a `_record_` matches given `_filter_`.

The `*tep_filter_copy()*` function copies a `_source_` filter into a `_dest_` filter.

The `*tep_filter_compare()*` function compares two filters - `_filter1_` and `_filter2_`.

The `*tep_filter_make_string()*` function constructs a string, displaying the `_filter_` contents for given `_event_id_`.

The `*tep_filter_strerror()*` function copies the `_filter_` error buffer into the given `_buf_` with the size `_buflen_`. If the error buffer is empty, in the `_buf_` is copied a string, describing the error `_err_`.

RETURN

VALUE

-----

The `*tep_filter_alloc()*` function returns a pointer to the newly created event filter, or NULL in case of an error.

The `*tep_filter_add_filter_str()*` function returns 0 if the rule was successfully added or a negative error code. Use `*tep_filter_strerror()*` to see actual error message in case of an error.

The `*tep_event_filtered()*` function returns 1 if the filter is found for given event, or 0 otherwise.

The `*tep_filter_remove_event()*` function returns 1 if the vent was removed, or 0 if the event was not found.

The `*tep_filter_match()*` function returns `_tep_errno_`, according to the result:  
[verse]

```
--  
_pass:[TEP_ERRNO__FILTER_MATCH]_ - filter found for event, the record matches.  
_pass:[TEP_ERRNO__FILTER_MISS]_ - filter found for event, the record does not match.  
_pass:[TEP_ERRNO__FILTER_NOT_FOUND]_ - no filter found for record's event.  
_pass:[TEP_ERRNO__NO_FILTER]_ - no rules in the filter.  
--  
or any other _tep_errno_, if an error occurred during the test.
```

The `*tep_filter_copy()*` function returns 0 on success or -1 if not all rules were copied.

The `*tep_filter_compare()*` function returns 1 if the two filters hold the same content, or 0 if they do not.

The `*tep_filter_make_string()*` function returns a string, which must be freed with `free()`, or NULL in case of an error.

The `*tep_filter_strerror()*` function returns 0 if message was filled successfully, or -1 in case of an error.

#### EXAMPLE

```
-----  
[source,c]  
--  
#include <event-parse.h>  
...  
struct tep_handle *tep = tep_alloc();  
...  
char errstr[200];  
int ret;  
  
struct tep_event_filter *filter = tep_filter_alloc(tep);  
struct tep_event_filter *filter1 = tep_filter_alloc(tep);  
ret = tep_filter_add_filter_str(filter, "sched/sched_wakeup:target_cpu==1");  
if(ret < 0) {  
    tep_filter_strerror(filter, ret, errstr, sizeof(errstr));  
    /* Failed to add a new rule to the filter, the error string is in errstr */  
}  
if (tep_filter_copy(filter1, filter) != 0) {
```

```

/* Failed to copy filter in filter1 */
}
...
if
(tep_filter_compare(filter, filter1) != 1) {
/* Both filters are different */
}
...
void process_record(struct tep_handle *tep, struct tep_record *record)
{
struct tep_event *event;
char *fstring;

event = tep_find_event_by_record(tep, record);

if (tep_event_filtered(filter, event->id) == 1) {
/* The event has filter */
fstring = tep_filter_make_string(filter, event->id);
if (fstring != NULL) {
/* The filter for the event is in fstring */
free(fstring);
}
}

switch (tep_filter_match(filter, record)) {
case TEP_ERRNO__FILTER_MATCH:
/* The filter matches the record */
break;
case TEP_ERRNO__FILTER_MISS:
/* The filter does not match the record */
break;
case TEP_ERRNO__FILTER_NOT_FOUND:
/* No filter found for record's event */
break;
case TEP_ERRNO__NO_FILTER:
/* There are no rules in the filter */
break;
default:
/* An error occurred during the test */
break;
}

if (tep_filter_remove_event(filter, event->id) == 1) {
/* The event was removed
from the filter */
}
}

```

```
...
tep_filter_reset(filter);
...
tep_filter_free(filter);
tep_filter_free(filter1);
...
--
```

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

--

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## RESOURCES

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<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

Found in path(s):

**\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-filter.txt**

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libtraceevent(3)

=====

NAME

----

tep\_set\_loglevel - Set log level of the library

SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
enum *tep_loglevel* {  
    TEP_LOG_NONE = 0,  
    TEP_LOG_CRITICAL,  
    TEP_LOG_ERROR,  
    TEP_LOG_WARNING,  
    TEP_LOG_INFO,  
    TEP_LOG_DEBUG,  
    TEP_LOG_ALL  
};
```

```
int *tep_set_loglevel*(enum tep_loglevel _level_);
```

--

DESCRIPTION

-----

The `*tep_set_loglevel()*` function sets the level of the library logs that will be printed on the console. Library log levels are:

[verse]

--

- `_TEP_LOG_NONE_` - Do not print any logs.
- `_TEP_LOG_CRITICAL_` - Print critical logs, problem that may cause a crash.
- `_TEP_LOG_ERROR_` - Print error logs, problem that could break the main logic of an API.
- `_TEP_LOG_WARNING_` - Print warnings, problem that could limit the result of an API.
- `_TEP_LOG_INFO_` - Print information about normal execution of an API.
- `_TEP_LOG_DEBUG_` - Print debug information.
- `_TEP_LOG_ALL_`  
- Print logs from all levels.

--

Setting the log level to specific value means that logs from the previous levels will be printed too. For example `_TEP_LOG_WARNING_` will print any logs with severity `_TEP_LOG_WARNING_`, `_TEP_LOG_ERROR_` and `_TEP_LOG_CRITICAL_`. The default log level is `_TEP_LOG_CRITICAL_`.

EXAMPLE

-----

[source,c]

--

```
#include <event-parse.h>

tep_set_loglevel(TEP_LOG_ALL);
...
/* call libtraceevent APIs and observe any logs they produce */
...
tep_set_loglevel(TEP_LOG_CRITICAL);
--
```

## FILES

-----

[verse]

--

*\*event-parse.h\**

Header file to include in order to have access to the library APIs.

*\*-ltraceevent\**

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

*\*libtraceevent\*(3)*, *\*trace-cmd\*(1)*

## AUTHOR

-----

[verse]

--

*\*Steven Rostedt\** <rostedt@goodmis.org>, author of *\*libtraceevent\**.

*\*Tzvetomir Stoyanov\** <tz.stoyanov@gmail.com>, author of this man page.

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*\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-log.txt*

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libtraceevent(3)

=====

## NAME

----

kbuffer\_timestamp, kbuffer\_subbuf\_timestamp -  
Functions that read various data of a kbuffer descriptor

## SYNOPSIS

-----

[verse]

--

```
*#include <kbuffer.h>*
```

```
unsigned long long *kbuffer_timestamp*(struct kbuffer pass:[*]_kbuf_);
```

```
unsigned long long *kbuffer_subbuf_timestamp*(struct kbuffer pass:[*]_kbuf_, void pass:[*]_subbuf_);
```

--

## DESCRIPTION

-----

The function `*kbuffer_timestamp()*` returns the timestamp of the current event of `_kbuf_`.

The function `*kbuffer_subbuf_timestamp()*` returns the timestamp for the sub-buffer that was loaded in `_kbuf_`. This usually is (but not guaranteed to be) the timestamp of the first event on the sub-buffer.

The function `*kbuffer_start_of_data()*` returns the offset of where the delta

## RETURN VALUE

-----

`*kbuffer_read_event()*` returns the event that the `_kbuf_` descriptor is currently at, or NULL if the last event was passed (by `*kbuffer_next_event()*`).

`*kbuffer_next_event()*`

returns the next event after the current event or NULL if there are no more events.

`*kbuffer_read_at_offset()*` returns the event at a given `_offset_` from the start of the sub-buffer stored in `_kbuf_`, or NULL if there exists no event. Note, `_offset_` only needs to be an offset that lands on the record, or is at the start of it. It does not need to be exactly at the beginning of the record.

`*kbuffer_missed_events()*` returns 0 if there were no missed events before loaded sub-buffer. Returns -1 if there were an unknown number of missed events, or if the number of missed events is known, that number will be returned.

`*kbuffer_event_size()*` returns the size of the data payload of the current event of `_kbuf_`.

\*kbuffer\_curr\_size()\* returns the size of the entire record of the current event of `_kbuf_`. This includes the size of the meta data for that record.

\*kbuf\_curr\_offset()\* returns the offset of the current record from the beginning of the `_kbuf_` sub-buffer.

\*kbuf\_curr\_index()\* returns the index of the current record from the beginning of the `_kbuf_` data section.

#### EXAMPLE

-----

[source,c]

--

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
#include <fcntl.h>
```

```
#include <unistd.h>
```

```
#include <sys/stat.h>
```

```
#include <kbuffer.h>
```

```
int main (int argc, char **argv)
```

```
{
```

```
    unsigned long long ts;
```

```
    struct kbuffer *kbuf;
```

```
    struct stat st;
```

```
    char *buf;
```

```
    void *event;
```

```
    int save_offset = -1;
```

```
    int record_size;
```

```
    int offset;
```

```
    int index;
```

```
    int size;
```

```
    int ret;
```

```
    int fd;
```

```
    int i = 0;
```

```
    if (argc < 2) {
```

```
        printf("usage: %s raw-subbuffer-page\n", argv[0]);
```

```
        printf(" Try: dd count=1 bs=4096 if=/sys/kernel/tracing/per_cpu/cpu0/trace_pipe_raw of=/tmp/file\n");
```

```
        exit(0);
```

```
    }
```

```
    if (stat(argv[1], &st) < 0) {
```

```
        perror("stat");
```

```
        exit(-1);
```

```
    }
```

```

buf = malloc(st.st_size);
if (!buf) {
    perror("Allocating buffer");
    exit(-1);
}

fd = open(argv[1], O_RDONLY);
if (fd < 0) {
    perror(argv[1]);
    exit(-1);
}

ret = read(fd, buf, st.st_size);
if (ret < 0) {
    perror("Reading
buffer");
    exit(-1);
}
close(fd);

kbuf = kbuffer_alloc(KBUFFER_ENDIAN_SAME_AS_HOST,
    KBUFFER_LSIZE_SAME_AS_HOST);
if (!kbuf) {
    perror("Creating kbuffer");
    exit(-1);
}
ret = kbuffer_load_subbuffer(kbuf, buf);
if (ret < 0) {
    perror("Loading sub bufer");
    exit(-1);
}

if (kbuffer_subbuffer_size(kbuf) > st.st_size) {
    fprintf(stderr, "kbuffer is bigger than raw size %d > %ld\n",
    kbuffer_subbuffer_size(kbuf), st.st_size);
    exit(-1);
}

ret = kbuffer_missed_events(kbuf);
if (ret) {
    if (ret > 0)
        printf("Missed %d events before this buffer\n", ret);
    else
        printf("Missed unknown number of events before this buffer\n");
}
do {
    event = kbuffer_read_event(kbuf, &ts);

```

```

if (event) {
    record_size = kbuffer_curr_size(kbuf);
    offset = kbuffer_curr_offset(kbuf);
    index = kbuffer_curr_index(kbuf);
    size = kbuffer_event_size(kbuf);

    if (i == 20)
        save_offset = offset;
    printf(" event %3d ts:%lld\trecord_size:%d size:%d\tindex:%d offset:%d\n",

        i++, ts, record_size, size, index, offset);
    event = kbuffer_next_event(kbuf, NULL);
}
} while (event);

if (!event)
    printf("Finished sub buffer\n");

if (save_offset > 0) {
    event = kbuffer_read_at_offset(kbuf, save_offset, &ts);
    if (!event) {
        fprintf(stderr, "Funny, can't find event 20 at offset %d\n", save_offset);
        exit(-1);
    }
    record_size = kbuffer_curr_size(kbuf);
    offset = kbuffer_curr_offset(kbuf);
    index = kbuffer_curr_index(kbuf);
    size = kbuffer_event_size(kbuf);

    printf("\n saved event 20 ts:%lld\trecord_size:%d size:%d\tindex:%d offset:%d\n\n",
        ts, record_size, size, index, offset);
}
kbuffer_free(kbuf);

```

```
return 0;
```

```
}
```

```
--
```

## FILES

```
-----
```

```
[verse]
```

```
--
```

```
*event-parse.h*
```

Header file to include in order to have access to the library APIs.

```
*-ltraceevent*
```

Linker switch to add when building a program that uses the library.

```
--
```

SEE ALSO

-----  
\*libtraceevent\*(3), \*trace-cmd\*(1)

## AUTHOR

-----  
[verse]

--  
\*Steven Rostedt\* <rostedt@goodmis.org>,  
author of \*libtraceevent\*.

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## RESOURCES

-----  
<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

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\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-kbuffer-timestamp.txt

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libtraceevent(3)

=====

## NAME

----  
tep\_find\_event, tep\_find\_event\_by\_name, tep\_find\_event\_by\_record, tep\_record\_is\_event -  
Find events by given key.

## SYNOPSIS

-----  
[verse]

--  
\*#include <event-parse.h>\*

```
struct tep_event pass:[*]*tep_find_event*(struct tep_handle pass:[*]_tep_, int _id_);
struct tep_event pass:[*]*tep_find_event_by_name*(struct tep_handle pass:[*]_tep_, const char pass:[*]_sys_, const
char pass:[*]_name_);
struct tep_event pass:[*]*tep_find_event_by_record*(struct tep_handle pass:[*]_tep_, struct tep_record
pass:[*]_record_);
bool *tep_record_is_event*(struct tep_record pass:[*]record, struct tep_event pass:[*]event);
```

--

## DESCRIPTION

-----

This set of functions can be used to search for an event, based on a given criteria. All functions require a pointer to a `_tep_`, trace event parser context.

The `*tep_find_event()*` function searches for an event by given event `_id_`. The event ID is assigned dynamically and can be viewed in event's format file, "ID" field.

The `*tep_find_event_by_name()*` function searches for an event by given event `_name_`, under the system `_sys_`. If the `_sys_` is NULL (not specified), the first event with `_name_` is returned.

The `*tep_find_event_by_record()*` function searches for an event from a given `_record_`.

The `*tep_record_is_event()*` function tests if the given `_record_` is of the type of the `_event_`. This is normally used to know if the `_record_` being processed is of an `_event_` where further processing should be done.

## RETURN VALUE

-----

All these functions except `*tep_record_is_event()*` return a pointer to the found event, or NULL if there is no such event.

## EXAMPLE

-----

```
[source,c]
--
#include <event-parse.h>
...
struct tep_handle *tep = tep_alloc();
...
struct tep_event *event;

event = tep_find_event(tep, 1857);
if (event == NULL) {
    /* There is no event with ID 1857 */
}

event = tep_find_event_by_name(tep, "kvm", "kvm_exit");
if
(event == NULL) {
    /* There is no kvm_exit event, from kvm system */
}
```

```
void event_from_record(struct tep_record *record)
{
struct tep_event *event = tep_find_event_by_record(tep, record);
if (event == NULL) {
/* There is no event from given record */
}
}
...
--
```

## FILES

-----

[verse]

--

*\*event-parse.h\**

Header file to include in order to have access to the library APIs.

*\*-ltraceevent\**

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

*\*libtraceevent\*(3)*, *\*trace-cmd\*(1)*

## AUTHOR

-----

[verse]

--

*\*Steven Rostedt\** <rostedt@goodmis.org>, author of *\*libtraceevent\**.

*\*Tzvetomir Stoyanov\** <tz.stoyanov@gmail.com>, author of this man page.

--

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*\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-event\_find.txt*

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libtraceevent(3)

=====

NAME

----

tep\_get\_header\_page\_size, tep\_get\_header\_timestamp\_size, tep\_is\_old\_format -  
Get the data stored in the header page, in kernel context.

SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
int *tep_get_header_page_size*(struct tep_handle pass:[*]_tep_);  
int *tep_get_header_timestamp_size*(struct tep_handle pass:[*]_tep_);  
bool *tep_is_old_format*(struct tep_handle pass:[*]_tep_);
```

--

DESCRIPTION

-----

These functions retrieve information from kernel context, stored in tracefs events/header\_page. Old kernels do not have header page info, so default values from user space context are used.

The `*tep_get_header_page_size()` function returns the size of a long integer, in kernel context. The `_tep_` argument is trace event parser context. This information is retrieved from tracefs events/header\_page, "commit" field.

The `*tep_get_header_timestamp_size()` function returns the size of timestamps, in kernel context. The `_tep_` argument is trace event parser context. This information is retrieved from tracefs events/header\_page, "timestamp" field.

The `*tep_is_old_format()` function returns true if the kernel predates the addition of events/header\_page, otherwise it returns false.

RETURN VALUE

-----

The `*tep_get_header_page_size()` function returns the size of a long integer, in bytes.

The `*tep_get_header_timestamp_size()` function returns the size of timestamps, in bytes.

The `*tep_is_old_format()` function returns true, if an old kernel is used to generate the tracing data, which has no event/header\_page. If the kernel is new,



or `_tep_` is NULL, false is returned.

#### EXAMPLE

```
-----
[source,c]
--
#include <event-parse.h>
...
struct tep_handle *tep = tep_alloc();
...
int longsize;
int timesize;
bool old;

longsize = tep_get_header_page_size(tep);
timesize = tep_get_header_timestamp_size(tep);
old = tep_is_old_format(tep);

printf ("%s kernel
is used to generate the tracing data.\n",
old?"Old":"New");
printf("The size of a long integer is %d bytes.\n", longsize);
printf("The timestamps size is %d bytes.\n", timesize);
...
--
```

#### FILES

```
-----
[verse]
--
*event-parse.h*
Header file to include in order to have access to the library APIs.
*-ltraceevent*
Linker switch to add when building a program that uses the library.
--
```

#### SEE ALSO

```
-----
*libtraceevent*(3), *trace-cmd*(1)
```

#### AUTHOR

```
-----
[verse]
--
*Steven Rostedt* <rostedt@goodmis.org>, author of *libtraceevent*.
*Tzvetomir Stoyanov* <tz.stoyanov@gmail.com>, author of this man page.
--
```

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-----  
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libtraceevent(3)

=====

## NAME

----  
tep\_register\_print\_function, tep\_unregister\_print\_function -  
Registers / Unregisters a helper function.

## SYNOPSIS

-----  
[verse]

--  
\*#include <event-parse.h>\*

```
enum *tep_func_arg_type* {  
    TEP_FUNC_ARG_VOID,  
    TEP_FUNC_ARG_INT,  
    TEP_FUNC_ARG_LONG,  
    TEP_FUNC_ARG_STRING,  
    TEP_FUNC_ARG_PTR,  
    TEP_FUNC_ARG_MAX_TYPES  
};
```

```
typedef unsigned long long (*pass:[*]tep_func_handler*)(struct trace_seq pass:[*]s, unsigned long long  
pass:[*]args);
```

```
int *tep_register_print_function*(struct tep_handle pass:[*]_tep_, tep_func_handler_func_, enum  
tep_func_arg_type _ret_type_, char pass:[*]_name_, ...);  
int *tep_unregister_print_function*(struct tep_handle pass:[*]_tep_, tep_func_handler_func_, char  
pass:[*]_name_);
```

--

## DESCRIPTION

-----

Some events may have helper functions in the print format arguments. This allows a plugin to dynamically create a way to process one of these functions.

The

`*tep_register_print_function()*` registers such helper function. The `_tep_` argument is the trace event parser context. The `_func_` argument is a pointer to the helper function. The `_ret_type_` argument is the return type of the helper function, value from the `_tep_func_arg_type_` enum. The `_name_` is the name of the helper function, as seen in the print format arguments. The `_...` is a variable list of `_tep_func_arg_type_` enums, the `_func_` function arguments. This list must end with `_TEP_FUNC_ARG_VOID_`. See 'EXAMPLE' section.

The `*tep_unregister_print_function()*` unregisters a helper function, previously registered with `*tep_register_print_function()*`. The `_tep_` argument is the trace event parser context. The `_func_` and `_name_` arguments are the same, used when the helper function was registered.

The `_tep_func_handler_` is the type of the helper function. The `_s_` argument is the trace sequence, it can be used to create a custom string.

The `_args_` is a list of arguments, defined when the helper function was registered.

## RETURN VALUE

-----

The `*tep_register_print_function()*` function returns 0 in case of success. In case of an error, `TEP_ERRNO_...` code is returned.

The `*tep_unregister_print_function()*` returns 0 in case of success, or -1 in case of an error.

## EXAMPLE

-----

Some events have internal functions calls, that appear in the print format output. For example "tracefs/events/i915/g4x\_wm/format" has:

[source,c]

--

```
print fmt: "pipe %c, frame=%u, scanline=%u, wm %d/%d/%d, sr %s/%d/%d/%d, hpll %s/%d/%d/%d, fbc %s",
  ((REC->pipe) + 'A'), REC->frame, REC->scanline, REC->primary,
  REC->sprite, REC->cursor, yesno(REC->cxsr), REC->sr_plane,
  REC->sr_cursor, REC->sr_fbc, yesno(REC->hpll), REC->hpll_plane,
  REC->hpll_cursor, REC->hpll_fbc, yesno(REC->fbc)
```

--

Notice the call to function `*yesno()*` in the print arguments. In the kernel context, this function has the following implementation:

[source,c]

```
--
static const char *yesno(int x)
{
    static
    const char *yes = "yes";
    static const char *no = "no";

    return x ? yes : no;
}
--
```

The user space event parser has no idea how to handle this `*yesno()*` function. The `*tep_register_print_function()*` API can be used to register a user space helper function, mapped to the kernel's `*yesno()*`:

[source,c]

```
--
#include <event-parse.h>
#include <trace-seq.h>
...
struct tep_handle *tep = tep_alloc();
...
static const char *yes_no_helper(int x)
{
    return x ? "yes" : "no";
}
...
if ( tep_register_print_function(tep,
    yes_no_helper,
    TEP_FUNC_ARG_STRING,
    "yesno",
    TEP_FUNC_ARG_INT,
    TEP_FUNC_ARG_VOID) != 0) {
    /* Failed to register yes_no_helper function */
}

```

/\*

Now, when the event parser encounters this `yesno()` function, it will know how to handle it.

\*/

...

```
if (tep_unregister_print_function(tep, yes_no_helper, "yesno") != 0) {
    /* Failed to unregister yes_no_helper function */
}

```

--

FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include

in order to have access to the library APIs.

**\*trace-seq.h\***

Header file to include in order to have access to trace sequences related APIs. Trace sequences are used to allow a function to call several other functions to create a string of data to use.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

--

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libtraceevent(3)

=====

NAME

----

tep\_strerror - Returns a string describing regular errno and tep error number.

SYNOPSIS

```
-----
[verse]
--
#include <event-parse.h>

int *tep_strerror*(struct tep_handle pass:[*]_tep_, enum tep_errno _errnum_, char pass:[*]_buf_, size_t _buflen_);
```

--  
DESCRIPTION

-----  
The `*tep_strerror()` function converts tep error number into a human readable string.

The `_tep_` argument is trace event parser context. The `_errnum_` is a regular errno, defined in `errno.h`, or a tep error number. The string, describing this error number is copied in the `_buf_` argument. The `_buflen_` argument is the size of the `_buf_`.

It as a thread safe wrapper around `strerror_r()`. The library function has two different behaviors - POSIX and GNU specific. The `*tep_strerror()` API always behaves as the POSIX version - the error string is copied in the user supplied buffer.

RETURN VALUE

-----  
The `*tep_strerror()` function returns 0, if a valid `_errnum_` is passed and the string is copied into `_buf_`. If `_errnum_` is not a valid error number, -1 is returned and `_buf_` is not modified.

EXAMPLE

```
-----
[source,c]
--
#include <event-parse.h>
...
struct tep_handle *tep = tep_alloc();
...
char buf[32];
char *pool = calloc(1, 128);
if (tep == NULL) {
    tep_strerror(tep, TEP_ERRNO__MEM_ALLOC_FAILED, buf, 32);
    printf ("The pool is not initialized, %s", buf);
}
...
--
```

FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

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libtraceevent(3)

=====

NAME



----

tep\_get\_any\_field\_val, tep\_get\_common\_field\_val, tep\_get\_field\_val,  
tep\_get\_field\_raw - Get value of a field.

## SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
*#include <trace-seq.h>*
```

```
int *tep_get_any_field_val*(struct trace_seq pass:[*]_s_, struct tep_event pass:[*]_event_, const char  
pass:[*]_name_, struct tep_record pass:[*]_record_, unsigned long long pass:[*]_val_, int _err_);  
int *tep_get_common_field_val*(struct trace_seq pass:[*]_s_, struct tep_event pass:[*]_event_, const char  
pass:[*]_name_, struct tep_record pass:[*]_record_, unsigned long long pass:[*]_val_, int _err_);  
int *tep_get_field_val*(struct trace_seq pass:[*]_s_, struct tep_event pass:[*]_event_, const char pass:[*]_name_,  
struct tep_record pass:[*]_record_, unsigned long long pass:[*]_val_, int _err_);  
void pass:[*]*tep_get_field_raw*(struct trace_seq pass:[*]_s_, struct tep_event pass:[*]_event_,  
const char pass:[*]_name_, struct tep_record pass:[*]_record_, int pass:[*]_len_, int _err_);
```

--

## DESCRIPTION

-----

These functions can be used to find a field and retrieve its value.

The `*tep_get_any_field_val()*` function searches in the `_record_` for a field with `_name_`, part of the `_event_`. If the field is found, its value is stored in `_val_`. If there is an error and `_err_` is not zero, then an error string is written into `_s_`.

The `*tep_get_common_field_val()*` function does the same as `*tep_get_any_field_val()*`, but searches only in the common fields. This works for any event as all events include the common fields.

The `*tep_get_field_val()*` function does the same as `*tep_get_any_field_val()*`, but searches only in the event specific fields.

The `*tep_get_field_raw()*` function searches in the `_record_` for a field with `_name_`, part of the `_event_`. If the field is found, a pointer to where the field exists in the record's raw data is returned. The size of the data is stored in `_len_`. If there is an error and `_err_` is not zero, then an error string is written into `_s_`.

## RETURN VALUE

-----

The `*tep_get_any_field_val()*`, `*tep_get_common_field_val()*` and `*tep_get_field_val()*` functions return 0 on success, or -1 in case of an error.

The `*tep_get_field_raw()*` function returns a pointer to field's raw data, and places the length of this data in `_len_`. In case of an error NULL is returned.

#### EXAMPLE

```
-----  
[source,c]  
--  
#include <event-parse.h>  
#include <trace-seq.h>  
...  
struct tep_handle *tep = tep_alloc();  
...  
struct tep_event *event = tep_find_event_by_name(tep, "kvm", "kvm_exit");  
...  
void process_record(struct tep_record *record)  
{  
    int len;  
    char *comm;  
    struct tep_event *event;  
    unsigned long long val;  
  
    event = tep_find_event_by_record(tep, record);  
    if (event != NULL) {  
        if (tep_get_common_field_val(NULL, event, "common_type",  
            record, &val, 0) == 0) {  
            /* Got the value of common type field */  
        }  
        if (tep_get_field_val(NULL, event,  
            "pid", record, &val, 0) == 0) {  
            /* Got the value of pid specific field */  
        }  
        comm = tep_get_field_raw(NULL, event, "comm", record, &len, 0);  
        if (comm != NULL) {  
            /* Got a pointer to the comm event specific field */  
        }  
    }  
}
```

#### FILES

```
-----  
[verse]  
--  
*event-parse.h*  
Header file to include in order to have access to the library APIs.  
*trace-seq.h*  
Header file to include in order to have access to trace sequences
```

related APIs. Trace sequences are used to allow a function to call several other functions to create a string of data to use.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

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libtraceevent(3)

=====

NAME

----

tep\_get\_event, tep\_get\_first\_event, tep\_get\_events\_count - Access events.

SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
struct tep_event pass:[*]*tep_get_event*(struct tep_handle pass:[*]_tep_, int _index_);
```

```
struct tep_event pass:[*]*tep_get_first_event*(struct tep_handle pass:[*]_tep_);
```

```
int *tep_get_events_count*(struct tep_handle pass:[*]_tep_);
```

--

DESCRIPTION

-----

The `*tep_get_event()*` function returns a pointer to event at the given `_index_`.

The `_tep_` argument is trace event parser context, the `_index_` is the index of the requested event.

The `*tep_get_first_event()*` function returns a pointer to the first event.

As events are stored in an array, this function returns the pointer to the beginning of the array. The `_tep_` argument is trace event parser context.

The `*tep_get_events_count()*` function returns the number of the events

in the array. The `_tep_`

argument is trace event parser context.

RETURN VALUE

-----

The `*tep_get_event()*` returns a pointer to the event located at `_index_`.

NULL is returned in case of error, in case there are no events or `_index_` is out of range.

The `*tep_get_first_event()*` returns a pointer to the first event. NULL is

returned in case of error, or in case there are no events.

The `*tep_get_events_count()*` returns the number of the events. 0 is

returned in case of error, or in case there are no events.

EXAMPLE

```

-----
[source,c]
--
#include <event-parse.h>
...
struct tep_handle *tep = tep_alloc();
...
int i,count = tep_get_events_count(tep);
struct tep_event *event, *events = tep_get_first_event(tep);

if (events == NULL) {
    /* There are no events */
} else {
    for (i = 0; i < count; i++) {
        event = (events+i);
        /* process events[i] */
    }

    /* Get the last event */
    event = tep_get_event(tep, count-1);
}
--

```

## FILES

```

-----
[verse]
--
*event-parse.h*
Header file to include in order to have access
to the library APIs.
*-ltraceevent*
Linker switch to add when building a program that uses the library.
--

```

## SEE ALSO

```

-----
*libtraceevent*(3), *trace-cmd*(1)

```

## AUTHOR

```

-----
[verse]
--
*Steven Rostedt* <rostedt@goodmis.org>, author of *libtraceevent*.
*Tzvetomir Stoyanov* <tz.stoyanov@gmail.com>, author of this man page.
--

```

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libtraceevent(3)

=====

## NAME

----

tep\_parse\_header\_page - Parses the data stored in the header page.

## SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
int *tep_parse_header_page*(struct tep_handle pass:[*]_tep_, char pass:[*]_buf_, unsigned long _size_, int _long_size_);
```

--

## DESCRIPTION

-----

The `*tep_parse_header_page()*` function parses the header page data from `_buf_`, and initializes the `_tep_`, trace event parser context, with it. The buffer `_buf_` is with `_size_`, and is supposed to be copied from `tracefs/events/header_page`.

Some old kernels do not have header page info, in this case the `*tep_parse_header_page()*` function can be called with `_size_` equal to 0. The `_tep_` context is initialized with default values. The `_long_size_` can be used in this use case, to set the size of a long integer to be used.

## RETURN VALUE

-----

The `*tep_parse_header_page()*` function returns 0 in case of success, or -1 in case of an error.

## EXAMPLE

```
-----  
[source,c]  
--  
#include <event-parse.h>  
...  
struct tep_handle *tep = tep_alloc();  
...  
char *buf;  
int size;  
buf = read_file("/sys/kernel/tracing/events/header_page", &size);  
if (tep_parse_header_page(tep, buf, size, sizeof(unsigned long)) != 0) {  
    /* Failed to parse the header page */  
}  
...  
--
```

## FILES

```
-----  
[verse]  
--  
*event-parse.h*  
Header file to include in order to have access to the library APIs.  
*-ltraceevent*  
Linker switch to add when building a program that uses the library.  
--
```

## SEE ALSO

```
-----  
*libtraceevent*(3), *trace-cmd*(1)
```

## AUTHOR

```
-----  
[verse]  
--  
*Steven Rostedt* <rostedt@goodmis.org>, author of *libtraceevent*.  
*Tzvetomir Stoyanov* <tz.stoyanov@gmail.com>, author of this man page.  
--
```

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-----  
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## RESOURCES

-----  
<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

#### Found

in path(s):

\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-parse\_head.txt

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libtraceevent(3)

=====

NAME

----

tep\_get\_long\_size, tep\_set\_long\_size - Get / set the size of a long integer on the machine, where the trace is generated, in bytes

SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
int *tep_get_long_size*(struct tep_handle pass:[*]_tep_);
```

```
void *tep_set_long_size*(struct tep_handle pass:[*]_tep_, int _long_size_);
```

--

DESCRIPTION

-----

The `*tep_get_long_size()` function returns the size of a long integer on the machine, where the trace is generated. The `_tep_` argument is trace event parser context.

The `*tep_set_long_size()` function sets the size of a long integer on the machine, where the trace is generated. The `_tep_` argument is trace event parser context.

The `_long_size_` is the size of a long integer, in bytes.

RETURN VALUE

-----

The `*tep_get_long_size()` function returns the size of a long integer on the machine, where the trace is generated, in bytes.

EXAMPLE

-----

[source,c]

--

```
#include <event-parse.h>
```

...



```
struct tep_handle *tep = tep_alloc();
...
tep_set_long_size(tep, 4);
...
int long_size = tep_get_long_size(tep);
...
--
```

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

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libtraceevent(3)

=====

## NAME

----

tep\_is\_file\_bigendian, tep\_set\_file\_bigendian - Get / set the endianness of the raw data being accessed by the tep handler.

## SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
enum *tep_endian* {  
    TEP_LITTLE_ENDIAN = 0,  
    TEP_BIG_ENDIAN  
};
```

```
bool *tep_is_file_bigendian*(struct tep_handle pass:[*]_tep_);
```

```
void *tep_set_file_bigendian*(struct tep_handle pass:[*]_tep_, enum tep_endian _endian_);
```

--

## DESCRIPTION

-----

The `*tep_is_file_bigendian()*` function gets the endianness of the raw data, being accessed by the tep handler. The `_tep_` argument is trace event parser context.

The `*tep_set_file_bigendian()*` function sets the endianness of raw data being accessed by the tep handler. The `_tep_` argument is trace event parser context.

[verse]

--

The `_endian_` argument is the endianness:

`_TEP_LITTLE_ENDIAN_` - the raw data is in little endian format,

`_TEP_BIG_ENDIAN_` - the raw data is in big endian format.

--

## RETURN VALUE

-----

The `*tep_is_file_bigendian()*` function returns true if the data is in bigendian format, false otherwise.

## EXAMPLE

-----

[source,c]

--

```
#include <event-parse.h>
```

...

```
struct tep_handle *tep = tep_alloc();
```

```
...
tep_set_file_bigendian(tep, TEP_LITTLE_ENDIAN);
...
if (tep_is_file_bigendian(tep)) {
    /* The raw data is in big endian */
} else {
    /* The raw data is in little endian */
}
--
```

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

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libtraceevent(3)

=====

NAME

----

tep\_list\_events, tep\_list\_events\_copy -  
Get list of events, sorted by given criteria.

SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
enum *tep_event_sort_type* {  
    _TEP_EVENT_SORT_ID_,  
    _TEP_EVENT_SORT_NAME_,  
    _TEP_EVENT_SORT_SYSTEM_,  
};
```

```
struct tep_event pass:[*]pass:[*]*tep_list_events*(struct tep_handle pass:[*]_tep_, enum tep_event_sort_type  
_sort_type_);
```

```
struct tep_event pass:[*]pass:[*]*tep_list_events_copy*(struct tep_handle pass:[*]_tep_, enum tep_event_sort_type  
_sort_type_);
```

--

DESCRIPTION

-----

The `*tep_list_events()` function returns an array of pointers to the events, sorted by the `_sort_type_` criteria. The last element of the array is NULL.

The returned memory must not be freed, it is managed by the library.

The function is not thread safe. The `_tep_` argument is trace event parser context. The `_sort_type_` argument is the required sort criteria:

[verse]

--

`_TEP_EVENT_SORT_ID_` -

sort by the event ID.

`_TEP_EVENT_SORT_NAME_` - sort by the event (name, system, id) triplet.

`_TEP_EVENT_SORT_SYSTEM_` - sort by the event (system, name, id) triplet.

--

The `*tep_list_events_copy()` is a thread safe version of `_tep_list_events()`.

It has the same behavior, but the returned array is allocated internally and must be freed by the caller. Note that the content of the array must not be freed (see the EXAMPLE below).

## RETURN VALUE

-----

The `*tep_list_events()` function returns an array of pointers to events. In case of an error, `NULL` is returned. The returned array must not be freed, it is managed by the library.

The `*tep_list_events_copy()` function returns an array of pointers to events. In case of an error, `NULL` is returned. The returned array must be freed by the caller.

## EXAMPLE

-----

```
[source,c]
--
#include <event-parse.h>
...
struct tep_handle *tep = tep_alloc();
...
int i;
struct tep_event_format **events;

i=0;
events =
    tep_list_events(tep, TEP_EVENT_SORT_ID);
if (events == NULL) {
    /* Failed to get the events, sorted by ID */
} else {
    while(events[i]) {
        /* walk through the list of the events, sorted by ID */
        i++;
    }
}

i=0;
events = tep_list_events_copy(tep, TEP_EVENT_SORT_NAME);
if (events == NULL) {
    /* Failed to get the events, sorted by name */
} else {
    while(events[i]) {
        /* walk through the list of the events, sorted by name */
        i++;
    }
    free(events);
}

...
--
```

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

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libtraceevent(3)

=====

## NAME

----

tep\_read\_number\_field - Reads a number from raw data.

## SYNOPSIS

-----

```
[verse]
--
*#include <event-parse.h>*

int *tep_read_number_field*(struct tep_format_field pass:[*]_field_, const void pass:[*]_data_, unsigned long long
pass:[*]_value_);
--
```

## DESCRIPTION

-----

The `*tep_read_number_field()*` function reads the value of the `_field_` from the raw `_data_` and stores it in the `_value_`. The function sets the `_value_` according to the endianness of the raw data and the current machine and stores it in `_value_`.

## RETURN VALUE

-----

The `*tep_read_number_field()*` function returns 0 in case of success, or -1 in case of an error.

## EXAMPLE

-----

```
[source,c]
--
#include <event-parse.h>
...
struct tep_handle *tep = tep_alloc();
...
struct tep_event *event = tep_find_event_by_name(tep, "timer", "hrtimer_start");
...
void process_record(struct tep_record *record)
{
    unsigned
    long long pid;
    struct tep_format_field *field_pid = tep_find_common_field(event, "common_pid");

    if (tep_read_number_field(field_pid, record->data, &pid) != 0) {
        /* Failed to get "common_pid" value */
    }
}
--
```

## FILES

-----

```
[verse]
--
*event-parse.h*
```

Header file to include in order to have access to the library APIs.

`*-ltraceevent*`

Linker switch to add when building a program that uses the library.

--

SEE ALSO

-----

`*libtraceevent*(3)`, `*trace-cmd*(1)`

AUTHOR

-----

[verse]

--

`*Steven Rostedt*` <rostedt@goodmis.org>, author of `*libtraceevent*`.

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libtraceevent(3)

=====

NAME

----

`tep_data_type`, `tep_data_pid`, `tep_data_preempt_count`, `tep_data_flags` -

Extract common fields from a record.

SYNOPSIS

-----

[verse]

--

`*#include <event-parse.h>*`

```
enum *trace_flag_type* {
    _TRACE_FLAG_IRQS_OFF_
```



```
_TRACE_FLAG_IRQS_NOSUPPORT_,
TRACE_FLAG_NEED_RESCHEDED_,
TRACE_FLAG_HARDIRQ_,
TRACE_FLAG_SOFTIRQ_,
};
```

```
int tep_data_type(struct tep_handle pass:[*]_tep_, struct tep_record pass:[*]_rec_);
int tep_data_pid(struct tep_handle pass:[*]_tep_, struct tep_record pass:[*]_rec_);
int tep_data_preempt_count(struct tep_handle pass:[*]_tep_, struct tep_record pass:[*]_rec_);
int tep_data_flags(struct tep_handle pass:[*]_tep_, struct tep_record pass:[*]_rec_);
--
```

## DESCRIPTION

-----

This set of functions can be used to extract common fields from a record.

The `tep_data_type()` function gets the event id from the record `_rec_`.

It reads the "common\_type" field.

The `_tep_` argument is the trace event parser context.

The `tep_data_pid()` function gets the process id from the record `_rec_`.

It reads the "common\_pid" field. The `_tep_` argument is the trace event parser context.

The `tep_data_preempt_count()` function gets the preemption count from the record `_rec_`. It reads the "common\_preempt\_count" field. The `_tep_` argument is the trace event parser context.

The `tep_data_flags()` function gets the latency flags from the record `_rec_`.

It reads the "common\_flags" field. The `_tep_` argument is the trace event parser context. Supported latency flags are:

[verse]

--

`_TRACE_FLAG_IRQS_OFF_`, Interrupts are disabled.

`_TRACE_FLAG_IRQS_NOSUPPORT_`, Reading IRQ flag is not supported by the architecture.

`_TRACE_FLAG_NEED_RESCHEDED_`, Task needs rescheduling.

`_TRACE_FLAG_HARDIRQ_`, Hard IRQ is running.

`_TRACE_FLAG_SOFTIRQ_`, Soft IRQ is running.

--

## RETURN VALUE

-----

The `tep_data_type()` function returns an integer, representing the event id.

The

`tep_data_pid()` function returns an integer, representing the process id

The `*tep_data_preempt_count()*` function returns an integer, representing the preemption count.

The `*tep_data_flags()*` function returns an integer, representing the latency flags. Look at the `_trace_flag_type_ enum` for supported flags.

All these functions in case of an error return a negative integer.

#### EXAMPLE

```
-----  
[source,c]  
--  
#include <event-parse.h>  
...  
struct tep_handle *tep = tep_alloc();  
...  
void process_record(struct tep_record *record)  
{  
    int data;  
  
    data = tep_data_type(tep, record);  
    if (data >= 0) {  
        /* Got the ID of the event */  
    }  
  
    data = tep_data_pid(tep, record);  
    if (data >= 0) {  
        /* Got the process ID */  
    }  
  
    data = tep_data_preempt_count(tep, record);  
    if (data >= 0) {  
        /* Got the preemption count */  
    }  
  
    data = tep_data_flags(tep, record);  
    if (data >= 0) {  
        /* Got the latency flags */  
    }  
}  
...  
--
```

#### FILES

```
-----  
[verse]  
--  
*event-parse.h*
```

Header file to include in order to have access  
to the library APIs.

`*-ltraceevent*`

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

`*libtraceevent*(3)`, `*trace-cmd*(1)`

## AUTHOR

-----

[verse]

--

`*Steven Rostedt*` <rostedt@goodmis.org>, author of `*libtraceevent*`.

`*Tzvetomir Stoyanov*` <tz.stoyanov@gmail.com>, author of this man page.

--

## REPORTING BUGS

-----

Report bugs to <linux-trace-devel@vger.kernel.org>

## LICENSE

-----

libtraceevent is Free Software licensed under the GNU LGPL 2.1

## RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

Found in path(s):

`*/opt/cola/permits/2148525021_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-record_parse.txt`

No license file was found, but licenses were detected in source scan.

license: 'LGPL-2.1',

Found in path(s):

`*/opt/cola/permits/2148525021_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/meson.build`

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libtraceevent(3)

=====

## NAME

----

`tep_print_printk`, `tep_print_funcs`, `tep_set_test_filters`, `tep_plugin_print_options` -

Print libtraceevent internal information.

## SYNOPSIS

```
-----  
[verse]  
--  
*#include <event-parse.h>*  
*#include <trace-seq.h>*  
  
void *tep_print_printk*(struct tep_handle pass:[*]tep);  
void *tep_print_funcs*(struct tep_handle pass:[*]tep);  
void *tep_set_test_filters*(struct tep_handle pass:[*]tep, int test_filters);  
void *tep_plugin_print_options*(struct trace_seq pass:[*]s);  
--
```

## DESCRIPTION

-----  
The `*tep_print_printk()*` function prints the printk string formats that were stored for this tracing session. The `_tep_` argument is trace event parser context.

The `*tep_print_funcs()*` function prints the stored function name to address mapping for this tracing session. The `_tep_` argument is trace event parser context.

The `*tep_set_test_filters()*` function sets a flag to test a filter string. If this flag is set, when `*tep_filter_add_filter_str()*` API as called, it will print the filter string instead of adding it. The `_tep_` argument is trace event parser context. The `_test_filters_` argument is the test flag that will be set.

The `*tep_plugin_print_options()*` function writes a list of the registered plugin options into `_s_`.

## EXAMPLE

```
-----  
[source,c]  
--  
#include <event-parse.h>  
#include <trace-seq.h>  
...  
struct tep_handle *tep = tep_alloc();  
...  
tep_print_printk(tep);  
...  
tep_print_funcs(tep);  
...  
struct tep_event_filter *filter = tep_filter_alloc(tep);  
tep_set_test_filters(tep, 1);  
tep_filter_add_filter_str(filter, "sched/sched_wakeup:target_cpu==1");  
tep_set_test_filters(tep, 0);
```

```
tep_filter_free(filter);
```

```
...
```

```
struct trace_seq seq;
```

```
trace_seq_init(&seq);
```

```
tep_plugin_print_options(&s);
```

```
...
```

```
--
```

## FILES

```
-----
```

```
[verse]
```

```
--
```

```
*event-parse.h*
```

Header file to include in order to have access to the library APIs.

```
*-ltraceevent*
```

Linker switch to add when building a program that uses the library.

```
--
```

## SEE ALSO

```
-----
```

```
*libtraceevent*(3), *trace-cmd*(1)
```

## AUTHOR

```
-----
```

```
[verse]
```

```
--
```

```
*Steven Rostedt* <rostedt@goodmis.org>, author of *libtraceevent*.
```

```
*Tzvetomir Stoyanov* <tz.stoyanov@gmail.com>, author of this man page.
```

```
--
```

## REPORTING BUGS

```
-----
```

```
Report bugs to <linux-trace-devel@vger.kernel.org>
```

## LICENSE

```
-----
```

```
libtraceevent is Free Software licensed under the GNU LGPL 2.1
```

## RESOURCES

```
-----
```

```
https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/
```

```
Found in path(s):
```

```
* /opt/cola/permits/2148525021_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-debug.txt
```

```
No license file was found, but licenses were detected in source scan.
```

libtraceevent(3)

=====

## NAME

----

tep\_set\_flag, tep\_clear\_flag, tep\_test\_flag -  
Manage flags of trace event parser context.

## SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
enum *tep_flag* {  
    _TEP_NSEC_OUTPUT_,  
    _TEP_DISABLE_SYS_PLUGINS_,  
    _TEP_DISABLE_PLUGINS_  
};  
void *tep_set_flag*(struct tep_handle pass:[*]_tep_, enum tep_flag _flag_);  
void *tep_clear_flag*(struct tep_handle pass:[*]_tep_, enum tep_flag _flag_);  
bool *tep_test_flag*(struct tep_handle pass:[*]_tep_, enum tep_flag _flag_);  
--
```

## DESCRIPTION

-----

Trace event parser context flags are defined in \*enum tep\_flag\*:

[verse]

--

`_TEP_NSEC_OUTPUT_` - print event's timestamp in nano seconds, instead of micro seconds.

`_TEP_DISABLE_SYS_PLUGINS_` - disable plugins, located in system's plugin directory. This directory is defined at library compile time, and usually depends on library installation

prefix: (install\_prefix)/lib/traceevent/plugins

`_TEP_DISABLE_PLUGINS_`

- disable all library plugins:

- in system's plugin directory

- in directory, defined by the environment variable `_TRACEEVENT_PLUGIN_DIR_`

- in user's home directory, `~/traceevent/plugins_`

--

Note: plugin related flags must be set before calling \*tep\_load\_plugins()\* API.

The \*tep\_set\_flag()\* function sets `_flag_` to `_tep_` context.

The \*tep\_clear\_flag()\* function clears `_flag_` from `_tep_` context.

The \*tep\_test\_flag()\* function tests if `_flag_` is set to `_tep_` context.

## RETURN VALUE

-----

\*tep\_test\_flag()\* function returns true if `_flag_` is set, false otherwise.

## EXAMPLE

-----

[source,c]

--

```
#include <event-parse.h>
```

...

```
struct tep_handle *tep = tep_alloc();
```

...

```
/* Print timestamps in nanoseconds */
```

```
tep_set_flag(tep, TEP_NSEC_OUTPUT);
```

...

```
if (tep_test_flag(tep, TEP_NSEC_OUTPUT)) {
```

```
    /* print timestamps in nanoseconds */
```

```
    } else {
```

```
        /* print timestamps in microseconds */
```

```
    }
```

...

```
/* Print timestamps in microseconds */
```

```
tep_clear_flag(tep, TEP_NSEC_OUTPUT);
```

...

--

## FILES

-----

[verse]

--

\*event-parse.h\*

Header

file to include in order to have access to the library APIs.

\*-ltraceevent\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*libtraceevent\*(3), \*trace-cmd\*(1)

## AUTHOR

-----

[verse]

--

\*Steven Rostedt\* <rostedt@goodmis.org>, author of \*libtraceevent\*.

\*Tzvetomir Stoyanov\* <tz.stoyanov@gmail.com>, author of this man page.

--

## REPORTING BUGS

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-----  
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## RESOURCES

-----  
<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

Found in path(s):

\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-set\_flag.txt

No license file was found, but licenses were detected in source scan.

libtraceevent(3)

=====

## NAME

----  
tep\_is\_bigendian, tep\_is\_local\_bigendian, tep\_set\_local\_bigendian - Get / set the endianness of the local machine.

## SYNOPSIS

-----  
[verse]

--  
\*#include <event-parse.h>\*

```
enum *tep_endian* {  
    TEP_LITTLE_ENDIAN = 0,  
    TEP_BIG_ENDIAN  
};
```

```
int *tep_is_bigendian*(void);  
bool *tep_is_local_bigendian*(struct tep_handle pass:[*]_tep_);  
void *tep_set_local_bigendian*(struct tep_handle pass:[*]_tep_, enum tep_endian _endian_);  
--
```

## DESCRIPTION

-----

The `*tep_is_bigendian()*` gets the endianness of the machine, executing the function.

The `*tep_is_local_bigendian()*` function gets the endianness of the local machine, saved in the `_tep_handler`. The `_tep_` argument is the trace event



parser context. This API is a bit faster than `*tep_is_bigendian()*`, as it returns cached endianness of the local machine instead of checking it each time.

The `*tep_set_local_bigendian()*` function sets the endianness of the local machine in the `_tep_handler`. The `_tep` argument is trace event parser context. The `_endian` argument is the endianness:

```
[verse]
--
_TEP_LITTLE_ENDIAN_ - the machine is little endian,
_TEP_BIG_ENDIAN_ - the machine is big endian.
--
```

## RETURN VALUE

-----  
The `*tep_is_bigendian()*` function returns non zero if the endianness of the machine, executing the code, is big endian and zero otherwise.

The `*tep_is_local_bigendian()*` function returns true, if the endianness of the local machine, saved in the `_tep_handler`, is big endian, or false otherwise.

## EXAMPLE

```
-----
[source,c]
--
#include <event-parse.h>
...
struct tep_handle *tep = tep_alloc();
...
if (tep_is_bigendian())
    tep_set_local_bigendian(tep, TEP_BIG_ENDIAN);
else
    tep_set_local_bigendian(tep, TEP_LITTLE_ENDIAN);
...
if (tep_is_local_bigendian(tep))
    printf("This machine you are running on is bigendian\n");
else
    printf("This machine you are running on is little endian\n");
--
```

## FILES

```
-----
[verse]
--
*event-parse.h*
Header
```

file to include in order to have access to the library APIs.

`*-ltraceevent*`

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

`*libtraceevent*(3)`, `*trace-cmd*(1)`

## AUTHOR

-----

[verse]

--

\*Steven Rostedt\* <rostedt@goodmis.org>, author of `*libtraceevent*`.

\*Tzvetomir Stoyanov\* <tz.stoyanov@gmail.com>, author of this man page.

--

## REPORTING BUGS

-----

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## RESOURCES

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<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

Found in path(s):

\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-host\_endian.txt

No license file was found, but licenses were detected in source scan.

libtraceevent(3)

=====

## NAME

----

`kbuffer_read_event`, `kbuffer_next_event`, `kbuffer_missed_events`, `kbuffer_event_size`, `kbuffer_curr_size`, `kbuffer_curr_offset`, `kbuffer_curr_index`, `kbuffer_read_buffer` -

Functions to read through the `kbuffer` sub buffer.

## SYNOPSIS

-----

[verse]

--

`*#include <kbuffer.h>*`

```

void pass:[*]*kbuffer_read_event*(struct kbuffer pass:[*]_kbuf_, unsigned long long pass:[*]_ts_);
void pass:[*]*kbuffer_next_event*(struct kbuffer pass:[*]_kbuf_, unsigned long long pass:[*]_ts_);
void pass:[*]*kbuffer_read_at_offset*(struct kbuffer pass:[*]_kbuf_, int _offset_, unsigned long long pass:[*]_ts_);
int *kbuffer_missed_events*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_event_size*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_curr_size*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_curr_offset*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_curr_index*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_read_buffer*(struct
kbuffer pass:[*]_kbuf_, void pass:[*]_buffer_, int _len_);
--

```

## DESCRIPTION

-----

The function `*kbuffer_read_event()` reads the next event in the `_kbuf_` descriptor and if `_ts_` is non NULL, will place its timestamp into it. This does not modify the `_kbuf_` descriptor, and calling this function multiple times will return the same result.

The function `*kbuffer_next_event()` will return the next event in the `_kbuf_` descriptor. It will also set the `_ts_` to the timestamp of the returned event. NULL is returned if there are no more events and `_ts_` will be undefined. Note, if this is called directly after a `*kbuffer_load_subbuffer()` then it will likely give an unexpected result, as it will return the second event and not the first event. Usually this function is only used to move to the next event and to know if there's any more events to read, and `*kbuffer_read_event()` is always called first.

The function `*kbuffer_read_at_offset()` returns the event located at a given `_offset_` from the beginning of the sub-buffer. This offset can be retrieved by `*kbuffer_curr_offset()`. If `_ts_` points to an unsigned long long, then it will be set to the event at the given offset's timestamp.

If the sub-buffer had missed events before it, then `*kbuffer_missed_events()` will return the non zero. If it returns -1, that means there were missed events, but the exact number of missed events is unknown. If it returns a positive number, then the number of missed events is the return value.

The `*kbuffer_event_size()` function returns the size of the data portion of the current event (the one that would be returned by `*kbuffer_read_event()`).

The `*kbuffer_curr_size()` function returns the entire record size of the current event (the one that would be returned by `*kbuffer_read_event()`). The difference here is that the return value includes the size of the event record meta data that is not part of what is returned by `*kbuffer_read_event()`.

The `*kbuffer_curr_offset()` function returns the offset from the beginning of the sub-buffer of where the current event's meta data for the record begins. The first event will

not be at offset zero. This offset can be used to retrieve the event with `*kbuffer_read_at_offset()`.

The `*kbuffer_curr_index()` function returns the index from the beginning of the data portion of the sub-buffer where the current event's meta data is located. The first event will likely be zero, but may not be if there's a timestamp attached to it.

The `*kbuffer_read_buffer()` function will fill the given `_buffer_` from the `_kbuf_` the same way the kernel would do a read system call. That is, if the length `_len_` is less than the sub buffer size, or the `kbuffer` current index is non-zero, it will start copying from the `_kbuf_` current event and create `_buffer_` as a new sub buffer (with a timestamp and commit header) with that event that was found and including all events after that can fit within `_len_`. The `_len_` must include the size of the sub buffer header as well as the events to include. That is, `_len_` is the allocated size of `_buffer_` that can be filled. The return from this function is the index of the end of the last event that was added. If there are no more events then zero is returned, and if the buffer can not copy any events because `_len_` was too small, then -1 is returned.

## RETURN VALUE

-----

`*kbuffer_read_event()` returns the event that the `_kbuf_` descriptor is currently at, or NULL if the last event was passed (by `*kbuffer_next_event()`).

`*kbuffer_next_event()` returns the next event after the current event or NULL if there are no more events.

`*kbuffer_read_at_offset()` returns the event at a given `_offset_` from the start of the sub-buffer stored in `_kbuf_`, or NULL if there exists no event. Note, `_offset_` only needs to be an offset that lands on the record, or is at the start of it. It does not need to be exactly at the beginning of the record.

`*kbuffer_missed_events()` returns 0 if there were no missed events before loaded sub-buffer.

Returns -1 if there were an unknown number of missed events, or if the number of missed events is known, that number will be returned.

`*kbuffer_event_size()` returns the size of the data payload of the current event of `_kbuf_`.

`*kbuffer_curr_size()` returns the size of the entire record of the current event of `_kbuf_`. This includes the size of the meta data for that record.

`*kbuf_curr_offset()` returns the offset of the current record from the beginning of the `_kbuf_` sub-buffer.

`*kbuf_curr_index()` returns the index of the current record from the beginning of the `_kbuf_` data section.

\*kbuf\_read\_buffer()\* returns the index of the end of the last event that was filled in `_buffer_`. If there are no more events to copy from `_start_` then 0 is returned. If `_len_` is not big enough to hold any events, then -1 is returned.

#### EXAMPLE

```
-----
[source,c]
--
#include <stdio.h>
#include <stdlib.h>
#include <fcntl.h>
#include <unistd.h>
#include <sys/stat.h>

#include
<kbuffer.h>

int main (int argc, char **argv)
{
    unsigned long long ts;
    struct kbuffer *kbuf;
    struct stat st;
    char *buf;
    void *event;
    int save_offset = -1;
    int record_size;
    int offset;
    int index;
    int size;
    int ret;
    int fd;
    int i = 0;

    if (argc < 2) {
        printf("usage: %s raw-subbuffer-page\n", argv[0]);
        printf(" Try: dd count=1 bs=4096 if=/sys/kernel/tracing/per_cpu/cpu0/trace_pipe_raw of=/tmp/file\n");
        exit(0);
    }

    if (stat(argv[1], &st) < 0) {
        perror("stat");
        exit(-1);
    }

    buf = malloc(st.st_size);
    if (!buf) {
        perror("Allocating buffer");
```

```

    exit(-1);
}

fd = open(argv[1], O_RDONLY);
if (fd < 0) {
    perror(argv[1]);
    exit(-1);
}

ret = read(fd, buf, st.st_size);
if (ret < 0) {
    perror("Reading buffer");
    exit(-1);
}
close(fd);

kbuf = kbuffer_alloc(KBUFFER_ENDIAN_SAME_AS_HOST,
    KBUFFER_LSIZE_SAME_AS_HOST);
if (!kbuf) {
    perror("Creating kbuffer");
    exit(-1);
}
ret = kbuffer_load_subbuffer(kbuf, buf);
if (ret < 0) {
    perror("Loading
sub bufer");
    exit(-1);
}

if (kbuffer_subbuffer_size(kbuf) > st.st_size) {
    fprintf(stderr, "kbuffer is bigger than raw size %d > %ld\n",
    kbuffer_subbuffer_size(kbuf), st.st_size);
    exit(-1);
}

ret = kbuffer_missed_events(kbuf);
if (ret) {
    if (ret > 0)
        printf("Missed %d events before this buffer\n", ret);
    else
        printf("Missed unknown number of events before this buffer\n");
}
do {
    event = kbuffer_read_event(kbuf, &ts);
    if (event) {
        record_size = kbuffer_curr_size(kbuf);
        offset = kbuffer_curr_offset(kbuf);
        index = kbuffer_curr_index(kbuf);

```

```

size = kbuffer_event_size(kbuf);

if (i == 20)
    save_offset = offset;
printf(" event %3d ts:%lld\trecord_size:%d size:%d\tindex:%d offset:%d\n",
        i++, ts, record_size, size, index, offset);
event = kbuffer_next_event(kbuf, NULL);
}
} while (event);

if (!event)
    printf("Finished sub buffer\n");

if (save_offset > 0) {
    event = kbuffer_read_at_offset(kbuf, save_offset, &ts);
    if
(!event) {
        fprintf(stderr, "Funny, can't find event 20 at offset %d\n", save_offset);
        exit(-1);
    }
    record_size = kbuffer_curr_size(kbuf);
    offset = kbuffer_curr_offset(kbuf);
    index = kbuffer_curr_index(kbuf);
    size = kbuffer_event_size(kbuf);

    printf("\n saved event 20 ts:%lld\trecord_size:%d size:%d\tindex:%d offset:%d\n\n",
            ts, record_size, size, index, offset);
}
kbuffer_free(kbuf);

return 0;
}

```

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

\*Steven Rostedt\* <rostedt@goodmis.org>, author of \*libtraceevent\*.

--

## REPORTING BUGS

-----

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## RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

## Found

in path(s):

\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-kbuffer-read.txt

No license file was found, but licenses were detected in source scan.

## libtraceevent(3)

=====

## NAME

----

tep\_print\_event - Writes event information into a trace sequence.

## SYNOPSIS

-----

[verse]

--

```
##include <event-parse.h>*
```

```
##include <trace-seq.h>*
```

```
void *tep_print_event*(struct tep_handle pass:[*]_tep_, struct trace_seqpass:[*]_s_, struct tep_record  
pass:[*]_record_, const char pass:[*]_fmt_, ...)
```

--

## DESCRIPTION

-----

The \*tep\_print\_event()\* function parses the event information of the given `_record_` and writes it into the trace sequence `_s_`, according to the format string `_fmt_`. The desired information is specified after the format string.

The `_fmt_` is printf-like format string, following arguments are supported:



[verse]

--

TEP\_PRINT\_PID, "%d" - PID of the event.

TEP\_PRINT\_CPU, "%d" - Event CPU.

TEP\_PRINT\_COMM, "%s" - Event command string.

TEP\_PRINT\_NAME, "%s" - Event name.

TEP\_PRINT\_LATENCY, "%s" - Latency of the event. It prints 4 or more fields -

interrupt state, scheduling state,  
current context, and preemption count.

Field 1 is the interrupt enabled state:

d : Interrupts are disabled

. : Interrupts are enabled

X : The architecture does not support this  
information

Field 2 is the "need resched" state.

N : The task is set to call the scheduler when  
possible, as another higher priority task  
may need to be scheduled in.

. : The task is not set to call the scheduler.

Field 3 is the context state.

. : Normal context

s : Soft interrupt context

h : Hard interrupt context

H : Hard interrupt context which triggered  
during soft interrupt context.

z : NMI context

Z : NMI context which triggered during hard  
interrupt context

Field 4 is the preemption count.

. : The preempt count is zero.

On preemptible kernels (where the task can be scheduled  
out in arbitrary locations while in kernel context), the  
preempt count, when non zero,

will prevent the kernel

from scheduling out the current task. The preempt count  
number is displayed when it is not zero.

Depending on the kernel, it may show other fields  
(lock depth, or migration disabled, which are unique to  
specialized kernels).

TEP\_PRINT\_TIME, %d - event time stamp. A divisor and precision can be  
specified as part of this format string:

"%precision.divisord". Example:

"%3.1000d" - divide the time by 1000 and print the first  
3 digits before the dot. Thus, the time stamp

"123456000" will be printed as "123.456"

TEP\_PRINT\_INFO, "%s" - event information.

TEP\_PRINT\_INFO\_RAW, "%s" - event information, in raw format.

--

## EXAMPLE

-----

[source,c]

--

```
#include <event-parse.h>
```

```
#include <trace-seq.h>
```

...

```
struct trace_seq seq;
```

```
trace_seq_init(&seq);
```

```
struct tep_handle *tep = tep_alloc();
```

...

```
void print_my_event(struct tep_record *record)
```

```
{
```

```
    trace_seq_reset(&seq);
```

```
    tep_print_event(tep, s, record, "%16s-%5d [%03d] %s %6.1000d %s %s",
```

```
        TEP_PRINT_COMM,
```

```
        TEP_PRINT_PID, TEP_PRINT_CPU,
```

```
        TEP_PRINT_LATENCY, TEP_PRINT_TIME, TEP_PRINT_NAME,
```

```
        TEP_PRINT_INFO);
```

```
}
```

...

--

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*trace-seq.h\***

Header file to include in order to have access to trace sequences related APIs.

Trace sequences are used to allow a function to call several other functions to create a string of data to use.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

\*Tzvetomir Stoyanov\* <tz.stoyanov@gmail.com>, author of this man page.

--

## REPORTING BUGS

-----

Report bugs to <linux-trace-devel@vger.kernel.org>

## LICENSE

-----

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## RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

## Found

in path(s):

\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-event\_print.txt

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## libtraceevent(3)

=====

## NAME

----

tep\_find\_common\_field, tep\_find\_field, tep\_find\_any\_field -

Search for a field in an event.

## SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
struct tep_format_field pass:[*]*tep_find_common_field*(struct tep_event pass:[*]_event_, const char pass:[*]_name_);
```

```
struct tep_format_field pass:[*]*tep_find_field*(struct tep_event_orformat pass:[*]_event_, const char pass:[*]_name_);
```

```
struct tep_format_field pass:[*]*tep_find_any_field*(struct tep_event pass:[*]_event_, const char pass:[*]_name_);
```

--

## DESCRIPTION

-----

These functions search for a field with given name in an event. The field returned can be used to find the field content from within a data record.

The `*tep_find_common_field()` function searches for a common field with `_name_` in the `_event_`.

The `*tep_find_field()*` function searches for an event specific field with `_name_` in the `_event_`.

The `*tep_find_any_field()*` function searches for any field with `_name_` in the `_event_`.

#### RETURN VALUE

-----

The `_tep_find_common_field()`, `*tep_find_field()*` and `_tep_find_any_field()` functions return a pointer to the found field, or NULL in case there is no field with the requested name.

#### EXAMPLE

-----

```
[source,c]
--
#include <event-parse.h>
...
void get_htimer_info(struct tep_handle *tep, struct tep_record *record)
{
    struct tep_format_field *field;
    struct tep_event *event;
    long long softexpires;
    int mode;
    int pid;

    event = tep_find_event_by_name(tep, "timer", "hrtimer_start");

    field = tep_find_common_field(event, "common_pid");
    if (field == NULL) {
        /* Cannot find "common_pid" field in the event */
    } else {
        /* Get pid from the data record */
        pid = tep_read_number(tep, record->data + field->offset,
                               field->size);
    }

    field = tep_find_field(event, "softexpires");
    if (field == NULL) {
        /* Cannot find "softexpires" event specific field in the event */
    } else {
        /* Get
softexpires parameter from the data record */
        softexpires = tep_read_number(tep, record->data + field->offset,
                                       field->size);
    }
}
```

```
field = tep_find_any_field(event, "mode");
if (field == NULL) {
    /* Cannot find "mode" field in the event */
} else
{
    /* Get mode parameter from the data record */
    mode = tep_read_number(tep, record->data + field->offset,
        field->size);
}
}
...
--
```

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

--

## REPORTING BUGS

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## LICENSE

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## RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

Found

in path(s):

```
* /opt/cola/permits/2148525021_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-field_find.txt
```

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libtraceevent(3)

=====

NAME

----

tep\_set\_function\_resolver, tep\_reset\_function\_resolver, tep\_register\_function, tep\_register\_print\_string, tep\_get\_function\_count - function related tep APIs

SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
typedef char pass:[*](*tep_func_resolver_t*)(void pass:[*]_priv_, unsigned long long pass:[*]_addrp_, char pass:[**]_modp_);
int *tep_set_function_resolver*(struct tep_handle pass:[*]_tep_, tep_func_resolver_t pass:[*]_func_, void pass:[*]_priv_);
void *tep_reset_function_resolver*(struct tep_handle pass:[*]_tep_);
int *tep_register_function*(struct tep_handle pass:[*]_tep_, char pass:[*]_name_, unsigned long long _addr_, char pass:[*]_modp_);
int *tep_register_print_string*(struct tep_handle pass:[*]_tep_, const char pass:[*]_fmt_, unsigned long long _addr_);
int *tep_get_function_count*(struct tep_handle *_tep_)
--
```

DESCRIPTION

-----

Some tools may have already

a way to resolve the kernel functions. These APIs

allow them to keep using it instead of duplicating all the entries inside.

The `tep_func_resolver_t` type is the prototype of the alternative kernel functions resolver. This function receives a pointer to its custom context (set with the `tep_set_function_resolver()` call) and the address of a kernel function, which has to be resolved. In case of success, it should return the name of the function and its module (if any) in `_modp_`.

The `tep_set_function_resolver()` function registers `_func_` as an alternative kernel functions resolver. The `_tep_` argument is trace event parser context.

The `_priv_` argument is a custom context of the `_func_` function. The function resolver is used by the APIs `tep_find_function(3)`,

`tep_find_function_address(3)`, and `tep_print_func_field()` to resolve

a function address to a function name.

The `*tep_reset_function_resolver()*` function resets the kernel functions resolver to the default function.

The `_tep_` argument is trace event parser context.

These APIs can be used to find function name and start address, by given address. The given address does not have to be exact, it will select the function that would contain it.

The `*tep_register_function()*` function registers a function name mapped to an address and (optional) module. This mapping is used in case the function tracer or events have "%pS" parameter in its format string. It is common to pass in the kallsyms function names with their corresponding addresses with this function. The `_tep_` argument is the trace event parser context. The `_name_` is the name of the function, the string is copied internally. The `_addr_` is the start address of the function. The `_mod_` is the kernel module the function may be in (NULL for none).

The `*tep_register_print_string()*` function registers a string by the address it was stored in the kernel. Some strings internal to the kernel with static address are passed to certain events. The "%s" in the event's format field which has an address needs to know what string would be at that address. The `tep_register_print_string()` supplies the parsing with the mapping between kernel addresses and those strings. The `_tep_` argument is the trace event parser context. The `_fmt_` is the string to register, it is copied internally. The `_addr_` is the address the string was located at.

`*tep_get_function_count*()` returns the number of registered functions in a tep handler.

## RETURN VALUE

-----

The `*tep_set_function_resolver()*` function returns 0 in case of success, or -1 in case of an error.

The `*tep_register_function()*` function returns 0 in case of success. In case of an error -1 is returned, and `errno` is set to the appropriate error number.

The `*tep_register_print_string()*` function returns 0 in case of success. In case of an error -1 is returned, and `errno` is set to the appropriate error number.

## EXAMPLE

-----

[source,c]

--

```

#include <event-parse.h>
...
struct tep_handle *tep =
    tep_alloc();
...
char *my_resolve_kernel_addr(void *context,
    unsigned long long *addrp, char **modp)
{
    struct db *function_database = context;
    struct symbol *sym = sql_lookup(function_database, *addrp);

    if (!sym)
        return NULL;

    *modp = sym->module_name;
    return sym->name;
}

void show_function( unsigned long long addr)
{
    unsigned long long fstart;
    const char *fname;

    if (tep_set_function_resolver(tep, my_resolve_kernel_addr,
        function_database) != 0) {
        /* failed to register my_resolve_kernel_addr */
    }

    /* These APIs use my_resolve_kernel_addr() to resolve the addr */
    fname = tep_find_function(tep, addr);
    fstart = tep_find_function_address(tep, addr);

    /*
     * addr is in function named fname, starting at fstart address,
     * at offset (addr - fstart)
     */

    tep_reset_function_resolver(tep);

}

...
if (tep_register_function(tep, "kvm_exit",
    (unsigned long long) 0x12345678, "kvm") != 0) {
    /* Failed to register kvm_exit address mapping */
}

...
if (tep_register_print_string(tep,

```



```
"print string",
(unsigned long long) 0x87654321, NULL) != 0) {
/* Failed to register "print string" address mapping */
}
...
--
```

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

--

## REPORTING BUGS

-----

Report bugs to <linux-trace-devel@vger.kernel.org>

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## RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

Found in path(s):

**\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-func\_apis.txt**

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libtraceevent(3)

=====

NAME

----

tep\_print\_field\_content, tep\_print\_fields, tep\_print\_num\_field, tep\_print\_func\_field, tep\_record\_print\_fields,  
tep\_record\_print\_selected\_fields -  
Print the field content.

SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
*#include <trace-seq.h>*
```

```
void *tep_print_field_content*(struct trace_seq pass:[*]_s_, void pass:[*]_data_, int size, struct tep_format_field  
pass:[*]_field_);  
void *tep_print_fields*(struct trace_seq pass:[*]_s_, void pass:[*]_data_, int _size_, struct tep_event  
pass:[*]_event_);  
int *tep_print_num_field*(struct trace_seq pass:[*]_s_, const char pass:[*]_fmt_, struct tep_event pass:[*]_event_,  
const char pass:[*]_name_, struct tep_record pass:[*]_record_, int _err_);  
int *tep_print_func_field*(struct trace_seq pass:[*]_s_, const char pass:[*]_fmt_, struct tep_event pass:[*]_event_,  
const char pass:[*]_name_, struct tep_record pass:[*]_record_, int  
_err_);  
void *tep_record_print_fields*(struct trace_seq pass:[*]_s_, struct tep_record pass:[*]_record_, struct tep_event  
pass:[*]_event_);  
void *tep_record_print_selected_fields*(struct trace_seq pass:[*]_s_, struct tep_record pass:[*]_record_, struct  
tep_event pass:[*]_event_, int _select_mask_);  
--
```

DESCRIPTION

-----

These functions print recorded field's data, according to the field's type.

The `*tep_print_field_content()` function extracts from the recorded raw `_data_` value of the `_field_` and prints it into `_s_`, according to the field type.

The `*tep_print_fields()` prints each field name followed by the record's field value according to the field's type:

[verse]

--

```
"field1_name=field1_value field2_name=field2_value ..."
```

--

It iterates all fields of the `_event_`, and calls `*tep_print_field_content()` for each of them.

The `*tep_print_num_field()` function prints a numeric field with given format string. A search is performed in the `_event_` for a field with `_name_`. If such field

is found, its value is extracted from the `_record_` and is printed in the `_s_`, according to the given format string `_fmt_`. If the argument `_err_` is non-zero, and an error occurs - it is printed in the `_s_`.

The `*tep_print_func_field()*` function prints a function field with given format string. A search is performed in the `_event_` for a field with `_name_`. If such field is found, its value is extracted from the `_record_`. The value is assumed to be a function address, and a search is performed to find the name of this function. The function name (if found) and its address are printed in the `_s_`, according to the given format string `_fmt_`. If the argument `_err_` is non-zero, and an error occurs - it is printed in `_s_`.

The `*tep_record_print_fields()*` prints the field's name followed by its value for all record's field.

The `*tep_record_print_selected_fields()*` prints the field's name followed by its value for selected subset of record field. The fields to be printed are defined by the `_select_mask_` bit mask.

#### RETURN VALUE

-----

The `*tep_print_num_field()*` and `*tep_print_func_field()*` functions return 1 on success, -1 in case of an error or 0 if the print buffer `_s_` is full.

#### EXAMPLE

-----

[source,c]

--

```
#include <event-parse.h>
```

```
#include <trace-seq.h>
```

...

```
struct tep_handle *tep = tep_alloc();
```

...

```
struct trace_seq seq;
```

```
trace_seq_init(&seq);
```

```
struct tep_event *event = tep_find_event_by_name(tep, "timer", "hrtimer_start");
```

...

```
void process_record(struct tep_record *record)
```

```
{
```

```
    struct tep_format_field *field_pid = tep_find_common_field(event, "common_pid");
```

```
    trace_seq_reset(&seq);
```

```
    /* Print the value of "common_pid" */
```

```
    tep_print_field_content(&seq, record->data, record->size, field_pid);
```

```
    /* Print all fields of the "hrtimer_start" event */
```

```
tep_print_fields(&seq, record->data, record->size, event);

/* Print the value of "expires" field with custom format string */
tep_print_num_field(&seq, " timer expires in %llu ", event, "expires", record, 0);

/* Print the
address and the name of "function" field with custom format string */
tep_print_func_field(&seq, " timer function is %s ", event, "function", record, 0);
}
...
--
```

## FILES

-----

[verse]

--

**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*trace-seq.h\***

Header file to include in order to have access to trace sequences related APIs.

Trace sequences are used to allow a function to call several other functions to create a string of data to use.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>, author of this man page.

--

## REPORTING BUGS

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## RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

Found

in path(s):

\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-field\_print.txt

No license file was found, but licenses were detected in source scan.

libtraceevent(3)

=====

NAME

----

tep\_find\_function, tep\_find\_function\_address, tep\_find\_function\_info - Find function name / start address.

SYNOPSIS

-----

[verse]

--

```
*#include <event-parse.h>*
```

```
const char pass:[*]*tep_find_function*(struct tep_handle pass:[*]_tep_, unsigned long long _addr_);
unsigned long long *tep_find_function_address*(struct tep_handle pass:[*]_tep_, unsigned long long _addr_);
int *tep_find_function_info*(struct tep_handle pass:[*]_tep_, unsigned long long _addr_, const char
pass:[**]_name_,
    unsigned long long pass:[*]_start_, unsigned long pass:[*]_size_);
```

--

DESCRIPTION

-----

These functions can be used to find function name and start address, by given address. The given address does not have to be exact, it will select the function that would contain it.

The `*tep_find_function()*` function returns the function name, which contains the given address `_addr_`. The `_tep_` argument is the trace event parser context.

The `*tep_find_function_address()*` function returns the function start address, by given address `_addr_`. The `_addr_` does not have to be exact, it will select the function that would contain it. The `_tep_` argument is the trace event parser context.

The `*tep_find_function_info()*` function retrieves the `_name_`, starting address (`_start_`), and the function text `_size_` of the function at `_address_`, if it is found. Note, if the `_tep_` handle has a function resolver (used by perf), then `_size_` is set to zero.

RETURN VALUE

-----

The `*tep_find_function()*` function returns the function name, or NULL in case it cannot be found.

The `*tep_find_function_address()*` function returns the function start address, or 0 in case it cannot be found.

The `*tep_find_function_info()*` function returns 1 if a function is found for the given address, or 0 if it is not.

#### EXAMPLE

-----

[source,c]

--

```
#include <event-parse.h>
```

...

```
struct tep_handle *tep = tep_alloc();
```

...

```
void
```

```
show_function_name(unsigned long long addr)
```

```
{
```

```
const char *fname = tep_find_function(tep, addr);
```

```
if (fname)
```

```
    printf("Found function %s at 0x%0llx\n", fname, addr);
```

```
else
```

```
    printf("No function found at 0x%0llx\n", addr);
```

```
}
```

```
void show_function_start_addr(unsigned long long addr)
```

```
{
```

```
const char *fname = tep_find_function(tep, addr);
```

```
unsigned long long fstart;
```

```
if (!fname) {
```

```
    printf("No function found at 0x%0llx\n", addr);
```

```
    return;
```

```
}
```

```
fstart = tep_find_function_address(tep, addr);
```

```
printf("Function %s at 0x%llx starts at 0x%0llx\n",  
      fname, addr, fstart);
```

```
}
```

```
void show_function_info(unsigned long long addr)
```

```
{
```

```
const char *fname;
```

```
unsigned long long fstart;
```

```
unsigned long size;
```

```
ret = tep_find_function_info(tep, addr, &fname, &fstart, &size);
if (!ret) {
    printf("No function found at 0x%0lx\n", addr);
    return;
}

printf("Function %s at 0x%lx starts at 0x%0lx and is %ld in size\n",
       fname, addr, fstart, size);
}
...
--
```

## FILES

-----

[verse]

--

\*event-parse.h\*

Header

file to include in order to have access to the library APIs.

\*-ltraceevent\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*libtraceevent\*(3), \*trace-cmd\*(1)

## AUTHOR

-----

[verse]

--

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<https://git.kernel.org/pub/scm/libs/libtrace/libtraceevent.git/>

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\* /opt/cola/permits/2148525021\_1724000791.6100943/0/libtraceevent-1-8-2-orig-tar-xz/libtraceevent-1.8.2/Documentation/libtraceevent-func\_find.txt

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libtraceevent(3)

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NAME

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kbuffer\_alloc, kbuffer\_dup, kbuffer\_free, kbuffer\_load\_subbuffer, kbuffer\_subbuffer, kbuffer\_refresh, kbuffer\_subbuffer\_size, kbuffer\_start\_of\_data - Creating of kbuffer element to parse the Linux kernel tracing ring buffer

SYNOPSIS

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[verse]

--

```
*#include <kbuffer.h>*
```

```
enum kbuffer_endian {
    KBUFFER_ENDIAN_BIG,
    KBUFFER_ENDIAN_LITTLE,
    KBUFFER_ENDIAN_SAME_AS_HOST,
};
```

```
enum kbuffer_long_size {
    KBUFFER_LSIZE_4,
    KBUFFER_LSIZE_8,
    KBUFFER_LSIZE_SAME_AS_HOST,
};
```

```
struct kbuffer;
struct tep_handle;
```

```
struct kbuffer pass:[*]kbuffer_alloc*(enum kbuffer_long_size _size_, enum kbuffer_endian _endian_);
struct kbuffer pass:[*]kbuffer_dup*(struct kbuffer pass:[*]_kbuf_);
void *kbuffer_free*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_load_subbuffer*(struct kbuffer pass:[*]_kbuf_, void pass:[*]_subbuffer_);
int *kbuffer_subbuffer_size*(struct kbuffer pass:[*]_kbuf_);
int *kbuffer_refresh*(struct
    kbuffer pass:[*]_kbuf_);
int *kbuffer_start_of_data*(struct kbuffer pass:[*]_kbuf_);
void pass:[*]kbuffer_subbuffer*(struct kbuffer pass:[*]_kbuf);
--
```

DESCRIPTION

-----

These functions create a `_kbuffer_` handle that can be used to parse the raw sub buffers



of the Linux kernel tracing ring buffer. The ring buffer is found in the `tracefs` directory, and can be retrieved by `*tracefs_instance_get_file(3)*` at `*per_cpu/cpuX/trace_pipe_raw*` where `*X*` is replaced by the per CPU number of the specified ring buffer. The ring buffer inside the kernel is split up per CPU, such that the raw ring buffer must be retrieved per CPU as well.

The `*kbuffer_alloc()*` will create a descriptor that can be used to manage a sub buffer read by the ring buffer. The `_size_` parameter denotes what the word size is for the given buffer (note, this works from reading raw data from machines other than the machine that is calling this function). The `_endian_` denotes the endian for the machine.

If

`_endian_` is set to `_KBUFFER_ENDIAN_SAME_AS_HOST_` the endian will be set to the same as the host endianness, which is useful when the application is reading the ring buffer data directly from the same machine it is running on.

If `_size_` is set to `_KBUFFER_LSIZE_SAME_AS_HOST_`, if the word size is 8, it will set the `kbuffer` descriptor to long size of 8. But if the size is 4, then it will then perform a `*uname(2)*` call, and if the `_machine_` field has the string "64" in it, it will be set to 8 byte long size and not 4 byte. This is because the ring buffer long size is dependent on the kernel and not user space.

The `*kbuffer_dup()*` function will duplicate an existing `kbuffer` structure with an allocated new one. It will have all the properties of the passed in `_kbuf_`, including pointing to the same subbuffer that was loaded in the `_kbuf_`. It must be freed with `*kbuffer_free()*`.

The `*kbuffer_free()*` function will free the resources created by `*kbuffer_alloc()*`.

The `*kbuffer_load_subbuffer()*`

will take a `_subbuffer_` which is a raw data blob from the `tracefs *trace_pipe_raw*` file. The Linux tracing ring buffer is broken up into sub buffers. Each sub buffer is as stand alone data segment that has all the information to split out the individual events and time stamps. This sub buffer is what `kbuffer` uses to walk the events.

The `*kbuffer_subbuffer_size()*` returns the location of the end of the last event on the sub-buffer. It does not return the size of the sub-buffer itself.

The `*kbuffer_refresh()*` is to be used if more writes were done on the loaded `kbuffer` where the size of the `kbuffer` needs to be refreshed to be able to read the new events that were written since the last `*kbuffer_load_subbuffer()*` was called on it.

Note, no memory barriers are implemented with this function and any synchronization with the writer is the responsibility of the application.

The `*kbuffer_start_of_data()*` function returns the offset of where the actual

data load of the sub-buffer begins.

The `*kbuffer_subbuffer()` function returns the pointer to the currently loaded subbuffer. That is, the last subbuffer that was loaded by `*kbuffer_load_subbuffer()`. If no subbuffer was loaded NULL is returned.

## RETURN VALUE

-----

`*kbuffer_alloc()` returns an allocated kbuffer descriptor or NULL on error. The returned descriptor must be freed with `*kbuffer_free()`

`*kbuffer_load_subbuffer()` returns 0 on success and -1 on error.

`*kbuffer_subbuffer_size()` returns the index on the subbuffer where the end of the last event is located.

`*kbuffer_start_of_data()` returns the offset of where the data begins on the sub-buffer loaded in `_kbuf_`.

`*kbuffer_subbuffer()` returns the last loaded subbuffer to `_kbuf_` that was loaded by `*kbuffer_load_subbuffer()` or NULL if none was loaded.

`*kbuffer_refresh()` returns 0 on success and -1 if `_kbuf_` is NULL or it does not have a subbuffer loaded via `*kbuffer_load_subbuffer()`.

## EXAMPLE

-----

[source,c]

--

```
#include <stdio.h>
```

```
#include
```

```
<stdlib.h>
```

```
#include <fcntl.h>
```

```
#include <unistd.h>
```

```
#include <sys/stat.h>
```

```
#include <kbuffer.h>
```

```
int main (int argc, char **argv)
```

```
{
```

```
    unsigned long long ts;
```

```
    struct kbuffer *kbuf;
```

```
    struct stat st;
```

```
    char *buf;
```

```
    void *event;
```

```
    int ret;
```

```
    int fd;
```

```

int i = 0;

if (argc < 2) {
    printf("usage: %s raw-subbuffer-page\n", argv[0]);
    printf(" Try: dd count=1 bs=4096 if=/sys/kernel/tracing/per_cpu/cpu0/trace_pipe_raw of=/tmp/file\n");
    exit(0);
}

if (stat(argv[1], &st) < 0) {
    perror("stat");
    exit(-1);
}

buf = malloc(st.st_size);
if (!buf) {
    perror("Allocating buffer");
    exit(-1);
}

fd = open(argv[1], O_RDONLY);
if (fd < 0) {
    perror(argv[1]);
    exit(-1);
}

ret = read(fd, buf, st.st_size);
if (ret < 0) {
    perror("Reading buffer");
    exit(-1);
}
close(fd);

kbuf = kbuffer_alloc(KBUFFER_ENDIAN_SAME_AS_HOST,
    KBUFFER_LSIZE_SAME_AS_HOST);
if (!kbuf) {
    perror("Creating kbuffer");
    exit(-1);
}
ret = kbuffer_load_subbuffer(kbuf, buf);
if (ret < 0) {
    perror("Loading
sub bufer");
    exit(-1);
}

if (kbuffer_subbuffer_size(kbuf) > st.st_size) {
    fprintf(stderr, "kbuffer is bigger than raw size %d > %ld\n",
    kbuffer_subbuffer_size(kbuf), st.st_size);
}

```

```

    exit(-1);
}

printf("Kbuffer data starts at %d\n", kbuffer_start_of_data(kbuf));
do {
    event = kbuffer_read_event(kbuf, &ts);
    if (event) {
        printf(" event %3d ts:%lld\n", i++, ts);
        event = kbuffer_next_event(kbuf, NULL);
    }
} while (event);

if (!event)
    printf("Finished sub buffer\n");

kbuffer_free(kbuf);

return 0;
}

```

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## FILES

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[verse]

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**\*event-parse.h\***

Header file to include in order to have access to the library APIs.

**\*-ltraceevent\***

Linker switch to add when building a program that uses the library.

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## SEE ALSO

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**\*libtraceevent\*(3)**, **\*trace-cmd\*(1)**

## AUTHOR

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[verse]

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**\*Steven Rostedt\*** <rostedt@goodmis.org>, author of **\*libtraceevent\***.

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<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

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# 1.268 python-launchpadlib 1.11.0-6

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# 1.269 newt 0.52.24-2ubuntu2

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Version 2, June 1991

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<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice

That's all there is to it!

## 1.270 pyopenssl 23.2.0-1

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# 1.271 pci-ids 0.0~2024.03.31-1

## 1.271.1 Available under license :

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Found in path(s):

```
* /opt/cola/permits/2148525668_1730382599.4846385/0/pci-ids-0-0-2024-03-31-orig-tar-xz/pci-ids-0.0~2024.03.31/README
```

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```
#  
# List of PCI ID's  
#  
# Version: 2024.03.31  
# Date: 2024-03-31 03:15:02  
#  
# Maintained by Albert Pool, Martin Mares, and other volunteers from  
# the PCI ID Project at https://pci-ids.ucw.cz/.  
#  
# New data are always welcome, especially if they are accurate. If you have  
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#  
  
# Vendors, devices and subsystems. Please keep sorted.
```

```

# Syntax:
# vendor vendor_name
# device device_name <-- single tab
# subvendor subdevice subsystem_name <-- two tabs

0001 SafeNet (wrong ID)
0010 Allied Telesis, Inc (Wrong ID)
# This is a relabelled RTL-8139
8139
  AT-2500TX V3 Ethernet
0014 Loongson Technology LLC
7a00 Hyper Transport Bridge Controller
7a02 APB (Advanced Peripheral Bus) Controller
7a03 Gigabit Ethernet Controller
7a04 OTG USB Controller
7a05 Vivante GPU (Graphics Processing Unit)
7a06 DC (Display Controller)
7a07 HDA (High Definition Audio) Controller
7a08 SATA AHCI Controller
7a09 PCI-to-PCI Bridge
7a0b SPI Controller
7a0c LPC Controller
7a0f DMA (Direct Memory Access) Controller
# Found on some boards with two sockets
7a10 Hyper Transport Bridge Controller
7a14 EHCI USB Controller
7a15 Vivante GPU (Graphics Processing Unit)
7a19 PCI-to-PCI Bridge
7a24 OHCI USB Controller
# Found on 7A2000 PCH
7a25 LG100 GPU
7a29 PCI-to-PCI Bridge
# Found on 7A2000 PCH
7a36 Display Controller
0018 Fn-Link Technology Limited
6252 6252CPUB 802.11ax PCIe Wireless Network Adapter
001c PEAK-System Technik GmbH
0001 PCAN-PCI CAN-Bus controller
  001c 0004 2 Channel CAN Bus SJC1000
  001c 0005
    2 Channel CAN Bus SJC1000 (Optically Isolated)
003d Lockheed Martin-Marietta Corp
# Real TJN ID is e159, but they got it wrong several times --mj
0059 Tiger Jet Network Inc. (Wrong ID)
0070 Hauppauge computer works Inc.
  7801 WinTV HVR-1800 MCE
0071 Nebula Electronics Ltd.
0095 Silicon Image, Inc. (Wrong ID)

```



0680 Ultra ATA/133 IDE RAID CONTROLLER CARD  
# Wrong ID used in subsystem ID of the TELES.S0/PCI 2.x ISDN adapter  
00a7 Teles AG (Wrong ID)  
0100 nCipher Security  
0123 General Dynamics  
0128 Dell (wrong ID)  
# 018a is not LevelOne but there is a board misprogrammed  
018a LevelOne  
0106 FPC-0106TX misprogrammed [RTL81xx]  
01de Oxide Computer Company  
0000 Propolis NVMe Controller  
0001 Propolis xHCI Controller  
0002 Propolis PCI-PCI Bridge  
# probably misprogrammed Intel Atom C2338 on Dell 0K8Y0N board  
0200 Dell (wrong ID)  
# 021b is not Compaq but there is a board misprogrammed  
021b Compaq Computer Corporation  
8139 HNE-300 (RealTek RTL8139c) [iPaq Networking]  
025e  
Solidigm  
0b60 NVMe DC SSD [Sentinel Rock Plus controller]  
025e 8008 NVMe DC SSD U.2 15mm [D7-P5510]  
025e 8208 NVMe DC SSD U.2 15mm [D7-P5810]  
025e 8d1d NVMe DC SSD E1.L 9.5mm [D5-P5316]  
025e 9008 NVMe DC SSD U.2 15mm [D7-P5520]  
025e 900c NVMe DC SSD E1.S 9.5mm [D7-P5520]  
025e 900d NVMe DC SSD E1.S 15mm [D7-P5520]  
025e 901c NVMe DC SSD E1.L 9.5mm [D7-P5520]  
025e 9108 NVMe DC SSD U.2 15mm [D7-P5620]  
025e c008 NVMe DC SSD U.2 15mm [D5-P5530]  
025e d408 NVMe DC SSD U.2 15mm [D5-P5430]  
025e d40c NVMe DC SSD E1.S 9.5mm [D5-P5430]  
025e d419 NVMe DC SSD E3.S 7.5mm [D5-P5430]  
025e d808 NVMe DC SSD U.2 15mm [D5-P5336]  
025e d819 NVMe DC SSD E3.S 7.5mm [D5-P5336]  
025e d81c NVMe DC SSD E1.L 18mm [D5-P5336]  
025e d81d NVMe DC SSD E1.L 9.5mm [D5-P5336]  
0b70 NVMe DC SSD [Yorktown controller]  
2b59 NVMe DC SSD [Atomos Prime]  
f1ab P41 Plus NVMe SSD (DRAM-less) [Echo Harbor]  
f1ac P44 Pro NVMe SSD [Hollywood Beach]  
0270 Hauppauge computer works Inc.  
(Wrong ID)  
0291 Davicom Semiconductor, Inc. (Wrong ID)  
# SpeedStream is Efficient Networks, Inc, a Siemens Company  
02ac SpeedStream  
1012 1012 PCMCIA 10/100 Ethernet Card [RTL81xx]  
02e0 XFX Pine Group Inc. (Wrong ID)

0303 Hewlett-Packard Company (Wrong ID)  
0308 ZyXEL Communications Corporation (Wrong ID)  
0315 SK-Electronics Co., Ltd.  
0357 TTTech Computertechnik AG (Wrong ID)  
000a TTP-Monitoring Card V2.0  
0432 SCM Microsystems, Inc.  
0001 Pluto2 DVB-T Receiver for PCMCIA [EasyWatch MobilSet]  
0497 Dell Inc. (wrong ID)  
060e Lightelligence  
0001 Hummingbird ES  
0675 Dynalink  
1700 IS64PH ISDN Adapter  
1702 IS64PH ISDN Adapter  
1703 ISDN Adapter (PCI Bus, DV, W)  
1704 ISDN Adapter (PCI Bus, D, C)  
0721 Sapphire, Inc.  
0731 Jingjia Microelectronics Co Ltd  
7200 JM7200 Series GPU  
0731 7201 JM7201  
0731 7202 JM7202  
0731 7208 JM7200  
0731 7212 JM7200  
0731 7214 JM7500  
0731 7215 JM7200  
9100 JM9100  
0731 9101 JM9100  
0731 9102 JM9100-I  
0731 9103 JM9100M  
910a  
JH910  
0731 910a JH910  
0731 910b JH910-I  
0731 910c JH910-M  
9200 JM9200  
920a JH920  
0731 920a JH920  
0731 920b JH920-I  
0731 920c JH920-M  
920b JH920-I  
920c JH920-M  
9210 JM9210  
0731 9210 JM9210  
0731 9211 JM9210-I  
9211 JM9210-I  
9230 JM9230  
0731 9230 JM9230  
0731 9231 JM9230-I  
9231 JM9231-I

9250 JM9250  
0731 9250 JM9250  
930a JH930-I  
0731 930a JH930-I  
0731 930b JH930-M  
0731 930c JH930  
930b JH930-M  
0777 Ubiquiti Networks, Inc.  
0795 Wired Inc.  
6663 Butane II (MPEG2 encoder board)  
6666 MediaPress (MPEG2 encoder board)  
07d1 D-Link System Inc  
0824 T1042 [Freescale]  
0925 VIA Technologies, Inc. (Wrong ID)  
0a89 BREA Technologies Inc  
0b0b Rhino Equipment Corp.  
0105 R1T1  
0205 R4FXO  
0206 RCB4FXO 4-channel FXO analog telephony card  
0305 R4T1  
0405 R8FXX  
0406 RCB8FXX 8-channel modular analog telephony card  
0505 R24FXX  
0506 RCB24FXS 24-Channel FXS analog telephony card  
0605 R2T1  
0705 R24FXS  
0706 RCB24FXO 24-Channel  
FXO analog telephony card  
0905 R1T3 Single T3 Digital Telephony Card  
0906 RCB24FXX 24-channel modular analog telephony card  
0a06 RCB672FXX 672-channel modular analog telephony card  
0bae Bachmann electronic GmbH  
0ccd Preferred Networks, Inc.  
0110 MN-Core  
0120 MN-Core 2  
0ccd 0000 MN-Core 2 16GB  
0ccd 0010 MN-Core 2 32GB  
0200 MN-Core Direct Connect  
0201 MN-Core 2 Middle-plane  
0e11 Compaq Computer Corporation  
0001 PCI to EISA Bridge  
0002 PCI to ISA Bridge  
0046 Smart Array 64xx  
0e11 4091 Smart Array 6i  
0e11 409a Smart Array 641  
0e11 409b Smart Array 642  
0e11 409c Smart Array 6400  
0e11 409d Smart Array 6400 EM

0049 NC7132 Gigabit Upgrade Module  
004a NC6136 Gigabit Server Adapter  
005a Remote Insight II board - Lights-Out  
007c NC7770 1000BaseTX  
007d NC6770 1000BaseTX  
0085 NC7780 1000BaseTX  
00b1 Remote Insight II board - PCI device  
00bb NC7760  
00ca NC7771  
00cb NC7781  
00cf NC7772  
00d0 NC7782  
00d1 NC7783  
00e3 NC7761  
0508  
Netelligent 4/16 Token Ring  
1000 Triflex/Pentium Bridge, Model 1000  
2000 Triflex/Pentium Bridge, Model 2000  
3032 QVision 1280/p  
3033 QVision 1280/p  
3034 QVision 1280/p  
4000 4000 [Triflex]  
4040 Integrated Array  
4048 Compaq Raid LC2  
4050 Smart Array 4200  
4051 Smart Array 4250ES  
4058 Smart Array 431  
4070 Smart Array 5300  
4080 Smart Array 5i  
4082 Smart Array 532  
4083 Smart Array 5312  
4091 Smart Array 6i  
409a Smart Array 641  
409b Smart Array 642  
409c Smart Array 6400  
409d Smart Array 6400 EM  
6010 HotPlug PCI Bridge 6010  
7020 USB Controller  
a0ec Fibre Channel Host Controller  
a0f0 Advanced System Management Controller  
0e11 b0f3 ProLiant DL360  
a0f3 Triflex PCI to ISA Bridge  
a0f7 PCI Hotplug Controller  
8086 002a PCI Hotplug Controller A  
8086 002b PCI Hotplug Controller B  
a0f8 ZFMicro Chipset USB  
a0fc FibreChannel HBA Tachyon  
ae10 Smart-2/P RAID Controller

0e11 4030 Smart-2/P Array Controller  
0e11 4031 Smart-2SL Array  
Controller  
0e11 4032 Smart Array 3200 Controller  
0e11 4033 Smart Array 3100ES Controller  
0e11 4034 Smart Array 221 Controller  
ae29 MIS-L  
ae2a MPC  
ae2b MIS-E  
ae31 System Management Controller  
ae32 Netelligent 10/100 TX PCI UTP  
ae33 Triflex Dual EIDE Controller  
ae34 Netelligent 10 T PCI UTP  
ae35 Integrated NetFlex-3/P  
ae40 Netelligent Dual 10/100 TX PCI UTP  
ae43 Netelligent Integrated 10/100 TX UTP  
ae69 CETUS-L  
ae6c Northstar  
ae6d NorthStar CPU to PCI Bridge  
b011 Netelligent 10/100 TX Embedded UTP  
b012 Netelligent 10 T/2 PCI UTP/Coax  
b01e NC3120 Fast Ethernet NIC  
b01f NC3122 Fast Ethernet NIC  
b02f NC1120 Ethernet NIC  
b030 Netelligent 10/100 TX UTP  
b04a 10/100 TX PCI Intel WOL UTP Controller  
b060 Smart Array 5300 Controller  
b0c6 NC3161 Fast Ethernet NIC  
b0c7 NC3160 Fast Ethernet NIC  
b0d7 NC3121 Fast Ethernet NIC  
b0dd NC3131 Fast Ethernet NIC  
b0de NC3132 Fast Ethernet Module  
b0df NC6132 Gigabit Module  
b0e0 NC6133 Gigabit Module  
b0e1  
NC3133 Fast Ethernet Module  
b123 NC6134 Gigabit NIC  
b134 NC3163 Fast Ethernet NIC  
b13c NC3162 Fast Ethernet NIC  
b144 NC3123 Fast Ethernet NIC  
b163 NC3134 Fast Ethernet NIC  
b164 NC3165 Fast Ethernet Upgrade Module  
b178 Smart Array 5i/532  
0e11 4080 Smart Array 5i  
0e11 4082 Smart Array 532  
0e11 4083 Smart Array 5312  
b1a4 NC7131 Gigabit Server Adapter  
b200 Memory Hot-Plug Controller

b203 Integrated Lights Out Controller  
103c 3305 iLO2  
b204 Integrated Lights Out Processor  
103c 3305 iLO2  
c000 Remote Insight Lights-Out Edition  
f130 NetFlex-3/P ThunderLAN 1.0  
f150 NetFlex-3/P ThunderLAN 2.3  
0e55 HaSoTec GmbH  
0eac SHF Communication Technologies AG  
0008 Ethernet Powerlink Managing Node 01  
0f62 Acrox Technologies Co., Ltd.  
1000 Broadcom / LSI  
0001 53c810  
1000 1000 LSI53C810AE PCI to SCSI I/O Processor  
0002 53c820  
0003 53c825  
1000 1000 LSI53C825AE PCI to SCSI I/O Processor (Ultra Wide)  
0004 53c815  
0005 53c810AP  
0006 53c860  
1000  
1000 LSI53C860E PCI to Ultra SCSI I/O Processor  
000a 53c1510  
0e11 b143 Integrated Dual Channel Wide Ultra2 SCSI Controller  
1000 1000 LSI53C1510 PCI to Dual Channel Wide Ultra2 SCSI Controller (Nonintelligent mode)  
000b 53C896/897  
0e11 6004 EOB003 Series SCSI host adapter  
1000 1000 LSI53C896/7 PCI to Dual Channel Ultra2 SCSI Multifunction Controller  
1000 1010 LSI22910 PCI to Dual Channel Ultra2 SCSI host adapter  
1000 1020 LSI21002 PCI to Dual Channel Ultra2 SCSI host adapter  
13e9 1000 6221L-4U (Dual U2W SCSI, dual 10/100TX, graphics)  
000c 53c895  
1000 1010 LSI8951U PCI to Ultra2 SCSI host adapter  
1000 1020 LSI8952U PCI to Ultra2 SCSI host adapter  
1de1 3906 DC-390U2B SCSI adapter  
1de1 3907 DC-390U2W  
000d 53c885  
000f 53c875  
0e11 7004 Embedded Ultra Wide SCSI Controller  
1000 1000 LSI53C876/E PCI to Dual Channel SCSI Controller  
1000 1010 LSI22801 PCI to Dual Channel Ultra SCSI host adapter  
1000 1020 LSI22802 PCI to Dual Channel  
Ultra SCSI host adapter  
1092 8760 FirePort 40 Dual SCSI Controller  
1775 10d0 V5D Single Board Computer Wide Ultra SCSI  
1775 10d1 V5D Single Board Computer Ultra SCSI  
1de1 3904 DC390F/U Ultra Wide SCSI Adapter  
4c53 1000 CC7/CR7/CP7/VC7/VP7/VR7 mainboard

4c53 1050 CT7 mainboard  
0010 53C1510  
0e11 4040 Integrated Smart Array Controller  
0e11 4048 RAID LC2 Controller  
1000 1000 53C1510 PCI to Dual Channel Wide Ultra2 SCSI Controller (Intelligent mode)  
0012 53c895a  
1000 1000 LSI53C895A PCI to Ultra2 SCSI Controller  
0013 53c875a  
1000 1000 LSI53C875A PCI to Ultra SCSI Controller  
0014 MegaRAID Tri-Mode SAS3516  
1000 9460 MegaRAID 9460-16i  
1000 9480 MegaRAID 9480-8i8e  
1000 9481 MegaRAID 9480-8e  
1028 1f3a PERC H745 Adapter  
1028 1f3b PERC H745 Front  
1028 1fd4 PERC H745P MX  
1137 020e UCSC-RAID-M5 12G Modular RAID Controller  
1d49 0602 ThinkSystem RAID 930-16i 4GB Flash PCIe 12Gb Adapter  
1d49 0604 ThinkSystem RAID 930-8e 4GB Flash PCIe  
12Gb Adapter  
1d49 0607 ThinkSystem RAID 930-16i 8GB Flash PCIe 12Gb Adapter  
8086 352d Integrated RAID Module RMSP3AD160F  
8086 9460 RAID Controller RSP3TD160F  
8086 9480 RAID Controller RSP3MD088F  
0015 MegaRAID Tri-Mode SAS3416  
1000 9441 MegaRAID 9440-16i  
1028 1f3c PERC H345 Adapter  
1028 1f3d PERC H345 Front  
1d49 0503 ThinkSystem RAID 530-16i PCIe 12Gb Adapter  
0016 MegaRAID Tri-Mode SAS3508  
1000 9461 MegaRAID 9460-8i  
1000 9462 MegaRAID 9460-4i  
1000 9463 MegaRAID 9365-28i  
1000 9464 MegaRAID 9365-24i  
1028 1fc9 PERC H840 Adapter  
1028 1fcb PERC H740P Adapter  
1028 1fcd PERC H740P Mini  
1028 1fcf PERC H740P Mini  
1d49 0601 ThinkSystem RAID 930-8i 2GB Flash PCIe 12Gb Adapter  
1d49 0603 ThinkSystem RAID 930-24i 4GB Flash PCIe 12Gb Adapter  
8086 352e Integrated RAID Module RMSP3CD080F  
8086 352f Integrated RAID Module RMSP3HD080E  
8086 9461 RAID Controller RSP3DD080F  
0017 MegaRAID Tri-Mode SAS3408  
1000 9440 MegaRAID 9440-8i  
1000  
9442 MegaRAID 9440-4i  
1d49 0500 ThinkSystem RAID 530-8i PCIe 12Gb Adapter

1d49 0502 ThinkSystem RAID 530-8i Dense Adapter  
8086 3528 Integrated RAID RMSP3LD060  
8086 3529 Integrated RAID RMSP3LD060  
8086 9441 RAID Controller RSP3WD080E  
001b MegaRAID Tri-Mode SAS3504  
1d49 0605 ThinkSystem RAID 930-4i 2GB Flash Flex Adapter  
001c MegaRAID Tri-Mode SAS3404  
1d49 0501 ThinkSystem RAID 530-4i Flex Adapter  
0020 53c1010 Ultra3 SCSI Adapter  
1000 1000 LSI53C1010-33 PCI to Dual Channel Ultra160 SCSI Controller  
107b 1040 Server Onboard 53C1010-33  
1de1 1020 DC-390U3W  
0021 53c1010 66MHz Ultra3 SCSI Adapter  
1000 1000 LSI53C1000/1000R/1010R/1010-66 PCI to Ultra160 SCSI Controller  
1000 1010 Asus TR-DLS onboard 53C1010-66  
103c 1300 Ultra160 SCSI [AB306A]  
103c 1310 Ultra160 SCSI [A9918A]  
103c 1330 Ultra160 SCSI [A7059A]  
103c 1340 Ultra160 SCSI [A7060A]  
124b 1070 PMC-USCSI3  
4c53 1080 CT8 mainboard  
4c53 1300 P017 mezzanine (32-bit PMC)  
4c53  
1310 P017 mezzanine (64-bit PMC)  
002f MegaRAID SAS 2208 IOV [Thunderbolt]  
1028 1f39 SPERC8-e  
1028 1f3e SPERC 8  
0030 53c1030 PCI-X Fusion-MPT Dual Ultra320 SCSI  
0e11 00da ProLiant ML 350  
1028 0123 LSI Logic 1020/1030  
1028 014a LSI Logic 1020/1030  
1028 016c PowerEdge 1850 MPT Fusion SCSI/RAID (Perc 4)  
1028 0183 LSI Logic 1020/1030  
1028 018a PERC 4/IM  
1028 1010 LSI U320 SCSI Controller  
103c 12c5 Ultra320 SCSI [A7173A]  
103c 1323 Core I/O LAN/SCSI Combo [AB314A]  
103c 3108 Single Channel Ultra320 SCSI HBA G2  
103c 322a SC11Xe Ultra320 Single Channel PCIe x4 SCSI Host Bus Adapter (412911-B21)  
124b 1170 PMC-USCSI320  
15ad 1976 LSI Logic Parallel SCSI Controller (emulated)  
1734 1052 PRIMERGY BX/RX/TX S2 series onboard SCSI(IME)  
0031 53c1030ZC PCI-X Fusion-MPT Dual Ultra320 SCSI  
0032 53c1035 PCI-X Fusion-MPT Dual Ultra320 SCSI  
1000 1000 LSI53C1020/1030 PCI-X to Ultra320 SCSI Controller  
0033 1030ZC\_53c1035 PCI-X Fusion-MPT Dual Ultra320  
SCSI  
0040 53c1035 PCI-X Fusion-MPT Dual Ultra320 SCSI



1000 0033 MegaRAID SCSI 320-2XR  
1000 0066 MegaRAID SCSI 320-2XRWS  
0041 53C1035ZC PCI-X Fusion-MPT Dual Ultra320 SCSI  
0050 SAS1064 PCI-X Fusion-MPT SAS  
1028 1f04 SAS 5/E  
1028 1f09 SAS 5i/R  
0052 MegaRAID SAS-3 3216/3224 [Cutlass]  
0053 MegaRAID SAS-3 3216/3224 [Cutlass]  
1000 9350 MegaRAID SAS 9341-16i  
1000 9351 MegaRAID SAS 9341-24i  
0054 SAS1068 PCI-X Fusion-MPT SAS  
1028 1f04 SAS 5/E Adapter Controller  
1028 1f05 SAS 5/i Adapter Controller  
1028 1f06 SAS 5/i Integrated Controller  
1028 1f07 SAS 5/iR Integrated RAID Controller  
1028 1f08 SAS 5/iR Integrated RAID Controller  
1028 1f09 SAS 5/iR Adapter RAID Controller  
103c 3228 SAS3080X-HP 8-port PCI-X 133MHz Host Bus Adapter with 2xSFF-8484  
15ad 1976 SAS Controller  
0055 SAS1068 PCI-X Fusion-MPT SAS  
1033 8336 SAS1068  
0056 SAS1064ET PCI-Express Fusion-MPT SAS  
1014 03bb ServeRAID BR10iL SAS/SATA Controller v2  
8086 34dc AXX4SASMOD  
RAID Controller  
0057 M1064E MegaRAID SAS  
8086 346c Embedded Software RAID Technology II (ESTRII)  
0058 SAS1068E PCI-Express Fusion-MPT SAS  
1000 3140 SAS3081E-R 8-Port SAS/SATA Host Bus Adapter  
1028 021d SAS 6/iR Integrated Workstations RAID Controller  
1028 1f0e SAS 6/iR Adapter RAID Controller  
1028 1f0f SAS 6/iR Integrated Blades RAID Controller  
1028 1f10 SAS 6/iR Integrated RAID Controller  
103c 3229 SC44Ge Host Bus Adapter  
0059 MegaRAID SAS 8208ELP/8208ELP  
005a SAS1066E PCI-Express Fusion-MPT SAS  
005b MegaRAID SAS 2208 [Thunderbolt]  
1000 9265 MegaRAID SAS 9265-8i  
1000 9266 MegaRAID SAS 9266-8i  
1000 9267 MegaRAID SAS 9267-8i  
1000 9268 MegaRAID SAS 9265CV-8i / 9270CV-8i  
1000 9269 MegaRAID SAS 9266-4i  
1000 9270 MegaRAID SAS 9270-8i  
1000 9271 MegaRAID SAS 9271-8i  
1000 9272 MegaRAID SAS 9272-8i  
1000 9273 MegaRAID SAS 9270CV-8i  
1000 9274 MegaRAID SAS 9270-4i  
1000 9275 MegaRAID SAS 9271-8iCC

1000 9276 MegaRAID SAS 9271-4i  
1000  
9285 MegaRAID SAS 9285-8e  
1000 9288 MegaRAID SAS 9285CV-8e  
1000 9290 MegaRAID SAS 9286-8e  
1000 9291 MegaRAID SAS 9286CV-8e  
1000 9295 MegaRAID SAS 9286CV-8eCC  
1014 040b ServeRAID M5110 SAS/SATA Controller  
1014 040c ServeRAID M5120 SAS/SATA Controller  
1014 0412 ServeRAID M5110e SAS/SATA Controller  
1028 1f2d PERC H810 Adapter  
1028 1f30 PERC H710 Embedded  
1028 1f31 PERC H710P Adapter  
1028 1f33 PERC H710P Mini (for blades)  
1028 1f34 PERC H710P Mini (for monolithics)  
1028 1f35 PERC H710 Adapter  
1028 1f37 PERC H710 Mini (for blades)  
1028 1f38 PERC H710 Mini (for monolithics)  
15d9 0690 LSI MegaRAID ROMB  
8086 3510 RMS25PB080 RAID Controller  
8086 3511 RMS25PB040 RAID Controller  
8086 3512 RMT3PB080 RAID Controller  
8086 3513 Integrated RAID Module RMS25CB080  
8086 3514 RMS25CB040 RAID Controller  
8086 351c RMS25PB080N RAID Controller  
8086 351d RMS25CB080N RAID Controller  
8086 9265 RS25DB080 RAID Controller  
8086 9268 RS25AB080  
RAID Controller  
8086 9285 RS25NB008 RAID Controller  
8086 9288 RS25SB008 RAID Controller  
005c SAS1064A PCI-X Fusion-MPT SAS  
005d MegaRAID SAS-3 3108 [Invader]  
1000 9361 MegaRAID SAS 9361-8i  
1000 9363 MegaRAID SAS 9361-4i  
1000 9364 MegaRAID SAS 9364-8i  
1000 936a MegaRAID SAS 9364-8i  
1000 9380 MegaRAID SAS 9380-8e  
1028 1f41 PERC H830 Adapter  
1028 1f42 PERC H730P Adapter  
1028 1f43 PERC H730 Adapter  
1028 1f47 PERC H730P Mini  
1028 1f48 PERC H730P Mini (for blades)  
1028 1f49 PERC H730 Mini  
1028 1f4a PERC H730 Mini (for blades)  
1028 1f4d PERC FD33xS  
1028 1f4f PERC H730P Slim  
1028 1f54 PERC FD33xD

1028 1fd1 PERC H730P MX  
1734 11f6 PRAID EP400i  
17aa 1052 ThinkServer RAID 720i  
17aa 1053 ThinkServer RAID 720ix  
1bd4 0014 12G SAS3108 2G  
1bd4 0015 12G SAS3108 4G  
1d49 0600 ThinkSystem RAID 730-8i 1GB Cache PCIe 12Gb Adapter  
1d49 0608 ThinkSystem RAID 730-8i 2GB Flash PCIe 12Gb Adapter  
1d49 0609 ThinkSystem RAID 730-8i  
4GB Flash PCIe 12Gb Adapter  
8086 351e RMS3CC080 RAID Controller  
8086 351f RMS3CC040 RAID Controller  
8086 9360 RS3DC080 RAID Controller  
8086 9362 RS3DC040 RAID Controller  
8086 9380 RS3SC008 RAID Controller  
8086 9381 RS3MC044 RAID Controller  
005e SAS1066 PCI-X Fusion-MPT SAS  
005f MegaRAID SAS-3 3008 [Fury]  
1028 1f44 PERC H330 Adapter  
1028 1f4b PERC H330 Mini  
1028 1f4c PERC H330 Mini (for blades)  
1028 1f4d PERC H330 Embedded (for monolithic)  
1054 306a SAS 3004 iMR ROMB  
1734 1211 PRAID CP400i [D3307-A12]  
1d49 04db ServeRAID M1210 SAS/SATA Controller  
1d49 0504 ThinkSystem RAID 520-8i PCIe 12Gb Adapter  
0060 MegaRAID SAS 1078  
1000 1006 MegaRAID SAS 8888ELP  
1000 100a MegaRAID SAS 8708ELP  
1000 100e MegaRAID SAS 8884E  
1000 100f MegaRAID SAS 8708E  
1000 1010 MegaRAID SATA 350-8ELP  
1000 1011 MegaRAID SATA 350-4ELP  
1000 1012 MegaRAID SAS 8704ELP  
1000 1016 MegaRAID SAS 8880EM2  
1014 0363 MegaRAID SAS PCI Express ROMB  
1014  
0364 SystemX MegaRAID SAS 8808E  
1014 0365 SystemX MegaRAID SAS 8884E  
1014 0379 SystemX MegaRAID SAS 8880EM2  
1028 1f0a PERC 6/E Adapter RAID Controller  
1028 1f0b PERC 6/i Adapter RAID Controller  
1028 1f0c PERC 6/i Integrated RAID Controller  
1028 1f0d PERC 6/i Integrated RAID Controller  
1028 1f11 CERC 6/i Integrated RAID Controller  
1033 835a MegaRAID SAS PCI Express ROMB  
1043 824d MegaRAID SAS PCI Express ROMB  
1170 002f MegaRAID SAS PCI Express ROMB

1170 0036 MegaRAID SAS PCI Express ROMB  
15d9 c080 MegaRAID SAS PCI Express ROMB  
17aa 6b7c MegaRAID SAS PCI Express ROMB  
18a1 0003 LSI MegaRAID SAS PCI Express ROMB  
8086 1006 RAID Controller SRCASAS28EP  
8086 100a RAID Controller SRCASAS28EV  
8086 1010 RAID Controller SRCASATA28E  
8086 34cc Integrated RAID Controller SROMBSAS28E  
8086 34cd Integrated RAID Controller SROMBSAS28E  
8086 3505 Integrated RAID Controller SROMBSASMP2  
0062 SAS1078 PCI-Express Fusion-MPT SAS  
1000 0062 SAS1078  
PCI-Express Fusion-MPT SAS  
0064 SAS2116 PCI-Express Fusion-MPT SAS-2 [Meteor]  
1000 3030 9200-16e 6Gb/s SAS/SATA PCIe x8 External HBA  
1000 30c0 SAS 9201-16i  
1000 30d0 9201-16e 6Gb/s SAS/SATA PCIe x8 External HBA  
0065 SAS2116 PCI-Express Fusion-MPT SAS-2 [Meteor]  
006e SAS2308 PCI-Express Fusion-MPT SAS-2  
0070 SAS2004 PCI-Express Fusion-MPT SAS-2 [Spitfire]  
1000 3010 SAS9211-4i  
1014 040e ServeRAID H1110  
0071 MR SAS HBA 2004  
0072 SAS2008 PCI-Express Fusion-MPT SAS-2 [Falcon]  
1000 3020 9211-8i  
1000 3040 9210-8i  
1000 3080 9200-8e [LSI SAS 6Gb/s SAS/SATA PCIe x8 External HBA]  
1000 30b0 9200-8e [LSI SAS 6Gb/s SAS/SATA PCIe x8 External HBA]  
1014 03ca IBM 6Gb SAS HBA [9212-4i4e]  
1028 1f1c 6Gbps SAS HBA Adapter  
1028 1f1d PERC H200 Adapter  
1028 1f1e PERC H200 Integrated  
1028 1f1f PERC H200 Modular  
1028 1f20 PERC H200 Embedded  
1028 1f22 PERC H200 Internal Tape Adapter  
# Fujitsu D2607 SAS2008 HBA controller  
1734 1177 HBA Ctrl SAS 6G 0/1  
[D2607]  
1bd4 000d 6G SAS2008IT  
1bd4 000e 6G SAS2008IR  
1bd4 000f 6G SAS2008IT SA5248  
1bd4 0010 6G SAS2008IR SA5248  
8086 350f RMS2LL040 RAID Controller  
8086 3700 SSD 910 Series  
0073 MegaRAID SAS 2008 [Falcon]  
1000 9240 MegaRAID SAS 9240-8i  
1000 9241 MegaRAID SAS 9240-4i  
1000 92a0 MegaRAID SAS 9220-8i

1014 03b1 ServeRAID M1015 SAS/SATA Controller  
1014 040d ServeRAID M1115 SAS/SATA Controller  
1028 1f4e PERC H310 Adapter  
1028 1f4f PERC H310 Integrated  
1028 1f50 PERC H310 Mini Blades  
1028 1f51 PERC H310 Mini Monolithics  
1028 1f52 PERC H310 Embedded1  
1028 1f53 PERC H310 Embedded2  
1028 1f54 PERC H310 Reserved  
1028 1f78 PERC H310  
1054 3035 LSI MegaRAID SAS 9240-8i  
1137 0072 2004 iMR ROMB  
1137 0073 2008 ROMB  
1137 00b0 UCSC RAID SAS 2008M-8i  
1137 00b1 UCSC RAID SAS 2008M-8i  
1137 00c2 UCS E-Series Double Wide  
1137 00c3 UCS E-Series Single Wide  
15d9 0400 Supermicro SMC2008-iMR  
1734 1177 RAID Ctrl SAS 6G 0/1 (D2607)  
17aa  
1051 ThinkServer RAID 510i  
8086 350d RMS2AF040 RAID Controller  
8086 9240 RAID Controller RS2WC080  
8086 9241 RAID Controller RS2WC040  
0074 SAS2108 PCI-Express Fusion-MPT SAS-2 [Liberator]  
0076 SAS2108 PCI-Express Fusion-MPT SAS-2 [Liberator]  
0077 SAS2108 PCI-Express Fusion-MPT SAS-2 [Liberator]  
0079 MegaRAID SAS 2108 [Liberator]  
1000 9251 MegaRAID SAS 9260-4ix  
1000 9256 MegaRAID SAS 9260-8ix  
1000 9260 MegaRAID SAS 9260-4i  
1000 9261 MegaRAID SAS 9260-8i  
1000 9262 MegaRAID SAS 9262-8i  
1000 9263 MegaRAID SAS 9261-8i  
1000 9264 MegaRAID SAS 9264-8i  
1000 9267 MegaRAID SAS 9260CV-4i  
1000 9268 MegaRAID SAS 9260CV-8i  
1000 9275 MegaRAID SAS 9280-8ex  
1000 9276 MR9260-16i  
1000 9280 MegaRAID SAS 9280-8e  
1000 9281 MegaRAID SAS 9281-8E  
1000 9282 MegaRAID SAS 9280-4i4e  
1000 9290 MegaRAID SAS 9280DE-24i4e  
1014 03b2 ServeRAID M5015 SAS/SATA Controller  
1014 03b3 ServeRAID M5025 SAS/SATA Controller  
1028 1f15 PERC H800 Adapter  
1028

1f16 PERC H700 Adapter  
1028 1f17 PERC H700 Integrated  
1028 1f18 PERC H700 Modular  
1028 1f1a PERC H800 Proto Adapter  
1028 1f1b PERC H700 Integrated  
1043 8480 PIKE-2108 16PD  
1734 1176 RAID Ctrl SAS 6G 5/6 512MB (D2616)  
1734 1177 RAID Ctrl SAS 6G 0/1 (D2607)  
8086 350b RMS2MH080 RAID Controller  
8086 9256 MegaRAID SAS 9260DE-8i RS2BL080DE  
8086 9260 RAID Controller RS2BL040  
8086 9261 RAID Controller RS2BL080  
8086 9264 RAID Controller RT3WB080 Warm Beach (Caster Lite)  
8086 9267 RAID Controller RS2VB040  
8086 9268 RAID Controller RS2VB080  
8086 9275 RAID Controller RS2PI008DE  
8086 9276 RAID Controller RS2WG160  
8086 9280 RAID Controller RS2PI008  
8086 9282 RAID Controller RS2MB044  
8086 9290 RAID Controller RS2SG244  
007c MegaRAID SAS 1078DE  
1014 0395 ServeRAID-AR10is SAS/SATA Controller  
007e SSS6200 PCI-Express Flash SSD  
1000 0504 Nytro NWD-BLP4-800  
1000 0507 Nytro NWD-BLP4-1600  
1000 0581 Nytro NWD-BLP4-400  
1000 100d  
Nytro NWD-BFH6-1200  
1000 100e Nytro NWD-BFH8-1600  
1000 107e Nytro NWD-BFH8-3200  
1000 1310 Nytro XP6302-8B1536  
1000 1311 Nytro XP6302-8B2048  
1000 1314 Nytro XP6302-8B4096  
1000 150c Nytro XP6210-4A2048  
1000 150f Nytro XP6210-4B2048  
1000 160b Nytro XP6209-4A1024  
1000 1613 Nytro XP6209-4B2048  
108e 050a Nytro ELP4x200\_4d\_n  
108e 0581 Nytro ELP4x100\_4d\_n  
0080 SAS2208 PCI-Express Fusion-MPT SAS-2  
0081 SAS2208 PCI-Express Fusion-MPT SAS-2  
0082 SAS2208 PCI-Express Fusion-MPT SAS-2  
0083 SAS2208 PCI-Express Fusion-MPT SAS-2  
0084 SAS2208 PCI-Express Fusion-MPT SAS-2  
0085 SAS2208 PCI-Express Fusion-MPT SAS-2  
0086 SAS2308 PCI-Express Fusion-MPT SAS-2  
15d9 0690 Onboard MegaRAID SAS2208 [Thunderbolt]  
15d9 0691 Onboard SAS2308 PCI-Express Fusion-MPT SAS-2

0087 SAS2308 PCI-Express Fusion-MPT SAS-2  
1000 3020 9207-8i SAS2.1 HBA  
1000 3030 SAS9207-4i4e  
1000 3040 9207-8e SAS2.1 HBA  
1000 3050 SAS9217-8i  
1000 3060 SAS9217-4i4e  
1014 0472  
N2125 External Host Bus Adapter  
1014 047a N2115 Internal Host Bus Adapter  
1590 0041 H220i  
1590 0042 H221 / 9207-8e  
1590 0044 H220i  
1bd4 0009 6G SAS2308IR  
1bd4 000a 6G SAS2308IT  
8086 3000 RS25GB008 RAID Controller  
8086 3060 RS25FB044 RAID Controller  
8086 3516 RMS25JB080 RAID Controller  
8086 3517 RMS25JB040 RAID Controller  
8086 3518 RMS25KB080 RAID Controller  
8086 3519 RMS25KB040 RAID Controller  
8086 351a RMS25LB040 RAID Controller  
8086 351b RMS25LB080 RAID Controller  
008f 53c875J  
1092 8000 FirePort 40 SCSI Controller  
1092 8760 FirePort 40 Dual SCSI Host Adapter  
0090 SAS3108 PCI-Express Fusion-MPT SAS-3  
0091 SAS3108 PCI-Express Fusion-MPT SAS-3  
0094 SAS3108 PCI-Express Fusion-MPT SAS-3  
0095 SAS3108 PCI-Express Fusion-MPT SAS-3  
0096 SAS3004 PCI-Express Fusion-MPT SAS-3  
0097 SAS3008 PCI-Express Fusion-MPT SAS-3  
1000 3090 SAS9311-8i  
1000 30a0 SAS9300-8e  
1000 30e0 SAS9300-8i  
1000 3130 SAS 9300-16i  
1028 1f45 HBA330  
Adapter  
1028 1f46 12Gbps HBA  
1028 1f53 HBA330 Mini  
1028 1fd2 HBA330 MX  
1028 1fd3 HBA330 MMZ  
# Supermicro AOC-S3008L-L8e uses 0808 for their SAS3008 SAS controller  
15d9 0808 AOC-S3008L-L8e  
1bd4 0008 12G SAS3008IMR Onboard  
1bd4 000b 12G SAS3008IR  
1bd4 000c 12G SAS3008IT  
1bd4 0011 Inspur 12Gb 8i-3008 IT SAS HBA  
1bd4 0012 12Gb SAS3008IR UDM

1bd4 001f 12G SAS3008IR Onboard  
1bd4 0020 12G SAS3008IT Onboard  
1bd4 0026 12G SAS3008IT RACK  
1bd4 0027 12G SAS3008IMR RACK  
1bd4 0028 12G SAS3008IR RACK  
00a5 Fusion-MPT 24GSAS/PCIe SAS40xx/41xx  
1000 4600 MegaRAID 9670W-16i Tri-Mode Storage Adapter  
1000 4610 MegaRAID 9670-24i Tri-Mode Storage Adapter  
1000 4620 MegaRAID 9660-16i Tri-Mode Storage Adapter  
1000 4630 MegaRAID 9660-8i8e Tri-Mode Storage Adapter  
1000 4640 eHBA 9600W-16i Tri-Mode Storage Adapter  
1000 4650 eHBA 9600W-16e Tri-Mode Storage Adapter  
1000 4660 eHBA 9600-24i Tri-Mode Storage Adapter  
1000 4670 eHBA 9600-16i Tri-Mode Storage  
Adapter  
1000 4680 eHBA 9600-16e Tri-Mode Storage Adapter  
1000 4690 MegaRAID 9620-16i Tri-Mode Storage Adapter  
1000 46a0 MegaRAID 9660-24i Tri-Mode Storage Adapter  
1000 46c0 eHBA 9680W-16e Tri-Mode Storage Adapter  
1000 46d0 eHBA 9600-8i8e Tri-Mode Storage Adapter  
# eHBA 9602W-16e Tri-Mode Storage Adapter  
1000 46e0 eHBA 9602W-16e Tri-Mode Storage Adapter  
1028 2114 PERC H965i Adapter  
1028 2115 PERC H965i Front  
1028 2117 PERC H965i MX  
1028 213a PERC H965e Adapter  
1028 213b PERC H765i Adapter  
1028 213c PERC H765i Front  
1028 213d PERC H765N Front  
1028 213e PERC H765i MX  
1028 213f PERC H365i Adapter  
1028 2140 PERC H365i Front  
1028 2142 HBA465e Adapter  
1028 2209 HBA465i Adapter  
1028 220a HBA465i Front  
1028 22cb PERC H365i Front  
1028 22cc PERC H965i Front  
1028 22cd HBA465i Front  
15d9 1d03 AOC-S4116L-H16IR (16DD/96DD) RAID Adapter  
15d9 1d07 AOC-S4016L-L16IT Storage Adapter  
15d9 1d08 AOC-S4016L-L16IR Storage Adapter  
1d49  
020a ThinkSystem 450W-16e SAS/SATA PCIe Gen4 24Gb HBA  
00ab SAS3516 Fusion-MPT Tri-Mode RAID On Chip (ROC)  
# 8 Internal and 8 External port channel 9400 HBA  
1000 3040 HBA 9400-8i8e  
8086 3530 Integrated RAID Module RMSP3JD160J  
00ac SAS3416 Fusion-MPT Tri-Mode I/O Controller Chip (IOC)



# Channel 16 internal port HBA  
1000 3000 HBA 9400-16i

# Channel 16 external port HBA  
1000 3020 HBA 9400-16e  
1028 1fe3 HBA345 Adapter  
1028 1fe4 HBA345 Front  
1d49 0201 ThinkSystem 430-16i SAS/SATA 12Gb HBA  
1d49 0203 ThinkSystem 430-16e SAS/SATA 12Gb HBA  
8086 3000 RAID Controller RSP3QD160J  
8086 3020 RAID Controller RSP3GD016J  
00ae SAS3508 Fusion-MPT Tri-Mode RAID On Chip (ROC)  
00af SAS3408 Fusion-MPT Tri-Mode I/O Controller Chip (IOC)  
1000 3010 HBA 9400-8i

# 9400 Channel 8 external port HBA  
1000 3030 HBA 9400-8e  
1d49 0200 ThinkSystem 430-8i SAS/SATA 12Gb HBA  
1d49 0202 ThinkSystem 430-8e SAS/SATA 12Gb HBA  
1d49 0204 ThinkSystem 430-8i SAS/SATA 12Gb Dense  
HBA  
00b2 PCIe Switch management endpoint  
1d49 0003 ThinkSystem 1611-8P PCIe Gen4 NVMe Switch Adapter

# 24G SAS/PCIe storage adapter chip  
00b3 Fusion-MPT 24G SAS/PCIe SAS50xx/SAS51xx

# 9760W 32 internal port RAID controller  
1000 5000 MegaRAID 9760W-32i 24G SAS/PCIe Storage Adapter

# 9760W 16 internal port RAID controller  
1000 5001 MegaRAID 9760W-16i 24G SAS/PCIe Storage Adapter

# 9760W 16 internal and 16 external port RAID controller  
1000 5010 MegaRAID 9760W-16i16e 24G SAS/PCIe Storage Adapter

# 9700W 32 internal port Storage controller  
1000 5020 eHBA 9700W-32i 24G SAS/PCIe Storage Adapter

# 9700W 16 internal port Storage controller  
1000 5021 eHBA 9700W-16i 24G SAS/PCIe Storage Adapter

# 9700 16 external port Storage controller  
1000 5030 eHBA 9700-16e 24G SAS/PCIe Storage Adapter  
1028 22d2 PERC H975i Front  
1028 22d3 PERC H975i Adapter  
1d49 020b ThinkSystem 460-16e SAS/SATA PCIe Gen5 24Gb HBA  
00b5 Fusion-MPT 24G SAS/PCIe SAS50xx/SAS51xx

# 9760W 32  
internal port RAID controller  
1000 5000 MegaRAID 9760W-32i 24G SAS/PCIe Storage Adapter

# 9760W 16 internal port RAID controller  
1000 5001 MegaRAID 9760W-16i 24G SAS/PCIe Storage Adapter

# 9760W 16 internal and 16 external port RAID controller  
1000 5010 MegaRAID 9760W-16i16e 24G SAS/PCIe Storage Adapter

# 9700W 32 internal port Storage controller  
1000 5020 eHBA 9700W-32i 24G SAS/PCIe Storage Adapter

# 9700W 16 internal port Storage controller  
 1000 5021 eHBA 9700W-16i 24G SAS/PCIe Storage Adapter

# 9700 16 external port Storage controller  
 1000 5030 eHBA 9700-16e 24G SAS/PCIe Storage Adapter

# Broadcom next-gen MPT PCIe switch  
 00b8 Fusion-MPT Switch SAS50xx/SAS51xx  
 00be SAS3504 Fusion-MPT Tri-Mode RAID On Chip (ROC)  
 00bf SAS3404 Fusion-MPT Tri-Mode I/O Controller Chip (IOC)  
 00c0 SAS3324 PCI-Express Fusion-MPT SAS-3  
 00c1 SAS3324 PCI-Express Fusion-MPT SAS-3  
 00c2 SAS3324 PCI-Express Fusion-MPT SAS-3  
 00c3 SAS3324 PCI-Express Fusion-MPT SAS-3  
 00c4 SAS3224 PCI-Express  
 Fusion-MPT SAS-3

# SAS 9305 16 internal port HBA  
 1000 3190 SAS9305-16i

# SAS 9305 24 internal port HBA  
 1000 31a0 SAS9305-24i  
 1170 0002 SAS3224 PCI Express to 12Gb HBA MEZZ CARD

00c5 SAS3316 PCI-Express Fusion-MPT SAS-3  
 00c6 SAS3316 PCI-Express Fusion-MPT SAS-3  
 00c7 SAS3316 PCI-Express Fusion-MPT SAS-3  
 00c8 SAS3316 PCI-Express Fusion-MPT SAS-3  
 00c9 SAS3216 PCI-Express Fusion-MPT SAS-3

# 9305 16 external port SAS HBA  
 1000 3180 SAS9305-16e  
 00ce MegaRAID SAS-3 3316 [Intruder]  
 1000 9371 MegaRAID SAS 9361-16i  
 1000 9390 MegaRAID SAS 9380-8i8e  
 00cf MegaRAID SAS-3 3324 [Intruder]  
 1000 9370 MegaRAID SAS 9361-24i  
 00d0 SAS3716 Fusion-MPT Tri-Mode RAID Controller Chip (ROC)

# 9405W 16 internal port channel HBA  
 1000 3050 HBA 9405W-16i

# 9405W 8 internal and 8 external port channel HBA  
 1000 3070 HBA 9405W-8i8e  
 00d1 SAS3616 Fusion-MPT Tri-Mode I/O Controller Chip (IOC)

# 9405W 16 external port Channel HBA  
 1000 3080 HBA 9405W-16e

# 9405W 16 internal  
 port Channel HBA  
 1000 3090 HBA 9405W-16i  
 00d3 MegaRAID Tri-Mode SAS3716W  
 00e0 Fusion-MPT 12GSAS/PCIe Unsupported SAS39xx  
 00e1 Fusion-MPT 12GSAS/PCIe SAS39xx  
 00e2 Fusion-MPT 12GSAS/PCIe Secure SAS39xx  
 00e3 Fusion-MPT 12GSAS/PCIe Unsupported SAS39xx  
 00e4 Fusion-MPT 12GSAS/PCIe Unsupported SAS38xx

# Invalid part  
1028 200b HBA355i Adapter Invalid  
# Invalid part  
1028 200c HBA355i Front Invalid  
# Invalid part  
1028 200d HBA355e Adapter Invalid  
# Invalid part  
1028 200e HBA350i MX Invalid  
# Soft Secure  
00e5 Fusion-MPT 12GSAS/PCIe SAS38xx  
# Soft Secure  
1028 200b HBA355i Adapter  
# Soft Secure  
1028 200c HBA355i Front  
# Soft Secure  
1028 200d HBA355e Adapter  
# Soft Secure  
1028 200e HBA350i MX  
1d49 0205 ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb Internal HBA  
1d49 0206 ThinkSystem 440-16e SAS/SATA PCIe Gen4 12Gb HBA  
00e6 Fusion-MPT 12GSAS/PCIe Secure SAS38xx  
1000 4050 9500-16i Tri-Mode HBA  
1000 4060 9500-8i Tri-Mode HBA  
1000 4070 9500-16e  
Tri-Mode HBA  
1000 4080 9500-8e Tri-Mode HBA  
1028 200b HBA355i Adapter  
1028 200c HBA355i Front  
1028 200d HBA355e Adapter  
1028 200e HBA350i MX  
1028 2170 HBA350i MM  
1028 2175 HBA350i Adapter  
1028 2197 HBA350i MM LP  
1028 2212 HBA355e-s Adapter  
15d9 1b64 SCC-B8SB80-B1 (NI22) Storage Controller Card  
15d9 1b65 AOC-S3816L-L16iT (NI22) Storage Adapter  
15d9 1b99 AOC-S3808L-L8iT Storage Adapter  
1d49 0205 ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb Internal HBA  
1d49 0206 ThinkSystem 440-16e SAS/SATA PCIe Gen4 12Gb HBA  
1d49 0207 ThinkSystem 440-8i SAS/SATA PCIe Gen4 12Gb HBA  
1d49 0208 ThinkSystem 440-16i SAS/SATA PCIe Gen4 12Gb HBA  
1d49 0209 ThinkSystem 440-8e SAS/SATA PCIe Gen4 12Gb HBA  
8086 4050 Storage Controller RS3P4QF160J  
8086 4070 Storage Controller RS3P4GF016J  
00e7 Fusion-MPT 12GSAS/PCIe Unsupported SAS38xx  
# Tampered part  
1028 200b HBA355i Adapter Tampered  
# Tampered part

1028 200c HBA355i Front Tampered  
# Tampered part  
1028  
200d HBA355e Adapter Tampered  
# Tampered part  
1028 200e HBA350i MX Tampered  
02b0 Virtual Endpoint on PCIe Switch  
1d49 0001 ThinkSystem 1610-4P NVMe Switch Adapter  
1d49 0002 ThinkSystem 810-4P NVMe Switch Adapter  
02b1 Virtual Endpoint on PCIe Switch (9749)  
1d49 0004 ThinkSystem 1610-8P NVMe Switch Adapter  
# Virtual endpoint used in Broadcom synthetic PCIe switches for resource reservation  
02b2 Virtual PCIe Placeholder Endpoint  
0407 MegaRAID  
1000 0530 MegaRAID 530 SCSI 320-0X RAID Controller  
1000 0531 MegaRAID 531 SCSI 320-4X RAID Controller  
1000 0532 MegaRAID 532 SCSI 320-2X RAID Controller  
1028 0531 PowerEdge Expandable RAID Controller 4/QC  
1028 0533 PowerEdge Expandable RAID Controller 4/QC  
8086 0530 MegaRAID Intel RAID Controller SRCZCRX  
8086 0532 MegaRAID Intel RAID Controller SRCU42X  
0408 MegaRAID  
1000 0001 MegaRAID SCSI 320-1E RAID Controller  
1000 0002 MegaRAID SCSI 320-2E RAID Controller  
1025 004d MegaRAID ACER ROMB-2E RAID  
Controller  
1028 0001 PowerEdge RAID Controller PERC4e/SC  
1028 0002 PowerEdge RAID Controller PERC4e/DC  
1028 0012 PowerEdge RAID Controller RAC4  
1028 0015 PowerEdge RAID Controller PERC5  
1028 1f03 PowerEdge RAID Controller PERC5  
1734 1065 FSC MegaRAID PCI Express ROMB  
8086 0002 MegaRAID Intel RAID Controller SRCU42E  
8086 3449 MegaRAID Intel RAID Controller SROMBU  
0409 MegaRAID  
1000 3004 MegaRAID SATA 300-4X RAID Controller  
1000 3008 MegaRAID SATA 300-8X RAID Controller  
8086 3008 MegaRAID RAID Controller SRCS28X  
8086 3431 MegaRAID RAID Controller Alief SROMBU42E  
8086 3499 MegaRAID RAID Controller Harwich SROMBU42E  
0411 MegaRAID SAS 1068  
1000 1001 MegaRAID SAS 8408E  
1000 1002 MegaRAID SAS 8480E  
1000 1003 MegaRAID SAS 8344ELP  
1000 1004 MegaRAID SAS 8308ELP  
1000 1008 MegaRAID SAS 84016E  
1000 100c MegaRAID SATA 300-12E  
1000 100d MegaRAID SATA 300-16E

1000 2004 MegaRAID SATA 300-8ELP  
1000 2005 MegaRAID SATA 300-4ELP  
1033  
8287 MegaRAID SAS PCI Express ROMB  
1054 3016 MegaRAID SAS RoMB Server  
1734 1081 MegaRAID SAS PCI Express ROMB  
1734 10a3 MegaRAID SAS PCI Express ROMB  
8086 1001 RAID Controller SRCSAS18E  
8086 1003 RAID Controller SRCSAS144E  
8086 3500 SROMBSAS18E RAID Controller  
8086 3501 SROMBSAS18E RAID Controller  
8086 3504 SROMBSAS18E RAID Controller  
0413 MegaRAID SAS 1068 [Verde ZCR]  
1000 1005 MegaRAID SAS 8300XLP  
0621 FC909 Fibre Channel Adapter  
0622 FC929 Fibre Channel Adapter  
1000 1020 44929 O Dual Fibre Channel card  
0623 FC929 LAN  
0624 FC919 Fibre Channel Adapter  
0625 FC919 LAN  
0626 FC929X Fibre Channel Adapter  
1000 1010 7202-XP-LC Dual Fibre Channel card  
0627 FC929X LAN  
0628 FC919X Fibre Channel Adapter  
0629 FC919X LAN  
0640 FC949X Fibre Channel Adapter  
0642 FC939X Fibre Channel Adapter  
0646 FC949ES Fibre Channel Adapter  
0701 83C885 NT50 DigitalScape Fast Ethernet  
0702 Yellowfin G-NIC gigabit ethernet  
1318 0000 PEI100X  
0804 SA2010  
0805  
SA2010ZC  
0806 SA2020  
0807 SA2020ZC  
0901 61C102  
1000 63C815  
10e0 MegaRAID 12GSAS/PCIe Unsupported SAS39xx  
1028 1ae0 PERC H755 Adapter - Invalid Device  
1028 1ae1 PERC H755 Front - Invalid Device  
1028 1ae2 PERC H755N Front - Invalid Device  
1028 1ae3 PERC H755 MX - Invalid Device  
10e1 MegaRAID 12GSAS/PCIe SAS39xx  
1028 1ae0 PERC H755 Adapter  
1028 1ae1 PERC H755 Front  
1028 1ae2 PERC H755N Front  
1028 1ae3 PERC H755 MX

1d49 060a ThinkSystem RAID 940-8i 4GB Flash PCIe Gen4 12Gb Adapter  
1d49 060b ThinkSystem RAID 940-8i 8GB Flash PCIe Gen4 12Gb Adapter  
1d49 060c ThinkSystem RAID 940-16i 8GB Flash PCIe Gen4 12Gb Adapter  
1d49 060d ThinkSystem RAID 940-16i 8GB Flash PCIe Gen4 12Gb Internal Adapter  
1d49 060e ThinkSystem RAID 940-32i 8GB Flash PCIe Gen4 12Gb Adapter  
1d49 060f ThinkSystem RAID 940-8e 4GB Flash PCIe Gen4 12Gb Adapter  
10e2 MegaRAID 12GSAS/PCIe Secure SAS39xx  
# 9560 16 internal port RAID controller  
1000 4000 MegaRAID 9560-16i  
#  
9561 16 internal port RAID controller  
1000 4002 MegaRAID 9561-16i  
# 9560 8 internal port RAID controller  
1000 4010 MegaRAID 9560-8i  
# 9550 8 internal port RAID controller  
1000 4015 MegaRAID 9550-8i  
# 9580 8 internal & 8 external port RAID controller  
1000 4020 MegaRAID 9580-8i8e  
# MegaRAID 9562-16i 9562 16 internal port RAID controller  
1000 40b0 MegaRAID 9562-16i  
1028 1ae0 PERC H755 Adapter  
1028 1ae1 PERC H755 Front  
1028 1ae2 PERC H755N Front  
1028 1ae3 PERC H755 MX  
1028 2171 PERC H750 Mini  
1028 2176 PERC H750 Adapter  
15d9 1b66 AOC-S3908L-H8iR RAID Adapter  
15d9 1b67 AOC-S3916L-H16iR RAID Adapter  
15d9 1c06 AOC-S3916L-H16iR-32DD+ RAID Adapter  
1d49 060a ThinkSystem RAID 940-8i 4GB Flash PCIe Gen4 12Gb Adapter  
1d49 060b ThinkSystem RAID 940-8i 8GB Flash PCIe Gen4 12Gb Adapter  
1d49 060c ThinkSystem RAID 940-16i 8GB Flash PCIe Gen4 12Gb Adapter  
1d49 060d ThinkSystem RAID 940-16i 8GB Flash PCIe Gen4 12Gb Internal Adapter  
1d49 060e  
ThinkSystem RAID 940-32i 8GB Flash PCIe Gen4 12Gb Adapter  
1d49 060f ThinkSystem RAID 940-8e 4GB Flash PCIe Gen4 12Gb Adapter  
1d49 0610 ThinkSystem RAID 940-16i 4GB Flash PCIe Gen4 12Gb Adapter  
8086 4000 RAID Controller RS3P4TF160F  
8086 4020 RAID Controller RS3P4MF088F  
10e3 MegaRAID 12GSAS/PCIe Unsupported SAS39xx  
1028 1ae0 PERC H755 Adapter - Tampered Device  
1028 1ae1 PERC H755 Front - Tampered Device  
1028 1ae2 PERC H755N Front - Tampered Device  
1028 1ae3 PERC H755 MX - Tampered Device  
10e4 MegaRAID 12GSAS/PCIe Unsupported SAS38xx  
10e5 MegaRAID 12GSAS/PCIe SAS38xx  
10e6 MegaRAID 12GSAS/PCIe Secure SAS38xx  
1000 40e0 MegaRAID 9540-2M2

1028 2172 PERC H355 Adapter  
1028 2173 PERC H355 Front  
1028 2174 PERC H350 Mini  
1028 2177 PERC H350 Adapter  
1028 2199 PERC H350 Mini LP  
15d9 1b9d AOC-S3816L-L16IR Storage Adapter  
15d9 1b9f AOC-S3816L-L8IR Storage Adapter  
15d9 1c6d AOC-S3808L-L8IR Storage Adapter  
15d9 1c6e AOC-SLG4-2H8M2 Storage  
Adapter  
1d49 0505 ThinkSystem RAID 540-8i PCIe Gen4 12Gb Adapter  
1d49 0506 ThinkSystem RAID 540-16i PCIe Gen4 12Gb Adapter  
1d49 0507 ThinkSystem RAID 545-8i PCIe Gen4 12Gb Adapter  
1d49 0700 ThinkSystem M.2 RAID B540i-2i SATA/NVMe Enablement Kit  
1d49 0701 ThinkSystem 7mm RAID B540p-2HS SATA/NVMe Enablement Kit  
1d49 0702 ThinkSystem M.2 RAID B540p-2HS SATA/NVMe Enablement Kit  
1d49 0703 ThinkSystem M.2 RAID B540d-2HS SATA/NVMe Enablement Kit  
1d49 0704 ThinkSystem M.2 RAID B545i-2i SATA/NVMe Enablement Kit  
10e7 MegaRAID 12GSAS/PCIe Unsupported SAS38xx  
1960 MegaRAID  
1000 0518 MegaRAID 518 SCSI 320-2 Controller  
1000 0520 MegaRAID 520 SCSI 320-1 Controller  
1000 0522 MegaRAID 522 i4 133 RAID Controller  
1000 0523 MegaRAID SATA 150-6 RAID Controller  
1000 4523 MegaRAID SATA 150-4 RAID Controller  
1000 a520 MegaRAID ZCR SCSI 320-0 Controller  
1028 0518 MegaRAID 518 DELL PERC 4/DC RAID Controller  
1028 0520 MegaRAID 520 DELL PERC 4/SC RAID Controller  
1028  
0531 PowerEdge Expandable RAID Controller 4/QC  
1028 0533 PowerEdge Expandable RAID Controller 4/QC  
8086 0520 MegaRAID RAID Controller SRCU41L  
8086 0523 MegaRAID RAID Controller SRCS16  
3050 SAS2008 PCI-Express Fusion-MPT SAS-2  
3150 1068e  
6001 DX1 Multiformat Broadcast HD/SD Encoder/Decoder  
c010 PEX880xx PCIe Gen 4 Switch  
1000 100b PEX88000 PCIe Gen 4 Virtual Upstream/Downstream Port  
1000 2004 PEX88000 Virtual PCIe TWC/NT2 Endpoint  
1000 2005 PEX88000 Virtual PCIe gDMA Endpoint  
1000 a024 PEX88024 24 lane/port PCIe Gen 4.0 Switch  
1000 a032 PEX88032 32 lane/port PCIe Gen 4 Switch  
1000 a048 PEX88048 50 lane/port PCIe Gen 4.0 Switch  
1000 a064 PEX88064 64 lane/port PCIe Gen 4 Switch  
1000 a080 PEX88080 80 lane/port PCIe Gen 4 Switch  
1000 a096 PEX88096 98 lane/port PCIe Gen 4.0 Switch  
c012 PEX880xx PCIe Gen 4 Switch  
# Virtual endpoint used in Broadcom synthetic PCIe switches for resource reservation

1000 100b PEX88000 PCIe Gen 4 Virtual Upstream/Downstream  
 Port  
 # For secure part version of this chip  
 1000 2004 PEX88000 Virtual PCIe TWC/NT2 Endpoint  
 # For secure part version of this chip  
 1000 2005 PEX88000 Virtual PCIe gDMA Endpoint  
 # For secure part version of this chip  
 1000 a024 PEX88024 24 lane/port PCIe Gen 4.0 Switch  
 # For secure part version of this chip  
 1000 a032 PEX88032 32 lane/port PCIe Gen 4.0 Switch  
 # For secure part version of this chip  
 1000 a048 PEX88048 48 lane/port PCIe Gen 4.0 Switch  
 1000 a064 PEX88064 64 lane/port PCIe Gen 4.0 Switch  
 # For secure part version of this chip  
 1000 a080 PEX88080 80 lane/port PCIe Gen 4.0 Switch  
 # For secure part version of this chip  
 1000 a096 PEX88096 96 lane/port PCIe Gen 4.0 Switch  
 1d49 0003 ThinkSystem 1611-8P PCIe Gen4 NVMe Switch Adapter  
 c030 PEX890xx PCIe Gen 5 Switch  
 1000 0024 PEX89024 PCIe Gen 5 24 port/lane Switch Upstream/Downstream Port  
 1000 0032 PEX89032 PCIe Gen 5 32 port/lane Switch Upstream/Downstream Port  
 1000 0048 PEX89048  
 PCIe Gen 5 48 port/lane Switch Upstream/Downstream Port  
 1000 0072 PEX89072 PCIe Gen 5 36 port/72 lane Switch Upstream/Downstream Port  
 1000 0088 PEX89088 PCIe Gen 5 44 port/88 lane Switch Upstream/Downstream Port  
 1000 0104 PEX89104 PCIe Gen 5 52 port/104 lane Switch Upstream/Downstream Port  
 1000 0144 PEX89144 PCIe Gen 5 72 port/144 lane Switch Upstream/Downstream Port  
 1000 100b PEX89000 PCIe Gen 5 Virtual Upstream/Downstream Port  
 1000 2004 PEX89000 Virtual PCIe TWC/NT 2.0 Endpoint  
 1000 2005 PEX89000 Virtual PCIe gDMA Endpoint  
 # Lower lane count PEX89000 switch  
 c034 PEX890xx PCIe Gen 5 Switch  
 # Lower lane count PEX89000 switch  
 1000 0024 PEX89024 PCIe Gen 5 24 port/lane Switch Upstream/Downstream Port  
 1000 0032 PEX89032 PCIe Gen 5 32 port/lane Switch Upstream/Downstream Port  
 # Lower lane count PEX89000 switch  
 1000 0048 PEX89048 PCIe Gen 5 48 port/lane Switch Upstream/Downstream Port  
 # Lower lane count PEX89000 switch  
 1000 100b PEX89000 PCIe Gen 5 Virtual  
 Upstream/Downstream Port  
 # Lower lane count PEX89000 switch  
 1000 2004 PEX89000 Virtual PCIe TWC/NT 2.0 Endpoint  
 # Lower lane count PEX89000 switch  
 1000 2005 PEX89000 Virtual PCIe gDMA Endpoint  
 1001 Kolter Electronic  
 0010 PCI 1616 Measurement card with 32 digital I/O lines  
 0011 OPTO-PCI Opto-Isolated digital I/O board  
 0012 PCI-AD/DA Analogue I/O board



0013 PCI-OPTO-RELAIS Digital I/O board with relay outputs  
0014 PCI-Counter/Timer Counter Timer board  
0015 PCI-DAC416 Analogue output board  
0016 PCI-MFB Analogue I/O board  
0017 PROTO-3 PCI Prototyping board  
9100 INI-9100/9100W SCSI Host  
# nee ATI Technologies, Inc.  
1002 Advanced Micro Devices, Inc. [AMD/ATI]  
1304 Kaveri  
1305 Kaveri  
1306 Kaveri  
1307 Kaveri  
1308 Kaveri HDMI/DP Audio Controller  
17aa 3988 Z50-75  
1309 Kaveri [Radeon R6/R7 Graphics]  
17aa 3830 Z50-75  
130a Kaveri [Radeon R6 Graphics]  
130b Kaveri [Radeon R4 Graphics]  
130c Kaveri [Radeon R7 Graphics]  
130d Kaveri [Radeon R6 Graphics]  
130e  
Kaveri [Radeon R5 Graphics]  
130f Kaveri [Radeon R7 Graphics]  
1310 Kaveri  
1311 Kaveri  
1312 Kaveri  
1313 Kaveri [Radeon R7 Graphics]  
1314 Wrestler HDMI Audio  
174b 1001 PURE Fusion Mini  
1315 Kaveri [Radeon R5 Graphics]  
1316 Kaveri [Radeon R5 Graphics]  
1317 Kaveri  
1318 Kaveri [Radeon R5 Graphics]  
131b Kaveri [Radeon R4 Graphics]  
131c Kaveri [Radeon R7 Graphics]  
131d Kaveri [Radeon R6 Graphics]  
13e9 Ariel/Navi10Lite  
13f9 Oberon/Navi12Lite  
13fe Cyan Skillfish [BC-250]  
# Used in the Steam Deck OLED  
1435 Sephiroth [AMD Custom GPU 0405]  
145a Dummy Function (absent graphics controller)  
1478 Navi 10 XL Upstream Port of PCI Express Switch  
1479 Navi 10 XL Downstream Port of PCI Express Switch  
1506 Mendocino  
154c Kryptos [Radeon RX 350]  
1462 7c28 MS-7C28 Motherboard  
154e Garfield

1551 Arlene  
1552 Pooky  
1561 Anubis  
15bf Phoenix1  
15c8 Phoenix2  
15d8 Picasso/Raven 2 [Radeon Vega Series / Radeon Vega Mobile Series]  
103c 8615 Pavilion  
Laptop 15-cw1xxx  
17aa 3181 ThinkCentre M75n IoT  
17aa 5124 ThinkPad E595  
1dc2 2209 Avita Pura 14 Notebook  
ea50 cc10 RXi2-BP  
15dd Raven Ridge [Radeon Vega Series / Radeon Vega Mobile Series]  
103c 83c6 Radeon Vega 8 Mobile  
1043 876b PRIME Motherboard  
1458 d000 Radeon RX Vega 11  
ea50 cc10 RXi2-BP  
15de Raven/Raven2/Fenghuang HDMI/DP Audio Controller  
103c 8615 Pavilion Laptop 15-cw1xxx  
1043 876b PRIME B450M-A Motherboard  
17aa 5124 ThinkPad E595  
ea50 cc10 RXi2-BP  
15df Raven/Raven2/Fenghuang/Renoir Cryptographic Coprocessor  
103c 8615 Pavilion Laptop 15-cw1xxx  
ea50 ce19 mCOM10-L1900  
15e7 Barcelo  
103c 8b17 ProBook 445 G9/455 G9 [Ryzen 7 Integrated Radeon GPU]  
15ff Fenghuang [Zhongshan Subor Z+]  
1607 Arden  
1636 Renoir [Radeon RX Vega 6 (Ryzen 4000/5000 Mobile Series)]  
1637 Renoir Radeon High Definition Audio Controller  
1638 Cezanne [Radeon Vega Series / Radeon Vega Mobile Series]  
1043 16c2 Radeon Vega 8  
# Used in the Steam Deck  
LCD  
163f VanGogh [AMD Custom GPU 0405]  
1640 Rembrandt Radeon High Definition Audio Controller  
164c Lucienne  
164d Rembrandt  
164e Raphael  
164f Phoenix  
1681 Rembrandt [Radeon 680M]  
1714 BeaverCreek HDMI Audio [Radeon HD 6500D and 6400G-6600G series]  
103c 168b ProBook 4535s  
1900 Phoenix3  
1901 Phoenix4  
3150 RV380/M24 [Mobility Radeon X600]  
103c 0934 nx8220

3151 RV380 GL [FireMV 2400]  
3152 RV370/M22 [Mobility Radeon X300]  
3154 RV380/M24 GL [Mobility FireGL V3200]  
3155 RV380 GL [FireMV 2400]  
3171 RV380 GL [FireMV 2400] (Secondary)  
3e50 RV380 [Radeon X550/X600]  
3e54 RV380 GL [FireGL V3200]  
3e70 RV380 [Radeon X550/X600] (Secondary)  
4136 RS100 [Mobility IGP 320M]  
4137 RS200 [Radeon IGP 340]  
4144 R300 [Radeon 9500]  
4146 R300 [Radeon 9700 PRO]  
4147 R300 GL [FireGL Z1]  
4148 R350 [Radeon 9800/9800 SE]  
4150 RV350 [Radeon 9550/9600/X1050 Series]  
1002 0002 R9600 Pro primary (Asus OEM for HP)  
1002 0003 R9600 Pro secondary (Asus OEM for HP)  
1002 4722 All-in-Wonder 2006 AGP Edition  
1458 4024 GV-R96128D  
148c 2064 R96A-C3N  
148c 2066 R96A-C3N  
174b 7c19 Atlantis Radeon 9600 Pro  
174b 7c29 GC-R9600PRO  
17ee 2002 Radeon 9600 256Mb Primary  
18bc 0101 GC-R9600PRO (Primary)  
4151 RV350 [Radeon 9600 Series]  
1043 c004 A9600SE  
174b 7c37 Radeon 9600SE 128M DDR V/D/VO  
4152 RV360 [Radeon 9600/X1050 Series]  
1002 0002 Radeon 9600XT  
1002 4772 All-in-Wonder 9600 XT  
1043 c002 Radeon 9600 XT TVD  
1043 c01a A9600XT/TD  
1462 9510 RX9600XT (MS-8951)  
174b 7c29 Radeon 9600XT  
1787 4002 Radeon 9600 XT  
4153 RV350 [Radeon 9550]  
1043 010c A9550GE/TD  
1462 932c RX9550SE-TD128 (MS-8932)  
4154 RV350 GL [FireGL T2]  
4155 RV350 [Radeon 9600]  
4157 RV350 GL [FireGL T2]  
4158 68800AX [Graphics Ultra Pro PCI]  
4164 R300 [Radeon 9500 PRO] (Secondary)  
4165 R300 [Radeon 9700 PRO] (Secondary)  
4166 R300 [Radeon 9700 PRO] (Secondary)  
4168 RV350 [Radeon 9800 SE] (Secondary)

4170 RV350 [Radeon 9550/9600/X1050 Series] (Secondary)  
1002 0003 R9600 Pro secondary (Asus OEM for HP)  
1002 4723 All-in-Wonder 2006 AGP Edition (Secondary)  
1458 4025 GV-R96128D (Secondary)  
148c 2067 R96A-C3N (Secondary)  
174b 7c28 GC-R9600PRO (Secondary)  
17ee 2003 Radeon 9600 256Mb (Secondary)  
18bc 0100 GC-R9600PRO (Secondary)  
4171 RV350 [Radeon 9600] (Secondary)  
1043 c005 A9600SE (Secondary)  
174b 7c36 Radeon 9600SE 128M DDR V/D/VO (secondary)  
4172 RV350 [Radeon 9600/X1050 Series] (Secondary)  
1002 0003 Radeon 9600XT (Secondary)  
1002 4773 All-in-Wonder 9600 XT (Secondary)  
1043 c003 A9600XT (Secondary)  
1043 c01b A9600XT/TD (Secondary)  
174b 7c28 Radeon 9600XT (Secondary)  
1787 4003 Radeon 9600 XT (Secondary)  
4173 RV350 [Radeon 9550] (Secondary)  
1043 010d A9550GE/TD (Secondary)  
4242 R200 [All-In-Wonder Radeon 8500 DV]  
1002 02aa Radeon 8500 AIW DV Edition  
4243 R200 PCI Bridge [All-in-Wonder Radeon 8500DV]  
4336 RS100 [Radeon IGP 320M]  
1002 4336 Pavilion  
ze4300 ATI Radeon Mobility U1 (IGP 320 M)  
103c 0024 Pavilion ze4400 builtin Video  
161f 2029 eMachines M5312 builtin Video  
4337 RS200M [Radeon IGP 330M/340M/345M/350M]  
1014 053a ThinkPad R40e  
103c 0850 Radeon IGP 345M  
4341 SB200 AC97 Audio Controller  
4342 SB200 PCI to PCI Bridge  
4345 SB200 EHCI USB Controller  
4346 Crayola 6 [XENOS Parent Die (XBOX 360)]  
4347 SB200 OHCI USB Controller #1  
4348 SB200 OHCI USB Controller #2  
4349 SB200 IDE Controller  
434c SB200 PCI to LPC Bridge  
434d SB200 AC97 Modem Controller  
4353 SB200 SMBus Controller  
4354 215CT [Mach64 CT PCI]  
4358 Mach64 CX [Graphics Xpression]  
4361 SB300 AC'97 Audio Controller  
4362 SB300 PCI to PCI Bridge  
4363 SB300 SMBus Controller  
4365 SB300 USB Controller (EHCI)

4367 SB300 USB Controller (EHCI)  
4368 SB300 USB Controller (EHCI)  
4369 SB300 IDE Controller  
436c SB300 PCI to LPC Bridge  
436d SB300 AC97 Modem Controller  
436e SB300 Serial ATA Controller  
4370 IXP SB400 AC'97 Audio  
Controller  
1025 0079 Aspire 5024WLMMi  
1025 0091 Aspire 5032WXMi  
103c 2a05 Pavilion t3030.de Desktop PC  
103c 308b MX6125  
105b 0c81 Realtek ALC 653  
107b 0300 MX6421  
1462 0131 MS-1013 Notebook  
4371 IXP SB4x0 PCI-PCI Bridge  
103c 308b MX6125  
1462 7217 Aspire L250  
4372 IXP SB4x0 SMBus Controller  
1025 0080 Aspire 5024WLMMi  
103c 2a20 Pavilion t3030.de Desktop PC  
103c 308b MX6125  
1462 0131 MS-1013 Notebook  
1462 7217 Aspire L250  
4373 IXP SB4x0 USB2 Host Controller  
1025 0080 Aspire 5024WLMMi  
103c 2a20 Pavilion t3030.de Desktop PC  
103c 308b MX6125  
1462 7217 Aspire L250  
4374 IXP SB4x0 USB Host Controller  
103c 2a20 Pavilion t3030.de Desktop PC  
103c 308b MX6125  
1462 7217 Aspire L250  
4375 IXP SB4x0 USB Host Controller  
1025 0080 Aspire 5024WLMMi  
103c 2a20 Pavilion t3030.de Desktop PC  
103c 308b MX6125  
1462 7217 Aspire L250  
4376 IXP SB4x0 IDE Controller  
1025 0080 Aspire 5024WLMMi  
103c 2a20 Pavilion t3030.de Desktop  
PC  
103c 308b MX6125  
1462 0131 MS-1013 Notebook  
1462 7217 Aspire L250  
4377 IXP SB4x0 PCI-ISA Bridge  
1025 0080 Aspire 5024WLMi  
103c 2a20 Pavilion t3030.de Desktop PC

103c 308b MX6125  
1462 7217 Aspire L250  
4378 IXP SB400 AC'97 Modem Controller  
1025 0080 Aspire 5024WLMMi  
103c 308b MX6125  
1462 0131 MS-1013 Notebook  
4379 IXP SB4x0 Serial ATA Controller  
1462 7141 Aspire L250  
437a IXP SB400 Serial ATA Controller  
1002 4379 4379 Serial ATA Controller  
1002 437a 437A Serial ATA Controller  
1462 7141 Aspire L250  
14f1 8800 Leadtek WinFast TV2000XP Expert  
437b IXP SB4x0 High Definition Audio Controller  
1002 437b IXP SB4x0 High Definition Audio Controller  
10cf 1326 Fujitsu Lifebook A3040  
1734 10b8 Realtek High Definition Audio  
4380 SB600 Non-Raid-5 SATA  
103c 2813 DC5750 Microtower  
1179 ff50 Satellite P305D-S8995E  
1458 b003 GA-MA790FX-DS5 (rev. 1.0)  
1458 b005 Gigabyte GA-MA69G-S3H Motherboard  
1462 7327 K9AG Neo2  
17f2  
5999 KI690-AM2 Motherboard  
4381 SB600 SATA Controller (RAID 5 mode)  
4382 SB600 AC97 Audio  
4383 SBx00 Azalia (Intel HDA)  
1019 2120 A785GM-M  
103c 1611 Pavilion dm1z-3000  
103c 280a DC5750 Microtower  
1043 8230 M3A78-EH Motherboard  
1043 836c M4A785TD Motherboard  
1043 8410 M4A89GTD PRO/USB3 Motherboard  
1043 841b M5A88-V EVO  
1043 8445 M5A78L LE  
105b 0e13 N15235/A74MX mainboard / AMD SB700  
1179 ff1e Satellite C660D-113  
1179 ff50 Satellite P305D-S8995E  
1458 a022 GA-770/78-series motherboard  
1458 a102 GA-880GMA-USB3  
1462 7596 760GM-E51(MS-7596) Motherboard  
17f2 5000 KI690-AM2 Motherboard  
4384 SBx00 PCI to PCI Bridge  
4385 SBx00 SMBus Controller  
1019 2120 A785GM-M  
103c 1611 Pavilion DM1Z-3000  
103c 280a DC5750 Microtower

1043 82ef M3A78-EH Motherboard  
1043 8389 M4A785TD Motherboard  
105b 0e13 N15235/A74MX mainboard / AMD SB700  
1179 ff50 Satellite P305D-S8995E  
1458 4385 GA-770/78-series motherboard  
1462 7368 K9AG Neo2  
1462  
7596 760GM-E51(MS-7596) Motherboard  
15d9 a811 H8DGU  
174b 1001 PURE Fusion Mini  
17f2 5000 KI690-AM2 Motherboard  
4386 SB600 USB Controller (EHCI)  
103c 280a DC5750 Microtower  
1179 ff50 Satellite P305D-S8995E  
1462 7368 K9AG Neo2  
17f2 5000 KI690-AM2 Motherboard  
4387 SB600 USB (OHCI0)  
103c 280a DC5750 Microtower  
1179 ff50 Satellite P305D-S8995E  
1462 7368 K9AG Neo2  
17f2 5000 KI690-AM2 Motherboard  
4388 SB600 USB (OHCI1)  
103c 280a DC5750 Microtower  
1179 ff50 Satellite P305D-S8995E  
1462 7368 K9AG Neo2  
17f2 5000 KI690-AM2 Motherboard  
4389 SB600 USB (OHCI2)  
103c 280a DC5750 Microtower  
1179 ff50 Satellite P305D-S8995E  
1462 7368 K9AG Neo2  
17f2 5000 KI690-AM2 Motherboard  
438a SB600 USB (OHCI3)  
103c 280a DC5750 Microtower  
1179 ff50 Satellite P305D-S8995E  
1462 7368 K9AG Neo2  
17f2 5000 KI690-AM2 Motherboard  
438b SB600 USB (OHCI4)  
103c 280a DC5750 Microtower  
1179 ff50 Satellite P305D-S8995E  
1462 7368 K9AG  
Neo2  
17f2 5000 KI690-AM2 Motherboard  
438c SB600 IDE  
103c 280a DC5750 Microtower  
1179 ff50 Satellite P305D-S8995E  
1458 5002 Gigabyte GA-MA69G-S3H Motherboard  
1462 7368 K9AG Neo2  
17f2 5000 KI690-AM2 Motherboard

438d SB600 PCI to LPC Bridge  
103c 280a DC5750 Microtower  
1179 ff50 Satellite P305D-S8995E  
1462 7368 K9AG Neo2  
17f2 5000 KI690-AM2 Motherboard  
438e SB600 AC97 Modem  
4390 SB7x0/SB8x0/SB9x0 SATA Controller [IDE mode]  
1043 82ef M3A78-EH Motherboard  
1043 8389 M4A785TD Motherboard  
105b 0e13 N15235/A74MX mainboard / AMD SB700  
1458 b002 GA-MA770-DS3rev2.0 Motherboard  
1462 7596 760GM-E51(MS-7596) Motherboard  
1849 4390 Motherboard (one of many)  
4391 SB7x0/SB8x0/SB9x0 SATA Controller [AHCI mode]  
103c 1609 ProLiant MicroServer N36L  
103c 1611 Pavilion DM1Z-3000  
1043 82ef M3A78-EH Motherboard  
1043 8443 M5A88-V EVO  
1043 84dd M5A99X EVO (R1.0) SB950  
105b 0e13 N15235/A74MX mainboard / AMD SB700  
1458 b002 GA-78/880-series  
motherboard  
174b 1001 PURE Fusion Mini  
4392 SB7x0/SB8x0/SB9x0 SATA Controller [Non-RAID5 mode]  
105b 0e13 N15235/A74MX mainboard / AMD SB700  
4393 SB7x0/SB8x0/SB9x0 SATA Controller [RAID5 mode]  
4394 SB7x0/SB8x0/SB9x0 SATA Controller [AHCI mode]  
4395 SB8x0/SB9x0 SATA Controller [Storage mode]  
4396 SB7x0/SB8x0/SB9x0 USB EHCI Controller  
1019 2120 A785GM-M  
103c 1609 ProLiant MicroServer N36L  
103c 1611 Pavilion DM1Z-3000  
1043 82ef M3A78-EH Motherboard  
1043 8443 M5A88-V EVO  
105b 0e13 N15235/A74MX mainboard / AMD SB700  
1458 5004 GA-78/880-series motherboard  
1462 7596 760GM-E51(MS-7596) Motherboard  
15d9 a811 H8DGU  
174b 1001 PURE Fusion Mini  
4397 SB7x0/SB8x0/SB9x0 USB OHCI0 Controller  
1019 2120 A785GM-M  
103c 1609 ProLiant MicroServer N36L  
103c 1611 Pavilion DM1Z-3000  
1043 82ef M3A78-EH Motherboard  
1043 8443 M5A88-V EVO  
105b 0e13 N15235/A74MX mainboard / AMD SB700  
1458 5004 GA-78/880-series motherboard  
1462 7596 760GM-E51(MS-7596)



## Motherboard

15d9 a811 H8DGU  
174b 1001 PURE Fusion Mini  
4398 SB7x0 USB OHCI1 Controller  
1019 2120 A785GM-M  
1043 82ef M3A78-EH Motherboard  
105b 0e13 N15235/A74MX mainboard / AMD SB700  
1458 5004 GA-MA78GM-S2H motherboard  
1462 7596 760GM-E51(MS-7596) Motherboard  
15d9 a811 H8DGU  
4399 SB7x0/SB8x0/SB9x0 USB OHCI2 Controller  
1019 2120 A785GM-M  
1043 82ef M3A78-EH Motherboard  
1043 8443 M5A88-V EVO  
105b 0e13 N15235/A74MX mainboard / AMD SB700  
1458 5004 GA-78/880-series motherboard  
1462 7596 760GM-E51(MS-7596) Motherboard  
174b 1001 PURE Fusion Mini  
439c SB7x0/SB8x0/SB9x0 IDE Controller  
1002 4392 MSI MS-7713 motherboard  
1019 2120 A785GM-M  
103c 1609 ProLiant MicroServer N36L  
1043 82ef M3A78-EH Motherboard  
105b 0e13 N15235/A74MX mainboard / AMD SB700  
1458 5002 GA-MA78GM-S2H motherboard  
1462 7596 760GM-E51(MS-7596) Motherboard  
439d SB7x0/SB8x0/SB9x0 LPC host controller  
1019 2120 A785GM-M  
103c 1609 ProLiant MicroServer  
N36L  
103c 1611 Pavilion DM1Z-3000  
1043 82ef M3A78-EH Motherboard  
1043 8443 M5A88-V EVO  
105b 0e13 N15235/A74MX mainboard / AMD SB700  
1462 7596 760GM-E51(MS-7596) Motherboard  
174b 1001 PURE Fusion Mini  
43a0 SB700/SB800/SB900 PCI to PCI bridge (PCIE port 0)  
43a1 SB700/SB800/SB900 PCI to PCI bridge (PCIE port 1)  
43a2 SB900 PCI to PCI bridge (PCIE port 2)  
43a3 SB900 PCI to PCI bridge (PCIE port 3)  
4437 RS250 [Mobility Radeon 7000 IGP]  
4554 210888ET [Mach64 ET]  
4630 XENOS Parent Die (XBOX 360)  
4631 XENOS Daughter Die (XBOX 360)  
4654 Mach64 VT  
4742 Rage 3 [3D Rage PRO AGP 2X]  
1002 0040 Rage Pro Turbo AGP 2X  
1002 0044 Rage Pro Turbo AGP 2X

1002 0061 Rage Pro AIW AGP 2X  
1002 0062 Rage Pro AIW AGP 2X  
1002 0063 Rage Pro AIW AGP 2X  
1002 0080 Rage Pro Turbo AGP 2X  
1002 0084 Rage Pro Turbo AGP 2X  
1002 4742 Rage Pro Turbo AGP 2X  
1002 8001 Rage Pro Turbo AGP 2X  
1028 0082 Rage Pro Turbo AGP 2X  
1028 4082 Optiplex GX1 Onboard Display  
Adapter  
1028 8082 Rage Pro Turbo AGP 2X  
1028 c082 Rage Pro Turbo AGP 2X  
8086 4152 Xpert 98D AGP 2X  
8086 464a Rage Pro Turbo AGP 2X  
4744 Rage 3 [3D Rage PRO AGP 1X]  
1002 4744 Rage Pro Turbo AGP  
8086 4d55 Rage 3D Pro AGP 1X [Intel MU440EX]  
4749 3D Rage PRO PCI  
1002 0061 Rage Pro AIW  
1002 0062 Rage Pro AIW  
474d Rage XL AGP 2X  
1002 0004 Xpert 98 RXL AGP 2X  
1002 0008 Xpert 98 RXL AGP 2X  
1002 0080 Rage XL AGP 2X  
1002 0084 Xpert 98 AGP 2X  
1002 474d Rage XL AGP  
1033 806a Rage XL AGP  
474e Rage XC AGP  
1002 474e Rage XC AGP  
474f Rage XL  
1002 0008 Rage XL  
1002 474f Rage XL  
4750 3D Rage Pro PCI  
1002 0040 Rage Pro Turbo  
1002 0044 Rage Pro Turbo  
1002 0080 Rage Pro Turbo  
1002 0084 Rage Pro Turbo  
1002 4750 Rage Pro Turbo  
4752 Rage 3 [Rage XL PCI]  
0e11 001e Proliant Rage XL  
1002 0008 Rage XL  
1002 4752 Proliant Rage XL  
1002 8008 Rage XL  
1014 0240 eServer xSeries server mainboard  
1028 00ce PowerEdge 1400  
1028  
00d1 PowerEdge 2550  
1028 00d9 PowerEdge 2500

1028 0134 PowerEdge 600SC  
1028 014a PowerEdge 1750  
1028 0165 PowerEdge 750  
103c 10e1 NetServer Rage XL  
103c 3208 ProLiant DL140 G2  
107b 6400 6400 Server  
1734 007a PRIMERGY RX/TX series onboard VGA  
1734 1073 Primergy Econel 200 D2020 mainboard  
8086 3411 SDS2 Mainboard  
8086 3427 S875WP1-E mainboard  
8086 5744 S845WD1-E mainboard  
4753 Rage XC  
1002 4753 Rage XC  
4754 Mach64 GT/GT-B [3D Rage I/II]  
4755 Mach64 GT-B [3D Rage II+ DVD]  
4756 Rage 2 [3D Rage IIC PCI]  
1002 4756 Rage IIC  
4757 Rage 2 [3D Rage IIC AGP]  
1002 4757 Rage IIC AGP  
1028 0089 Rage 3D IIC  
1028 008e PowerEdge 1300 onboard video  
1028 4082 Rage 3D IIC  
1028 8082 Rage 3D IIC  
1028 c082 Rage 3D IIC  
4758 Mach64 GX [WinTurbo]  
4759 Rage 3 [3D Rage IIC PCI]  
475a 3D Rage IIC AGP  
1002 0084 Rage 3D Pro AGP 2x XPERT 98  
1002 0087 Rage 3D IIC  
1002 475a Rage IIC AGP  
4845 Xilleon 220 HBIU for HDTV2  
4846 Xilleon  
220 IDE for HDTV2  
4847 Xilleon 220 USB for HDTV2  
4848 Xilleon 220 DAIO-0 for HDTV2  
4849 Xilleon 220 DAIO-1 for HDTV2  
484a Xilleon 220 LPC for HDTV2  
4850 Xilleon 215 HBIU for X215  
4851 Xilleon 215 IDE for X215  
4852 Xilleon 215 USB for X215  
4853 Xilleon 215 DAIO-0 for X215  
4854 Xilleon 215 DAIO-1 for X215  
4855 Xilleon 225 HBIU for X225  
4856 Xilleon 225 IDE for X225  
4857 Xilleon 225 USB for X225  
4858 Xilleon 225 DAIO-0 for X225  
4859 Xilleon 225 DAIO-1 for X225  
4860 Xilleon 210 HBIU for X210

4861 Xilleon 210 IDE for X210  
4862 Xilleon 210 USB for X210  
4863 Xilleon 210 DAIO-0 for X210  
4864 Xilleon 210 DAIO-1 for X210  
4865 Xilleon 226 HBIU for X226  
4866 Xilleon 226 IDE for X226  
4867 Xilleon 226 USB for X226  
4868 Xilleon 226 DAIO-0 for X226  
4869 Xilleon 226 DAIO-1 for X226  
486a Xilleon 240S HBIU for X240S  
486b Xilleon 240H HBIU for X240H  
486c Xilleon 240S USB for X240S  
486d Xilleon 240H USB for X240H  
486e Xilleon 250 USB 1.1 for X250  
486f  
Xilleon 260 USB 1.1 for X260  
4870 Xilleon 250 HBIU for X250  
4871 Xilleon 250 IDE for X250  
4872 Xilleon 234/235 HBIU for X234/X235  
4873 Xilleon 244/245 HBIU for X244/X245  
4874 Xilleon 234/235 USB 1.1 for X234/X235  
4875 Xilleon 260 HBIU for X260  
4876 Xilleon 260 IDE for X260  
4877 Xilleon 244/245 USB 1.1 for X244/X245  
4878 Xilleon 270 HBIU for X270  
487b Xilleon 242 HBIU for X242  
487d Xilleon 242 USB 1.1 for X242  
4880 Xilleon 254 HBIU for X254  
4881 Xilleon 254 USB 1.1 for X254  
4882 Xilleon 255 HBIU for X255  
4883 Xilleon 255 USB 1.1 for X255  
4884 Xilleon 243 HBIU for X243  
4885 Xilleon 243 USB 1.1 for X243  
4886 Xilleon 233 HBIU for X233  
4887 Xilleon 233 USB 1.1 for X233  
4888 Xilleon 143 HBIU for X143  
4889 Xilleon 143 HBIU for X143L  
488a Xilleon 143 HBIU for X143S  
4966 RV250 [Radeon 9000 Series]  
10f1 0002 RV250 If [Tachyon G9000 PRO]  
148c 2039 RV250 If [Radeon 9000 Pro "Evil Commando"]  
1509 9a00 RV250 If [Radeon 9000 "AT009"]  
1681  
0040 RV250 If [3D prophet 9000]  
174b 7176 Radeon 9000 Pro  
174b 7192 RV250 If [Radeon 9000 "Atlantis"]  
17af 2005 RV250 If [Excalibur Radeon 9000 Pro]  
17af 2006 RV250 If [Excalibur Radeon 9000]

496e RV250 [Radeon 9000] (Secondary)  
4a49 R420 [Radeon X800 PRO/GTO AGP]  
174b 2620 R420 [Radeon X800 GTO AGP]  
4a4a R420 [Radeon X800 GT AGP]  
4a4b R420 [Radeon X800 AGP Series]  
4a4d R420 GL [FireGL X3-256]  
4a4e RV420/M18 [Mobility Radeon 9800]  
4a4f R420 [Radeon X850 AGP]  
4a50 R420 [Radeon X800 XT Platinum Edition AGP]  
4a54 R420 [Radeon X800 VE AGP]  
1002 4422 All-In-Wonder X800 VE AGP  
4a69 R420 [Radeon X800 PRO/GTO] (Secondary)  
4a6a R420 [Radeon X800] (Secondary)  
4a6b R420 [Radeon X800 XT AGP] (Secondary)  
4a70 R420 [Radeon X800 XT Platinum Edition AGP] (Secondary)  
4a74 R420 [Radeon X800 VE] (Secondary)  
4b49 R481 [Radeon X850 XT AGP]  
4b4b R481 [Radeon X850 PRO AGP]  
4b4c R481 [Radeon X850 XT Platinum Edition AGP]  
4b69 R481 [Radeon X850 XT AGP]  
(Secondary)  
4b6b R481 [Radeon X850 PRO AGP] (Secondary)  
4b6c R481 [Radeon X850 XT Platinum Edition AGP] (Secondary)  
4c42 Mach64 LT [3D Rage LT PRO AGP]  
0e11 b0e7 Rage LT Pro (Compaq Presario 5240)  
0e11 b0e8 Rage 3D LT Pro  
0e11 b10e 3D Rage LT Pro (Compaq Armada 1750)  
1002 0040 Rage LT Pro AGP 2X  
1002 0044 Rage LT Pro AGP 2X  
1002 4c42 Rage LT Pro AGP 2X  
1002 8001 Rage LT Pro AGP 2X  
1028 0085 Rage 3D LT Pro  
4c46 Rage Mobility 128 AGP 2X/Mobility M3  
1002 0155 IBM Thinkpad A22p  
1014 0155 Thinkpad A22p  
1028 00b1 Latitude C600  
4c47 3D Rage IIC PCI / Mobility Radeon 7500/7500C  
4c49 3D Rage LT PRO PCI  
1002 0004 Rage LT Pro  
1002 0040 Rage LT Pro  
1002 0044 Rage LT Pro  
1002 4c49 Rage LT Pro  
4c4d Rage Mobility AGP 2x Series  
0e11 b111 Armada M700  
0e11 b160 Armada E500  
1002 0084 Xpert 98 AGP 2X (Mobility)  
1014 0154 ThinkPad A20m/A21m  
1028 00aa Latitude CPt

1028 00bb Latitude CPx  
1179 ff00 Satellite 1715XCDS laptop  
13bd  
1019 PC-AR10  
4c4e Rage Mobility L AGP 2x  
4c50 Rage 3 LT [3D Rage LT PRO PCI]  
1002 4c50 Rage LT Pro  
4c52 M1 [Rage Mobility-M1 PCI]  
1033 8112 Versa Note VXi  
4c54 264LT [Mach64 LT]  
4c57 RV200/M7 [Mobility Radeon 7500]  
1014 0517 ThinkPad T30  
1014 0530 ThinkPad T4x Series  
1028 00e6 Radeon Mobility M7 LW (Dell Inspiron 8100)  
1028 012a Latitude C640  
1043 1622 Mobility Radeon M7 (L3C/S)  
144d c006 Radeon Mobility M7 LW in vpr Matrix 170B4  
4c58 RV200/M7 GL [Mobility FireGL 7800]  
4c59 RV100/M6 [Rage/Radeon Mobility Series]  
0e11 b111 Evo N600c  
1014 0235 ThinkPad A30/A30p (2652/2653)  
1014 0239 ThinkPad X22/X23/X24  
103c 0025 XE4500 Notebook  
104d 80e7 VAIO PCG-GR214EP/GR214MP/GR215MP/GR314MP/GR315MP  
104d 8140 PCG-Z1SP laptop  
1509 1930 Medion MD9703  
4c66 RV250/M9 GL [Mobility FireGL 9000/Radeon 9000]  
1014 054d ThinkPad T41  
4c6e RV250/M9 [Mobility Radeon 9000] (Secondary)  
4d46 Rage Mobility 128 AGP 4X/Mobility M4  
4d52 Theater 550  
PRO PCI [ATI TV Wonder 550]  
4d53 Theater 550 PRO PCIe  
4e44 R300 [Radeon 9700/9700 PRO]  
1002 515e Radeon ES1000  
1002 5965 Radeon ES1000  
4e45 R300 [Radeon 9500 PRO/9700]  
1002 0002 Radeon R300 NE [Radeon 9500 Pro]  
1681 0002 Hercules 3D Prophet 9500 PRO [Radeon 9500 Pro]  
4e46 R300 [Radeon 9600 TX]  
4e47 R300 GL [FireGL X1]  
4e48 R350 [Radeon 9800 Series]  
4e49 R350 [Radeon 9800]  
4e4a R360 [Radeon 9800 XXL/XT]  
1002 4e4a R360 [Radeon 9800 XT]  
4e4b R350 GL [FireGL X2 AGP Pro]  
4e50 RV350/M10 / RV360/M11 [Mobility Radeon 9600 (PRO) / 9700]  
1025 005a TravelMate 290

1025 0064 Extensa 3000 series laptop: ATI RV360/M11 [Mobility Radeon 9700]  
103c 088c NC8000 laptop  
103c 0890 NC6000 laptop  
144d c00c P35 notebook  
1462 0311 MSI M510A  
1734 1055 Amilo M1420W  
4e51 RV350 [Radeon 9550/9600/X1050 Series]  
4e52 RV350/M10 [Mobility Radeon 9500/9700 SE]  
144d c00c P35 notebook  
4e54 RV350/M10 GL [Mobility FireGL T2]  
4e56 RV360/M12 [Mobility Radeon 9550]  
4e64  
R300 [Radeon 9700 PRO] (Secondary)  
4e65 R300 [Radeon 9500 PRO] (Secondary)  
1002 0003 Radeon R300 NE [Radeon 9500 Pro]  
1681 0003 Hercules 3D Prophet 9500 PRO [Radeon 9500 Pro] (Secondary)  
4e66 RV350 [Radeon 9600] (Secondary)  
4e67 R300 GL [FireGL X1] (Secondary)  
4e68 R350 [Radeon 9800 PRO] (Secondary)  
4e69 R350 [Radeon 9800] (Secondary)  
4e6a RV350 [Radeon 9800 XT] (Secondary)  
1002 4e6a R360 [Radeon 9800 XT] (Secondary)  
1002 4e71 M10 NQ [Radeon Mobility 9600]  
4e71 RV350/M10 [Mobility Radeon 9600] (Secondary)  
4f72 RV250 [Radeon 9000 Series]  
4f73 RV250 [Radeon 9000 Series] (Secondary)  
5044 All-In-Wonder 128 PCI  
1002 0028 Rage 128 AIW  
1002 0029 Rage 128 AIW  
5046 Rage 4 [Rage 128 PRO AGP 4X]  
1002 0004 Rage Fury Pro  
1002 0008 Rage Fury Pro/Xpert 2000 Pro  
1002 0014 Rage Fury Pro  
1002 0018 Rage Fury Pro/Xpert 2000 Pro  
1002 0028 Rage 128 Pro AIW AGP  
1002 002a Rage 128 Pro AIW AGP  
1002 0048 Rage Fury Pro  
1002 2000 Rage Fury  
MAXX AGP 4x (TMDS) (VGA device)  
1002 2001 Rage Fury MAXX AGP 4x (TMDS) (Extra device?!)  
5050 Rage 4 [Rage 128 PRO PCI / Xpert 128 PCI]  
1002 0008 Xpert 128  
5052 Rage 4 [Rage 128 PRO AGP 4X]  
5144 R100 [Radeon 7200 / All-In-Wonder Radeon]  
1002 0008 Radeon 7000/Radeon VE  
1002 0009 Radeon 7000/Radeon  
1002 000a Radeon 7000/Radeon  
1002 001a Radeon 7000/Radeon

1002 0029 Radeon AIW  
1002 0038 Radeon 7000/Radeon  
1002 0039 Radeon 7000/Radeon  
1002 008a Radeon 7000/Radeon  
1002 00ba Radeon 7000/Radeon  
1002 0139 Radeon 7000/Radeon  
1002 028a Radeon 7000/Radeon  
1002 02aa Radeon AIW  
1002 053a Radeon 7000/Radeon  
5148 R200 GL [FireGL 8800]  
1002 010a FireGL 8800 64Mb  
1002 0152 FireGL 8800 128Mb  
1002 0162 FireGL 8700 32Mb  
1002 0172 FireGL 8700 64Mb  
514c R200 [Radeon 8500/8500 LE]  
1002 003a Radeon R200 QL [Radeon 8500 LE]  
1002 013a Radeon 8500  
148c 2026 R200 QL [Radeon 8500 Evil Master II Multi Display Edition]  
1681 0010 Radeon 8500  
[3D Prophet 8500 128Mb]  
174b 7149 Radeon 8500 LE  
1787 0f08 Radeon R200 QL [PowerMagic Radeon 8500]  
514d R200 [Radeon 9100]  
5157 RV200 [Radeon 7500/7500 LE]  
1002 013a Radeon 7500  
1002 0f2b ALL-IN-WONDER VE PCI  
1002 103a Dell Optiplex GX260  
1458 4000 RV200 QW [RADEON 7500 PRO MAYA AR]  
148c 2024 RV200 QW [Radeon 7500LE Dual Display]  
148c 2025 RV200 QW [Radeon 7500 Evil Master Multi Display Edition]  
148c 2036 RV200 QW [Radeon 7500 PCI Dual Display]  
174b 7146 RV200 QW [Radeon 7500 LE]  
174b 7147 Radeon 7500 LE  
174b 7161 Radeon RV200 QW [Radeon 7500 LE]  
17af 0202 RV200 QW [Excalibur Radeon 7500LE]  
5159 RV100 [Radeon 7000 / Radeon VE]  
1002 000a Radeon 7000/Radeon VE  
1002 000b Radeon 7000  
1002 0038 Radeon 7000/Radeon VE  
1002 003a Radeon 7000/Radeon VE  
1002 00ba Radeon 7000/Radeon VE  
1002 013a Radeon 7000/Radeon VE  
1002 0908 XVR-100 (supplied by Sun)  
# The IBM card doubles as an ATI PCI video adapter  
1014 029a Remote Supervisor  
Adapter II (RSA2)  
1014 02c8 eServer xSeries server mainboard  
1028 016c PowerEdge 1850 Embedded Radeon 7000/VE



1028 016d PowerEdge 2850 Embedded Radeon 7000-M  
1028 0170 PowerEdge 6850 Embedded Radeon 7000/VE  
1028 019a PowerEdge SC1425  
103c 1292 Radeon 7000  
1043 c00a A7000/T/64M  
1458 4002 RV100 QY [RADEON 7000 PRO MAYA AV Series]  
148c 2003 RV100 QY [Radeon 7000 Multi-Display Edition]  
148c 2023 RV100 QY [Radeon 7000 Evil Master Multi-Display]  
148c 2081 RV6DE  
174b 0280 Radeon RV100 QY [Radeon 7000/VE]  
174b 7112 Radeon VE 7000  
174b 7c28 Radeon VE 7000 DDR  
1787 0202 RV100 QY [Excalibur Radeon 7000]  
17ee 1001 Radeon 7000 64MB DDR + DVI  
515e ES1000  
1028 01bb PowerEdge 1955 Embedded ATI ES1000  
1028 01df PowerEdge SC440  
1028 01e6 PowerEdge 860  
1028 01f0 PowerEdge R900 Embedded ATI ES1000  
1028 0205 PowerEdge 2970 Embedded ATI ES1000  
1028 020b PowerEdge T605 Embedded ATI ES1000  
1028 020f PowerEdge R300 Embedded ATI ES1000  
1028  
0210 PowerEdge T300 Embedded ATI ES1000  
1028 0221 PowerEdge R805 Embedded ATI ES1000  
1028 0223 PowerEdge R905 Embedded ATI ES1000  
1028 0225 PowerEdge T105 Embedded ATI ES1000  
1028 023c PowerEdge R200 Embedded ATI ES1000  
103c 1304 Integrity iLO2 Advanced KVM VGA [AD307A]  
103c 31fb ProLiant DL360 G5  
15d9 8680 X7DVL-E-O motherboard  
15d9 9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server Board  
5245 Rage 128 GL PCI  
1002 0008 Xpert 128  
1002 0028 Rage 128 AIW  
1002 0029 Rage 128 AIW  
1002 0068 Rage 128 AIW  
5246 Rage 128 (Rage 4) series  
1002 0004 Magnum/Xpert 128/Xpert 99  
1002 0008 Rage 128 AGP 2x  
1002 0028 Rage 128 AIW AGP  
1002 0044 Rage Fury/Xpert 128/Xpert 2000  
1002 0068 Rage 128 AIW AGP  
1002 0448 Rage Fury  
524b Rage 128 VR PCI  
524c Rage 128 VR AGP  
1002 0008 Xpert 99/Xpert 2000

1002 0088 Xpert 99  
534d Rage 128 4X AGP 4x  
1002 0008 Xpert 99/Xpert 2000  
1002 0018 Xpert 2000  
5354 Mach 64 VT  
1002 5654 Mach  
64 reference  
5446 Rage 128 PRO Ultra AGP 4x  
1002 0004 Rage Fury Pro  
1002 0008 Rage Fury Pro/Xpert 2000 Pro  
1002 0018 Rage Fury Pro/Xpert 2000 Pro  
1002 0028 Rage 128 AIW Pro AGP  
1002 0029 Rage 128 AIW  
1002 002a Rage 128 AIW Pro AGP  
1002 002b Rage 128 AIW  
1002 0048 Xpert 2000 Pro  
5452 Rage 128 PRO Ultra4XL VR-R AGP  
1002 001c Rage 128 Pro 4XL  
103c 1279 Rage 128 Pro 4XL  
5460 RV370/M22 [Mobility Radeon X300]  
1775 1100 CR11/VR11 Single Board Computer  
5461 RV370/M22 [Mobility Radeon X300]  
5462 RV380/M24C [Mobility Radeon X600 SE]  
5464 RV370/M22 GL [Mobility FireGL V3100]  
5549 R423 [Radeon X800 GTO]  
554a R423 [Radeon X800 XT Platinum Edition]  
554b R423 [Radeon X800 GT/SE]  
1002 0302 Radeon X800 SE  
554d R480 [Radeon X800 GTO2/XL]  
1002 0322 All-In-Wonder X800 XL  
1458 2124 GV-R80L256V-B (AGP)  
554e R430 [All-In-Wonder X800 GT]  
554f R430 [Radeon X800]  
5550 R423 GL [FireGL V7100]  
5551 R423 GL [FireGL V5100]  
5569 R423 [Radeon X800  
PRO] (Secondary)  
556b R423 [Radeon X800 GT] (Secondary)  
556d R480 [Radeon X800 GTO2/XL] (Secondary)  
1458 2125 GV-R80L256V-B (AGP)  
556f R430 [Radeon X800] (Secondary)  
5571 R423 GL [FireGL V5100] (Secondary)  
564b RV410/M26 GL [Mobility FireGL V5000]  
564f RV410/M26 [Mobility Radeon X700 XL]  
5652 RV410/M26 [Mobility Radeon X700]  
5653 RV410/M26 [Mobility Radeon X700]  
1025 0080 Aspire 5024WLMi  
103c 0940 Compaq NW8240 Mobile Workstation

5654 Mach64 VT [Video Xpression]  
1002 5654 Mach64VT Reference  
5655 264VT3 [Mach64 VT3]  
5656 Mach64 VT4 [Video Xpression+]  
5657 RV410 [Radeon X550 XTX / X700]  
5830 RS300 Host Bridge  
5831 RS300 Host Bridge  
5832 RS300 Host Bridge  
5833 RS300 Host Bridge  
5834 RS300 [Radeon 9100 IGP]  
5835 RS300M [Mobility Radeon 9100 IGP]  
5838 RS300 AGP Bridge  
5854 RS480 [Radeon Xpress 200 Series] (Secondary)  
5874 RS480 [Radeon Xpress 1150] (Secondary)  
5940 RV280 [Radeon 9200 PRO] (Secondary)  
17af 2021 Excalibur Radeon 9250  
(Secondary)  
5941 RV280 [Radeon 9200] (Secondary)  
1458 4019 Radeon 9200  
174b 7c12 Radeon 9200  
17af 200d Excalibur Radeon 9200  
18bc 0050 GC-R9200-C3 (Secondary)  
5944 RV280 [Radeon 9200 SE PCI]  
5950 RS480/RS482/RS485 Host Bridge  
1025 0080 Aspire 5024WLMMi  
103c 280a DC5750 Microtower  
103c 2a20 Pavilion t3030.de Desktop PC  
103c 308b MX6125  
1462 0131 MS-1013 Notebook  
1462 7217 Aspire L250  
5951 RX480/RX482 Host Bridge  
5952 RD580 Host Bridge  
5954 RS480 [Radeon Xpress 200 Series]  
1002 5954 RV370 [Radeon Xpress 200G Series]  
5955 RS480M [Mobility Radeon Xpress 200]  
1002 5955 RS480 0x5955 [Radeon XPRESS 200M 5955 (PCIE)]  
103c 308b MX6125  
1462 0131 MS-1013 Notebook  
5956 RD790 Host Bridge  
5957 RX780/RX790 Host Bridge  
1849 5957 A770CrossFire Motherboard  
5958 RD780 Host Bridge  
5960 RV280 [Radeon 9200 PRO / 9250]  
17af 2020 Excalibur Radeon 9250  
5961 RV280 [Radeon 9200]  
1002 2f72 All-in-Wonder 9200 Series  
1019 4c30 Radeon 9200

## VIVO

12ab 5961 YUAN SMARTVGA Radeon 9200  
1458 4018 Radeon 9200  
174b 7c13 Radeon 9200  
17af 200c Excalibur Radeon 9200  
18bc 0050 Radeon 9200 Game Buster  
18bc 0051 GC-R9200-C3  
18bc 0053 Radeon 9200 Game Buster VIVO  
5962 RV280 [Radeon 9200]  
5964 RV280 [Radeon 9200 SE]  
1002 5964 Radeon 9200 SE, 64-bit 128MB DDR, 200/166MHz  
1043 c006 Radeon 9200 SE / TD / 128M  
1458 4018 R92S128T [Radeon 9200 SE 128MB]  
1458 4032 Radeon 9200 SE 128MB  
147b 6191 R9200SE-DT  
148c 2073 CN-AG92E  
174b 7c13 Radeon 9200 SE  
1787 5964 Excalibur 9200SE VIVO 128M  
17af 2012 Radeon 9200 SE Excalibur  
18bc 0170 Sapphire Radeon 9200 SE 128MB Game Buster  
18bc 0173 GC-R9200L(SE)-C3H [Radeon 9200 Game Buster]  
5965 RV280 GL [FireMV 2200 PCI]  
5974 RS482/RS485 [Radeon Xpress 1100/1150]  
103c 280a DC5750 Microtower  
1462 7141 Aspire L250  
5975 RS482M [Mobility Radeon Xpress 200]  
5978 RX780/RD790 PCI to PCI bridge (external gfx0 port A)  
1849 5957 A770CrossFire Motherboard  
5979  
RD790 PCI to PCI bridge (external gfx0 port B)  
597a RD790 PCI to PCI bridge (PCI express gpp port A)  
597b RX780/RD790 PCI to PCI bridge (PCI express gpp port B)  
597c RD790 PCI to PCI bridge (PCI express gpp port C)  
597d RX780/RD790 PCI to PCI bridge (PCI express gpp port D)  
597e RD790 PCI to PCI bridge (PCI express gpp port E)  
1849 5957 A770CrossFire Motherboard  
597f RD790 PCI to PCI bridge (PCI express gpp port F)  
1849 5957 A770CrossFire Motherboard  
5980 RD790 PCI to PCI bridge (external gfx1 port A)  
5981 RD790 PCI to PCI bridge (external gfx1 port B)  
5982 RD790 PCI to PCI bridge (NB-SB link)  
5a10 RD890 Northbridge only dual slot (2x16) PCI-e GFX Hydra part  
5a11 RD890 Northbridge only single slot PCI-e GFX Hydra part  
5a12 RD890 Northbridge only dual slot (2x8) PCI-e GFX Hydra part  
15d9 a811 H8DGU  
5a13 RD890S/SR5650 Host Bridge  
5a14 RD9x0/RX980 Host Bridge  
5a15 RD890 PCI to PCI bridge (PCI express gpp port A)

5a16 RD890/RD9x0/RX980  
 PCI to PCI bridge (PCI Express GFX port 0)  
 5a17 RD890/RD9x0 PCI to PCI bridge (PCI Express GFX port 1)  
 5a18 RD890/RD9x0/RX980 PCI to PCI bridge (PCI Express GPP Port 0)  
 15d9 a811 H8DGU  
 5a19 RD890/RD9x0/RX980 PCI to PCI bridge (PCI Express GPP Port 1)  
 5a1a RD890/RD9x0/RX980 PCI to PCI bridge (PCI Express GPP Port 2)  
 5a1b RD890/RD9x0/RX980 PCI to PCI bridge (PCI Express GPP Port 3)  
 5a1c RD890/RD9x0/RX980 PCI to PCI bridge (PCI Express GPP Port 4)  
 5a1d RD890/RD9x0/RX980 PCI to PCI bridge (PCI Express GPP Port 5)  
 5a1e RD890/RD9x0/RX980 PCI to PCI bridge (PCI Express GPP2 Port 0)  
 5a1f RD890/RD990 PCI to PCI bridge (PCI Express GFX2 port 0)  
 15d9 a811 H8DGU  
 5a20 RD890/RD990 PCI to PCI bridge (PCI Express GFX2 port 1)  
 5a23 RD890S/RD990 I/O Memory Management Unit (IOMMU)  
 5a31 RC410 Host Bridge  
 5a33 RS400 Host Bridge  
 5a34 RS4xx PCI Express Port [ext gfx]  
 5a36 RC4xx/RS4xx PCI Express Port 1  
 5a37 RC4xx/RS4xx PCI Express Port 2  
 5a38 RC4xx/RS4xx PCI Express  
 Port 3  
 5a39 RC4xx/RS4xx PCI Express Port 4  
 5a3f RC4xx/RS4xx PCI Bridge [int gfx]  
 1462 7217 Aspire L250  
 5a41 RS400 [Radeon Xpress 200]  
 5a42 RS400M [Radeon Xpress 200M]  
 5a61 RC410 [Radeon Xpress 200/1100]  
 5a62 RC410M [Mobility Radeon Xpress 200M]  
 5b60 RV370 [Radeon X300]  
 1043 002a Extreme AX300SE-X  
 1043 032e Extreme AX300/TD  
 1458 2102 GV-RX30S128D (X300SE)  
 1462 0400 RX300SE-TD128E (MS-8940 REV:200)  
 1462 0402 RX300SE-TD128E (MS-8940)  
 174b 0500 Radeon X300 (PCIE)  
 196d 1086 X300SE HM  
 5b62 RV370 [Radeon X600/X600 SE]  
 5b63 RV370 [Radeon X300/X550/X1050 Series]  
 5b64 RV370 GL [FireGL V3100]  
 5b65 RV370 GL [FireMV 2200]  
 5b66 RV370X  
 5b70 RV370 [Radeon X300 SE]  
 # RX300SE-TD128E  
 1462 0403 Radeon X300 SE 128MB DDR  
 174b 0501 Radeon X300 SE  
 196d 1087 Radeon X300 SE HyperMemory  
 5b72 RV380 [Radeon X300/X550/X1050 Series] (Secondary)

5b73 RV370 [Radeon X300/X550/X1050 Series] (Secondary)  
5b74 RV370 GL [FireGL V3100] (Secondary)  
5b75 RV370  
GL [FireMV 2200] (Secondary)  
5c61 RV280/M9+ [Mobility Radeon 9200 AGP]  
5c63 RV280/M9+ [Mobility Radeon 9200 AGP]  
1002 5c63 Apple iBook G4 2004  
144d c00c P30 notebook  
5d44 RV280 [Radeon 9200 SE] (Secondary)  
1458 4019 R92S128T (Radeon 9200 SE 128MB Secondary)  
1458 4032 Radeon 9200 SE 128MB  
147b 6190 R9200SE-DT (Secondary)  
174b 7c12 Radeon 9200 SE (Secondary)  
1787 5965 Excalibur 9200SE VIVO 128M (Secondary)  
17af 2013 Radeon 9200 SE Excalibur (Secondary)  
18bc 0171 Radeon 9200 SE 128MB Game Buster (Secondary)  
18bc 0172 GC-R9200L(SE)-C3H [Radeon 9200 Game Buster]  
5d45 RV280 GL [FireMV 2200 PCI] (Secondary)  
5d48 R423/M28 [Mobility Radeon X800 XT]  
5d49 R423/M28 GL [Mobility FireGL V5100]  
5d4a R423/M28 [Mobility Radeon X800]  
5d4d R480 [Radeon X850 XT Platinum Edition]  
5d4e R480 [Radeon X850 SE]  
5d4f R480 [Radeon X800 GTO]  
5d50 R480 GL [FireGL V7200]  
5d52 R480 [Radeon X850 XT]  
1002 0b12 PowerColor X850XT PCIe (Primary)  
5d57 R423 [Radeon  
X800 XT]  
5d6d R480 [Radeon X850 XT Platinum Edition] (Secondary)  
5d6f R480 [Radeon X800 GTO] (Secondary)  
5d72 R480 [Radeon X850 XT] (Secondary)  
1002 0b13 PowerColor X850XT PCIe (Secondary)  
5d77 R423 [Radeon X800 XT] (Secondary)  
5e48 RV410 GL [FireGL V5000]  
5e49 RV410 [Radeon X700 Series]  
5e4a RV410 [Radeon X700 XT]  
5e4b RV410 [Radeon X700 PRO]  
5e4c RV410 [Radeon X700 SE]  
5e4d RV410 [Radeon X700]  
148c 2116 Bravo X700  
5e4f RV410 [Radeon X700]  
1569 1e4f Radeon X550 XT  
5e6b RV410 [Radeon X700 PRO] (Secondary)  
5e6d RV410 [Radeon X700] (Secondary)  
148c 2117 Bravo X700 (Secondary)  
5f57 R423 [Radeon X800 XT]  
6600 Mars [Radeon HD 8670A/8670M/8750M / R7 M370]

103c 1952 ProBook 455 G1  
6601 Mars [Radeon HD 8730M]  
103c 2100 FirePro M4100  
6604 Opal XT [Radeon R7 M265/M365X/M465]  
1025 0776 Aspire V5 Radeon R7 M265  
103c 8006 FirePro M4170  
103c 814f Litho XT [Radeon R7 M365X]  
103c 82aa Litho XT [Radeon R7 M465]  
17aa 3643 Radeon R7 A360  
6605  
Opal PRO [Radeon R7 M260X]  
103c 2259 FirePro M4150  
6606 Mars XTX [Radeon HD 8790M]  
1028 0684 FirePro W4170M  
6607 Mars LE [Radeon HD 8530M / R5 M240]  
6608 Oland GL [FirePro W2100]  
13cc 3d28 MXRT-2600  
6609 Oland GL [FirePro W2100 / Barco MXRT 2600]  
6610 Oland XT [Radeon HD 8670 / R5 340X OEM / R7 250/350/350X OEM]  
1019 0030 Radeon HD 8670  
1028 0081 Radeon R7 350X OEM  
1028 0083 Radeon R5 340X OEM  
1028 2120 Radeon R7 250  
1028 2322 Radeon R7 250  
1462 2910 Radeon HD 8670  
1462 2911 Radeon HD 8670  
148c 7350 Radeon R7 350  
1642 3c81 Radeon HD 8670  
1642 3c91 Radeon HD 8670  
1642 3f09 Radeon R7 350  
6611 Oland [Radeon HD 8570 / R5 430 OEM / R7 240/340 / Radeon 520 OEM]  
1028 1001 Radeon R5 430 OEM (1024 MByte)  
1028 1002 Radeon R5 430 OEM (2048 MByte)  
# The 'AMD Radeon R5 430' instead of 240/340 is NOT a typo! It's actually correct.  
1028 1711 R5 430 OEM (2048 MByte)  
1028 210b Radeon R5 240 OEM  
# OEM-card for Dell; verified through  
AMD's own drivers (\*.inf) and a TPU BIOS in database  
1028 2121 Radeon HD 8570 OEM  
# OEM-card from Fujitsu; verified through AMD's own drivers (\*.inf)  
10cf 1889 Radeon HD 8570 OEM  
1642 1869 Radeon 520 OEM  
174b 4248 Radeon R7 240 OEM  
174b a240 Radeon R7 240 OEM  
174b d340 Radeon R7 340 OEM  
1b0a 90d3 Radeon R7 240 OEM  
6613 Oland PRO [Radeon R7 240/340 / Radeon 520]  
148c 7340 Radeon R7 340

1682 7240 R7 240 2048 MB  
1dcf 3000 Oland PRO [Radeon R7 240/340 / Radeon 520]  
6617 Oland LE [Radeon R7 240]  
6631 Oland  
6640 Saturn XT [FirePro M6100]  
106b 014b Tropo XT [Radeon R9 M380 Mac Edition]  
6641 Saturn PRO [Radeon HD 8930M]  
6646 Bonaire XT [Radeon R9 M280X / FirePro W6150M]  
6647 Saturn PRO/XT [Radeon R9 M270X/M280X]  
1043 223d N551ZU laptop Radeon R9 M280X  
6649 Bonaire [FirePro W5100]  
1002 0b0c FirePro W4300  
103c 0b0c Bonaire [FirePro W4300]  
103c 230c FirePro W5100  
13cc 3d2a MXRT-5600  
664d Bonaire [FirePro W5100 / Barco MXRT-5600]  
6650  
Bonaire  
6651 Bonaire  
6658 Bonaire XTX [Radeon R7 260X/360]  
1043 048f R7260X-DC2OC-2GD5  
1043 04d3 AMD Radeon R7 260X  
# GV-R726XOC-1GD  
1458 227b Radeon R7 260X  
148c 0907 Radeon R7 360  
1682 0907 Radeon R7 360  
1682 7360 Radeon R7 360  
665c Bonaire XT [Radeon HD 7790/8770 / R7 360 / R9 260/360 OEM]  
1043 0452 Radeon HD 7790 DirectCU II OC  
# R7790-1GD5/OC  
1462 2930 Radeon HD 7790 OC  
1462 2932 Radeon HD 8770  
1462 2934 Radeon R9 260 OEM  
1462 2938 Radeon R9 360 OEM  
148c 0907 Radeon R7 360  
148c 9260 Radeon R9 260 OEM  
148c 9360 Radeon R9 360 OEM  
1682 0907 Radeon R7 360  
# FX-779A-CDB4 / FX-779A-CDBC  
1682 3310 Radeon HD 7790 Black Edition 2 GB  
# 100356OCL / 11210-01-20G  
174b e253 Radeon HD 7790 Dual-X OC  
1787 2329 Radeon HD 7790 TurboDuo  
665d Bonaire [Radeon R7 200 Series]  
665f Tobago PRO [Radeon R7 360 / R9 360 OEM]  
1028 0b04 Radeon R9 360 OEM  
1462 2938 Radeon R9 360 OEM  
1462 3271 Radeon R9 360 OEM



1682 7360 Radeon  
R7 360  
6660 Sun XT [Radeon HD 8670A/8670M/8690M / R5 M330 / M430 / Radeon 520 Mobile]  
1028 05ea Radeon HD 8670M  
1028 06bf Radeon R5 M335  
103c 1970 Radeon HD 8670M  
103c 80be Radeon R5 M330  
103c 8136 Radeon R5 M330  
103c 8329 Radeon R7 M520  
17aa 3633 Radeon R5 A330  
17aa 3804 Radeon R5 M330  
17aa 3809 Radeon R5 M330  
17aa 381a Radeon R5 M430  
17aa 390c Radeon R5 M330  
6663 Sun PRO [Radeon HD 8570A/8570M]  
1025 0846 Radeon HD 8570A  
17aa 3805 Radeon HD 8570M  
6664 Jet XT [Radeon R5 M240]  
6665 Jet PRO [Radeon R5 M230 / R7 M260DX / Radeon 520/610 Mobile]  
17aa 1309 Z50-75 Radeon R7 M260DX  
17aa 368f Radeon R5 A230  
6667 Jet ULT [Radeon R5 M230]  
666f Sun LE [Radeon HD 8550M / R5 M230]  
66a0 Vega 20 [Radeon Pro/Radeon Instinct]  
66a1 Vega 20 [Radeon Pro VII/Radeon Instinct MI50 32GB]  
66a2 Vega 20  
66a3 Vega 20 [Radeon Pro Vega II/Radeon Pro Vega II Duo]  
66a7 Vega 20 [Radeon Pro Vega 20]  
66af Vega 20 [Radeon VII]  
6704 Cayman PRO GL [FirePro  
V7900]  
6707 Cayman LE GL [FirePro V5900]  
6718 Cayman XT [Radeon HD 6970]  
6719 Cayman PRO [Radeon HD 6950]  
671c Antilles [Radeon HD 6990]  
671d Antilles [Radeon HD 6990]  
671f Cayman CE [Radeon HD 6930]  
6720 Blackcomb [Radeon HD 6970M/6990M]  
1028 048f Radeon HD 6990M  
1028 0490 Alienware M17x R3 Radeon HD 6970M  
1028 04a4 FirePro M8900  
1028 04ba Radeon HD 6990M  
1028 053f FirePro M8900  
106b 0b00 Radeon HD 6970M  
1558 5102 Radeon HD 6970M  
1558 5104 Radeon HD 6990M  
1558 7201 Radeon HD 6990M  
174b e188 Radeon HD 6970M

6738 Barts XT [Radeon HD 6870]  
# HD-687A-ZDFC  
1682 3103 Radeon HD 8670  
1787 201a Barts XT [Radeon HD 6870 X2]  
1787 201b Barts XT [Radeon HD 6870 X2]  
6739 Barts PRO [Radeon HD 6850]  
1043 03b4 EAH6850 [Radeon HD 6850]  
673e Barts LE [Radeon HD 6790]  
148c 7720 Radeon HD 7720 OEM  
6740 Whistler [Radeon HD 6730M/6770M/7690M XT]  
1019 238c Radeon HD 6730M  
1019 238e Radeon HD 6730M  
1019 2391 Radeon HD 6730M  
1019  
2392 Radeon HD 6770M  
1028 04a3 Precision M4600  
1028 053e FirePro M5950  
103c 1630 FirePro M5950  
103c 1631 FirePro M5950  
103c 164b Radeon HD 6730M  
103c 164e Radeon HD 6730M  
103c 1657 Radeon HD 6770M  
103c 1658 Radeon HD 6770M  
103c 165a Radeon HD 6770M  
103c 165b Radeon HD 6770M  
103c 1688 Radeon HD 6770M  
103c 1689 Radeon HD 6770M  
103c 168a Radeon HD 6770M  
103c 185e Radeon HD 7690M XT  
103c 3388 Radeon HD 6770M  
103c 3389 Radeon HD 6770M  
103c 3582 Radeon HD 6770M  
103c 366c Radeon HD 6730M  
1043 1d02 Radeon HD 6730M  
1043 1d12 Radeon HD 6730M  
104d 9084 Radeon HD 6730M  
104d 9085 Radeon HD 6730M  
144d b074 Radeon HD 6730M  
144d b077 Radeon HD 6730M  
144d b084 Radeon HD 6730M  
144d b088 Radeon HD 6730M  
17aa 3982 Radeon HD 6730M  
6741 Whistler [Radeon HD 6630M/6650M/6750M/7670M/7690M]  
1019 238e Radeon HD 6650M  
1019 238f Radeon HD 6650M  
1025 0379 Radeon HD 6650M  
1025 037b Radeon HD 6650M  
1025 037e Radeon HD

6650M

1025 0382 Radeon HD 6650M  
1025 0384 Radeon HD 6650M  
1025 0385 Radeon HD 6650M  
1025 0386 Radeon HD 6650M  
1025 0387 Radeon HD 6650M  
1025 0388 Radeon HD 6650M  
1025 0442 Radeon HD 6650M  
1025 0451 Radeon HD 6650M  
1025 0489 Radeon HD 6650M  
1025 048b Radeon HD 6650M  
1025 048c Radeon HD 6650M  
1025 050a Radeon HD 6650M  
1025 050b Radeon HD 6650M  
1025 050c Radeon HD 6650M  
1025 050e Radeon HD 6650M  
1025 050f Radeon HD 6650M  
1025 0513 Radeon HD 6650M  
1025 0514 Radeon HD 6650M  
1025 0515 Radeon HD 6650M  
1025 0516 Radeon HD 6650M  
1025 051e Radeon HD 6650M  
1025 051f Radeon HD 6650M  
1025 0520 Radeon HD 6650M  
1025 0521 Radeon HD 6650M  
1025 052a Radeon HD 6650M  
1025 0555 Radeon HD 6650M  
1025 0556 Radeon HD 6650M  
1025 055d Radeon HD 6650M  
1025 055e Radeon HD 6650M  
1025 056d Radeon HD 6650M  
1025 059a Radeon HD 6650M  
1025 059b Radeon HD 6650M  
1025 059e Radeon HD 6650M  
1025 059f Radeon HD 6650M  
1025 0600

Radeon HD 6650M

1025 0605 Radeon HD 6650M  
1025 0606 Radeon HD 6650M  
1025 0619 Radeon HD 6650M  
1028 04c1 Radeon HD 6630M  
1028 04c5 Radeon HD 6630M  
1028 04cd Radeon HD 6630M  
1028 04d7 Radeon HD 6630M  
1028 04d9 Radeon HD 6630M  
1028 052d Radeon HD 6630M  
103c 1617 Radeon HD 6650M  
103c 1646 Radeon HD 6750M

103c 1647 Radeon HD 6650M  
103c 164b Radeon HD 6650M  
103c 164e Radeon HD 6650M  
103c 1688 Radeon HD 6750M  
103c 1689 Radeon HD 6750M  
103c 168a Radeon HD 6750M  
103c 1860 Radeon HD 7690M  
103c 3385 Radeon HD 6630M  
103c 3560 Radeon HD 6750M  
103c 358d Radeon HD 6750M  
103c 3590 Radeon HD 6750M  
103c 3593 Radeon HD 6750M  
103c 366c Radeon HD 6650M  
1043 1cd2 Radeon HD 6650M  
1043 2121 Radeon HD 6650M  
1043 2122 Radeon HD 6650M  
1043 2123 Radeon HD 6650M  
1043 2125 Radeon HD 7670M  
1043 2127 Radeon HD 7670M  
104d 907b Radeon HD 6630M  
104d 9080 Radeon HD 6630M  
104d 9081 Radeon HD 6630M  
106b 00e2 MacBookPro8,2  
[Core i7, 15", Late 2011]  
1179 fd63 Radeon HD 6630M  
1179 fd65 Radeon HD 6630M  
144d c093 Radeon HD 6650M  
144d c0ac Radeon HD 6650M  
144d c0b3 Radeon HD 6750M  
144d c539 Radeon HD 6630M  
144d c609 Radeon HD 6630M  
152d 0914 Radeon HD 6650M  
17aa 21e1 Radeon HD 6630M  
17aa 3970 Radeon HD 6650M  
17aa 3976 Radeon HD 6650M  
1854 0907 Radeon HD 6650M  
6742 Whistler LE [Radeon HD 6610M/7610M]  
1002 6570 Turks [Radeon HD 6570]  
1019 2393 Radeon HD 6610M  
1043 1d82 K53SK Laptop Radeon HD 7610M  
1179 fb22 Radeon HD 7610M  
1179 fb23 Radeon HD 7610M  
1179 fb27 Radeon HD 7610M  
1179 fb2a Radeon HD 7610M  
1179 fb2c Radeon HD 7610M  
1179 fb30 Radeon HD 7610M  
1179 fb31 Radeon HD 7610M  
1179 fb32 Radeon HD 7610M

1179 fb38 Radeon HD 7610M  
1179 fb39 Radeon HD 7610M  
1179 fb3a Radeon HD 7610M  
1179 fb3b Radeon HD 7610M  
1179 fb40 Radeon HD 7610M  
1179 fb41 Radeon HD 7610M  
1179 fb47 Radeon HD 7610M  
1179 fb48 Radeon HD 7610M  
1179  
fb49 Radeon HD 7610M  
1179 fb51 Radeon HD 7610M  
1179 fb52 Radeon HD 7610M  
1179 fb53 Radeon HD 7610M  
1179 fb56 Radeon HD 7610M  
1179 fb81 Radeon HD 7610M  
1179 fb82 Radeon HD 7610M  
1179 fb83 Radeon HD 7610M  
1179 fc56 Radeon HD 7610M  
1179 fcd4 Radeon HD 7610M  
1179 fcee Radeon HD 7610M  
1458 6570 Turks [Radeon HD 6570]  
1462 6570 Turks [Radeon HD 6570]  
148c 6570 Turks [Radeon HD 6570]  
1682 6570 Turks [Radeon HD 6570]  
174b 5570 Turks [Radeon HD 5570]  
174b 6570 Turks [Radeon HD 6570]  
174b 7570 Turks [Radeon HD 7570]  
174b 8510 Turks [Radeon HD 8510]  
174b 8570 Turks [Radeon HD 8570]  
1787 6570 Turks [Radeon HD 6570]  
17af 6570 Turks [Radeon HD 6570]  
8086 2111 Radeon HD 6625M  
6743 Whistler [Radeon E6760]  
6749 Turks GL [FirePro V4900]  
15c3 2b06 MED-X4900 (EIZO)  
674a Turks GL [FirePro V3900]  
13cc 3d22 MXRT-2500  
15c3 0106 MED-X3900  
6750 Onega [Radeon HD 6650A/7650A]  
1462 2670 Radeon HD 6670A  
17aa 3079 Radeon HD 7650A  
17aa  
307a Radeon HD 6650A  
17aa 3087 Radeon HD 7650A  
17aa 3618 Radeon HD 6650A  
17aa 3623 Radeon HD 6650A  
17aa 3627 Radeon HD 6650A  
6751 Turks [Radeon HD 7650A/7670A]

1028 0548 Radeon HD 7650A  
1462 2671 Radeon HD 7670A  
1462 2672 Radeon HD 7670A  
1462 2680 Radeon HD 7650A  
1462 2681 Radeon HD 7650A  
17aa 3087 Radeon HD 7650A  
6758 Turks XT [Radeon HD 6670/7670]  
1028 0b0e Radeon HD 6670  
103c 6882 Radeon HD 6670  
1462 250a Radeon HD 7670  
148c 7670 Radeon HD 7670  
1545 7670 Radeon HD 7670  
1682 3300 Radeon HD 7670  
174b 7670 Radeon HD 7670  
174b e181 Radeon HD 6670  
1787 2309 Radeon HD 6670  
6759 Turks PRO [Radeon HD 6570/7570/8550 / R5 230]  
103c 3130 Radeon HD 6570  
1043 0403 Radeon HD 6570  
1462 2500 Radeon HD 6570  
1462 2509 Radeon HD 7570  
148c 7570 Radeon HD 7570  
1642 3a67 Radeon HD 6570  
1682 3280 Radeon HD 7570  
1682 3530 Radeon HD 8550  
1682 5230 Radeon R5 230 series  
1682 6450 Radeon HD 6450 series  
174b  
7570 Radeon HD 7570  
174b 8550 Radeon HD8550 OEM  
174b 8570 Radeon HD8550 OEM  
174b e142 Radeon HD 6570  
174b e181 Radeon HD 6570  
1787 a230 Radeon R5 230 series  
1787 a450 Radeon HD 6450 series  
1b0a 908f Radeon HD 6570  
1b0a 9090 Radeon HD 6570  
1b0a 9091 Radeon HD 6570  
1b0a 9092 Radeon HD 6570  
1b0a 909e Radeon HD 6570  
1b0a 90b5 Radeon HD 7570  
1b0a 90b6 Radeon HD 7570  
675b Turks [Radeon HD 7600 Series]  
675d Turks PRO [Radeon HD 7570]  
675f Turks LE [Radeon HD 5570/6510/7510/8510]  
148c 6510 Radeon HD 6510  
148c 6530 Radeon HD 6530  
148c 7510 Radeon HD 7510

1545 7570 Radeon HD 7570  
174b 6510 Radeon HD 6510  
174b 7510 Radeon HD 7510  
174b 8510 Radeon HD 8510  
1787 2012 Radeon HD 5570 2GB GDDR3  
1787 2314 Radeon HD 5570 1GB DDR2/GDDR3  
6760 Seymour [Radeon HD 6400M/7400M Series]  
1002 0124 Radeon HD 6470M  
1002 0134 Radeon HD 6470M  
1019 238b Radeon HD 6470M  
1019 238e Radeon HD 6470M  
1019 2390 Radeon HD 6470M  
1019  
9985 Radeon HD 6470M  
1028 04c1 Radeon HD 6470M  
1028 04c3 Radeon HD 6470M  
1028 04ca Radeon HD 6470M  
1028 04cb Radeon HD 6470M  
1028 04cc Vostro 3350  
1028 04d1 Radeon HD 6470M  
1028 04d3 Radeon HD 6470M  
1028 04d7 Radeon HD 6470M  
1028 0502 Radeon HD 6470M  
1028 0503 Radeon HD 6470M  
1028 0506 Radeon HD 6470M  
1028 0507 Radeon HD 6470M  
1028 0514 Radeon HD 6470M  
1028 051c Radeon HD 6450M / 7430M  
1028 051d Radeon HD 6450M / 7430M  
103c 161a Radeon HD 6470M  
103c 161b Radeon HD 6470M  
103c 161e Radeon HD 6470M  
103c 161f Radeon HD 6470M  
103c 1622 Radeon HD 6450M  
103c 1623 Radeon HD 6450M  
103c 164a Radeon HD 6470M  
103c 164d Radeon HD 6470M  
103c 1651 Radeon HD 6470M  
103c 1656 Radeon HD 6490M  
103c 1658 Radeon HD 6490M  
103c 1659 Radeon HD 6490M  
103c 165b Radeon HD 6490M  
103c 165d Radeon HD 6470M  
103c 165f Radeon HD 6470M  
103c 1661 Radeon HD 6470M  
103c 1663 Radeon HD 6470M  
103c 1665 Radeon HD 6470M  
103c 1667

Radeon HD 6470M

103c 1669 Radeon HD 6470M  
103c 166b Radeon HD 6470M  
103c 166c Radeon HD 6470M  
103c 166e Radeon HD 6470M  
103c 1670 Radeon HD 6470M  
103c 1672 Radeon HD 6470M  
103c 167a Radeon HD 6470M  
103c 167b Radeon HD 6470M  
103c 167d Radeon HD 6490M  
103c 167f Radeon HD 6490M  
103c 168c Radeon HD 6470M  
103c 168f Radeon HD 6470M  
103c 1694 Radeon HD 6470M  
103c 1696 Radeon HD 6470M  
103c 1698 Radeon HD 6470M  
103c 169a Radeon HD 6470M  
103c 169c Radeon HD 6490M  
103c 1855 Radeon HD 7450M  
103c 1859 Radeon HD 7450M  
103c 185c Radeon HD 7450M  
103c 185d Radeon HD 7470M  
103c 185f Radeon HD 7470M  
103c 1863 Radeon HD 7450M  
103c 355c Radeon HD 6490M  
103c 355f Radeon HD 6490M  
103c 3563 Radeon HD 6470M  
103c 3565 Radeon HD 6470M  
103c 3567 Radeon HD 6470M  
103c 3569 Radeon HD 6470M  
103c 3581 Radeon HD 6490M  
103c 3584 Radeon HD 6470M  
103c 358c Radeon HD 6490M  
103c 358f Radeon HD 6490M  
103c 3592 Radeon HD

6490M

103c 3596 Radeon HD 6490M  
103c 366b Radeon HD 6470M  
103c 3671 FirePro M3900  
103c 3673 Radeon HD 6470M  
1043 100a Radeon HD 7470M  
1043 100c Radeon HD 6470M  
1043 101b Radeon HD 6470M  
1043 101c Radeon HD 6470M  
1043 102a Radeon HD 7450M  
1043 102c Radeon HD 6470M  
1043 104b Radeon HD 7470M  
1043 105d Radeon HD 7470M



1043 106b Radeon HD 7470M  
1043 106d Radeon HD 7470M  
1043 107d Radeon HD 7470M  
1043 1cb2 Radeon HD 6470M  
1043 1d22 Radeon HD 6470M  
1043 1d32 Radeon HD 6470M  
1043 2001 Radeon HD 6470M  
1043 2002 Radeon HD 7470M  
1043 2107 Radeon HD 7470M  
1043 2108 Radeon HD 7470M  
1043 2109 Radeon HD 7470M  
1043 84a0 Radeon HD 6470M  
1043 84e9 Radeon HD 6470M  
1043 8515 Radeon HD 7470M  
1043 8517 Radeon HD 7470M  
1043 855a Radeon HD 7470M  
104d 907b Radeon HD 6470M  
104d 9081 Radeon HD 6470M  
104d 9084 Radeon HD 6470M  
104d 9085 Radeon HD 6470M  
1179 0001 Radeon HD 6450M  
1179 0003 Radeon HD 6450M  
1179 0004  
Radeon HD 6450M  
1179 fb22 Radeon HD 7470M  
1179 fb23 Radeon HD 7470M  
1179 fb2c Radeon HD 7470M  
1179 fb31 Radeon HD 7470M  
1179 fb32 Radeon HD 7470M  
1179 fb33 Radeon HD 7470M  
1179 fb38 Radeon HD 7470M  
1179 fb39 Radeon HD 7470M  
1179 fb3a Radeon HD 7470M  
1179 fb40 Radeon HD 7470M  
1179 fb41 Radeon HD 7470M  
1179 fb42 Radeon HD 7470M  
1179 fb47 Radeon HD 7470M  
1179 fb48 Radeon HD 7470M  
1179 fb51 Radeon HD 7470M  
1179 fb52 Radeon HD 7470M  
1179 fb53 Radeon HD 7470M  
1179 fb81 Radeon HD 7470M  
1179 fb82 Radeon HD 7470M  
1179 fb83 Radeon HD 7470M  
1179 fc51 Radeon HD 6470M  
1179 fc52 Radeon HD 7470M  
1179 fc56 Radeon HD 7470M  
1179 fcd3 Radeon HD 7470M

1179 fcd4 Radeon HD 7470M  
1179 fcee Radeon HD 7470M  
1179 fdee Radeon HD 7470M  
144d b074 Radeon HD 6470M  
144d b084 Radeon HD 6470M  
144d c095 Radeon HD 6470M  
144d c0b3 Radeon HD 6490M  
144d c538 Radeon HD 6470M  
144d c581 Radeon HD 6470M  
144d c589 Radeon HD 6470M  
144d  
c609 Radeon HD 7470M  
144d c625 Radeon HD 7470M  
144d c636 Radeon HD 7450M  
1462 10ac Radeon HD 6470M  
152d 0916 Radeon HD 6470M  
17aa 21e5 Radeon HD 6470M  
17aa 3900 Radeon HD 7450M  
17aa 3902 Radeon HD 7450M  
17aa 3969 Radeon HD 6470M  
17aa 3970 Radeon HD 7450M  
17aa 3976 Radeon HD 6470M  
17aa 397b Radeon HD 6470M  
17aa 397d Radeon HD 6470M  
17aa 5101 Radeon HD 7470M  
17aa 5102 Radeon HD 7450M  
17aa 5103 Radeon HD 7450M  
17aa 5106 Radeon HD 7450M  
1854 0897 Radeon HD 6470M  
1854 0900 Radeon HD 6470M  
1854 0908 Radeon HD 6470M  
1854 2015 Radeon HD 6470M  
6761 Seymour LP [Radeon HD 6430M]  
6763 Seymour [Radeon E6460]  
6764 Seymour [Radeon HD 6400M Series]  
6765 Seymour [Radeon HD 6400M Series]  
6766 Caicos  
6767 Caicos  
6768 Caicos  
6770 Caicos [Radeon HD 6450A/7450A]  
17aa 308d Radeon HD 7450A  
17aa 3623 Radeon HD 6450A  
17aa 3627 Radeon HD 6450A  
17aa 3629 Radeon HD 6450A  
17aa 363c Radeon HD 6450A  
17aa 3658 Radeon  
HD 7470A  
6771 Caicos XTX [Radeon HD 8490 / R5 235X OEM]

6772 Caicos [Radeon HD 7450A]  
6778 Caicos XT [Radeon HD 7470/8470 / R5 235/310 OEM]  
1019 0024 Radeon HD 7470  
1019 0027 Radeon HD 8470  
1028 2120 Radeon HD 7470  
1462 b491 Radeon HD 8470  
1462 b492 Radeon HD 8470  
1462 b493 Radeon HD 8470 OEM  
1462 b499 Radeon R5 235 OEM  
1642 3c65 Radeon HD 8470  
1642 3c75 Radeon HD 8470  
174b 8145 Radeon HD 8470  
174b d145 Radeon R5 235 OEM  
174b d335 Radeon R5 310 OEM  
174b e145 Radeon HD 7470  
17aa 3694 Radeon R5 A220  
6779 Caicos [Radeon HD 6450/7450/8450 / R5 230 OEM]  
1019 0016 Radeon HD 6450  
1019 0017 Radeon HD 6450  
1019 0018 Radeon HD 6450  
1028 2120 Radeon HD 6450  
103c 2128 Radeon HD 6450  
103c 2aee Radeon HD 7450A  
1043 047b EAH6450 SILENT/DI/1GD3(LP)  
1092 6450 Radeon HD 6450  
1462 2125 Radeon HD 6450  
1462 2346 Radeon HD 7450  
1462 2490 Radeon HD 6450  
1462 2494 Radeon HD 6450  
1462 2496 Radeon HD 7450  
148c 7450  
Radeon HD 7450  
148c 8450 Radeon HD 8450 OEM  
1545 7470 Radeon HD 7470  
1642 3a65 Radeon HD 6450  
1642 3a66 Radeon HD 7450  
1642 3a75 Radeon HD 6450  
1642 3a76 Radeon HD 7450  
1682 3200 Radeon HD 7450  
174b 7450 Radeon HD 7450  
174b e127 Radeon HD 6450  
174b e153 Radeon HD 6450  
174b e164 Radeon HD 6450 1 GB DDR3  
174b e180 Radeon HD 6450  
174b e201 Radeon HD 6450  
1787 2311 Radeon HD 6450  
17af 8450 Radeon HD 8450 OEM  
1b0a 9096 Radeon HD 6450

1b0a 9097 Radeon HD 6450  
1b0a 90a8 Radeon HD 6450A  
1b0a 90b1 Radeon HD 6450  
1b0a 90b3 Radeon HD 7450A  
1b0a 90bb Radeon HD 7450A  
677b Caicos PRO [Radeon HD 7450]  
6780 Tahiti XT GL [FirePro W9000]  
6784 Tahiti [FirePro Series Graphics Adapter]  
6788 Tahiti [FirePro Series Graphics Adapter]  
678a Tahiti PRO GL [FirePro Series]  
1002 030c FirePro W8000  
1002 0310 FirePro S9000  
1002 0420 Radeon Sky 700  
1002 0422 Radeon Sky 900  
1002 0710 FirePro S9050  
1002 0b0e FirePro S10000 Passive  
1002  
0b2a FirePro S10000  
1028 030c FirePro W8000  
1028 0710 FirePro S9000  
6798 Tahiti XT [Radeon HD 7970/8970 OEM / R9 280X]  
1002 3000 Tahiti XT2 [Radeon HD 7970 GHz Edition]  
1002 3001 Tahiti XTL [Radeon R9 280X]  
1002 4000 Radeon HD 8970 OEM  
1043 041c HD 7970 DirectCU II  
1043 0420 HD 7970 DirectCU II TOP  
1043 0444 HD 7970 DirectCU II TOP  
1043 0448 HD 7970 DirectCU II TOP  
1043 044a Tahiti XT2 [Matrix HD 7970]  
1043 044c Tahiti XT2 [Matrix HD 7970 Platinum]  
1043 3001 Tahiti XTL [ROG Matrix R9 280X]  
1043 3006 Tahiti XTL [Radeon R9 280X DirectCU II TOP]  
1043 9999 ARES II  
106b 0127 FirePro D700  
106b 0128 FirePro D700  
1092 3000 Tahiti XT2 [Radeon HD 7970 GHz Edition]  
1458 2261 Tahiti XT2 [Radeon HD 7970 GHz Edition OC]  
# GV-R928XOC-3GD  
1458 3001 Tahiti XTL [Radeon R9 280X OC]  
1462 2774 HD 7970 TwinFrozr III Boost Edition OC  
1682 3001 Tahiti XTL [Radeon R9 280X]  
1682 3211 Double D HD 7970 Black Edition  
# FX-797A-TNBC  
1682  
3213 HD 7970 Black Edition  
1682 3214 Double D HD 7970  
1787 201c HD 7970 IceQ X<sup>2</sup>  
# Radeon HD 7970 X2

1787 2317 Radeon HD 7990  
1787 3000 Tahiti XT2 [Radeon HD 7970 GHz Edition]  
679a Tahiti PRO [Radeon HD 7950/8950 OEM / R9 280]  
1002 0b01 Radeon HD 8950 OEM  
1002 3000 Tahiti PRO2 [Radeon HD 7950 Boost]  
1462 3000 Radeon HD 8950 OEM  
174b a003 Radeon R9 280  
679b Malta [Radeon HD 7990/8990 OEM]  
1002 0b28 Radeon HD 8990 OEM  
1002 0b2a Radeon HD 7990  
1462 8036 Radeon HD 8990 OEM  
148c 8990 Radeon HD 8990 OEM  
679e Tahiti LE [Radeon HD 7870 XT]  
106b 0125 FirePro D500  
106b 0126 FirePro D500  
1787 2328 Radeon HD 7870 Black Edition 2 GB GDDR5 [2GBD5-2DHV3E]  
679f Tahiti  
67a0 Hawaii XT GL [FirePro W9100]  
1002 0335 FirePro S9150  
1002 0735 FirePro S9170  
1028 031f FirePro W9100  
1028 0335 FirePro S9150  
67a1 Hawaii PRO GL [FirePro W8100]  
1002 0335 FirePro S9100  
1028 0335 FirePro S9100  
67a2 Hawaii GL  
67a8 Hawaii  
67a9 Hawaii  
67aa  
Hawaii  
67b0 Hawaii XT / Grenada XT [Radeon R9 290X/390X]  
1028 0b00 Grenada XT [Radeon R9 390X]  
103c 6566 Radeon R9 390X  
1043 046a R9 290X DirectCU II  
1043 046c R9 290X DirectCU II OC  
1043 0474 Matrix R9 290X Platinum  
1043 0476 ARES III  
1043 04d7 Radeon R9 390X  
1043 04db Radeon R9 390X  
1043 04df Radeon R9 390X  
1043 04e9 Radeon R9 390X  
1458 227c R9 290X WindForce 3X OC  
1458 2281 R9 290X WindForce 3X OC  
1458 228c R9 290X WindForce 3X  
1458 228d R9 290X WindForce 3X OC  
1458 2290 R9 290X WindForce 3X  
1458 22bc Radeon R9 390X  
1458 22c1 Grenada PRO [Radeon R9 390]

1462 2015 Radeon R9 390X  
1462 3070 R9 290X Lightning  
1462 3071 R9 290X Lightning  
1462 3072 R9 290X Lightning LE  
1462 3080 R9 290X Gaming  
1462 3082 R9 290X Gaming OC  
148c 2347 Devil 13 Dual Core R9 290X  
148c 2357 Grenada XT [Radeon R9 390X]  
1682 9290 Double Dissipation R9 290X  
1682 9395 Grenada XT [Radeon R9 390X]  
174b 0e34 Radeon R9 390X  
174b e282  
Vapor-X R9 290X Tri-X OC  
174b e285 R9 290X Tri-X OC  
174b e324 Grenada XT2 [Radeon R9 390X]  
1787 2020 R9 290X IceQ X<sup>2</sup> Turbo  
1787 2357 Grenada XT [Radeon R9 390X]  
67b1 Hawaii PRO [Radeon R9 290/390]  
1043 04dd STRIX R9 390  
148c 2358 Radeon R9 390  
174b e324 Sapphire Nitro R9 390  
67b8 Hawaii XT [Radeon R9 290X Engineering Sample]  
67b9 Vesuvius [Radeon R9 295X2]  
67be Hawaii LE  
67c0 Ellesmere [Radeon Pro WX 7100 Mobile]  
67c2 Ellesmere [Radeon Pro V7300X / V7350x2]  
67c4 Ellesmere [Radeon Pro WX 7100]  
1002 0336 Radeon Pro Duo  
1002 1336 Radeon Pro Duo  
67c7 Ellesmere [Radeon Pro WX 5100]  
67ca Ellesmere [Polaris10]  
67cc Ellesmere [Polaris10]  
67cf Ellesmere [Polaris10]  
67d0 Ellesmere [Radeon Pro V7300X / V7350x2]  
67d4 Ellesmere [Radeon Pro WX 7100 / Barco MXRT-8700]  
67d7 Ellesmere [Radeon Pro WX 5100 / Barco MXRT-6700]  
67df Ellesmere [Radeon RX 470/480/570/570X/580/580X/590]  
1002 0b37 Radeon RX 480  
1028 1722 Radeon RX 570X  
1028 1723  
Radeon RX 580X  
103c 840e Radeon RX 580 4GB  
1043 04a8 Radeon RX 480  
1043 04b0 Radeon RX 470  
1043 04fb Radeon RX 480  
1043 04fd Radeon RX 480 8GB  
1043 056a Radeon RX 590  
106b 0161 Radeon Pro 580

106b 0162 Radeon Pro 575  
106b 0163 Radeon Pro 570  
1458 22f0 Radeon RX 570  
1458 22f7 Radeon RX 570 Gaming 4G  
1462 3411 Radeon RX 470  
1462 3413 Radeon RX 480 Gaming X 8GB  
1462 3416 Radeon RX 570  
1462 3418 Radeon RX 580 ARMOR 8G OC  
1462 341b Radeon RX 570 Armor 8G OC  
1462 341e Radeon RX 570 Armor 4G OC  
1462 809e Radeon RX 480 4GB  
1462 8a92 Radeon RX 580  
148c 2372 Radeon RX 480 [Red Dragon]  
148c 2373 Radeon RX 470  
148c 2377 Red Devil RX 580 8G Golden  
148c 2378 Radeon RX 580  
148c 2379 Radeon RX 570 4G [Red Dragon]  
148c 2391 Radeon RX 590 [Red Devil]  
1682 9470 Radeon RX 470  
1682 9480 Radeon RX 480  
1682 9587 Radeon RX 590 FATBOY 8GB  
1682 9588 Radeon RX 580 XTR  
1682 c570 Radeon RX 570  
1682 c580 Radeon RX 580  
174b  
e347 Radeon RX 470/480  
174b e349 Radeon RX 470  
1787 a470 Radeon RX 470  
1787 a480 Radeon RX 480  
1849 5001 Phantom Gaming X RX 580 OC  
1849 5030 Phantom Gaming D Radeon RX580 8G OC  
1da2 e343 Radeon RX 570 Pulse ITX 4GB  
1da2 e353 Radeon RX 570 Pulse 4GB  
1da2 e366 Nitro+ Radeon RX 570/580/590  
1da2 e387 Radeon RX 580 Pulse 4GB  
67e0 Baffin [Radeon Pro WX 4170]  
103c 8270 Radeon Pro WX 4170  
103c 8272 Radeon Pro WX 4170  
67e1 Baffin [Polaris11]  
67e3 Baffin [Radeon Pro WX 4100]  
67e8 Baffin [Radeon Pro WX 4130/4150]  
1028 075d Radeon Pro WX 4150  
1028 07b0 Radeon Pro WX 4130/4150  
1028 07b1 Radeon Pro WX 4130  
1028 175d Radeon Pro WX 4150  
1028 17b0 Radeon Pro WX 4130/4150  
1028 17b1 Radeon Pro WX 4130  
103c 8275 Radeon Pro WX 4150

103c 8277 Radeon Pro WX 4150  
67e9 Baffin [Polaris11]  
67eb Baffin [Radeon Pro V5300X]  
67ef Baffin [Radeon RX 460/560D / Pro 450/455/460/555/555X/560/560X]  
1025 1367 RX560X 4GB  
1028 1703 RX 560D  
OEM OC 2 GB  
103c 3421 Radeon RX 460  
1043 0561 AREZ Radeon RX 560  
106b 0160 Radeon Pro 460  
106b 0166 Radeon Pro 455  
106b 0167 Radeon Pro 450  
106b 0179 Radeon Pro 560  
106b 017a Radeon Pro 555  
106b 018f Radeon Pro 560X  
106b 0190 Radeon Pro 555X  
1642 1727 Polaris 21 XL [Radeon RX 560D]  
1682 956d Polaris 21 XL [Radeon RX 560D]  
67ff Baffin [Radeon RX 550 640SP / RX 560/560X]  
1002 0b04 Radeon RX 560  
1028 1721 Radeon RX 560X  
1028 1726 Radeon RX 560DX  
103c 8479 Radeon RX 560X Mobile  
1043 04bc Radeon RX 560  
1043 052f Radeon RX 560  
1458 22ed Radeon RX 560  
148c 2381 Radeon RX 560  
1682 9560 Radeon RX 560  
1da2 e348 Radeon RX 560  
1da2 e367 Radeon RX 550 640SP  
6800 Wimbledon XT [Radeon HD 7970M]  
1002 0124 Radeon HD 7970M  
8086 2110 Radeon HD 7970M  
8086 2111 Radeon HD 7970M  
6801 Neptune XT [Radeon HD 8970M]  
1002 0124 Radeon HD 8970M  
1462 1117 Radeon R9 M290X  
8086 2110 Radeon HD 8970M  
8086 2111 Radeon HD 8970M  
6802  
Wimbledon  
6806 Neptune  
6808 Pitcairn XT GL [FirePro W7000]  
1002 0310 FirePro S7000  
1002 0420 Radeon Sky 500  
103c 030c MED-X7000  
13cc 3d25 MXRT-7500  
15c3 030c MED-X7000



6809 Pitcairn LE GL [FirePro W5000]  
13cc 3d23 MXRT-5500  
13cc 3d24 MXRT-5550  
15c3 0b06 MED-X5000  
6810 Curacao XT / Trinidad XT [Radeon R7 370 / R9 270X/370X]  
106b 012a FirePro D300  
106b 012b FirePro D300  
148c 0908 Radeon R9 370 OEM  
1682 7370 Radeon R7 370  
6811 Curacao PRO [Radeon R7 370 / R9 270/370 OEM]  
1028 0b00 Trinidad PRO [Radeon R9 370 OEM]  
1043 2016 Trinidad PRO [Radeon R9 370 OEM]  
1458 2016 Trinidad PRO [Radeon R9 370 OEM]  
1462 2016 Trinidad PRO [Radeon R9 370 OEM]  
1462 3050 R9 270 Gaming OC  
148c 2016 Trinidad PRO [Radeon R9 370 OEM]  
1682 2015 Trinidad PRO [Radeon R7 370]  
174b 2015 NITRO Radeon R7 370  
174b 2016 Trinidad PRO [Radeon R9 370 OEM]  
1787 2016 Trinidad PRO [Radeon R9 370 OEM]  
6816 Pitcairn  
6817 Pitcairn  
6818 Pitcairn XT  
[Radeon HD 7870 GHz Edition]  
1002 0b05 Radeon HD 8870 OEM  
174b 8b04 Radeon HD 8860  
6819 Pitcairn PRO [Radeon HD 7850 / R7 265 / R9 270 1024SP]  
1043 042c Radeon HD 7850  
1682 7269 Radeon R9 270 1024SP  
1682 9278 Radeon R9 270 1024SP  
174b a008 Radeon R9 270 1024SP  
174b e221 Radeon HD 7850 2GB GDDR5 DVI-I/DVI-D/HDMI/DP  
6820 Venus XTX [Radeon HD 8890M / R9 M275X/M375X]  
103c 1851 Radeon HD 7750M  
17aa 3643 Radeon R9 A375  
17aa 3801 Radeon R9 M275  
17aa 3824 Radeon R9 M375  
1da2 e26a Radeon R7 250  
6821 Venus XT [Radeon HD 8870M / R9 M270X/M370X]  
1002 031e FirePro SX4000  
1028 05cc FirePro M5100  
1028 15cc FirePro M5100  
106b 0149 Radeon R9 M370X Mac Edition  
6822 Venus PRO [Radeon E8860]  
6823 Venus PRO [Radeon HD 8850M / R9 M265X]  
6825 Heathrow XT [Radeon HD 7870M]  
1028 053f FirePro M6000  
1028 05cd FirePro M6000

1028 15cd FirePro M6000  
103c 176c FirePro M6000  
8086 2111 Chelsea PRO  
6826 Chelsea LP [Radeon HD 7700M Series]  
6827  
Heathrow PRO [Radeon HD 7850M/8850M]  
6828 Cape Verde PRO [FirePro W600]  
15c3 2b1e MED-X6000  
6829 Cape Verde  
682a Venus PRO  
682b Cape Verde PRO / Venus LE / Tropo PRO-L [Radeon HD 8830M / R7 250 / R7 M465X]  
0128 079c Radeon R7 465X  
1462 3012 Radeon R7 250  
682c Cape Verde GL [FirePro W4100]  
682d Chelsea XT GL [FirePro M4000]  
682f Chelsea LP [Radeon HD 7730M]  
103c 1851 Radeon HD 7750M  
6835 Cape Verde PRX [Radeon R9 255 OEM]  
6837 Cape Verde LE [Radeon HD 7730/8730]  
1462 2796 Radeon HD 8730  
1462 8092 Radeon HD 8730  
148c 8730 Radeon HD 8730  
1787 3000 Radeon HD 6570  
683d Cape Verde XT [Radeon HD 7770/8760 / R7 250X]  
1002 0030 Radeon HD 8760 OEM  
1019 0030 Radeon HD 8760 OEM  
103c 6890 Radeon HD 8760 OEM  
1043 8760 Radeon HD 8760 OEM  
1462 2710 R7770-PMD1GD5  
174b 8304 Radeon HD 8760 OEM  
683f Cape Verde PRO [Radeon HD 7750/8740 / R7 250E]  
1462 2790 Radeon HD 8740  
1462 2791 Radeon HD 8740  
1642 3b97 Radeon HD 8740  
6840 Thames  
[Radeon HD 7500M/7600M Series]  
1025 050e Radeon HD 7670M  
1025 050f Radeon HD 7670M  
1025 0513 Radeon HD 7670M  
1025 0514 Radeon HD 7670M  
1025 056d Radeon HD 7670M  
1025 059a Radeon HD 7670M  
1025 059b Radeon HD 7670M  
1025 059e Radeon HD 7670M  
1025 0600 Radeon HD 7670M  
1025 0606 Radeon HD 7670M  
1025 0696 Radeon HD 7650M  
1025 0697 Radeon HD 7650M

1025 0698 Radeon HD 7650M  
1025 0699 Radeon HD 7650M  
1025 0757 Radeon HD 7670M  
1028 056a Radeon HD 7670M  
1028 056e Radeon HD 7670M  
1028 0598 Radeon HD 7670M  
1028 059d Radeon HD 7670M  
1028 05a3 Radeon HD 7670M  
1028 05b9 Radeon HD 7670M  
1028 05bb Radeon HD 7670M  
103c 1789 FirePro M2000  
103c 17f1 Radeon HD 7570M  
103c 17f4 Radeon HD 7650M  
103c 1813 Radeon HD 7590M  
103c 182f Radeon HD 7670M  
103c 1830 Radeon HD 7670M  
103c 1835 Radeon HD 7670M  
103c 183a Radeon HD 7670M  
103c 183c Radeon HD 7670M  
103c 183e Radeon HD 7670M  
103c 1840 Radeon HD 7670M  
103c 1842  
Radeon HD 7670M  
103c 1844 Radeon HD 7670M  
103c 1848 Radeon HD 7670M  
103c 184a Radeon HD 7670M  
103c 184c Radeon HD 7670M  
103c 1895 Radeon HD 7670M  
103c 1897 Radeon HD 7670M  
103c 18a5 Radeon HD 7670M  
103c 18a7 Radeon HD 7670M  
103c 18f4 Radeon HD 7670M  
1043 100a Radeon HD 7670M  
1043 104b Radeon HD 7670M  
1043 10dc Radeon HD 7670M  
1043 2121 Radeon HD 7670M  
1043 2122 Radeon HD 7670M  
1043 2123 Radeon HD 7670M  
1043 2125 Radeon HD 7670M  
1043 2127 Radeon HD 7670M  
1179 fb11 Radeon HD 7670M  
1179 fb22 Radeon HD 7670M  
1179 fb23 Radeon HD 7670M  
1179 fb2c Radeon HD 7670M  
1179 fb31 Radeon HD 7670M  
1179 fb32 Radeon HD 7670M  
1179 fb38 Radeon HD 7670M  
1179 fb39 Radeon HD 7670M

1179 fb3a Radeon HD 7670M  
1179 fb40 Radeon HD 7670M  
1179 fb41 Radeon HD 7670M  
1179 fb47 Radeon HD 7670M  
1179 fb48 Radeon HD 7670M  
1179 fb51 Radeon HD 7670M  
1179 fb52 Radeon HD 7670M  
1179 fb53 Radeon HD 7670M  
1179 fb81 Radeon HD  
7670M  
1179 fb82 Radeon HD 7670M  
1179 fb83 Radeon HD 7670M  
1179 fc56 Radeon HD 7670M  
1179 fcd4 Radeon HD 7670M  
1179 fcee Radeon HD 7670M  
144d c0c5 Radeon HD 7690M  
144d c0ce Radeon HD 7670M  
144d c0da Radeon HD 7670M  
17aa 3970 Radeon HD 7670M  
17aa 397b Radeon HD 7670M  
17aa 5101 Radeon HD 7670M  
17aa 5102 Radeon HD 7670M  
17aa 5103 Radeon HD 7670M  
6841 Thames [Radeon HD 7550M/7570M/7650M]  
1028 0561 Radeon HD 7650M  
1028 056c Radeon HD 7650M  
1028 057f Radeon HD 7570M  
103c 17f1 Radeon HD 7570M  
103c 17f4 Radeon HD 7650M  
103c 1813 Radeon HD 7570M  
103c 183a Radeon HD 7650M  
103c 183c Radeon HD 7650M  
103c 183e Radeon HD 7650M  
103c 1840 Radeon HD 7650M  
103c 1842 Radeon HD 7650M  
103c 1844 Radeon HD 7650M  
1043 100a Radeon HD 7650M  
1043 104b Radeon HD 7650M  
1043 10dc Radeon HD 7650M  
1043 2134 Radeon HD 7650M  
1179 0001 Radeon HD 7570M  
1179 0002 Radeon HD 7570M  
1179 fb43 Radeon HD 7550M  
1179 fb91 Radeon HD  
7550M  
1179 fb92 Radeon HD 7550M  
1179 fb93 Radeon HD 7550M  
1179 fba2 Radeon HD 7550M

1179 fba3 Radeon HD 7550M  
144d c0c7 Radeon HD 7550M  
6842 Thames LE [Radeon HD 7000M Series]  
6843 Thames [Radeon HD 7670M]  
6860 Vega 10 [Instinct MI25/MI25x2/V340/V320]  
1002 0c35 Radeon PRO V320  
1002 6c75 Radeon PRO V320  
106b 017c Radeon Pro Vega 64  
6861 Vega 10 XT [Radeon PRO WX 9100]  
6862 Vega 10 XT [Radeon PRO SSG]  
6863 Vega 10 XTX [Radeon Vega Frontier Edition]  
6864 Vega 10 [Radeon Pro V340/Instinct MI25x2]  
6867 Vega 10 XL [Radeon Pro Vega 56]  
6868 Vega 10 [Radeon PRO WX 8100/8200]  
6869 Vega 10 XGA [Radeon Pro Vega 48]  
686a Vega 10 LEA  
686b Vega 10 XTXA [Radeon Pro Vega 64X]  
686c Vega 10 [Instinct MI25 MxGPU/MI25x2 MxGPU/V340 MxGPU/V340L MxGPU]  
686d Vega 10 GLXTA  
686e Vega 10 GLXLA  
687f Vega 10 XL/XT [Radeon RX Vega 56/64]  
1002 0b36 RX Vega64  
1002 6b76 AMD Radeon RX Vega 56 8GB  
# ROG-STRIX-RXVEGA64-O8G-GAMING  
1043 04c4 Radeon RX Vega 64  
1458  
230c Radeon RX VEGA 56 GAMING OC 8G  
1da2 e376 Radeon RX VEGA 56 Pulse 8GB OC HBM2  
6880 Lexington [Radeon HD 6550M]  
103c 163c Pavilion dv6 Radeon HD 6550M  
6888 Cypress XT [FirePro V8800]  
6889 Cypress PRO [FirePro V7800]  
1002 0301 FirePro V7800P  
13cc 3d1f MXRT-7400  
688a Cypress XT [FirePro V9800]  
1002 030c FirePro V9800P  
688c Cypress XT GL [FireStream 9370]  
688d Cypress PRO GL [FireStream 9350]  
6898 Cypress XT [Radeon HD 5870]  
1002 0b00 Radeon HD 5870 Eyefinity Edition  
106b 00d0 Radeon HD 5870 Mac Edition  
# R5870-PM2D1G  
1462 8032 Radeon HD 5870 1 GB GDDR5  
174b 6870 Radeon HD 6870 1600SP Edition  
6899 Cypress PRO [Radeon HD 5850]  
# EAH5850  
1043 0330 Radeon HD 5850  
174b 237b Radeon HD 5850 X2

174b 6850 Radeon HD 6850 1440SP Edition  
689b Cypress PRO [Radeon HD 6800 Series]  
689c Hemlock [Radeon HD 5970]  
1043 0352 ARES  
689d Hemlock [Radeon HD 5970]  
689e Cypress LE [Radeon HD 5830]  
68a0 Broadway XT [Mobility Radeon HD 5870]  
1028  
12ef FirePro M7820  
103c 1520 FirePro M7820  
68a1 Broadway PRO [Mobility Radeon HD 5850]  
106b 00cc iMac MC511 Mobility Radeon HD 5850 MXM Module  
68a8 Granville [Radeon HD 6850M/6870M]  
1025 0442 Radeon HD 6850M  
1025 0451 Radeon HD 6850M  
1025 050a Radeon HD 6850M  
1025 050b Radeon HD 6850M  
1025 050c Radeon HD 6850M  
1025 050e Radeon HD 6850M  
1025 050f Radeon HD 6850M  
1025 0513 Radeon HD 6850M  
1025 0514 Radeon HD 6850M  
1025 0515 Radeon HD 6850M  
1025 0516 Radeon HD 6850M  
1025 0525 Radeon HD 6850M  
1025 0526 Radeon HD 6850M  
1025 056d Radeon HD 6850M  
1028 048f Radeon HD 6870M  
1028 0490 Radeon HD 6870M  
1028 04b9 Radeon HD 6870M  
1028 04ba Radeon HD 6870M  
103c 159b Radeon HD 6850M  
144d c0ad Radeon HD 6850M  
68a9 Juniper XT [FirePro V5800]  
13cc 3d1e MXRT-5400  
13cc 3d20 MXRT-5450  
68b8 Juniper XT [Radeon HD 5770]  
106b 00cf MacPro5,1 [Mac Pro 2.8GHz DDR3]  
68b9 Juniper LE [Radeon HD 5670 640SP Edition]  
68ba  
Juniper XT [Radeon HD 6770]  
68be Juniper PRO [Radeon HD 5750]  
148c 3000 Radeon HD 6750  
68bf Juniper PRO [Radeon HD 6750]  
174b 6750 Radeon HD 6750  
68c0 Madison [Mobility Radeon HD 5730 / 6570M]  
1019 2383 Mobility Radeon HD 5730  
1028 02a2 Mobility Radeon HD 5730

1028 02fe Mobility Radeon HD 5730  
1028 0419 Mobility Radeon HD 5730  
103c 147d Mobility Radeon HD 5730  
103c 1521 Madison XT [FirePro M5800]  
103c 1593 Mobility Radeon HD 6570  
103c 1596 Mobility Radeon HD 6570  
103c 1599 Mobility Radeon HD 6570  
1043 1c22 Mobility Radeon HD 5730  
17aa 3927 Mobility Radeon HD 5730  
17aa 3952 Mobility Radeon HD 5730  
17aa 3978 Radeon HD 6570M  
68c1 Madison [Mobility Radeon HD 5650/5750 / 6530M/6550M]  
1025 0205 Mobility Radeon HD 5650  
1025 0293 Mobility Radeon HD 5650  
1025 0294 Mobility Radeon HD 5650  
1025 0296 Mobility Radeon HD 5650  
1025 0308 Mobility Radeon HD 5650  
1025 030a Mobility Radeon HD 5650  
1025 0311 Mobility Radeon HD 5650  
1025  
0312 Mobility Radeon HD 5650  
1025 031c Mobility Radeon HD 5650  
1025 031d Mobility Radeon HD 5650  
1025 033d Mobility Radeon HD 5650  
1025 033e Mobility Radeon HD 5650  
1025 033f Mobility Radeon HD 5650  
1025 0346 Mobility Radeon HD 5650  
1025 0347 Aspire 7740G  
1025 0348 Mobility Radeon HD 5650  
1025 0356 Mobility Radeon HD 5650  
1025 0357 Mobility Radeon HD 5650  
1025 0358 Mobility Radeon HD 5650  
1025 0359 Mobility Radeon HD 5650  
1025 035a Mobility Radeon HD 5650  
1025 035b Mobility Radeon HD 5650  
1025 035c Mobility Radeon HD 5650  
1025 035d Mobility Radeon HD 5650  
1025 035e Mobility Radeon HD 5650  
1025 0360 Mobility Radeon HD 5650  
1025 0362 Mobility Radeon HD 5650  
1025 0364 Mobility Radeon HD 5650  
1025 0365 Mobility Radeon HD 5650  
1025 0366 Mobility Radeon HD 5650  
1025 0367 Mobility Radeon HD 5650  
1025 0368 Mobility Radeon HD 5650  
1025 036c Mobility Radeon HD 5650  
1025 036d Mobility Radeon HD 5650  
1025 036e

Mobility Radeon HD 5650

1025 036f Mobility Radeon HD 5650  
1025 0372 Mobility Radeon HD 5650  
1025 0373 Mobility Radeon HD 5650  
1025 0377 Mobility Radeon HD 5650  
1025 0378 Mobility Radeon HD 5650  
1025 0379 Mobility Radeon HD 5650  
1025 037a Mobility Radeon HD 5650  
1025 037b Mobility Radeon HD 5650  
1025 037e Mobility Radeon HD 5650  
1025 037f Mobility Radeon HD 5650  
1025 0382 Mobility Radeon HD 5650  
1025 0383 Mobility Radeon HD 5650  
1025 0384 Mobility Radeon HD 5650  
1025 0385 Mobility Radeon HD 5650  
1025 0386 Mobility Radeon HD 5650  
1025 0387 Mobility Radeon HD 5650  
1025 0388 Mobility Radeon HD 5650  
1025 038b Mobility Radeon HD 5650  
1025 038c Mobility Radeon HD 5650  
1025 039a Mobility Radeon HD 5650  
1025 0411 Mobility Radeon HD 5650  
1025 0412 Mobility Radeon HD 5650  
1025 0418 Mobility Radeon HD 5650  
1025 0419 Mobility Radeon HD 5650  
1025 0420 Mobility Radeon HD 5650  
1025 0421 Mobility Radeon HD 5650  
1025 0425

Mobility Radeon HD 5650

1025 042a Mobility Radeon HD 5650  
1025 042e Mobility Radeon HD 5650  
1025 042f Mobility Radeon HD 5650  
1025 0432 Mobility Radeon HD 5650  
1025 0433 Mobility Radeon HD 5650  
1025 0442 Mobility Radeon HD 5650  
1025 044c Mobility Radeon HD 5650  
1025 044e Mobility Radeon HD 5650  
1025 0451 Mobility Radeon HD 5650  
1025 0454 Mobility Radeon HD 5650  
1025 0455 Mobility Radeon HD 5650  
1025 0475 Mobility Radeon HD 5650  
1025 0476 Mobility Radeon HD 5650  
1025 0487 Mobility Radeon HD 5650  
1025 0489 Mobility Radeon HD 5650  
1025 0498 Mobility Radeon HD 5650  
1025 0517 Radeon HD 6550M  
1025 051a Radeon HD 6550M  
1025 051b Radeon HD 6550M



1025 051c Radeon HD 6550M  
1025 051d Radeon HD 6550M  
1025 0525 Radeon HD 6550M  
1025 0526 Radeon HD 6550M  
1025 052b Radeon HD 6550M  
1025 052c Radeon HD 6550M  
1025 053c Radeon HD 6550M  
1025 053d Radeon HD 6550M  
1025 053e Radeon HD 6550M  
1025 053f Radeon HD 6550M  
1025  
0607 Radeon HD 6550M  
1028 041b Mobility Radeon HD 5650  
1028 0447 Mobility Radeon HD 5650  
1028 0448 Mobility Radeon HD 5650  
1028 0456 Mobility Radeon HD 5650  
1028 0457 Mobility Radeon HD 5650  
103c 1436 Mobility Radeon HD 5650  
103c 1437 Mobility Radeon HD 5650  
103c 1440 Mobility Radeon HD 5650  
103c 1448 Mobility Radeon HD 5650  
103c 1449 Mobility Radeon HD 5650  
103c 144a Mobility Radeon HD 5650  
103c 144b Mobility Radeon HD 5650  
103c 147b Mobility Radeon HD 5650  
103c 149c Mobility Radeon HD 5650  
103c 149e Mobility Radeon HD 5650  
103c 1521 Madison Pro [FirePro M5800]  
1043 1bc2 Mobility Radeon HD 5650  
104d 9071 Mobility Radeon HD 5650  
104d 9077 Mobility Radeon HD 5650  
104d 9081 Mobility Radeon HD 5650  
1179 fd00 Mobility Radeon HD 5650  
1179 fd12 Mobility Radeon HD 5650  
1179 fd1a Mobility Radeon HD 5650  
1179 fd30 Mobility Radeon HD 5650  
1179 fd31 Mobility Radeon HD 5650  
1179 fd50 Mobility Radeon HD 5650  
1179 fd52  
Radeon HD 6530M  
1179 fd63 Radeon HD 6530M  
1179 fd65 Radeon HD 6530M  
1179 fdd0 Mobility Radeon HD 5650  
1179 fdd2 Radeon HD 6530M  
144d c07e Mobility Radeon HD 5650  
144d c085 Mobility Radeon HD 5650  
14c0 0043 Mobility Radeon HD 5650  
14c0 004d Mobility Radeon HD 5650

17aa 3928 Mobility Radeon HD 5650  
17aa 3951 Mobility Radeon HD 5650  
17aa 3977 Radeon HD 6550M  
68c7 Pinewood [Mobility Radeon HD 5570/6550A]  
1462 2241 Mobility Radeon HD 5570  
1462 2243 Mobility Radeon HD 5570  
1462 2244 Mobility Radeon HD 5570  
1462 2245 Radeon HD 6550A  
1462 2246 Radeon HD 6550A  
68c8 Redwood XT GL [FirePro V4800]  
68c9 Redwood PRO GL [FirePro V3800]  
13cc 3d1d MXRT-2400  
68d8 Redwood XT [Radeon HD 5670/5690/5730]  
1028 68e0 Radeon HD 5670  
174b 5690 Radeon HD 5690  
174b 5730 Radeon HD 5730  
174b e151 Radeon HD 5670  
1787 3000 Radeon HD 5730  
17af 3010 Radeon HD 5730  
17af 3011 Radeon HD 5690  
68d9 Redwood PRO [Radeon HD 5550/5570/5630/6510/6610/7570]  
103c  
6870 Radeon HD 5570  
103c 6872 Radeon HD 5570  
1043 03ce Radeon HD 5550  
1462 2151 Radeon HD 5570  
1462 2240 Radeon HD 5570  
148c 3000 Radeon HD 6510  
148c 3001 Radeon HD 6610  
1545 5550 Radeon HD 5550  
1545 7570 Radeon HD 7570  
1642 3985 Radeon HD 5570  
1642 3996 Radeon HD 5570  
174b 3000 Radeon HD 6510  
174b 6510 Radeon HD 6510  
174b 6610 Radeon HD 6610  
174b e142 Radeon HD 5570  
1787 3000 Radeon HD 6510  
17af 3000 Radeon HD 6510  
17af 3010 Radeon HD 5630  
68da Redwood LE [Radeon HD 5550/5570/5630/6390/6490/7570]  
1462 8071 VR5550-MD1G (Radeon HD 5550)  
148c 3000 Radeon HD 6390  
148c 3001 Radeon HD 6490  
1545 7570 Radeon HD 7570  
174b 3000 Radeon HD 6390  
174b 5570 Radeon HD 5570  
174b 5630 Radeon HD 5630

174b 6490 Radeon HD 6490  
1787 3000 Radeon HD 5630  
17af 3000 Radeon HD 6390  
17af 3010 Radeon HD 5630  
68de Redwood  
68e0 Park [Mobility Radeon HD 5430/5450/5470]  
1028 0404 Mobility Radeon HD 5450  
1028  
0414 Mobility Radeon HD 5450  
1028 0434 Mobility Radeon HD 5450  
103c 1433 Mobility Radeon HD 5450  
103c 1434 Mobility Radeon HD 5450  
103c 1469 Mobility Radeon HD 5450  
103c 146b Mobility Radeon HD 5450  
103c 1486 TouchSmart tm2-2050er discrete GPU (Mobility Radeon HD 5450)  
103c 1622 Mobility Radeon HD 5450  
103c 1623 Mobility Radeon HD 5450  
103c eeee Mobility Radeon HD 5450  
104d 9076 Mobility Radeon HD 5450  
1682 304e Caicos [Radeon HD 5450]  
1682 6000 Caicos [Radeon HD 5450]  
17aa 9e52 FirePro M3800  
17aa 9e53 FirePro M3800  
68e1 Park [Mobility Radeon HD 5430]  
1043 041f Caicos [Radeon HD 7350]  
1043 3000 Caicos [Radeon HD 5450]  
148c 3000 Caicos [Radeon HD 5450]  
148c 3001 Caicos [Radeon HD 6230]  
148c 3002 Caicos [Radeon HD 6250]  
148c 3003 Caicos [Radeon HD 6350]  
148c 7350 Caicos [Radeon HD 7350]  
148c 8350 Caicos [Radeon HD 8350]  
1545 5450 Caicos [Radeon HD 5450]  
1545 7350 Caicos [Radeon HD 7350]  
1682 3000 Caicos [Radeon  
HD 5450]  
1682 6000 Caicos [Radeon HD 5450]  
1682 7350 Caicos [Radeon HD 7350]  
174b 3000 Caicos [Radeon HD 5450]  
174b 5470 Caicos [Radeon HD 5470]  
174b 6000 Caicos [Radeon HD 5450]  
174b 6230 Caicos [Radeon HD 6230]  
174b 6350 Caicos [Radeon HD 6350]  
174b 7350 Caicos [Radeon HD 7350]  
1787 3000 Caicos [Radeon HD 5450]  
17af 3000 Caicos [Radeon HD 5450]  
17af 3001 Caicos [Radeon HD 6230]  
17af 3014 Caicos [Radeon HD 6350]

17af 3015 Caicos [Radeon HD 7350]  
17af 8350 Caicos [Radeon HD 8350 OEM]  
68e4 Robson CE [Radeon HD 6370M/7370M]  
1019 2386 Radeon HD 6350M  
1019 2387 Radeon HD 6350M  
1019 238d Radeon HD 6370M  
1019 238e Radeon HD 6370M  
1025 0382 Radeon HD 6370M  
1025 0489 Radeon HD 6370M  
1025 048a Radeon HD 6370M  
1025 048b Radeon HD 6370M  
1025 048c Radeon HD 6370M  
1028 04c1 Radeon HD 6370M  
1028 04ca Radeon HD 6370M  
1028 04cc Radeon HD 6370M  
1028 04cd Radeon HD 6370M  
1028 04d7 Radeon HD 6370M  
103c 1411 Radeon  
HD 6370M  
103c 1421 Radeon HD 6370M  
103c 1426 Radeon HD 6370M  
103c 1428 Radeon HD 6370M  
103c 142a Radeon HD 6370M  
103c 142b Radeon HD 6370M  
103c 143a Radeon HD 6370M  
103c 143c Radeon HD 6370M  
103c 1445 Radeon HD 6370M  
103c 162c Radeon HD 6370M  
103c 162d Radeon HD 6370M  
103c 162e Radeon HD 6370M  
103c 162f Radeon HD 6370M  
103c 1639 Radeon HD 6370M  
103c 163a Radeon HD 6370M  
103c 163b Radeon HD 6370M  
103c 163c Radeon HD 6370M  
103c 163d Radeon HD 6370M  
103c 163e Radeon HD 6370M  
103c 163f Radeon HD 6370M  
103c 1641 Radeon HD 6370M  
103c 1643 Radeon HD 6370M  
103c 3578 Radeon HD 6370M  
103c 357a Radeon HD 6370M  
103c 3673 Radeon HD 6370M  
103c 3675 Radeon HD 6370M  
1043 1c92 Radeon HD 6370M  
1043 84a1 Radeon HD 6370M  
1043 84ad Radeon HD 6370M  
104d 9081 Radeon HD 6370M

1545 7350 Cedar [Radeon HD 7350]  
1558 4510 Radeon HD 6370M  
1558 5505 Radeon HD 6370M  
174b 5450 Cedar [Radeon HD 5450]  
17aa 21dd Radeon  
HD 6370M  
17aa 21e9 Radeon HD 6370M  
17aa 3971 Radeon HD 6370M  
17aa 3972 Radeon HD 7370M  
17aa 397a Radeon HD 6370M/7370M  
17aa 397b Radeon HD 6370M/7370M  
17aa 397f Radeon HD 7370M  
68e5 Robson LE [Radeon HD 6330M]  
1179 fd3c Radeon HD 6330M  
1179 fd50 Radeon HD 6330M  
1179 fd52 Radeon HD 6330M  
1179 fd63 Radeon HD 6330M  
1179 fd65 Radeon HD 6330M  
1179 fd73 Radeon HD 6330M  
1179 fd75 Radeon HD 6330M  
1179 fdd0 Radeon HD 6330M  
1179 fdd2 Radeon HD 6330M  
1179 fdea Radeon HD 6330M  
1179 fdf8 Radeon HD 6330M  
148c 5450 Cedar [Radeon HD 5450]  
148c 6350 Cedar [Radeon HD 6350]  
148c 7350 Cedar [Radeon HD 7350]  
148c 8350 Cedar [Radeon HD 8350]  
1545 7350 Cedar [Radeon HD 7350]  
68e8 Cedar  
68e9 Cedar [ATI FirePro (FireGL) Graphics Adapter]  
68f1 Cedar GL [FirePro 2460]  
68f2 Cedar GL [FirePro 2270]  
68f8 Cedar [Radeon HD 7300 Series]  
68f9 Cedar [Radeon HD 5000/6000/7350/8350 Series]  
1019 0001 Radeon HD 5450  
1019 0002 Radeon HD 5450  
1019  
0019 Radeon HD 6350  
1025 0518 Radeon HD 5450  
1025 0519 Radeon HD 5450  
1028 010e XPS 8300  
1028 2126 Radeon HD 6350  
103c 2126 Radeon HD 6350  
103c 2aac Radeon HD 5450  
103c 2aae Radeon HD 5450  
103c 3580 Radeon HD 5450  
1043 0386 Radeon HD 5450

1043 03c2 EAH5450 SILENT/DI/512MD2 (LP)  
# GV-R545SC-1GI  
1458 21d8 Radeon HD 5450 1GB DDR3 Silent  
1462 2130 Radeon HD 5450  
1462 2131 Radeon HD 5450  
1462 2133 Radeon HD 6350  
1462 2180 Radeon HD 5450  
1462 2181 Radeon HD 5450  
1462 2182 Radeon HD 6350  
1462 2183 Radeon HD 6350  
1462 2230 Radeon HD 5450  
1462 2231 Radeon HD 5450  
1462 2495 Radeon HD 6350  
148c 3001 Radeon HD 5530/6250  
148c 3002 Radeon HD 6290  
148c 3003 Radeon HD 6230  
148c 3004 Radeon HD 6350  
148c 7350 Radeon HD 7350  
148c 8350 Radeon HD 8350  
1545 7350 Radeon HD 7350  
1642 3983 Radeon HD 5450  
1642 3984 Radeon HD 6350  
1642 3987 Radeon HD 6350  
1642 3997 Radeon HD 5450  
1642 3a05 Radeon HD 5450  
1642  
3b31 Radeon HD 6350A  
1682 3270 Radeon HD 7350  
174b 3000 Radeon HD 6230  
174b 3987 Radeon HD 6350  
174b 5470 Radeon HD 5470  
174b 5490 Radeon HD 5490  
174b 5530 Radeon HD 5530  
174b 6230 Radeon HD 6230  
174b 6250 Radeon HD 6250  
174b 6290 Radeon HD 6290  
174b 6350 Radeon HD 6350  
174b 7350 Radeon HD 7350  
174b 8350 Radeon HD 8350  
174b e127 Radeon HD 5450  
174b e145 Radeon HD 5450  
174b e153 Radeon HD 5450  
1787 3000 Radeon HD 5470  
1787 3001 Radeon HD 5530  
1787 3002 Radeon HD 5490  
17aa 3602 Radeon HD 5450  
17aa 3603 Radeon HD 5450  
17aa 360f Radeon HD 5450

17aa 3619 Radeon HD 5450  
17af 3000 Radeon HD 6250  
17af 3001 Radeon HD 6230  
17af 3002 Radeon HD 6290  
17af 3011 Radeon HD 5470  
17af 3012 Radeon HD 5490  
17af 3013 Radeon HD 5470  
17af 3014 Radeon HD 6350  
68fa Cedar [Radeon HD 7350/8350 / R5 220]  
1019 0019 Radeon HD 7350  
1019 0021 Radeon HD 7350  
1019 0022 Radeon HD 7350  
1019 0026 Radeon HD 8350  
103c  
2adf Radeon HD 7350A  
103c 2ae8 Radeon HD 7350A  
1043 8350 Radeon HD 8350  
1462 2128 Radeon HD 7350  
1462 2184 Radeon HD 7350  
1462 2186 Radeon HD 7350  
1462 2495 Radeon HD 7350  
1462 b490 Radeon HD 7350  
1642 3985 Radeon HD 7350  
174b 3510 Radeon HD 8350  
174b 3521 Radeon R5 220  
174b 3522 Radeon R5 220  
174b 7350 Radeon HD 7350  
174b 8153 Radeon HD 8350  
174b e127 Radeon HD 7350  
174b e153 Radeon HD 7350  
174b e180 Radeon HD 7350  
17af 3015 Radeon HD 7350  
68fe Cedar LE  
6900 Topaz XT [Radeon R7 M260/M265 / M340/M360 / M440/M445 / 530/535 / 620/625 Mobile]  
1025 1056 Radeon R7 M360 / R8 M365DX  
1028 0640 Radeon R7 M260/M265  
1028 0643 Radeon R7 M260/M265  
1028 067f Radeon R7 M260  
1028 0767 Radeon R7 M445  
1028 0810 Radeon 530  
1028 130a Radeon R7 M260  
103c 2263 Radeon R7 M260  
103c 2269 Radeon R7 M260  
103c 22c6 Radeon R7 M260  
103c 22c8 Radeon R7 M260  
103c 2b45 Radeon R7 A360  
103c 808c Radeon R7 M260  
103c 8099

Radeon R7 M360  
103c 80b5 Radeon R7 M360  
103c 80b9 Radeon R7 M360  
103c 811c Radeon R7 M340  
103c 8226 Radeon R7 M440  
10cf 1906 Radeon R7 M260  
1170 9979 Radeon R7 M360  
1179 f903 Radeon R7 M260  
1179 f922 Radeon R7 M260  
1179 f923 Radeon R7 M260  
1179 f934 Radeon R7 M260  
17aa 3822 Radeon R7 M360  
17aa 3824 Radeon R7 M360  
17aa 5021 Radeon R7 M260  
6901 Topaz PRO [Radeon R5 M255]  
103c 1318 Radeon R6 M255DX  
6907 Meso XT [Radeon R5 M315]  
6920 Amethyst [Radeon R9 M395/ M395X Mac Edition]  
6921 Amethyst XT [Radeon R9 M295X / M390X]  
6929 Tonga XT GL [FirePro S7150]  
692b Tonga PRO GL [FirePro W7100]  
13cc 3d2b MXRT-7600  
692f Tonga XTV GL [FirePro S7150V]  
6930 Tonga PRO [Radeon R9 380 4GB]  
6938 Tonga XT / Amethyst XT [Radeon R9 380X / R9 M295X]  
1043 04f5 Radeon R9 380X  
1043 04f7 Radeon R9 380X  
106b 013a Radeon R9 M295X Mac Edition  
1458 22c8 Radeon R9 380X  
148c 2350 Radeon R9 380X  
1682 9385 Radeon R9 380X  
174b e308 Radeon  
R9 380X Nitro 4G D5  
17af 2006 Radeon R9 380X  
6939 Tonga PRO [Radeon R9 285/380]  
1462 2015 Radeon R9 380 Gaming 4G  
148c 9380 Radeon R9 380  
174b e308 Radeon R9 380 Nitro 4G D5  
174b e315 Radeon R9 285  
693b Tonga PRO GL [FirePro W7100 / Barco MXRT-7600]  
694c Polaris 22 XT [Radeon RX Vega M GH]  
694e Polaris 22 XL [Radeon RX Vega M GL]  
694f Polaris 22 MGL XL [Radeon Pro WX Vega M GL]  
6980 Polaris12  
6981 Lexa XT [Radeon PRO WX 3200]  
6985 Lexa XT [Radeon PRO WX 3100]  
103c 83b5 Radeon PRO WX 3100  
6986 Polaris12



6987 Lexa [Radeon 540X/550X/630 / RX 640 / E9171 MCM]  
698f Lexa XT [Radeon PRO WX 3100 / Barco MXRT 4700]  
6995 Lexa XT [Radeon PRO WX 2100]  
699f Lexa PRO [Radeon 540/540X/550/550X / RX 540X/550/550X]  
1028 1720 Radeon RX 550X  
148c 2380 Lexa XL [Radeon RX 550]  
17aa 5069 Thinkpad E480/E580  
1da2 e367 Lexa PRO [Radeon RX 550]  
69a0 Vega 12  
69a1 Vega 12  
69a2 Vega 12  
69a3 Vega 12  
69af Vega 12 [Radeon Pro Vega 20]  
6fdf Polaris 20  
XL [Radeon RX 580 2048SP]  
700f RS100 AGP Bridge  
7010 RS200/RS250 AGP Bridge  
7100 R520 [Radeon X1800 XT]  
7101 R520/M58 [Mobility Radeon X1800 XT]  
7102 R520/M58 [Mobility Radeon X1800]  
7104 R520 GL [FireGL V7200 / Barco MXTR-5100]  
13cc 3d0a MXRT-5100  
7109 R520 [Radeon X1800 XL]  
1002 0322 All-in-Wonder X1800XL  
1002 0d02 Radeon X1800 CrossFire Edition  
710a R520 [Radeon X1800 GTO]  
1002 0b12 Radeon X1800 GTO<sup>2</sup>  
710b R520 [Radeon X1800 GTO]  
710e R520 GL [FireGL V7300]  
13cc 3d0c MXRT-5150  
710f R520 GL [FireGL V7350]  
13cc 3d0e MXRT-7100  
7120 R520 [Radeon X1800] (Secondary)  
7124 R520 GL [FireGL V7200] (Secondary)  
13cc 3d0b MXRT-5100 (Secondary)  
7129 R520 [Radeon X1800] (Secondary)  
1002 0323 All-In-Wonder X1800 XL (Secondary)  
1002 0d03 Radeon X1800 CrossFire Edition (Secondary)  
712e R520 GL [FireGL V7300] (Secondary)  
13cc 3d0d MXRT-5150 (Secondary)  
712f R520 GL [FireGL V7350] (Secondary)  
13cc 3d0f MXRT-7100 (Secondary)  
7140 RV515  
[Radeon X1300/X1550/X1600 Series]  
7142 RV515 PRO [Radeon X1300/X1550 Series]  
1002 0322 All-in-Wonder 2006 PCI-E Edition  
1043 0142 EAX1300PRO/TD/256M  
7143 RV505 [Radeon X1300/X1550 Series]

7145 RV515/M54 [Mobility Radeon X1400]  
17aa 2006 Thinkpad T60 model 2007  
7146 RV515 [Radeon X1300/X1550]  
1002 0322 All-in-Wonder 2006 PCI-E Edition  
1545 1996 Radeon X1300 512MB PCI-e  
7147 RV505 [Radeon X1550 64-bit]  
7149 RV515/M52 [Mobility Radeon X1300]  
714a RV515/M52 [Mobility Radeon X1300]  
7152 RV515 GL [FireGL V3300]  
7153 RV515 GL [FireGL V3350]  
715f RV505 CE [Radeon X1550 64-bit]  
7162 RV515 PRO [Radeon X1300/X1550 Series] (Secondary)  
1002 0323 All-in-Wonder 2006 PCI-E Edition (Secondary)  
7163 RV505 [Radeon X1550 Series] (Secondary)  
7166 RV515 [Radeon X1300/X1550 Series] (Secondary)  
1002 0323 All-in-Wonder 2006 PCI-E Edition (Secondary)  
1545 1997 Radeon X1300 512MB PCI-e (Secondary)  
7167 RV515 [Radeon X1550 64-bit] (Secondary)  
7172 RV515 GL [FireGL  
V3300] (Secondary)  
7173 RV515 GL [FireGL V3350] (Secondary)  
7181 RV516 [Radeon X1600/X1650 Series]  
7183 RV516 [Radeon X1300/X1550 Series]  
7186 RV516/M64 [Mobility Radeon X1450]  
7187 RV516 [Radeon X1300/X1550 Series]  
7188 RV516/M64-S [Mobility Radeon X2300]  
103c 30c1 6910p  
718a RV516/M64 [Mobility Radeon X2300]  
718b RV516/M62 [Mobility Radeon X1350]  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
718c RV516/M62-CSP64 [Mobility Radeon X1350]  
718d RV516/M64-CSP128 [Mobility Radeon X1450]  
7193 RV516 [Radeon X1550 Series]  
7196 RV516/M62-S [Mobility Radeon X1350]  
719b RV516 GL [FireMV 2250]  
13cc 3d12 MXRT-1150  
13cc 3d14 MXRT-2150  
719f RV516 [Radeon X1550 Series]  
71a0 RV516 [Radeon X1300/X1550 Series] (Secondary)  
71a1 RV516 [Radeon X1600/X1650 Series] (Secondary)  
71a3 RV516 [Radeon X1300/X1550 Series] (Secondary)  
71a7 RV516 [Radeon X1300/X1550 Series] (Secondary)  
71bb RV516 GL [FireMV 2250] (Secondary)  
13cc 3d13 MXRT-1150 (Secondary)  
13cc  
3d15 MXRT-2150 (Secondary)  
71c0 RV530 [Radeon X1600 XT/X1650 GTO]  
1002 e160 Radeon X1650 GTO

174b e160 Radeon X1650 GTO  
71c1 RV535 [Radeon X1650 PRO]  
174b 0880 Radeon X1700 FSC  
71c2 RV530 [Radeon X1600 PRO]  
71c3 RV530 [Radeon X1600 PRO]  
71c4 RV530/M56 GL [Mobility FireGL V5200]  
17aa 2007 ThinkPad T60p  
71c5 RV530/M56-P [Mobility Radeon X1600]  
103c 309f Compaq nx9420 Notebook  
103c 30a3 Compaq NW8440  
1043 10b2 A6J-Q008  
106b 0080 MacBook Pro  
71c6 RV530LE [Radeon X1600/X1650 PRO]  
71c7 RV535 [Radeon X1650 PRO]  
1787 3000 PowerColor X1650 PRO AGP  
71ce RV530 [Radeon X1300 XT/X1600 PRO]  
71d2 RV530 GL [FireGL V3400]  
13cc 3d08 MXRT-2100  
71d4 RV530/M66 GL [Mobility FireGL V5250]  
71d5 RV530/M66-P [Mobility Radeon X1700]  
71d6 RV530/M66-XT [Mobility Radeon X1700]  
71de RV530/M66 [Mobility Radeon X1700/X2500]  
71e0 RV530 [Radeon X1600] (Secondary)  
174b e161 Radeon X1600 GTO (Secondary)  
71e1 RV535 [Radeon X1650 PRO] (Secondary)  
174b  
0881 Radeon X1700 FSC (Secondary)  
71e2 RV530 [Radeon X1600] (Secondary)  
71e6 RV530 [Radeon X1650] (Secondary)  
71e7 RV535 [Radeon X1650 PRO] (Secondary)  
1787 3001 Radeon X1650 PRO AGP  
71f2 RV530 GL [FireGL V3400] (Secondary)  
13cc 3d09 MXRT-2100 (Secondary)  
7210 RV550/M71 [Mobility Radeon HD 2300]  
7211 RV550/M71 [Mobility Radeon X2300 HD]  
7240 R580+ [Radeon X1950 XTX]  
1002 0d02 Radeon X1950 CrossFire Edition  
7244 R580+ [Radeon X1950 XT]  
7248 R580 [Radeon X1950]  
7249 R580 [Radeon X1900 XT]  
1002 0412 All-In-Wonder X1900  
1002 0b12 Radeon X1900 XT/XTX  
1002 0d02 Radeon X1900 CrossFire Edition  
1043 0160 Radeon X1900 XTX 512 MB GDDR3  
724b R580 [Radeon X1900 GT]  
1002 0b12 Radeon X1900 (Primary)  
1002 0b13 Radeon X1900 (Secondary)  
724e R580 GL [FireGL V7350]

7269 R580 [Radeon X1900 XT] (Secondary)  
726b R580 [Radeon X1900 GT] (Secondary)  
726e R580 [AMD Stream Processor] (Secondary)  
7280 RV570 [Radeon X1950 PRO]  
7288 RV570 [Radeon X1950  
GT]  
7291 RV560 [Radeon X1650 XT]  
1462 0810 Radeon X1700 SE  
7293 RV560 [Radeon X1650 GT]  
72a0 RV570 [Radeon X1950 PRO] (Secondary)  
72a8 RV570 [Radeon X1950 GT] (Secondary)  
72b1 RV560 [Radeon X1650 XT] (Secondary)  
72b3 RV560 [Radeon X1650 GT] (Secondary)  
7300 Fiji [Radeon R9 FURY / NANO Series]  
1002 0b35 FirePro S9300 X2  
1002 0b36 Radeon R9 FURY X / NANO  
1002 1b36 Radeon Pro Duo  
1043 049e Radeon R9 FURY  
1043 04a0 Radeon R9 FURY X  
174b e329 Radeon R9 FURY  
7310 Navi 10 [Radeon Pro W5700X]  
7312 Navi 10 [Radeon Pro W5700]  
7314 Navi 10 USB  
7319 Navi 10 [Radeon Pro 5700 XT]  
731b Navi 10 [Radeon Pro 5700]  
731e TDC-150  
731f Navi 10 [Radeon RX 5600 OEM/5600 XT / 5700/5700 XT]  
1002 0b36 Reference RX 5700 XT  
1458 2313 Radeon RX 5700 XT Gaming OC  
1458 231d Radeon RX 5600 XT/REV 2.0 [Windforce 6GB OC]  
148c 2398 AXRX 5700 XT 8GBD6-3DHE/OC [PowerColor Red Devil Radeon RX 5700 XT]  
1682 5701 RX 5700 XT RAW II  
1849 5120 Radeon RX 5600 XT  
1da2  
e409 Sapphire Technology Limited Navi 10 [Radeon RX 5600 OEM/5600 XT / 5700/5700 XT]  
1da2 e410 Sapphire NITRO+ RX 5700 XT  
1da2 e411 Radeon RX 5600 XT  
7340 Navi 14 [Radeon RX 5500/5500M / Pro 5500M]  
7341 Navi 14 [Radeon Pro W5500]  
7347 Navi 14 [Radeon Pro W5500M]  
734f Navi 14 [Radeon Pro W5300M]  
7360 Navi 12 [Radeon Pro 5600M/V520/BC-160]  
7362 Navi 12 [Radeon Pro V520/V540]  
7388 Arcturus GL-XL  
738c Arcturus GL-XL [Instinct MI100]  
738e Arcturus GL-XL [Instinct MI100]  
73a1 Navi 21 [Radeon Pro V620]  
73a2 Navi 21 Pro-XTA [Radeon Pro W6900X]

73a3 Navi 21 GL-XL [Radeon PRO W6800]  
73a4 Navi 21 USB  
73a5 Navi 21 [Radeon RX 6950 XT]  
# Reference  
1002 0e3a Radeon RX 6950 XT  
1849 5230 Navi 21 [ASRock OC Forumla Radeon RX 6950XT]  
1da2 441d Navi 21 [Sapphire Nitro+ Radeon RX 6950 XT]  
1eae 6950 Navi 21 [XFX Speedster MERC319 Radeon RX 6950 XT]  
73ab Navi 21 Pro-XLA [Radeon Pro W6800X/Radeon Pro W6800X Duo]  
73ae Navi 21 [Radeon Pro V620 MxGPU]  
73af  
Navi 21 [Radeon RX 6900 XT]  
148c 2414 Navi 21 XTXH [PowerColor Red Devil RX 6900 XT Ultimate]  
73bf Navi 21 [Radeon RX 6800/6800 XT / 6900 XT]  
1002 0e3a Radeon RX 6900 XT  
148c 2408 Red Devil AMD Radeon RX 6900 XT  
1da2 438e NITRO+ Radeon RX 6800 XT  
1da2 440f TOXIC RX 6900 XT  
1da2 e437 Pulse Radeon RX 6800  
1eae 6701 Speedster MERC 319 AMD Radeon RX 6800 XT Black  
1eae 6901 Speedster MERC 319 AMD Radeon RX 6900 XT Black  
73c3 Navi 22  
73c4 Navi 22 USB  
73ce Navi 22-XL SRIOV MxGPU  
73df Navi 22 [Radeon RX 6700/6700 XT/6750 XT / 6800M/6850M XT]  
1043 16c2 Radeon RX 6800M  
1458 2408 Radeon RX 6750 XT GAMING OC 12G  
1462 3980 Radeon RX 6700 XT Mech 2X 12G [MSI]  
148c 2409 Red Devil RX 6700 XT  
1849 5219 Radeon RX 6700 XT Challenger D  
1849 5222 RX 6700 XT Challenger D OC  
# Gaming 1440/QHD Overclock edition with 12 Gb GDDR6 and PCIe 4.0 of Radeon RX 6700 XT by Sapphire  
PULSE manufactured on autumn 2022 / C1 reviseion  
1da2 445e Radeon RX 6700 XT GAMING  
OC 12G [Sapphire PULSE]  
1da2 465e Radeon RX 6750 XT PULSE OC  
1da2 e445 Sapphire Radeon RX 6700  
1eae 6601 Speedster QICK 319 RX 6700 XT  
1eae 661a Radeon RX 6700 [SPEEDSTER SWFT 309]  
73e0 Navi 23  
73e1 Navi 23 WKS-XM [Radeon PRO W6600M]  
73e3 Navi 23 WKS-XL [Radeon PRO W6600]  
73e4 Navi 23 USB  
73ef Navi 23 [Radeon RX 6650 XT / 6700S / 6800S]  
1458 2405 Navi 23 [Radeon RX 6650 XT]  
1849 5236 RX 6650 XT Challenger D OC  
73f0 Navi 33 [Radeon RX 7600M XT]  
73ff Navi 23 [Radeon RX 6600/6600 XT/6600M]

1462 5021 MSI RX 6600XT MECH 2X  
1462 5022 RX 6600 MECH 2X  
148c 2412 PowerColor Red Devil RX 6600 XT  
1849 5218 Radeon RX 6600 Challenger ITX 8GB  
1da2 448e Radeon RX 6600 XT Pulse  
7408 Aldebaran/MI200 [Instinct MI250X]  
740c Aldebaran/MI200 [Instinct MI250X/MI250]  
740f Aldebaran/MI200 [Instinct MI210]  
7421 Navi 24 [Radeon PRO W6500M]  
7422 Navi 24 [Radeon PRO W6400]  
7423 Navi 24 [Radeon PRO W6300/W6300M]  
7424 Navi 24 [Radeon RX 6300]  
743f Navi  
24 [Radeon RX 6400/6500 XT/6500M]  
1da2 e457 PULSE AMD Radeon RX 6500 XT  
7446 Navi 31 USB  
7448 Navi 31 [Radeon Pro W7900]  
744c Navi 31 [Radeon RX 7900 XT/7900 XTX/7900M]  
1002 0e3b RX 7900 GRE [XFX]  
1da2 471e PULSE RX 7900 XTX  
1da2 e471 NITRO+ RX 7900 XTX Vapor-X  
1eae 7901 RX-79XMERC9 [SPEEDSTER MERC 310 RX 7900 XTX]  
745e Navi 31 [Radeon Pro W7800]  
7470 Navi 32 [Radeon PRO W7700]  
747e Navi 32 [Radeon RX 7700 XT / 7800 XT]  
7480 Navi 33 [Radeon RX 7700S/7600/7600S/7600M XT/PRO W7600]  
1849 5313 RX 7600 Challenger OC  
7483 Navi 33 [Radeon RX 7600M/7600M XT]  
7489 Navi 33 [Radeon Pro W7500]  
74a0 Aqua Vanjaram [Instinct MI300A]  
74a1 Aqua Vanjaram [Instinct MI300X]  
7833 RS350 Host Bridge  
7834 RS350 [Radeon 9100 PRO/XT IGP]  
7835 RS350M [Mobility Radeon 9000 IGP]  
7838 RS350 AGP Bridge  
7910 RS690 Host Bridge  
1179 ff50 Satellite P305D-S8995E  
17f2 5000 KI690-AM2 Motherboard  
7911 RS690/RS740 Host Bridge  
1002 7910 RS690/RS740 Host Bridge  
7912  
RS690/RS740 PCI to PCI Bridge (Internal gfx)  
7913 RS690 PCI to PCI Bridge (PCI Express Graphics Port 0)  
7915 RS690 PCI to PCI Bridge (PCI Express Port 1)  
7916 RS690 PCI to PCI Bridge (PCI Express Port 2)  
7917 RS690 PCI to PCI Bridge (PCI Express Port 3)  
1002 7910 RS690 PCI to PCI Bridge  
7919 RS690 HDMI Audio [Radeon Xpress 1200 Series]

1179 7919 Satellite P305D-S8995E  
17f2 5000 KI690-AM2 Motherboard  
791e RS690 [Radeon X1200]  
1462 7327 K9AG Neo2  
17f2 5000 KI690-AM2 Motherboard  
791f RS690M [Radeon Xpress 1200/1250/1270]  
1179 ff50 Satellite P305D-S8995E  
7930 RS600 Host Bridge  
7932 RS600 PCI to PCI Bridge (Internal gfx)  
7933 RS600 PCI to PCI Bridge (PCI Express Graphics Port 0)  
7935 RS600 PCI to PCI Bridge (PCI Express Port 1)  
7936 RS600 PCI to PCI Bridge (PCI Express Port 2)  
7937 RS690 PCI to PCI Bridge (PCI Express Port 3)  
793b RS600 HDMI Audio [Radeon Xpress 1250]  
793f RS690M [Radeon Xpress 1200/1250/1270] (Secondary)  
7941 RS600 [Radeon  
Xpress 1250]  
7942 RS600M [Radeon Xpress 1250]  
796e RS740 [Radeon 2100]  
105b 0e13 N15235/A74MX mainboard  
9400 R600 [Radeon HD 2900 PRO/XT]  
1002 2552 Radeon HD 2900 XT  
1002 3000 Radeon HD 2900 PRO  
1002 3142 HIS Radeon HD 2900XT 512MB GDDR3 VIVO PCIe  
9401 R600 [Radeon HD 2900 XT]  
9403 R600 [Radeon HD 2900 PRO]  
9405 R600 [Radeon HD 2900 GT]  
940a R600 GL [FireGL V8650]  
13cc 3d16 MXRT-7200  
940b R600 GL [FireGL V8600]  
940f R600 GL [FireGL V7600]  
9440 RV770 [Radeon HD 4870]  
9441 R700 [Radeon HD 4870 X2]  
9442 RV770 [Radeon HD 4850]  
1002 0502 MSI Radeon HD 4850 512MB GDDR3  
174b e810 Radeon HD 4850 512MB GDDR3  
9443 R700 [Radeon HD 4850 X2]  
9444 RV770 GL [FirePro V8750]  
9446 RV770 GL [FirePro V7760]  
944a RV770/M98L [Mobility Radeon HD 4850]  
944b RV770/M98 [Mobility Radeon HD 4850 X2]  
944c RV770 LE [Radeon HD 4830]  
944e RV770 CE [Radeon HD 4710]  
174b 3261 Radeon HD 4810  
9450 RV770 GL [FireStream 9270]  
9452 RV770 GL [FireStream  
9250]  
9456 RV770 GL [FirePro V8700]

945a RV770/M98-XT [Mobility Radeon HD 4870]  
9460 RV790 [Radeon HD 4890]  
9462 RV790 [Radeon HD 4860]  
946a RV770 GL [FirePro M7750]  
9480 RV730/M96 [Mobility Radeon HD 4650/5165]  
103c 3628 Mobility Radeon HD 4650 [dv6-1190en]  
9488 RV730/M96-XT [Mobility Radeon HD 4670]  
9489 RV730/M96 GL [Mobility FireGL V5725]  
9490 RV730 XT [Radeon HD 4670]  
174b e880 Radeon HD 4670 512MB GDDR3 Dual DVI-I/TVO  
9491 RV730/M96-CSP [Radeon E4690]  
9495 RV730 [Radeon HD 4600 AGP Series]  
1002 0028 Radeon HD 4650/4670 AGP  
1092 0028 Radeon HD 4670 AGP 512MB DDR2  
1458 0028 Radeon HD 4650 AGP  
1682 0028 Radeon HD 4650 AGP  
174b 0028 Radeon HD 4650 AGP DDR2  
9498 RV730 PRO [Radeon HD 4650]  
949c RV730 GL [FirePro V7750]  
13cc 3d1b MXRT-7300  
949e RV730 GL [FirePro V5700]  
949f RV730 GL [FirePro V3750]  
94a0 RV740/M97 [Mobility Radeon HD 4830]  
94a1 RV740/M97-XT [Mobility Radeon HD 4860]  
94a3 RV740/M97 GL [FirePro M7740]  
94b3 RV740  
PRO [Radeon HD 4770]  
94b4 RV740 PRO [Radeon HD 4750]  
94c1 RV610 [Radeon HD 2400 PRO/XT]  
1028 0211 Optiplex 755  
1028 0d02 Optiplex 755  
94c3 RV610 [Radeon HD 2400 PRO]  
1028 0302 Radeon HD 2400 Pro  
174b e400 Radeon HD 2400 PRO  
18bc 3550 Radeon HD 2400 PRO  
94c4 RV610 LE [Radeon HD 2400 PRO AGP]  
94c5 RV610 [Radeon HD 2400 LE]  
94c7 RV610 [Radeon HD 2350]  
94c8 RV610/M74 [Mobility Radeon HD 2400 XT]  
94c9 RV610/M72-S [Mobility Radeon HD 2400]  
1002 94c9 Radeon HD2400  
94cb RV610 [Radeon E2400]  
94cc RV610 LE [Radeon HD 2400 PRO PCI]  
9500 RV670 [Radeon HD 3850 X2]  
9501 RV670 [Radeon HD 3870]  
174b e620 Radeon HD 3870  
9504 RV670/M88 [Mobility Radeon HD 3850]  
9505 RV670 [Radeon HD 3690/3850]



148c 3000 Radeon HD 3850  
174b 3000 Radeon HD 3690/3850  
1787 3000 Radeon HD 3690  
9506 RV670/M88 [Mobility Radeon HD 3850 X2]  
9507 RV670 [Radeon HD 3830]  
9508 RV670/M88-XT [Mobility Radeon HD 3870]  
9509 RV670/M88 [Mobility Radeon HD 3870 X2]  
950f R680  
[Radeon HD 3870 X2]  
9511 RV670 GL [FireGL V7700]  
9513 RV670 [Radeon HD 3850 X2]  
9515 RV670 PRO [Radeon HD 3850 AGP]  
9519 RV670 GL [FireStream 9170]  
9540 RV710 [Radeon HD 4550]  
954f RV710 [Radeon HD 4350/4550]  
1462 1618 R4350 MD512H (MS-V161)  
9552 RV710/M92 [Mobility Radeon HD 4330/4350/4550]  
1028 1103 M92 [Mobility Radeon HD 4330]  
# GV-R435OC-512I/FF1  
1458 21ac Radeon HD 4350  
# GV-R455HM-512I/F41  
1458 21ed Radeon HD 4550  
# 113-100928-J01  
148c 3000 Radeon HD 4350 Go! Green 512MB GDDR3  
# 113-2E172001-003  
174b 3000 Radeon HD 4350/4550 HyperMemory DDR2  
9553 RV710/M92 [Mobility Radeon HD 4530/4570/5145/530v/540v/545v]  
1025 015e Mobility Radeon HD 4570  
1025 017d Mobility Radeon HD 4570  
1025 0205 Mobility Radeon HD 4570 / 545v  
1025 0206 Mobility Radeon HD 4570  
1025 0237 Mobility Radeon HD 4570  
1028 02be Mobility Radeon HD 4570 / 545v  
1028 02e8 Mobility Radeon HD 4530  
103c 143c Mobility Radeon HD 545v  
103c 1446 Mobility Radeon HD  
545v  
103c 3624 Mobility Radeon HD 4530  
103c 3628 Mobility Radeon HD 4530  
103c 3636 Mobility Radeon HD 4530  
1043 1b32 Mobility Radeon HD 4570  
1043 1b42 Mobility Radeon HD 4570  
104d 9056 Mobility Radeon HD 4570  
1179 ff82 Satellite L505-13T GPU (Mobility Radeon HD 5145)  
144d c07f Mobility Radeon HD 545v  
144d c571 Mobility Radeon HD 545v  
1462 1006 Mobility Radeon HD 545v  
17aa 2129 Mobility Radeon HD 545v

17aa 215b Mobility Radeon HD 545v  
17aa 21bb Mobility Radeon HD 545v  
9555 RV711/M93 [Mobility Radeon HD 4350/4550/530v/540v/545v / FirePro RG220]  
103c 1411 ProBook 4720s GPU (Mobility Radeon HD 4350)  
9557 RV711/M93 GL [FirePro RG220]  
955f RV710/M92 [Mobility Radeon HD 4330]  
9580 RV630 [Radeon HD 2600 PRO]  
9581 RV630/M76 [Mobility Radeon HD 2600]  
9583 RV630/M76 [Mobility Radeon HD 2600 XT/2700]  
106b 0083 iMac 7,1  
1734 1107 Mobility Radeon HD 2700  
9586 RV630 XT [Radeon HD 2600 XT AGP]  
9587 RV630 PRO [Radeon HD 2600 PRO AGP]  
9588  
RV630 XT [Radeon HD 2600 XT]  
1458 216c Radeon HD 2600 XT, 256MB GDDR3, 2x DVI, TV-out, PCIe (GV-RX26T256H)  
9589 RV630 PRO [Radeon HD 2600 PRO]  
1787 3000 Radeon HD 3610  
958a RV630 [Radeon HD 2600 X2]  
958b RV630/M76 [Mobility Radeon HD 2600 XT]  
958c RV630 GL [FireGL V5600]  
13cc 3d18 MXRT-5200  
958d RV630 GL [FireGL V3600]  
9591 RV635/M86 [Mobility Radeon HD 3650]  
1002 9591 Mobility Radeon HD 3650  
9593 RV635/M86 [Mobility Radeon HD 3670]  
9595 RV635/M86 GL [Mobility FireGL V5700]  
9596 RV635 PRO [Radeon HD 3650 AGP]  
1043 0028 EAH3650 SILENT/HTDI/512M/A  
9597 RV635 PRO [Radeon HD 3650 AGP]  
9598 RV635 [Radeon HD 3650/3750/4570/4580]  
1002 9598 Mobility Radeon HD 3600  
1043 01d6 EAH3650 Silent  
1043 3001 Radeon HD 4570  
174b 3001 Radeon HD 3750  
174b 4580 RV635 PRO [Radeon HD 4580]  
17af 3011 RV635 PRO [Radeon HD 4580]  
9599 RV635 PRO [Radeon HD 3650 AGP]  
95c0 RV620 PRO [Radeon HD 3470]  
1002 95c0 Mobility Radeon HD 3470  
1028 3243 C120D  
95c2  
RV620/M82 [Mobility Radeon HD 3410/3430]  
95c4 RV620/M82 [Mobility Radeon HD 3450/3470]  
1002 95c4 Mobility Radeon HD 3400  
95c5 RV620 LE [Radeon HD 3450]  
1028 0342 Radeon HD 3450 DMS-59  
95c6 RV620 LE [Radeon HD 3450 AGP]

95c9 RV620 LE [Radeon HD 3450 PCI]  
95cc RV620 GL [FirePro V3700]  
95cd RV620 GL [FirePro 2450]  
95cf RV620 GL [FirePro 2260]  
960f RS780 HDMI Audio [Radeon 3000/3100 / HD 3200/3300]  
1462 7596 760GM-E51(MS-7596) Motherboard  
9610 RS780 [Radeon HD 3200]  
1458 d000 GA-MA78GM-S2H Motherboard  
9611 RS780C [Radeon 3100]  
9612 RS780M [Mobility Radeon HD 3200]  
9613 RS780MC [Mobility Radeon HD 3100]  
9614 RS780D [Radeon HD 3300]  
9615 RS780E [Radeon HD 3200]  
9616 RS780L [Radeon 3000]  
# ID is probably a copy-paste error by a MSI developer from another mainboard, since all other ID numbers on this mainboard including the sub-device of this device has used subsystem ID 1462:7596  
1462 7501 760GM-E51(MS-7596) Motherboard  
9640 Sumo [Radeon HD 6550D]  
9641 Sumo [Radeon HD 6620G]  
9642 SuperSumo [Radeon HD 6370D]  
9643 SuperSumo [Radeon HD 6380G]  
9644 SuperSumo [Radeon HD 6410D]  
9645 SuperSumo [Radeon HD 6410D]  
9647 Sumo [Radeon HD 6520G]  
9648 Sumo [Radeon HD 6480G]  
9649 SuperSumo [Radeon HD 6480G]  
964a Sumo [Radeon HD 6530D]  
964b Sumo  
964c Sumo  
964e Sumo  
964f Sumo  
970f RS880 HDMI Audio [Radeon HD 4200 Series]  
1019 2120 A785GM-M  
1043 83a2 M4A785TD Motherboard  
1043 843e M5A88-V EVO  
9710 RS880 [Radeon HD 4200]  
1019 2120 A785GM-M  
1043 83a2 M4A785TD Motherboard  
9712 RS880M [Mobility Radeon HD 4225/4250]  
103c 1609 ProLiant MicroServer N36L  
9713 RS880M [Mobility Radeon HD 4100]  
9714 RS880 [Radeon HD 4290]  
9715 RS880 [Radeon HD 4250]  
1043 843e M5A88-V EVO  
# Radeon HD 6250 too?  
9802 Wrestler [Radeon HD 6310]  
174b 1001 PURE Fusion Mini

9803 Wrestler [Radeon HD 6310]  
9804 Wrestler [Radeon HD 6250]  
9805 Wrestler [Radeon HD 6250]  
9806 Wrestler [Radeon HD 6320]  
9807  
Wrestler [Radeon HD 6290]  
9808 Wrestler [Radeon HD 7340]  
9809 Wrestler [Radeon HD 7310]  
980a Wrestler [Radeon HD 7290]  
9830 Kabini [Radeon HD 8400 / R3 Series]  
1043 8623 AM11-A Motherboard  
9831 Kabini [Radeon HD 8400E]  
9832 Kabini [Radeon HD 8330]  
1849 9832 QC5000-ITX/PH  
9833 Kabini [Radeon HD 8330E]  
9834 Kabini [Radeon HD 8210]  
9835 Kabini [Radeon HD 8310E]  
9836 Kabini [Radeon HD 8280 / R3 Series]  
9837 Kabini [Radeon HD 8280E]  
9838 Kabini [Radeon HD 8240 / R3 Series]  
9839 Kabini [Radeon HD 8180]  
983d Temash [Radeon HD 8250/8280G]  
9840 Kabini HDMI/DP Audio  
1043 8623 AM11-A Motherboard  
1849 9840 QC5000-ITX/PH  
9850 Mullins [Radeon R3 Graphics]  
9851 Mullins [Radeon R4/R5 Graphics]  
1179 f928 Beema [Radeon R5 Graphics]  
9852 Mullins [Radeon R2 Graphics]  
9853 Mullins [Radeon R2 Graphics]  
9854 Mullins [Radeon R3E Graphics]  
9855 Mullins [Radeon R6 Graphics]  
9856 Mullins [Radeon R1E/R2E Graphics]  
9857 Mullins [Radeon APU XX-2200M with  
R2 Graphics]  
9858 Mullins  
9859 Mullins  
985a Mullins  
985b Mullins  
985c Mullins  
985d Mullins  
985e Mullins  
985f Mullins  
9874 Wani [Radeon R5/R6/R7 Graphics]  
1002 1871 Radeon R5 Graphics  
1002 1e20 Radeon R7 Graphics  
1028 06bd Radeon R6 Graphics  
103c 2b44 Radeon R6 Graphics

103c 8221 Radeon R5 Graphics  
103c 8223 Radeon R5 Graphics  
103c 8238 Radeon R7 Graphics  
103c 8353 Radeon R7 Graphics  
1458 d000 Radeon R7 Graphics  
17aa 5113 Radeon R6 Graphics  
17aa 5116 Radeon R6 Graphics  
17aa 5118 Radeon R5 Graphics  
9890 Amur  
98c0 Nolan  
98e4 Stoney [Radeon R2/R3/R4/R5 Graphics]  
9900 Trinity [Radeon HD 7660G]  
103c 1985 Pavilion 17-e163sg Notebook PC  
# AMD A10-5800K CPU  
9901 Trinity [Radeon HD 7660D]  
9902 Trinity HDMI Audio Controller  
103c 194e ProBook 455 G1 Notebook  
103c 1985 Pavilion 17-e163sg Notebook PC  
9903 Trinity [Radeon HD 7640G]  
103c 194e ProBook 455 G1 Notebook  
103c 1952 ProBook 455 G1 Notebook  
9904 Trinity [Radeon  
HD 7560D]  
9905 Trinity GL [FirePro A300]  
9906 Trinity GL [FirePro A320]  
9907 Trinity [Radeon HD 7620G]  
9908 Trinity [Radeon HD 7600G]  
9909 Trinity [Radeon HD 7500G]  
990a Trinity [Radeon HD 7500G]  
990b Richland [Radeon HD 8650G]  
990c Richland [Radeon HD 8670D]  
990d Richland [Radeon HD 8550G]  
990e Richland [Radeon HD 8570D]  
990f Richland [Radeon HD 8610G]  
9910 Trinity [Radeon HD 7660G]  
9913 Trinity [Radeon HD 7640G]  
9917 Trinity [Radeon HD 7620G]  
9918 Trinity [Radeon HD 7600G]  
9919 Trinity [Radeon HD 7500G]  
991e Bishop [Xbox One S APU]  
9920 Liverpool [Playstation 4 APU]  
9921 Liverpool HDMI/DP Audio Controller  
9922 Starshp  
9923 Starsha2 [Kingston/Clayton]  
9924 Gladius  
9925 Kingston/Clayton/Jupiter/Gladius/Montego HDMI Controller  
9926 Jupiter  
9990 Trinity 2 [Radeon HD 7520G]

9991 Trinity 2 [Radeon HD 7540D]  
 9992 Trinity 2 [Radeon HD 7420G]  
 9993 Trinity 2 [Radeon HD 7480D]  
 9994 Trinity 2 [Radeon HD 7400G]  
 9995 Richland [Radeon HD  
 8450G]  
 9996 Richland [Radeon HD 8470D]  
 9997 Richland [Radeon HD 8350G]  
 9998 Richland [Radeon HD 8370D]  
 9999 Richland [Radeon HD 8510G]  
 999a Richland [Radeon HD 8410G]  
 999b Richland [Radeon HD 8310G]  
 999c Richland [Radeon HD 8650D]  
 # AMD Quad-Core A8-Series APU A8-6500T with Radeon HD 8550D  
 999d Richland [Radeon HD 8550D]  
 99a0 Trinity 2 [Radeon HD 7520G]  
 99a2 Trinity 2 [Radeon HD 7420G]  
 99a4 Trinity 2 [Radeon HD 7400G]  
 aa00 R600 HDMI Audio [Radeon HD 2900 GT/PRO/XT]  
 aa01 RV635 HDMI Audio [Radeon HD 3650/3730/3750]  
 aa08 RV630 HDMI Audio [Radeon HD 2600 PRO/XT / HD 3610]  
 aa10 RV610 HDMI Audio [Radeon HD 2350 PRO / 2400 PRO/XT / HD 3410]  
 174b aa10 Radeon HD 2400 PRO  
 18bc aa10 Radeon HD 2400 PRO  
 aa18 RV670/680 HDMI Audio [Radeon HD 3690/3800 Series]  
 aa20 RV635 HDMI Audio [Radeon HD 3650/3730/3750]  
 aa28 RV620 HDMI Audio [Radeon HD 3450/3470/3550/3570]  
 aa30 RV770 HDMI Audio [Radeon HD 4850/4870]  
 174b aa30 Radeon HD 4850 512MB GDDR3 PCI-E Dual Slot  
 Fansink  
 aa38 RV710/730 HDMI Audio [Radeon HD 4000 series]  
 103c 3628 dv6-1190en  
 aa50 Cypress HDMI Audio [Radeon HD 5830/5850/5870 / 6850/6870 Rebrand]  
 aa58 Juniper HDMI Audio [Radeon HD 5700 Series]  
 # 5500, 5600 and mobile 5700 series  
 aa60 Redwood HDMI Audio [Radeon HD 5000 Series]  
 1025 033d Mobility Radeon HD 5650  
 1025 0347 Aspire 7740G  
 aa68 Cedar HDMI Audio [Radeon HD 5400/6300/7300 Series]  
 1028 aa68 XPS 8300  
 aa80 Cayman/Antilles HDMI Audio [Radeon HD 6930/6950/6970/6990]  
 aa88 Barts HDMI Audio [Radeon HD 6790/6850/6870 / 7720 OEM]  
 aa90 Turks HDMI Audio [Radeon HD 6500/6600 / 6700M Series]  
 1028 04a3 Precision M4600  
 aa98 Caicos HDMI Audio [Radeon HD 6450 / 7450/8450/8490 OEM / R5 230/235/235X OEM]  
 1043 aa98 EAH6450 SILENT/DI/1GD3(LP)  
 174b aa98 Radeon HD 6450 1GB DDR3  
 aaa0 Tahiti HDMI Audio [Radeon HD 7870 XT / 7950/7970]

aab0 Oland/Hainan/Cape Verde/Pitcairn HDMI Audio [Radeon HD 7000 Series]  
aab8 Tiran HDMI Audio  
aac0 Tobago HDMI Audio  
[Radeon R7 360 / R9 360 OEM]  
1043 aac0 R7260X-DC2OC-2GD5  
aac8 Hawaii HDMI Audio [Radeon R9 290/290X / 390/390X]  
aad8 Tonga HDMI Audio [Radeon R9 285/380]  
174b aad8 Radeon R9 285/380 HDMI Audio  
aae0 Baffin HDMI/DP Audio [Radeon RX 550 640SP / RX 560/560X]  
aae8 Fiji HDMI/DP Audio [Radeon R9 Nano / FURY/FURY X]  
aaf0 Ellesmere HDMI Audio [Radeon RX 470/480 / 570/580/590]  
aaf8 Vega 10 HDMI Audio [Radeon Vega 56/64]  
ab00 Baffin HDMI/DP Audio [Radeon RX 550 640SP / RX 560/560X]  
ab08 Polaris 22 HDMI Audio  
ab10 Lexa HDMI Audio  
ab18 Vega 12 HDMI Audio  
ab20 Vega 20 HDMI Audio [Radeon VII]  
ab28 Navi 21/23 HDMI/DP Audio Controller  
ab30 Navi 31 HDMI/DP Audio  
ab38 Navi 10 HDMI Audio  
ac00 Theater 506 World-Wide Analog Decoder  
ac01 Theater 506 World-Wide Analog Decoder  
ac02 TV Wonder HD 600 PCIe  
ac03 Theater 506 PCIe  
ac04 Theater 506 USB  
ac05 Theater 506 USB  
ac06 Theater 506 External USB  
ac07 Theater 506 External USB  
ac08 Theater 506A World-Wide Analog  
Decoder + Demodulator  
ac09 Theater 506A World-Wide Analog Decoder + Demodulator  
ac0a Theater 506A PCIe  
ac0b Theater 506A PCIe  
ac0c Theater 506A USB  
ac0d Theater 506A USB  
ac0e Theater 506A External USB  
ac0f Theater 506A External USB  
ac12 Theater HD T507 (DVB-T) TV tuner/capture device  
cab0 RS100 Host Bridge  
cab2 RS200 Host Bridge  
cab3 RS250 Host Bridge  
cbb2 RS200 Host Bridge  
1003 ULSI Systems  
0201 US201  
1004 VLSI Technology Inc  
0005 82C592-FC1  
0006 82C593-FC1  
0007 82C594-AFC2

0008 82C596/7 [Wildcat]  
0009 82C597-AFC2  
000c 82C541 [Lynx]  
000d 82C543 [Lynx]  
0101 82C532  
0102 82C534 [Eagle]  
0103 82C538  
0104 82C535  
0105 82C147  
0200 82C975  
0280 82C925  
0304 QSound ThunderBird PCI Audio  
1004 0304 QSound ThunderBird PCI Audio  
122d 1206 DSP368 Audio  
1483 5020 XWave Thunder 3D Audio  
0305 QSound ThunderBird PCI Audio Gameport  
1004 0305 QSound ThunderBird PCI Audio Gameport  
122d 1207 DSP368 Audio Gameport  
1483 5021 XWave  
Thunder 3D Audio Gameport  
0306 QSound ThunderBird PCI Audio Support Registers  
1004 0306 QSound ThunderBird PCI Audio Support Registers  
122d 1208 DSP368 Audio Support Registers  
1483 5022 XWave Thunder 3D Audio Support Registers  
0307 SAA7785 ThunderBird PCI Audio  
1004 0703 Philips Rhythmic Edge PSC703  
1004 0705 Philips Seismic Edge PSC705  
1004 0706 Philips Acoustic Edge PSC706  
0308 SAA7785 ThunderBird PCI Audio Gameport  
0702 VAS96011 [Golden Gate II]  
0703 Tollgate  
1005 Avance Logic Inc. [ALI]  
2064 ALG2032/2064  
2128 ALG2364A  
2301 ALG2301  
2302 ALG2302  
2364 ALG2364  
2464 ALG2364A  
2501 ALG2564A/25128A  
1006 Reply Group  
1007 NetFrame Systems Inc  
1008 Epson  
100a Phoenix Technologies  
100b National Semiconductor Corporation  
0001 DP83810  
0002 87415/87560 IDE  
000e 87560 Legacy I/O  
000f FireWire Controller



0011 NS87560 National PCI System I/O  
0012 USB Controller  
0020 DP83815 (MacPhyter) Ethernet Controller  
103c 0024 Pavilion ze4400 builtin  
Network  
12d9 000c Aculab E1/T1 PMXc cPCI carrier card  
1385 f311 FA311 / FA312 (FA311 with WoL HW)  
1385 f312 FA312 (rev. A1) Fast Ethernet PCI Adapter  
0021 PC87200 PCI to ISA Bridge  
0022 DP83820 10/100/1000 Ethernet Controller  
1186 4900 DGE-500T  
1385 621a GA621  
1385 622a GA622T  
0028 Geode GX2 Host Bridge  
002a CS5535 South Bridge  
002b CS5535 ISA bridge  
002d CS5535 IDE  
002e CS5535 Audio  
002f CS5535 USB  
0030 Geode GX2 Graphics Processor  
0035 DP83065 [Saturn] 10/100/1000 Ethernet Controller  
0500 SCx200 Bridge  
0501 SCx200 SMI  
0502 SCx200, SC1100 IDE controller  
100b 0502 IDE Controller  
0503 SCx200, SC1100 Audio Controller  
100b 0503 XpressAudio controller  
0504 SCx200 Video  
0505 SCx200 XBus  
0510 SC1100 Bridge  
100b 0500 GPIO and LPC support bridge  
0511 SC1100 SMI & ACPI  
100b 0501 SC1100 SMI & ACPI bridge  
0515 SC1100 XBus  
100b 0505 SC1100 PCI to XBus bridge  
d001 87410 IDE  
100c Tseng Labs Inc  
3202 ET4000/W32p rev A  
3205  
ET4000/W32p rev B  
3206 ET4000/W32p rev C  
3207 ET4000/W32p rev D  
3208 ET6000  
4702 ET6300  
100d AST Research Inc  
100e Weitek  
9000 P9000 Viper  
9001 P9000 Viper

9002 P9000 Viper  
9100 P9100 Viper Pro/SE  
1010 Video Logic, Ltd.  
1011 Digital Equipment Corporation  
0001 DECchip 21050  
0002 DECchip 21040 [Tulip]  
0004 DECchip 21030 [TGA]  
0007 NVRAM [Zephyr NVRAM]  
0008 KZPSA [KZPSA]  
0009 DECchip 21140 [FasterNet]  
1025 0310 21140 Fast Ethernet  
10b8 2001 SMC9332BDT EtherPower 10/100  
10b8 2002 SMC9332BVT EtherPower T4 10/100  
10b8 2003 SMC9334BDT EtherPower 10/100 (1-port)  
1109 2400 ANA-6944A/TX Fast Ethernet  
1112 2300 RNS2300 Fast Ethernet  
1112 2320 RNS2320 Fast Ethernet  
1112 2340 RNS2340 Fast Ethernet  
1113 1207 EN-1207-TX Fast Ethernet  
1186 1100 DFE-500TX Fast Ethernet  
1186 1112 DFE-570TX Fast Ethernet  
1186 1140 DFE-660 Cardbus Ethernet 10/100  
1186 1142 DFE-660 Cardbus Ethernet 10/100  
11f6 0503 Freedomline Fast Ethernet  
1282  
9100 AEF-380TXD Fast Ethernet  
1385 1100 FA310TX Fast Ethernet  
2646 0001 KNE100TX Fast Ethernet  
000a 21230 Video Codec  
000d PBXGB [TGA2]  
000f PCI-to-PDQ Interface Chip [PFI] FDDI (DEFPA)  
1011 def1 FDDIcontroller/PCI (DEFPA)  
103c def1 FDDIcontroller/PCI (3X-DEFPA)  
0014 DECchip 21041 [Tulip Pass 3]  
1186 0100 DE-530+  
0016 ATMworks 350 Adapter [OPPO] (DGLPB)  
0017 PV-PCI Graphics Controller (ZLXp-L)  
0018 Memory Channel interface  
0019 DECchip 21142/43  
1011 500a DE500A Fast Ethernet  
1011 500b DE500B Fast Ethernet  
1014 0001 10/100 EtherJet Cardbus  
1025 0315 ALN315 Fast Ethernet  
1033 800c PC-9821-CS01 100BASE-TX Interface Card  
1033 800d PC-9821NR-B06 100BASE-TX Interface Card  
103c 125a 10/100Base-TX (PCI) [A5506B]  
108d 0016 Rapidfire 2327 10/100 Ethernet  
108d 0017 GoCard 2250 Ethernet 10/100 Cardbus

10b8 2005 SMC8032DT Extreme Ethernet 10/100  
10b8 8034 SMC8034 Extreme Ethernet 10/100  
10ef 8169 Cardbus Fast Ethernet  
1109 2a00  
ANA-6911A/TX Fast Ethernet  
1109 2b00 ANA-6911A/TXC Fast Ethernet  
1109 3000 ANA-6922/TX Fast Ethernet  
1113 1207 Cheetah Fast Ethernet  
1113 2220 Cardbus Fast Ethernet  
115d 0002 Cardbus Ethernet 10/100  
1179 0203 Fast Ethernet  
1179 0204 Cardbus Fast Ethernet  
1186 1100 DFE-500TX Fast Ethernet  
1186 1101 DFE-500TX Fast Ethernet  
1186 1102 DFE-500TX Fast Ethernet  
1186 1112 DFE-570TX Quad Fast Ethernet  
11f0 4235 21143 [FASTLine-II UTP 10/100]  
1259 2800 AT-2800Tx Fast Ethernet  
1266 0004 Eagle Fast EtherMAX  
12af 0019 NetFlyer Cardbus Fast Ethernet  
1374 0001 Cardbus Ethernet Card 10/100  
1374 0002 Cardbus Ethernet Card 10/100  
1374 0007 Cardbus Ethernet Card 10/100  
1374 0008 Cardbus Ethernet Card 10/100  
1385 2100 FA510  
1395 0001 10/100 Ethernet CardBus PC Card  
13d1 ab01 EtherFast 10/100 Cardbus (PCMP200)  
1498 000a TPMC880-10 10/100Base-T and 10Base2 PMC Ethernet Adapter  
1498 000b TPMC880-11 Single 10/100Base-T PMC Ethernet Adapter  
1498  
000c TPMC880-12 Single 10Base2 PMC Ethernet Adapter  
14cb 0100 LNDL-100N 100Base-TX Ethernet PC Card  
1668 2000 FastNet Pro (PE2000)  
2646 0001 KNE100TX  
2646 0002 KNE-CB4TX  
8086 0001 EtherExpress PRO/100 Mobile CardBus 32  
001a Farallon PN9000SX Gigabit Ethernet  
0021 DECchip 21052  
0022 DECchip 21150  
0023 DECchip 21150  
0024 DECchip 21152  
0025 DECchip 21153  
0026 DECchip 21154  
0034 56k Modem Cardbus  
1374 0003 56k Modem Cardbus  
0045 DECchip 21553  
0046 DECchip 21554  
0e11 4050 Smart Array 4200 Controller

0e11 4051 Smart Array 4250ES Controller  
0e11 4058 Smart Array 431 Controller  
103c 10c2 NetRAID-4M  
12d9 000a IP Telephony card  
4c53 1050 CT7 mainboard  
4c53 1051 CE7 mainboard  
9005 0364 5400S (Mustang)  
9005 0365 5400S (Mustang)  
9005 1364 Dell PowerEdge RAID Controller 2  
9005 1365 Dell PowerEdge RAID Controller 2  
e4bf 1000 CC8-1-BLUES  
1065 StrongARM DC21285  
1069 0020 DAC960P / DAC1164P  
1012 Micronics Computers  
Inc  
1013 Cirrus Logic  
0038 GD 7548  
0040 GD 7555 Flat Panel GUI Accelerator  
004c GD 7556 Video/Graphics LCD/CRT Ctrlr  
00a0 GD 5430/40 [Alpine]  
00a2 GD 5432 [Alpine]  
00a4 GD 5434-4 [Alpine]  
00a8 GD 5434-8 [Alpine]  
00ac GD 5436 [Alpine]  
00b0 GD 5440  
00b8 GD 5446  
1af4 1100 QEMU Virtual Machine  
00bc GD 5480  
1013 00bc CL-GD5480  
00d0 GD 5462  
00d2 GD 5462 [Laguna I]  
00d4 GD 5464 [Laguna]  
00d5 GD 5464 BD [Laguna]  
00d6 GD 5465 [Laguna]  
13ce 8031 Barco Metheus 2 Megapixel, Dual Head  
13cf 8031 Barco Metheus 2 Megapixel, Dual Head  
00e8 GD 5436U  
1100 CL 6729  
1110 PD 6832 PCMCIA/CardBus Ctrlr  
1112 PD 6834 PCMCIA/CardBus Ctrlr  
1113 PD 6833 PCMCIA/CardBus Ctrlr  
1200 GD 7542 [Nordic]  
1202 GD 7543 [Viking]  
1204 GD 7541 [Nordic Light]  
4000 MD 5620 [CLM Data Fax Voice]  
4400 CD 4400  
6001 CS 4610/11 [CrystalClear SoundFusion Audio Accelerator]  
1014 1010 CS4610 SoundFusion Audio Accelerator

6003 CS 4614/22/24/30 [CrystalClear SoundFusion  
Audio Accelerator]  
1013 4280 Crystal SoundFusion PCI Audio Accelerator  
1014 0153 ThinkPad 600X/A20m  
153b 112e DMX XFire 1024  
153b 1136 SiXPack 5.1+  
1681 0050 Game Theater XP  
1681 a010 Gamesurround Fortissimo II  
1681 a011 Gamesurround Fortissimo III 7.1  
5053 3357 Santa Cruz  
6004 CS 4614/22/24 [CrystalClear SoundFusion Audio Accelerator]  
6005 Crystal CS4281 PCI Audio  
1013 4281 Crystal CS4281 PCI Audio  
10cf 10a8 Crystal CS4281 PCI Audio  
10cf 10a9 Crystal CS4281 PCI Audio  
10cf 10aa Crystal CS4281 PCI Audio  
10cf 10ab Crystal CS4281 PCI Audio  
10cf 10ac Crystal CS4281 PCI Audio  
10cf 10ad Crystal CS4281 PCI Audio  
10cf 10b4 Crystal CS4281 PCI Audio  
1179 0001 Crystal CS4281 PCI Audio  
14c0 000c Crystal CS4281 PCI Audio  
1014 IBM  
0002 PCI to MCA Bridge  
0005 Processor to I/O Controller [Alta Lite]  
0007 Processor to I/O Controller [Alta MP]  
000a PCI to ISA Bridge (IBM27-82376) [Fire Coral]  
0017 CPU to PCI Bridge  
0018 TR Auto LANstreamer  
001b  
GXT-150P  
001c Carrera  
001d SCSI-2 FAST PCI Adapter (82G2675)  
0020 GXT1000 Graphics Adapter  
0022 PCI to PCI Bridge (IBM27-82351)  
002d Processor to I/O Controller [Python]  
002e SCSI RAID Adapter [ServeRAID]  
1014 002e ServeRAID-3x  
1014 022e ServeRAID-4H  
0031 2 Port Serial Adapter  
# AS400 iSeries PCI sync serial card  
1014 0031 2721 WAN IOA - 2 Port Sync Serial Adapter  
0036 PCI to 32-bit LocalBus Bridge [Miami]  
0037 PowerPC to PCI Bridge (IBM27-82660)  
003a CPU to PCI Bridge  
003c GXT250P/GXT255P Graphics Adapter  
003e 16/4 Token ring UTP/STP controller  
1014 003e Token-Ring Adapter

1014 00cd Token-Ring Adapter + Wake-On-LAN  
1014 00ce 16/4 Token-Ring Adapter 2  
1014 00cf 16/4 Token-Ring Adapter Special  
1014 00e4 High-Speed 100/16/4 Token-Ring Adapter  
1014 00e5 16/4 Token-Ring Adapter 2 + Wake-On-LAN  
1014 016d iSeries 2744 Card  
0045 SSA Adapter  
0046 MPIC interrupt controller  
0047 PCI to PCI Bridge  
0048 PCI to PCI Bridge  
0049  
Warhead SCSI Controller  
004e ATM Controller (14104e00)  
004f ATM Controller (14104f00)  
0050 ATM Controller (14105000)  
0053 25 MBit ATM Controller  
0054 GXT500P/GXT550P Graphics Adapter  
0057 MPEG PCI Bridge  
0058 SSA Adapter [Advanced SerialRAID/X]  
005e GXT800P Graphics Adapter  
007c ATM Controller (14107c00)  
007d 3780IDSP [MWave]  
008b EADS PCI to PCI Bridge  
008e GXT3000P Graphics Adapter  
0090 GXT 3000P  
1014 008e GXT-3000P  
0091 SSA Adapter  
0095 20H2999 PCI Docking Bridge  
0096 Chukar chipset SCSI controller  
1014 0097 iSeries 2778 DASD IOA  
1014 0098 iSeries 2763 DASD IOA  
1014 0099 iSeries 2748 DASD IOA  
009f PCI 4758 Cryptographic Accelerator  
00a5 ATM Controller (1410a500)  
00a6 ATM 155MBPS MM Controller (1410a600)  
00b7 GXT2000P Graphics Adapter  
1092 00b8 FireGL1 AGP 32Mb  
00b8 GXT2000P Graphics Adapter  
00be ATM 622MBPS Controller (1410be00)  
00dc Advanced Systems Management Adapter (ASMA)  
00fc CPC710 Dual Bridge and Memory  
Controller (PCI-64)  
0105 CPC710 Dual Bridge and Memory Controller (PCI-32)  
010f Remote Supervisor Adapter (RSA)  
0142 Yotta Video Compositor Input  
1014 0143 Yotta Input Controller (ytin)  
0144 Yotta Video Compositor Output  
1014 0145 Yotta Output Controller (ytout)

0156 405GP PLB to PCI Bridge  
015e 622Mbps ATM PCI Adapter  
0160 64bit/66MHz PCI ATM 155 MMF  
016e GXT4000P Graphics Adapter  
0170 GXT6000P Graphics Adapter  
1092 0172 Fire GL2  
1092 0173 Fire GL3  
1092 0174 Fire GL4  
1092 0184 Fire GL4s  
017d GXT300P Graphics Adapter  
0180 Snipe chipset SCSI controller  
1014 0241 iSeries 2757 DASD IOA  
1014 0264 Quad Channel PCI-X U320 SCSI RAID Adapter (2780)  
0188 EADS-X PCI-X to PCI-X Bridge  
01a7 PCI-X to PCI-X Bridge  
01bd ServeRAID Controller  
1014 01bd ServeRAID 4Lx  
1014 01be ServeRAID-4M  
1014 01bf ServeRAID-4L  
1014 0208 ServeRAID-4Mx  
1014 020e ServeRAID-4Lx  
1014 022e ServeRAID-4H  
1014 0258 ServeRAID-5i  
1014 0259 ServeRAID-5i  
01c1  
64bit/66MHz PCI ATM 155 UTP  
01e6 Cryptographic Accelerator  
01ef PowerPC 440GP PCI Bridge  
1734 102b PCEAS PCI-X Dual Port ESCON Adapter  
1734 10f8 PCEAT PCI-Express Dual Port ESCON Adapter  
01ff 10/100 Mbps Ethernet  
0219 Multiport Serial Adapter  
1014 021a Dual RVX  
1014 0251 Internal Modem/RVX  
1014 0252 Quad Internal Modem  
021b GXT6500P Graphics Adapter  
021c GXT4500P Graphics Adapter  
0233 GXT135P Graphics Adapter  
# Internal debugging card for CELL based systems  
025a Drone card  
028c Citrine chipset SCSI controller  
1014 028d Dual Channel PCI-X DDR SAS RAID Adapter (572E)  
1014 02be Dual Channel PCI-X DDR U320 SCSI RAID Adapter (571B)  
1014 02c0 Dual Channel PCI-X DDR U320 SCSI Adapter (571A)  
1014 030d PCI-X DDR Auxiliary Cache Adapter (575B)  
02a1 Calgary PCI-X Host Bridge  
02bd Obsidian chipset SCSI controller  
1014 02c1 PCI-X DDR 3Gb SAS Adapter (572A/572C)

1014 02c2 PCI-X DDR 3Gb SAS RAID Adapter (572B/571D)  
1014 0338 PCI-X DDR Auxiliary  
Cache Adapter (575C)  
0302 Winnipeg PCI-X Host Bridge  
0308 CalIOC2 PCI-E Root Port  
0311 FC 5740/1954 4-Port 10/100/1000 Base-TX PCI-X Adapter for POWER  
0314 ZISC 036 Neural accelerator card  
032d Axon - Cell Companion Chip  
1014 03a1 PCIe PowerXCell 8i Cell Accelerator Board  
0339 Obsidian-E PCI-E SCSI controller  
1014 030a PCIe 3Gb SAS RAID Adapter (574E)  
1014 033a PCIe 3Gb SAS Adapter (57B3)  
1014 035c PCIe x8 Internal 3Gb SAS adapter (57CC)  
1014 0360 PCI-E Auxiliary Cache Adapter (57B7)  
033d PCI-E IPR SAS Adapter (FPGA)  
1014 033c PCIe2 1.8GB Cache 6Gb SAS RAID Adapter Tri-port (57B5)  
1014 0353 PCIe2 3.1GB Cache 6Gb SAS RAID Enclosure (57C3)  
1014 0354 PCIe2 6Gb SAS Adapter Dual-port (57C4)  
1014 0356 PCIe2 1.8GB Cache 6Gb SAS RAID & SSD Adapter (574D)  
1014 035f PCIe2 6Gb SAS Adapter Quad-port (57B2)  
034a PCI-E IPR SAS Adapter (ASIC)  
1014 033b PCIe2 6Gb SAS RAID Adapter Quad-port (57B4)  
1014 0355 PCIe2 3.6GB Cache 6Gb SAS RAID Adapter  
Quad-port (57B1)  
1014 0357 PCIe2 6Gb SAS Adapter Quad-port (57C6)  
1014 035d PCIe3 1.8GB Cache RAID SAS Adapter Quad-port 6GB (57C8)  
1014 035e PCIe2 3.6GB Cache 6Gb SAS RAID Adapter Quad-port (57CE)  
1014 03fb PCIe3 28GB Cache RAID SAS Enclosure 6Gb x 16 (57D5)  
1014 03fe PCIe3 x8 Cache SAS RAID Internal Adapter 6Gb (57D8)  
1014 03ff PCIe3 x8 SAS RAID Internal Adapter 6Gb (57D7)  
1014 0474 PCIe3 x16 Cache SAS RAID Internal Adapter 6Gb (57EB)  
1014 0475 PCIe3 x16 SAS RAID Internal Adapter 6Gb (57EC)  
1014 0499 PCIe3 x16 Cache SAS RAID Internal Adapter 6Gb (57ED)  
1014 049a PCIe3 x16 SAS RAID Internal Adapter 6Gb (57EE)  
1014 04c7 PCIe3 x 8 Cache SAS RAID Internal Adapter 6GB(2CCA)  
1014 04c8 PCIe3 x 8 Cache SAS RAID Internal Adapter 6GB(2CD2)  
1014 04c9 PCIe3 x 8 Cache SAS RAID Internal Adapter 6GB(2CCD)  
03dc POWER8 Host Bridge (PHB3)  
044b GenWQE Accelerator Adapter  
04aa Flash Adapter 90 (PCIe2 0.9TB)  
04c1 POWER9 Host Bridge (PHB4)  
04da PCI-E IPR  
SAS+ Adapter (ASIC)  
1014 04fb PCIe3 x16 20GB Cache 12Gb Quad SAS RAID+ Adapter(580B)  
1014 04fc PCIe3 x8 12Gb Quad SAS RAID+ Adapter(580A)  
04ed Internal Shared Memory (ISM) virtual PCI device  
0611 4769 Cryptographic Adapter  
3022 QLA3022 Network Adapter



4022 QLA3022 Network Adapter  
ffff MPIC-2 interrupt controller  
1015 LSI Logic Corp of Canada  
1016 ICL Personal Systems  
1017 SPEA Software AG  
5343 SPEA 3D Accelerator  
1018 Unisys Systems  
1019 Elitegroup Computer Systems  
9602 RS780/RS880 PCI to PCI bridge (int gfx)  
101a AT&T GIS (NCR)  
0005 100VG ethernet  
0007 BYNET BIC4G/2C/2G  
101a 0019 BYNET BIC2C  
101a 001c BYNET BIC2G  
101a 001f BYNET BIC4G  
0009 PQS Memory Controller  
000a BYNET BPCI Adapter  
000b BYNET 4 Port BYA Switch (BYA4P)  
000c BYNET 4 Port BYA Switch (BYA4G)  
0010 NCR AMC Memory Controller  
1dc1 BYNET BIC2M/BIC4M/BYA4M  
101a 0019 BIC2M  
101a 001f BIC4M  
101a 0ece BYA4M  
1fa8 BYNET Multi-port BIC Adapter (XBIC Based)  
101a 00c3  
BYNET BIC2SE  
101b Vitesse Semiconductor  
# Maxim VSC452 Super BMC Controller with Video  
0452 VSC452 [SuperBMC]  
101c Western Digital  
0193 33C193A  
0196 33C196A  
0197 33C197A  
0296 33C296A  
3193 7193  
3197 7197  
3296 33C296A  
4296 34C296  
9710 Pipeline 9710  
9712 Pipeline 9712  
c24a 90C  
# ID for Newly Acquired Storage Products from Vitesse  
101d Maxim Integrated Products  
101e American Megatrends Inc.  
0009 MegaRAID 428 Ultra RAID Controller (rev 03)  
1960 MegaRAID  
101e 0471 MegaRAID 471 Enterprise 1600 RAID Controller

101e 0475 MegaRAID 475 Express 500/500LC RAID Controller  
101e 0477 MegaRAID 477 Elite 3100 RAID Controller  
101e 0493 MegaRAID 493 Elite 1600 RAID Controller  
101e 0494 MegaRAID 494 Elite 1650 RAID Controller  
101e 0503 MegaRAID 503 Enterprise 1650 RAID Controller  
101e 0511 MegaRAID 511 i4 IDE RAID Controller  
101e 0522 MegaRAID 522 i4133 RAID Controller  
1028 0471 PowerEdge RAID Controller 3/QC  
1028 0475 PowerEdge RAID Controller  
3/SC  
1028 0493 PowerEdge RAID Controller 3/DC  
1028 0511 PowerEdge Cost Effective RAID Controller ATA100/4Ch  
103c 60e7 NetRAID-1M  
103c 60e8 NetRaid 2M [AMI MegaRaid 493]  
9010 MegaRAID 428 Ultra RAID Controller  
9030 EIDE Controller  
9031 EIDE Controller  
9032 EIDE & SCSI Controller  
9033 SCSI Controller  
9040 Multimedia card  
9060 MegaRAID 434 Ultra GT RAID Controller  
9063 MegaRAC  
101e 0767 Dell Remote Assistant Card 2  
101f PictureTel  
1020 Hitachi Computer Products  
1021 OKI Electric Industry Co. Ltd.  
1022 Advanced Micro Devices, Inc. [AMD]  
1100 K8 [Athlon64/Opteron] HyperTransport Technology Configuration  
1101 K8 [Athlon64/Opteron] Address Map  
1102 K8 [Athlon64/Opteron] DRAM Controller  
1103 K8 [Athlon64/Opteron] Miscellaneous Control  
1200 Family 10h Processor HyperTransport Configuration  
1201 Family 10h Processor Address Map  
1202 Family 10h Processor DRAM Controller  
1203 Family 10h Processor Miscellaneous Control  
1204 Family 10h Processor Link  
Control  
1300 Family 11h Processor HyperTransport Configuration  
1301 Family 11h Processor Address Map  
1302 Family 11h Processor DRAM Controller  
1303 Family 11h Processor Miscellaneous Control  
1304 Family 11h Processor Link Control  
1305 Griffin Function 5  
1306 Griffin Function 6  
1307 Griffin Function 7  
1308 Kaveri Audio Controller  
1314 Wrestler/Bheem/Ontario/Krishna Audio Controller  
13e0 Ariel Root Complex

13e1 Ariel IOMMU  
13e2 Ariel PCIe Dummy Host Bridge  
13e3 Ariel PCIe GPP Bridge  
13e4 Ariel PCIe Dummy Host Bridge  
13e5 Ariel Internal PCIe GPP Bridge 0 to Bus A  
13e6 Ariel Internal PCIe GPP Bridge 0 to Bus B  
13e7 Ariel SMBus Controller  
13e8 Ariel LPC Bridge  
13e9 Ariel Internal GPU  
13ea Ariel HD Audio Controller  
13eb Ariel HD Audio Coprocessor  
13ec Ariel Cryptographic Coprocessor  
13ed Ariel USB 3.1 Type C: Gen2 x 1port + DP Alt Mode  
13ee Ariel USB 3.1 Type A: Gen2 x 2 ports  
13ef Ariel ZCN/MP4  
13f0 Ariel Device 24: Function 0  
13f1  
Ariel Device 24: Function 1  
13f2 Ariel Device 24: Function 2  
13f3 Ariel Device 24: Function 3  
13f4 Ariel Device 24: Function 4  
13f5 Ariel Device 24: Function 5  
13f6 Ariel Device 24: Function 6  
13f7 Ariel Device 24: Function 7  
1400 Family 15h (Models 10h-1fh) Processor Function 0  
1401 Family 15h (Models 10h-1fh) Processor Function 1  
1402 Family 15h (Models 10h-1fh) Processor Function 2  
1403 Family 15h (Models 10h-1fh) Processor Function 3  
1404 Family 15h (Models 10h-1fh) Processor Function 4  
1405 Family 15h (Models 10h-1fh) Processor Function 5  
1410 Family 15h (Models 10h-1fh) Processor Root Complex  
103c 1985 Pavilion 17-e163sg Notebook PC  
1412 Family 15h (Models 10h-1fh) Processor Root Port  
1022 1234 Trinity A-series APU  
1413 Family 15h (Models 10h-1fh) Processor Root Port  
1414 Family 15h (Models 10h-1fh) Processor Root Port  
1022 1234 Trinity A-series APU  
1415 Family 15h (Models 10h-1fh) Processor Root Port  
1416 Family 15h (Models 10h-1fh)  
Processor Root Port  
1417 Family 15h (Models 10h-1fh) Processor Root Port  
1418 Family 15h (Models 10h-1fh) Processor Root Port  
1419 Family 15h (Models 10h-1fh) I/O Memory Management Unit  
141a Family 15h (Models 30h-3fh) Processor Function 0  
141b Family 15h (Models 30h-3fh) Processor Function 1  
141c Family 15h (Models 30h-3fh) Processor Function 2  
141d Family 15h (Models 30h-3fh) Processor Function 3  
141e Family 15h (Models 30h-3fh) Processor Function 4

141f Family 15h (Models 30h-3fh) Processor Function 5  
1422 Family 15h (Models 30h-3fh) Processor Root Complex  
1423 Family 15h (Models 30h-3fh) I/O Memory Management Unit  
1424 Family 15h (Models 30h-3fh) Processor Root Port  
1425 Kaveri P2P Bridge for GFX PCIe Port [1:0]  
1426 Family 15h (Models 30h-3fh) Processor Root Port  
142e Liverpool Processor HT configuration  
142f Liverpool Processor Address Maps  
1430 Liverpool Processor DRAM configuration  
1431 Liverpool Processor Misc configuration  
1432 Liverpool  
Processor PM configuration  
1433 Liverpool Processor NB Performance Monitor  
1434 Liverpool Processor SPLL Configuration  
1436 Liverpool Processor Root Complex  
1437 Liverpool I/O Memory Management Unit  
1438 Liverpool UMI PCIe Dummy Host Bridge  
1439 Family 16h Processor Functions 5:1  
143a Kingston/Clayton/Gladius/Montego Root Complex  
143b Kingston/Clayton/Gladius/Montego P2P Bridge for UMI Link  
1440 Matisse/Vermeer Data Fabric: Device 18h; Function 0  
1441 Matisse/Vermeer Data Fabric: Device 18h; Function 1  
1442 Matisse/Vermeer Data Fabric: Device 18h; Function 2  
1443 Matisse/Vermeer Data Fabric: Device 18h; Function 3  
1444 Matisse/Vermeer Data Fabric: Device 18h; Function 4  
1445 Matisse/Vermeer Data Fabric: Device 18h; Function 5  
1446 Matisse/Vermeer Data Fabric: Device 18h; Function 6  
1447 Matisse/Vermeer Data Fabric: Device 18h; Function 7  
1448 Renoir Device 24: Function 0  
1449 Renoir Device 24: Function 1  
144a Renoir Device 24: Function 2  
144b Renoir  
Device 24: Function 3  
144c Renoir Device 24: Function 4  
144d Renoir Device 24: Function 5  
144e Renoir Device 24: Function 6  
144f Renoir Device 24: Function 7  
1450 Family 17h (Models 00h-0fh) Root Complex  
1451 Family 17h (Models 00h-0fh) I/O Memory Management Unit  
1452 Family 17h (Models 00h-1fh) PCIe Dummy Host Bridge  
ea50 ce19 mCOM10-L1900  
1453 Family 17h (Models 00h-0fh) PCIe GPP Bridge  
1454 Family 17h (Models 00h-0fh) Internal PCIe GPP Bridge 0 to Bus B  
1455 Zeppelin/Renoir PCIe Dummy Function  
1456 Family 17h (Models 00h-0fh) Platform Security Processor (PSP) 3.0 Device  
1457 Family 17h (Models 00h-0fh) HD Audio Controller  
1458 XGMAC 10GbE Controller  
1459 XGMAC 10GbE Controller

145a Zeppelin/Raven/Raven2 PCIe Dummy Function  
145b Zeppelin Non-Transparent Bridge  
145c Family 17h (Models 00h-0fh) USB 3.0 Host Controller  
145d Zeppelin Switch Upstream (PCIE SW.US)  
145e Zeppelin Switch Downstream (PCIE SW.DS)  
145f Zeppelin USB 3.0 xHCI Compliant  
Host Controller  
1460 Family 17h (Models 00h-0fh) Data Fabric: Device 18h; Function 0  
1461 Family 17h (Models 00h-0fh) Data Fabric: Device 18h; Function 1  
1462 Family 17h (Models 00h-0fh) Data Fabric: Device 18h; Function 2  
1463 Family 17h (Models 00h-0fh) Data Fabric: Device 18h; Function 3  
1464 Family 17h (Models 00h-0fh) Data Fabric: Device 18h; Function 4  
1465 Family 17h (Models 00h-0fh) Data Fabric: Device 18h; Function 5  
1466 Family 17h (Models 00h-0fh) Data Fabric: Device 18h; Function 6  
1467 Family 17h (Models 00h-0fh) Data Fabric: Device 18h; Function 7  
1468 Zeppelin Cryptographic Coprocessor NTBCCP  
1470 Vega 10 PCIe Bridge  
1471 Vega 10 PCIe Bridge  
1480 Starship/Matisse Root Complex  
1462 7c37 X570-A PRO motherboard  
15d9 1b95 H12SSL-i  
1481 Starship/Matisse IOMMU  
1482 Starship/Matisse PCIe Dummy Host Bridge  
1483 Starship/Matisse GPP Bridge  
01de fff9 Gimlet Baseboard  
1484 Starship/Matisse Internal PCIe GPP Bridge 0 to bus[E:B]  
1485 Starship/Matisse  
Reserved SPP  
1486 Starship/Matisse Cryptographic Coprocessor PSPCPP  
1487 Starship/Matisse HD Audio Controller  
1462 9c37 X570-A PRO motherboard  
1488 Starship Reserved SSP  
1489 Starship Reserved SSP  
148a Starship/Matisse PCIe Dummy Function  
148b Starship/Matisse Non-Transparent Bridge  
148c Starship USB 3.0 Host Controller  
15d9 145c H12SSL-i  
148d Starship/Matisse Switch Upstream (PCIE SW.US)  
148e Starship/Matisse Switch Downstream (PCIE SW.DS)  
148f Starship Reserved SSP  
1490 Starship Device 24; Function 0  
1491 Starship Device 24; Function 1  
1492 Starship Device 24; Function 2  
1493 Starship Device 24; Function 3  
1494 Starship Device 24; Function 4  
1495 Starship Device 24; Function 5  
1496 Starship Device 24; Function 6  
1497 Starship Device 24; Function 7

1498 Starship/Matisse PTDMA  
1499 Starship/Matisse NVMe  
149a Starship PCIe GPP Bridge [1:0]  
149b Starship Reserved SSP  
149c Matisse USB 3.0 Host Controller  
1462 7c37 X570-A  
PRO motherboard  
149d Vangogh CVIP  
14b5 Family 17h-19h PCIe Root Complex  
14b6 Family 17h-19h IOMMU  
14b7 Family 17h-19h PCIe Dummy Host Bridge  
14b8 Family 17h-19h PCIe GPP Bridge  
14b9 Family 17h-19h Internal PCIe GPP Bridge  
14ba Family 17h-19h PCIe GPP Bridge  
# Server device  
14ca Genoa CCP/PSP 4.0 Device  
14cd Family 19h USB4/Thunderbolt PCIe tunnel  
14de Phoenix PCIe Dummy Function  
14ef Family 19h USB4/Thunderbolt PCIe tunnel  
1502 AMD IPU Device  
1510 Family 14h Processor Root Complex  
174b 1001 PURE Fusion Mini  
1512 Family 14h Processor Root Port  
1513 Family 14h Processor Root Port  
1514 Family 14h Processor Root Port  
1515 Family 14h Processor Root Port  
1516 Family 14h Processor Root Port  
1530 Family 16h Processor Function 0  
1531 Family 16h Processor Function 1  
1532 Family 16h Processor Function 2  
1533 Family 16h Processor Function 3  
1534 Family 16h Processor Function 4  
1535 Family 16h Processor Function 5  
1536 Family 16h Processor Root Complex  
1043  
8623 AM11-A Motherboard  
1849 1536 QC5000-ITX/PH  
1537 Kabini/Mullins PSP-Platform Security Processor  
1538 Family 16h Processor Function 0  
1539 Kabini P2P Bridge for PCIe Ports[4:0]  
1540 Kryptos/Cato/Garfield/Garfield+/Arlene/Pooky HT Configuration  
1541 Kryptos/Cato/Garfield/Garfield+/Arlene/Pooky Address Maps  
1542 Kryptos/Cato/Garfield/Garfield+/Arlene/Pooky DRAM Configuration  
1543 Kryptos/Cato/Garfield/Garfield+/Arlene/Pooky Miscellaneous Configuration  
1544 Kryptos/Cato/Garfield/Garfield+/Arlene/Pooky PM Configuration  
1545 Kryptos/Cato/Garfield/Garfield+/Arlene/Pooky NB Performance Monitor  
1546 Kryptos/Cato/Garfield/Garfield+/Arlene/Pooky Root Complex  
1547 Kryptos/Cato/Garfield/Garfield+/Arlene/Pooky IOMMU

1548 Kryptos/Cato/Garfield/Garfield+/Arlene/Pooky UMI PCIe Dummy Host Bridge  
1549 Kryptos/Cato/Garfield/Garfield+ P2P Bridge for PCIe Port [3:0]  
154a Kryptos/Cato/Garfield/Garfield+/Arlene/Pooky Audio Processor  
154b Kryptos/Cato/Garfield/Garfield+/Arlene/Pooky  
Security Processor  
154d Kryptos/Cato/Garfield/Garfield+/Arlene/Pooky/Anubis HDMI Controller  
154f Anubis Audio Processor  
1550 Garfield+/Arlene/Pooky/Anubis SPLL Configuration  
1553 Arlene/Pooky P2P Bridge for PCIE (3:0)  
155b Anubis Root Complex  
155c Anubis IOMMU  
155d Anubis UMI PCIe Dummy Bridge  
155e Anubis P2P Bridge for PCIe Ports [4:0]  
1560 Anubis Security Processor  
1566 Family 16h (Models 30h-3fh) Processor Root Complex  
1567 Mullins IOMMU  
156b Family 16h (Models 30h-3fh) Host Bridge  
1570 Family 15h (Models 60h-6fh) Processor Function 0  
1571 Family 15h (Models 60h-6fh) Processor Function 1  
1572 Family 15h (Models 60h-6fh) Processor Function 2  
1573 Family 15h (Models 60h-6fh) Processor Function 3  
1574 Family 15h (Models 60h-6fh) Processor Function 4  
1575 Family 15h (Models 60h-6fh) Processor Function 5  
1576 Family 15h (Models 60h-6fh) Processor Root Complex  
1577 Family 15h (Models 60h-6fh) I/O Memory Management Unit  
1578  
Carrizo Platform Security Processor  
1579 Carrizo Audio Processor  
157a Family 15h (Models 60h-6fh) Audio Controller  
157b Family 15h (Models 60h-6fh) Host Bridge  
157c Family 15h (Models 60h-6fh) Processor Root Port  
157d Carrizo Audio Dummy Host Bridge  
157e Carrizo Audio Controller  
1580 Family 16h (Models 30h-3fh) Processor Function 0  
1581 Family 16h (Models 30h-3fh) Processor Function 1  
1582 Family 16h (Models 30h-3fh) Processor Function 2  
1583 Family 16h (Models 30h-3fh) Processor Function 3  
1584 Family 16h (Models 30h-3fh) Processor Function 4  
1585 Family 16h (Models 30h-3fh) Processor Function 5  
1590 Amur/Nolan HT Configuration  
1591 Amur/Nolan Address Maps  
1592 Amur/Nolan DRAM Configuration  
1593 Amur/Nolan Miscellaneous Configuration  
1594 Amur/Nolan PM Configuration  
1595 Amur/Nolan NB Performance Monitor  
1596 Amur/Nolan Root Complex  
1597 Amur/Nolan IOMMU  
1598 Amur/Nolan Platform Security Processor

1599 Amur/Nolan PCIe Dummy Host Bridge  
159d  
Amur Function 6: Gasket  
15b0 Stoney HT Configuration  
15b1 Stoney Address Maps  
15b2 Stoney DRAM Configuration  
15b3 Stoney Miscellaneous Configuration  
15b4 Stoney PM Configuration  
15b5 Stoney NB Performance Monitor  
15bc Stoney PCIe [GFX,GPP] Bridge [4:0]  
15be Stoney Audio Processor  
15c4 Phoenix USB4/Thunderbolt NHI controller #1  
15c5 Phoenix USB4/Thunderbolt NHI controller #2  
15c7 Family 19h (Model 74h) CCP/PSP 3.0 Device  
15d0 Raven/Raven2 Root Complex  
103c 8615 Pavilion Laptop 15-cw1xxx  
1043 876b PRIME B450M-A Motherboard  
ea50 ce19 mCOM10-L1900  
15d1 Raven/Raven2 IOMMU  
103c 8615 Pavilion Laptop 15-cw1xxx  
1043 876b PRIME B450M-A Motherboard  
ea50 ce19 mCOM10-L1900  
15d2 Raven/Raven2 PCIe Dummy Host Bridge  
15d3 Raven/Raven2 PCIe GPP Bridge [6:0]  
ea50 ce19 mCOM10-L1900  
15d4 FireFlight USB 3.1  
15d5 FireFlight USB 3.1  
15d6 Rembrandt USB4 XHCI controller #5  
15d7 Rembrandt USB4 XHCI controller #6  
15da Raven/Raven2 PCIe Dummy Host Bridge  
15db  
Raven/Raven2 Internal PCIe GPP Bridge 0 to Bus A  
ea50 ce19 mCOM10-L1900  
15dc Raven/Raven2 Internal PCIe GPP Bridge 0 to Bus B  
ea50 ce19 mCOM10-L1900  
15de Raven/Raven2/FireFlight HD Audio Controller  
15df Family 17h (Models 10h-1fh) Platform Security Processor  
1043 876b PRIME Motherboard  
17aa 5124 ThinkPad E595  
ea50 ce19 mCOM10-L1900  
15e0 Raven USB 3.1  
103c 8615 Pavilion Laptop 15-cw1xxx  
1043 876b PRIME Motherboard  
17aa 5124 ThinkPad E595  
ea50 ce19 mCOM10-L1900  
15e1 Raven USB 3.1  
103c 8615 Pavilion Laptop 15-cw1xxx  
1043 876b PRIME Motherboard



17aa 5124 ThinkPad E595  
ea50 ce19 mCOM10-L1900  
15e2 ACP/ACP3X/ACP6x Audio Coprocessor  
17aa 5124 ThinkPad E595  
ea50 ce19 mCOM10-L1900  
15e3 Family 17h/19h HD Audio Controller  
103c 8615 Pavilion Laptop 15-cw1xxx  
103c 8b17 ProBook 445 G9/455 G9  
1043 86c7 PRIME B450M-A Motherboard  
17aa 5124 ThinkPad E595  
15e4 Sensor Fusion Hub  
15e5 Raven2 USB 3.1  
ea50 ce19 mCOM10-L1900  
15e6  
Raven/Raven2/Renoir Non-Sensor Fusion Hub KMDF driver  
1022 15e4 Raven/Raven2/Renoir Sensor Fusion Hub  
ea50 ce19 mCOM10-L1900  
15e8 Raven/Raven2 Device 24: Function 0  
15e9 Raven/Raven2 Device 24: Function 1  
15ea Raven/Raven2 Device 24: Function 2  
15eb Raven/Raven2 Device 24: Function 3  
15ec Raven/Raven2 Device 24: Function 4  
15ed Raven/Raven2 Device 24: Function 5  
15ee Raven/Raven2 Device 24: Function 6  
15ef Raven/Raven2 Device 24: Function 7  
15f0 FireFlight Device 24: Function 0  
15f1 FireFlight Device 24: Function 1  
15f2 FireFlight Device 24: Function 2  
15f3 FireFlight Device 24: Function 3  
15f4 FireFlight Device 24: Function 4  
15f5 FireFlight Device 24: Function 5  
15f6 FireFlight Device 24: Function 6  
15f7 FireFlight Device 24: Function 7  
15f8 FireFlight Root Complex  
15f9 FireFlight IOMMU  
15fa FireFlight PCIe Dummy Host Bridge  
15fb FireFlight PCIe GPP Bride 3:0  
15fc FireFlight PCIe Dummy Host Bridge  
15fd FireFlight Internal PCIe  
GPP Bridge 0 to Bus A  
15fe FireFlight Internal PCIe GPP Bridge 0 to Bus B  
15ff FireFlight Bus A; Device 0: Function 0: Internal GPU  
1600 Family 15h Processor Function 0  
1601 Family 15h Processor Function 1  
1602 Family 15h Processor Function 2  
1603 Family 15h Processor Function 3  
1604 Family 15h Processor Function 4  
1605 Family 15h Processor Function 5

1606 Arden Security Processor  
1608 Arden Device 18h: Function 0  
1609 Arden Device 18h: Function 1  
160a Arden Device 18h: Function 2  
160b Arden Device 18h: Function 3  
160c Arden Device 18h: Function 4  
160d Arden Device 18h: Function 5  
160e Arden Device 18h: Function 6  
160f Arden Device 18h: Function 7  
161a Rembrandt USB4 XHCI controller #1  
161b Rembrandt USB4 XHCI controller #2  
161c Rembrandt USB4 XHCI controller #7  
161d Rembrandt USB4 XHCI controller #3  
161e Rembrandt USB4 XHCI controller #4  
161f Rembrandt USB4 XHCI controller #8  
1620 Anubis HT Configuration  
1621 Anubis Address Maps  
1622  
Anubis DRAM Configuration  
1623 Anubis Miscellaneous Configuration  
1624 Anubis PM Configuration  
1625 Anubis NB Performance Monitor  
1626 Arden Root Complex  
1627 Arden IOMMU  
1628 Arden PCIe Dummy Host Bridge  
1629 Arden PCIe GPP Bridge  
162a Arden Internal PCIe GPP Bridge 0 to bus X  
162b Arden PCIe Non-Transparent Bridge  
162c VanGogh USB2  
162e Rembrandt USB4/Thunderbolt NHI controller #1  
162f Rembrandt USB4/Thunderbolt NHI controller #2  
1630 Renoir/Cezanne Root Complex  
1631 Renoir/Cezanne IOMMU  
1632 Renoir PCIe Dummy Host Bridge  
1633 Renoir PCIe GPP Bridge  
1634 Renoir/Cezanne PCIe GPP Bridge  
1635 Renoir Internal PCIe GPP Bridge to Bus  
1637 Renoir HD Audio Controller  
1639 Renoir/Cezanne USB 3.1  
163a VanGogh USB0  
163b VanGogh USB1  
163c VanGogh SecUSB  
163d VanGogh SecureFunction  
163e VanGogh HSP  
1641 Renoir 10GbE Controller Port 0 (XGBE0/1)  
1642 Renoir WLAN  
1643 Renoir BT  
1644 Renoir I2S

1645 VanGogh Root Complex  
1646 VanGogh IOMMU  
1647  
VanGogh PCIe GPP Bridge  
1648 VanGogh Internal PCIe GPP Bridge to Bus  
1649 Family 19h PSP/CCP  
164f Milan IOMMU  
1650 Milan Data Fabric; Function 0  
1651 Milan Data Fabric; Function 1  
1652 Milan Data Fabric; Function 2  
1653 Milan Data Fabric; Function 3  
1654 Milan Data Fabric; Function 4  
1655 Milan Data Fabric; Function 5  
1656 Milan Data Fabric; Function 6  
1657 Milan Data Fabric; Function 7  
1660 VanGogh Data Fabric; Function 0  
1661 VanGogh Data Fabric; Function 1  
1662 VanGogh Data Fabric; Function 2  
1663 VanGogh Data Fabric; Function 3  
1664 VanGogh Data Fabric; Function 4  
1665 VanGogh Data Fabric; Function 5  
1666 VanGogh Data Fabric; Function 6  
1667 VanGogh Data Fabric; Function 7  
1668 Pink Sardine USB4/Thunderbolt NHI controller #1  
1669 Pink Sardine USB4/Thunderbolt NHI controller #2  
166a Cezanne Data Fabric; Function 0  
166b Cezanne Data Fabric; Function 1  
166c Cezanne Data Fabric; Function 2  
166d Cezanne Data Fabric; Function  
3  
166e Cezanne Data Fabric; Function 4  
166f Cezanne Data Fabric; Function 5  
1670 Cezanne Data Fabric; Function 6  
1671 Cezanne Data Fabric; Function 7  
1679 Rembrandt Data Fabric: Device 18h; Function 0  
167a Rembrandt Data Fabric: Device 18h; Function 1  
167b Rembrandt Data Fabric: Device 18h; Function 2  
167c Rembrandt Data Fabric: Device 18h; Function 3  
167d Rembrandt Data Fabric: Device 18h; Function 4  
167e Rembrandt Data Fabric: Device 18h; Function 5  
167f Rembrandt Data Fabric: Device 18h; Function 6  
1680 Rembrandt Data Fabric: Device 18h; Function 7  
1700 Family 12h/14h Processor Function 0  
1701 Family 12h/14h Processor Function 1  
1702 Family 12h/14h Processor Function 2  
1703 Family 12h/14h Processor Function 3  
1704 Family 12h/14h Processor Function 4  
1705 Family 12h Processor Root Complex

1706 Llano P2P Bridge to external GPU  
1707 Family 12h Processor Root Port  
1708 Family 12h Processor Root Port  
1709 Family 12h Processor Root Port  
170a Family  
12h Processor Root Port  
170b Family 12h Processor Root Port  
170c Family 12h Processor Root Port  
170d Family 12h Processor Root Port  
1716 Family 12h/14h Processor Function 5  
1718 Family 12h/14h Processor Function 6  
1719 Family 12h/14h Processor Function 7  
2000 79C97x [PCnet32 LANCE]  
1014 2000 NetFinity 10/100 Fast Ethernet  
1022 2000 PCnet - Fast 79C971  
103c 104c Ethernet with LAN remote power Adapter  
103c 1064 Ethernet with LAN remote power Adapter  
103c 1065 Ethernet with LAN remote power Adapter  
103c 106c Ethernet with LAN remote power Adapter  
103c 106e Ethernet with LAN remote power Adapter  
103c 10ea Ethernet with LAN remote power Adapter  
1113 1220 EN1220 10/100 Fast Ethernet  
1259 2450 AT-2450 10/100 Fast Ethernet  
1259 2454 AT-2450v4 10Mb Ethernet Adapter  
1259 2700 AT-2700TX 10/100 Fast Ethernet  
1259 2701 AT-2700FX 100Mb Ethernet  
1259 2702 AT-2700FTX (AM79C976KD [PCnet-PRO] chipset) 10/100 Mb Fiber/Copper Fast Ethernet  
1259  
2703 AT-2701FX  
1259 2704 AT-2701FTX 10/100 Mb Fiber/Copper Fast Ethernet  
4c53 1000 CC7/CR7/CP7/VC7/VP7/VR7 mainboard  
4c53 1010 CP5/CR6 mainboard  
4c53 1020 VR6 mainboard  
4c53 1030 PC5 mainboard  
4c53 1040 CL7 mainboard  
4c53 1060 PC7 mainboard  
# Via AMD's own technical reference on their Am79C978 NICs;  
<https://www.amd.com/system/files/TechDocs/22206.pdf>  
2001 Am79C978 PCnet Home (HomePNA) 1/10 PCI Ethernet Adapter [Am79C971 PHY]  
1092 0a78 Multimedia Home Network Adapter  
1668 0299 ActionLink Home Network Adapter  
2003 Am 1771 MBW [Alchemy]  
2020 AM53/79C974 [PC-SCSI]  
1af4 1100 QEMU Virtual Machine  
2040 79c974  
2080 CS5536 [Geode companion] Host Bridge  
2081 Geode LX Video  
2082 Geode LX AES Security Block

208f CS5536 GeodeLink PCI South Bridge  
2090 CS5536 [Geode companion] ISA  
2091 CS5536 [Geode companion] FLASH  
2093 CS5536 [Geode companion] Audio  
2094 CS5536 [Geode companion] OHC  
2095 CS5536 [Geode companion] EHC  
2096 CS5536 [Geode companion]  
UDC  
2097 CS5536 [Geode companion] UOC  
209a CS5536 [Geode companion] IDE  
2625 Am79C973 [Lance/PCI PCNet/32]  
2627 Am79C975 [Lance/PCI PCNet/32]  
3000 ELanSC520 Microcontroller  
43a0 Hudson PCI to PCI bridge (PCIE port 0)  
43a1 Hudson PCI to PCI bridge (PCIE port 1)  
43a2 Hudson PCI to PCI bridge (PCIE port 2)  
43a3 Hudson PCI to PCI bridge (PCIE port 3)  
43b0 X370 Series Chipset PCIe Upstream Port  
1849 43c6 Fatal1ty X370 Professional Gaming  
43b1 X399 Series Chipset PCIe Bridge  
43b4 300 Series Chipset PCIe Port  
43b5 X370 Series Chipset SATA Controller  
1849 43c8 Fatal1ty X370 Professional Gaming  
43b6 X399 Series Chipset SATA Controller  
43b7 300 Series Chipset SATA Controller  
43b9 X370 Series Chipset USB 3.1 xHCI Controller  
1849 43d0 Fatal1ty X370 Professional Gaming  
43ba X399 Series Chipset USB 3.1 xHCI Controller  
43bb 300 Series Chipset USB 3.1 xHCI Controller  
43c6 400 Series Chipset PCIe Bridge  
43c7 400 Series Chipset PCIe Port  
43c8  
400 Series Chipset SATA Controller  
43d5 400 Series Chipset USB 3.1 xHCI Compliant Host Controller  
43e9 500 Series Chipset Switch Upstream Port  
43eb 500 Series Chipset SATA Controller  
# or ASM106X Serial ATA Controller  
1b21 1062 ASM1062 Serial ATA Controller  
43ee 500 Series Chipset USB 3.1 XHCI Controller  
# maybe  
1b21 1142 ASM1042A USB 3.0 Host Controller  
43f4 600 Series Chipset PCIe Switch Upstream Port  
43f5 600 Series Chipset PCIe Switch Downstream Port  
43f6 600 Series Chipset SATA Controller  
43f7 600 Series Chipset USB 3.2 Controller  
57a3 Matisse PCIe GPP Bridge  
57a4 Matisse PCIe GPP Bridge  
57ad Matisse Switch Upstream

7006 AMD-751 [Irongate] System Controller  
7007 AMD-751 [Irongate] AGP Bridge  
700a AMD-IGR4 AGP Host to PCI Bridge  
700b AMD-IGR4 PCI to PCI Bridge  
700c AMD-760 MP [IGD4-2P] System Controller  
700d AMD-760 MP [IGD4-2P] AGP Bridge  
700e AMD-760 [IGD4-1P] System Controller  
700f AMD-760 [IGD4-1P] AGP Bridge  
7400 AMD-755 [Cobra] ISA  
7401  
AMD-755 [Cobra] IDE  
7403 AMD-755 [Cobra] ACPI  
7404 AMD-755 [Cobra] USB  
7408 AMD-756 [Viper] ISA  
7409 AMD-756 [Viper] IDE  
740b AMD-756 [Viper] ACPI  
740c AMD-756 [Viper] USB  
7410 AMD-766 [ViperPlus] ISA  
7411 AMD-766 [ViperPlus] IDE  
7413 AMD-766 [ViperPlus] ACPI  
7414 AMD-766 [ViperPlus] USB  
7440 AMD-768 [Opus] ISA  
1043 8044 A7M-D Mainboard  
7441 AMD-768 [Opus] IDE  
7443 AMD-768 [Opus] ACPI  
1043 8044 A7M-D Mainboard  
7445 AMD-768 [Opus] Audio  
7446 AMD-768 [Opus] MC97 Modem  
7448 AMD-768 [Opus] PCI  
7449 AMD-768 [Opus] USB  
7450 AMD-8131 PCI-X Bridge  
7451 AMD-8131 PCI-X IOAPIC  
7454 AMD-8151 System Controller  
7455 AMD-8151 AGP Bridge  
7458 AMD-8132 PCI-X Bridge  
7459 AMD-8132 PCI-X IOAPIC  
7460 AMD-8111 PCI  
161f 3017 HDAMB  
7461 AMD-8111 USB  
7462 AMD-8111 Ethernet  
7463 AMD-8111 USB EHCI  
7464 AMD-8111 USB OHCI  
161f 3017 HDAMB  
7468 AMD-8111 LPC  
161f 3017 HDAMB  
7469 AMD-8111 IDE  
1022 2b80 AMD-8111 IDE [Quartet]  
161f

3017 HDAMB  
746a AMD-8111 SMBus 2.0  
746b AMD-8111 ACPI  
161f 3017 HDAMB  
746d AMD-8111 AC97 Audio  
161f 3017 HDAMB  
746e AMD-8111 MC97 Modem  
756b AMD-8111 ACPI  
7800 FCH SATA Controller [IDE mode]  
7801 FCH SATA Controller [AHCI mode]  
103c 168b ProBook 4535s Notebook  
103c 194e ProBook 455 G1 Notebook  
1043 8623 AM11-A Motherboard  
17aa 3988 Z50-75  
1849 7801 QC5000-ITX/PH  
7802 FCH SATA Controller [RAID mode]  
7803 FCH SATA Controller [RAID mode]  
7804 FCH SATA Controller [AHCI mode]  
103c 1985 Pavilion 17-e163sg Notebook PC  
7805 FCH SATA Controller [RAID mode]  
7806 FCH SD Flash Controller  
7807 FCH USB OHCI Controller  
103c 194e ProBook 455 G1 Notebook  
103c 1985 Pavilion 17-e163sg Notebook PC  
1043 8623 AM11-A Motherboard  
17aa 3988 Z50-75  
1849 7807 QC5000-ITX/PH  
7808 FCH USB EHCI Controller  
103c 194e ProBook 455 G1 Notebook  
103c 1985 Pavilion 17-e163sg Notebook PC  
1043 8623 AM11-A Motherboard  
17aa 3988 Z50-75  
1849 7808  
QC5000-ITX/PH  
7809 FCH USB OHCI Controller  
103c 194e ProBook 455 G1 Notebook  
17aa 3988 Z50-75  
780a Kabini/Mullins SATA Raid/AHCI Mode (DotHill driver)  
780b FCH SMBus Controller  
103c 194e ProBook 455 G1 Notebook  
103c 1985 Pavilion 17-e163sg Notebook PC  
1043 8623 AM11-A Motherboard  
17aa 3988 Z50-75  
1849 780b QC5000-ITX/PH  
780c FCH IDE Controller  
780d FCH Azalia Controller  
103c 194e ProBook 455 G1 Notebook  
103c 1985 Pavilion 17-e163sg Notebook PC

1043 8444 F2A85-M Series  
1043 8576 AM1I-A Motherboard  
17aa 3988 Z50-75  
1849 8892 QC5000-ITX/PH  
780e FCH LPC Bridge  
103c 194e ProBook 455 G1 Notebook  
103c 1985 Pavilion 17-e163sg Notebook PC  
1043 8623 AM1I-A Motherboard  
17aa 3988 Z50-75  
1849 780e QC5000-ITX/PH  
780f FCH PCI Bridge  
7812 FCH USB XHCI Controller  
7813 FCH SD Flash Controller  
7814 FCH USB XHCI Controller  
103c 194e ProBook 455 G1 Notebook  
103c 1985 Pavilion 17-e163sg Notebook PC  
1043 8623 AM1I-A Motherboard  
17aa  
3988 Z50-75  
1849 7814 QC5000-ITX/PH  
7900 FCH SATA Controller [IDE mode]  
7901 FCH SATA Controller [AHCI mode]  
103c 8615 Pavilion Laptop 15-cw1xxx  
1043 876b PRIME Motherboard  
1462 7c37 X570-A PRO motherboard  
15d9 7901 H12SSL-i  
ea50 ce19 mCOM10-L1900  
7902 FCH SATA Controller [RAID mode]  
7903 FCH SATA Controller [RAID mode]  
7904 FCH SATA Controller [AHCI mode]  
7906 FCH SD Flash Controller  
7908 FCH USB EHCI Controller  
790b FCH SMBus Controller  
103c 8615 Pavilion Laptop 15-cw1xxx  
103c 8b17 ProBook 445 G9/455 G9  
1043 876b PRIME Motherboard  
1462 7c37 X570-A PRO motherboard  
15d9 790b H12SSL-i  
17aa 5124 ThinkPad E595  
ea50 ce19 mCOM10-L1900  
790e FCH LPC Bridge  
103c 8615 Pavilion Laptop 15-cw1xxx  
1043 876b PRIME B450M-A Motherboard  
1462 7c37 X570-A PRO motherboard  
15d9 790e H12SSL-i  
17aa 5124 ThinkPad E595  
ea50 ce19 mCOM10-L1900  
790f FCH PCI Bridge



7914 FCH USB XHCI Controller  
9600 RS780 Host Bridge  
1043 82ee  
M378A-CM Motherboard  
1043 82f1 M3A78-EH Motherboard  
9601 RS880 Host Bridge  
1019 2120 A785GM-M  
1028 0433 Optiplex 580  
103c 1609 ProLiant MicroServer N36L  
1043 83a2 M4A785-M Mainboard  
1043 843e M5A88-V EVO  
9602 RS780/RS880 PCI to PCI bridge (int gfx)  
9603 RS780 PCI to PCI bridge (ext gfx port 0)  
1028 0433 Optiplex 580  
103c 1609 ProLiant MicroServer N36L  
9604 RS780/RS880 PCI to PCI bridge (PCIE port 0)  
1028 0433 OptiPlex 580  
9605 RS780/RS880 PCI to PCI bridge (PCIE port 1)  
9606 RS780 PCI to PCI bridge (PCIE port 2)  
103c 1609 ProLiant MicroServer N36L  
9607 RS780/RS880 PCI to PCI bridge (PCIE port 3)  
9608 RS780/RS880 PCI to PCI bridge (PCIE port 4)  
1028 0433 OptiPlex 580  
9609 RS780/RS880 PCI to PCI bridge (PCIE port 5)  
960a RS780 PCI to PCI bridge (NB-SB link)  
960b RS780 PCI to PCI bridge (ext gfx port 1)  
# Takes over NVMe PCI ID when RAID is enabled  
b000 RAID Bottom Device  
1023 Trident Microsystems  
0194 82C194  
2000 4DWave DX  
2001  
4DWave NX  
122d 1400 Trident PCI288-Q3DII (NX)  
2100 CyberBlade XP4m32  
2200 XGI Volari XP5  
8400 CyberBlade/i7  
1023 8400 CyberBlade i7 AGP  
8420 CyberBlade/i7d  
0e11 b15a CyberBlade i7 AGP  
8500 CyberBlade/i1  
8520 CyberBlade i1  
0e11 b16e CyberBlade i1 AGP  
1023 8520 CyberBlade i1 AGP  
8620 CyberBlade/i1  
1014 0502 ThinkPad R30/T30  
1014 1025 Travelmate 352TE  
8820 CyberBlade XPAi1

9320 TGUI 9320  
9350 GUI Accelerator  
9360 Flat panel GUI Accelerator  
9382 Cyber 9382 [Reference design]  
9383 Cyber 9383 [Reference design]  
9385 Cyber 9385 [Reference design]  
9386 Cyber 9386  
9388 Cyber 9388  
9397 Cyber 9397  
939a Cyber 9397DVD  
9420 TGUI 9420  
9430 TGUI 9430  
9440 TGUI 9440  
9460 TGUI 9460  
9470 TGUI 9470  
9520 Cyber 9520  
9525 Cyber 9525  
9540 Cyber 9540  
9660 TGUI 9660/938x/968x  
9680 TGUI 9680  
9682 TGUI 9682  
9683 TGUI 9683  
9685 ProVIDIA 9685  
9750 3DImage 9750  
1014 9750 3DImage 9750  
1023 9750 3DImage 9750  
9753 TGUI  
9753  
9754 TGUI 9754  
9759 TGUI 975  
9783 TGUI 9783  
9785 TGUI 9785  
9850 3DImage 9850  
9880 Blade 3D PCI/AGP  
1023 9880 Blade 3D  
9910 CyberBlade/XP  
9930 CyberBlade/XPm  
9960 CyberBlade XP2  
1024 Beijing Dajia Internet Information Technology Co.  
0101 StreamLake 200 AI-VPU  
1024 0201 SL200-NP  
1024 0301 SL200-P  
1025 Acer Incorporated [ALI]  
1435 M1435  
1445 M1445  
1449 M1449  
1451 M1451  
1461 M1461

1489 M1489  
1511 M1511  
1512 ALI M1512 Aladdin  
1513 M1513  
1521 ALI M1521 Aladdin III CPU Bridge  
10b9 1521 ALI M1521 Aladdin III CPU Bridge  
1523 ALI M1523 ISA Bridge  
10b9 1523 ALI M1523 ISA Bridge  
1531 M1531 Northbridge [Aladdin IV/IV+]  
1533 M1533 PCI-to-ISA Bridge  
10b9 1533 ALI M1533 Aladdin IV/V ISA South Bridge  
1535 M1535 PCI Bridge + Super I/O + FIR  
1541 M1541 Northbridge [Aladdin V]  
10b9 1541 ALI M1541 Aladdin V/V+ AGP+PCI North Bridge  
1542 M1542 Northbridge [Aladdin V]  
1543 M1543 PCI-to-ISA Bridge + Super I/O + FIR  
1561 M1561  
Northbridge [Aladdin 7]  
1621 M1621 Northbridge [Aladdin-Pro II]  
1631 M1631 Northbridge+3D Graphics [Aladdin TNT2]  
1641 M1641 Northbridge [Aladdin-Pro IV]  
1647 M1647 [MaGiK1] PCI North Bridge  
1671 M1671 Northbridge [ALADDiN-P4]  
1672 Northbridge [CyberALADDiN-P4]  
3141 M3141  
3143 M3143  
3145 M3145  
3147 M3147  
3149 M3149  
3151 M3151  
3307 M3307 MPEG-I Video Controller  
3309 M3309 MPEG-II Video w/ Software Audio Decoder  
3321 M3321 MPEG-II Audio/Video Decoder  
5212 M4803  
5215 ALI PCI EIDE Controller  
5217 M5217H  
5219 M5219  
5225 M5225  
5229 M5229  
5235 M5235  
5237 M5237 PCI USB Host Controller  
5240 EIDE Controller  
5241 PCMCIA Bridge  
5242 General Purpose Controller  
5243 PCI to PCI Bridge Controller  
5244 Floppy Disk Controller  
5247 M1541 PCI to PCI Bridge  
5251 M5251 P1394 Controller

5427 PCI to AGP Bridge  
5451 M5451 PCI AC-Link Controller Audio Device  
5453 M5453 PCI AC-Link Controller Modem Device  
7101 M7101 PCI PMU Power Management Controller  
10b9  
7101 M7101 PCI PMU Power Management Controller  
# should be 1022:9602  
9602 AMD RS780/RS880 PCI to PCI bridge (int gfx)  
1028 Dell  
0001 PowerEdge Expandable RAID Controller 2/Si  
1028 0001 PowerEdge 2400  
0002 PowerEdge Expandable RAID Controller 3/Di  
1028 0002 PowerEdge 4400  
1028 00d1 PERC 3/DiV [Viper]  
1028 00d9 PERC 3/DiL [Lexus]  
0003 PowerEdge Expandable RAID Controller 3/Si  
1028 0003 PowerEdge 2450  
# PowerEdge Codename Iguana  
0004 PowerEdge Expandable RAID Controller 3/Di [Iguana]  
1028 0004 PERC 3/DiF [Iguana]  
0006 PowerEdge Expandable RAID Controller 3/Di  
0007 Remote Access Card III  
0008 Remote Access Card III  
0009 Remote Access Card III: BMC/SMIC device not present  
000a PowerEdge Expandable RAID Controller 3/Di  
1028 0106 PERC 3/DiJ [Jaguar]  
1028 011b PERC 3/DiD [Dagger]  
1028 0121 PERC 3/DiB [Boxster]  
000c Embedded Remote Access or ERA/O  
000d Embedded Remote Access: BMC/SMIC device  
000e PowerEdge Expandable RAID controller  
4/Di  
000f PowerEdge Expandable RAID controller 4/Di  
1028 014a PowerEdge 1750  
0010 Remote Access Card 4  
0011 Remote Access Card 4 Daughter Card  
0012 Remote Access Card 4 Daughter Card Virtual UART  
0013 PowerEdge Expandable RAID controller 4  
1028 016c PowerEdge Expandable RAID Controller 4e/Si  
1028 016d PowerEdge Expandable RAID Controller 4e/Di  
1028 016e PowerEdge Expandable RAID Controller 4e/Di  
1028 016f PowerEdge Expandable RAID Controller 4e/Di  
1028 0170 PowerEdge Expandable RAID Controller 4e/Di  
0014 Remote Access Card 4 Daughter Card SMIC interface  
0015 PowerEdge Expandable RAID controller 5  
1028 1f01 PERC 5/E Adapter RAID Controller  
1028 1f02 PERC 5/i Adapter RAID Controller  
1028 1f03 PERC 5/i Integrated RAID Controller

0016 PowerEdge Expandable RAID controller S300  
1028 1f24 PERC S300 Controller  
# NV-RAM Adapter used in Dell DR appliances  
0073 NV-RAM Adapter  
1028 PCIe Bridge riser  
2600 ENT NVMe RT1  
1028 215e ENT NVMe  
RT1 RI 3.84TB  
1028 215f ENT NVMe RT1 RI 7.68TB  
1028 2160 ENT NVMe RT1 FIPS RI 3.84TB  
1028 2161 ENT NVMe RT1 FIPS RI 7.68TB  
9602 RS780/RS880 PCI to PCI bridge (int gfx)  
1029 Siemens Nixdorf IS  
102a LSI Logic  
0000 HYDRA  
0010 ASPEN  
001f AHA-2940U2/U2W /7890/7891 SCSI Controllers  
9005 00f 2940U2W SCSI Controller  
9005 0106 2940U2W SCSI Controller  
9005 a180 2940U2W SCSI Controller  
00c5 AIC-7899 U160/m SCSI Controller  
1028 00c5 PowerEdge 2550/2650/4600  
00cf AIC-7899P U160/m  
1028 0106 PowerEdge 4600  
1028 0121 PowerEdge 2650  
102b Matrox Electronics Systems Ltd.  
# DJ: I've a suspicion that 0010 is a duplicate of 0d10.  
0010 MGA-I [Impression?]  
0100 MGA 1064SG [Mystique]  
0518 MGA-II [Athena]  
0519 MGA 2064W [Millennium]  
051a MGA 1064SG [Mystique]  
102b 0100 MGA-1064SG Mystique  
102b 051a MGA-1164SG Mystique 220  
102b 1100 MGA-1084SG Mystique  
102b 1200 MGA-1084SG Mystique  
1100 102b MGA-1084SG Mystique  
110a 0018 Scenic Pro C5 (D1025)  
051b  
MGA 2164W [Millennium II]  
102b 051b MGA-2164W Millennium II  
102b 1100 MGA-2164W Millennium II  
102b 1200 MGA-2164W Millennium II  
102b 2100 MGA-2164W Millennium II  
051e MGA 1064SG [Mystique] AGP  
051f MGA 2164W [Millennium II] AGP  
102b 2100 MGA-2164WA [Millennium II A]  
0520 MGA G200

102b dbc2 G200 Multi-Monitor  
102b dbc8 G200 Multi-Monitor  
102b dbe2 G200 Multi-Monitor  
102b dbe8 G200 Multi-Monitor  
102b ff03 Millennium G200 SD  
102b ff04 Marvel G200  
0521 MGA G200 AGP  
1014 ff03 Millennium G200 AGP  
102b 48e9 Mystique G200 AGP  
102b 48f8 Millennium G200 SD AGP  
102b 4a60 Millennium G200 LE AGP  
102b 4a64 Millennium G200 AGP  
102b c93c Millennium G200 AGP  
102b c9b0 Millennium G200 AGP  
102b c9bc Millennium G200 AGP  
102b ca60 Millennium G250 LE AGP  
102b ca6c Millennium G250 AGP  
102b dbbc Millennium G200 AGP  
102b dbc2 Millennium G200 MMS (Dual G200)  
102b dbc3 G200 Multi-Monitor  
102b dbc8 Millennium G200 MMS (Dual  
G200)  
102b dbd2 G200 Multi-Monitor  
102b dbd3 G200 Multi-Monitor  
102b dbd4 G200 Multi-Monitor  
102b dbd5 G200 Multi-Monitor  
102b dbd8 G200 Multi-Monitor  
102b dbd9 G200 Multi-Monitor  
102b dbe2 Millennium G200 MMS (Quad G200)  
102b dbe3 G200 Multi-Monitor  
102b dbe8 Millennium G200 MMS (Quad G200)  
102b dbf2 G200 Multi-Monitor  
102b dbf3 G200 Multi-Monitor  
102b dbf4 G200 Multi-Monitor  
102b dbf5 G200 Multi-Monitor  
102b dbf8 G200 Multi-Monitor  
102b dbf9 G200 Multi-Monitor  
102b f806 Mystique G200 Video AGP  
102b ff00 MGA-G200 AGP  
102b ff02 Mystique G200 AGP  
102b ff03 Millennium G200A AGP  
102b ff04 Marvel G200 AGP  
110a 0032 MGA-G200 AGP  
0522 MGA G200e [Pilot] ServerEngines (SEP1)  
103c 31fa ProLiant DL140 G3  
0525 MGA G400/G450  
0e11 b16f MGA-G400 AGP  
102b 0328 Millennium G400 16Mb SDRAM

102b 0338 Millennium G400 16Mb SDRAM  
102b 0378 Millennium G400 32Mb SDRAM  
102b 0541 Millennium G450 Dual Head  
102b 0542 Millennium  
G450 Dual Head LX  
102b 0543 Millennium G450 Single Head LX  
102b 0641 Millennium G450 32Mb SDRAM Dual Head  
102b 0642 Millennium G450 32Mb SDRAM Dual Head LX  
102b 0643 Millennium G450 32Mb SDRAM Single Head LX  
102b 07c0 Millennium G450 Dual Head LE  
102b 07c1 Millennium G450 SDR Dual Head LE  
102b 0d41 Millennium G450 Dual Head PCI  
102b 0d42 Millennium G450 Dual Head LX PCI  
102b 0d43 Millennium G450 32Mb Dual Head PCI  
102b 0e00 Marvel G450 eTV  
102b 0e01 Marvel G450 eTV  
102b 0e02 Marvel G450 eTV  
102b 0e03 Marvel G450 eTV  
102b 0f80 Millennium G450 Low Profile  
102b 0f81 Millennium G450 Low Profile  
102b 0f82 Millennium G450 Low Profile DVI  
102b 0f83 Millennium G450 Low Profile DVI  
102b 19d8 Millennium G400 16Mb SGRAM  
102b 19f8 Millennium G400 32Mb SGRAM  
102b 2159 Millennium G400 Dual Head 16Mb  
102b 2179 Millennium G400 MAX/Dual Head 32Mb  
102b 217d Millennium G400 Dual Head Max  
102b 23c0 Millennium G450  
102b 23c1 Millennium  
G450  
102b 23c2 Millennium G450 DVI  
102b 23c3 Millennium G450 DVI  
102b 2f58 Millennium G400  
102b 2f78 Millennium G400  
102b 3693 Marvel G400 AGP  
102b 5dd0 4Sight II  
102b 5f50 4Sight II  
102b 5f51 4Sight II  
102b 5f52 4Sight II  
102b 9010 Millennium G400 Dual Head  
1458 0400 GA-G400  
1705 0001 Millennium G450 32MB SGRAM  
1705 0002 Millennium G450 16MB SGRAM  
1705 0003 Millennium G450 32MB  
1705 0004 Millennium G450 16MB  
0527 Parhelia  
102b 0840 Parhelia 128Mb  
102b 0850 Parhelia 256MB

102b 0870 MED2mp-DVI  
102b 0880 P-256 Edge Overlap Controller  
0528 Parhelia  
102b 1020 Parhelia 128MB  
102b 1030 Parhelia 256 MB Dual DVI  
102b 1040 MED2mp-DVI  
102b 1050 Sono S20  
102b 1060 PJ-30L  
102b 1070 PJ-40L  
102b 1421 MED5mp  
102b 1431 MED3mp-DVI  
102b 1451 MED5mp-DVI  
102b 1491 MED2mp-DVI  
102b 14b1 MED3mp-DVI  
102b 14c1 MED5mp-DVI  
102b 14e1 Parhelia PCI 256MB  
102b 14f1 Parhelia Precision SGT  
102b 1501 ATC-4MP  
102b  
1511 ATC-4MP  
102b 1521 TheatreVUE T30  
102b 1531 TheatreVUE T20  
102b 1541 MED2mp-DVI  
102b 1551 MED3mp-DVI  
102b 1561 MED5mp-DVI  
102b 1571 Parhelia DL256 PCI  
102b 1591 Parhelia Precision SDT  
102b 15a1 MED4mp-DVI  
102b 2011 Parhelia HR256  
102b 2021 QID Pro  
102b 2061 PJ-40LP  
102b 2081 EWS Quad  
102b 2411 PPX-OUT8  
102b 2421 VPX-OUT8  
102b 2441 PPX-OUT4  
102b 2451 VPX-OUT4  
102b 2491 LPX-OUT4  
0530 MGA G200EV  
0532 MGA G200eW WPCM450  
1028 0235 PowerEdge R710 MGA G200eW WPCM450  
1028 0236 PowerEdge R610 MGA G200eW WPCM450  
1028 0237 PowerEdge T610 MGA G200eW WPCM450  
1028 0287 PowerEdge M610 MGA G200eW WPCM450  
1028 028c PowerEdge R410 MGA G200eW WPCM450  
1028 028d PowerEdge T410 MGA G200eW WPCM450  
1028 029c PowerEdge M710 MGA G200eW WPCM450  
1028 02a4 PowerEdge T310 MGA G200eW WPCM450  
15d9 0605 X8SIL



15d9 0624 X9SCM-F Motherboard  
15d9 066b X9SRL-F  
15d9 a811 H8DGU  
0533 MGA G200EH  
103c 3381 iLO4  
0534 G200eR2  
1028  
04f7 PowerEdge R320 server  
0536 Integrated Matrox G200eW3 Graphics Controller  
0538 MGA G200eH3  
1590 00e4 iLO5 VGA  
0540 M91XX  
102b 2080 M9140 LP PCIe x16  
102b 20c0 Xenia  
102b 20c1 Xenia Pro  
102b 2100 M9120 PCIe x16  
102b 2140 M9125 PCIe x16  
102b 2180 M9120 Plus LP PCIe x16  
102b 21c0 M9120 Plus LP PCIe x1  
102b 2200 VDA1164 Output Board  
102b 2240 M9148 LP PCIe x16  
102b 2241 M9138 LP PCIe x16  
102b 2280 M9188 ATX PCIe x16  
102b 22c0 M9128 LP PCIe x16  
0550 SV2  
102b 00c0 MURA-IPX-I4EF  
102b 00c1 MURA-IPX-I4DF  
102b 00c3 MURA-IPX-I4DHF  
102b 00c5 MURA-IPX-I4EHF  
0d10 MGA Ultima/Impression  
1000 MGA G100 [Productiva]  
102b ff01 Productiva G100  
102b ff05 Productiva G100 Multi-Monitor  
1001 MGA G100 [Productiva] AGP  
102b 1001 MGA-G100 AGP  
102b ff00 MGA-G100 AGP  
102b ff01 MGA-G100 Productiva AGP  
102b ff03 Millennium G100 AGP  
102b ff04 MGA-G100 AGP  
102b ff05 MGA-G100 Productiva AGP Multi-Monitor  
110a 001e  
MGA-G100 AGP  
2007 MGA Mistral  
2527 Millennium G550  
102b 0f42 Matrox G550 Low Profile PCI  
102b 0f83 Millennium G550  
102b 0f84 Millennium G550 Dual Head DDR 32Mb  
102b 1e41 Millennium G550

102b 22c0 G550 PCIe  
102b 2300 Millennium G550 LP PCIE  
2537 Millennium P650/P750  
102b 1820 Millennium P750 64MB  
102b 1830 Millennium P650 64MB  
102b 1850 RAD2mp  
102b 1860 RAD3mp  
102b 1880 Sono S10  
102b 1c10 QID 128MB  
102b 2811 Millennium P650 Low-profile PCI 64MB  
102b 2821 Millennium P650 Low-profile PCI  
102b 2841 RAD PCI  
102b 2851 Spectrum PCI  
102b 2871 EpicA TC2  
102b 2c11 QID Low-profile PCI  
102b 2c21 QID LP PCI LW  
102b 2c31 QID LP PCI  
102b 2c41 EpicA TC4  
102b 3001 Extio F1400  
102b 3011 Extio F1220  
102b 3041 RG-200DL  
102b 3051 RG-400SL  
102b 3061 Extio F1420  
102b 3081 Extio F1240  
2538 Millennium P650 PCIe  
102b 0847 RAD PCIe  
102b 08c7 Millennium P650 PCIe 128MB  
102b 0907 Millennium P650 PCIe 64MB  
102b 0947  
Parhelia APVe  
102b 0987 ATC PCIe 4MP  
102b 1047 Millennium P650 LP PCIe 128MB  
102b 1087 Millennium P650 LP PCIe 64MB  
102b 1801 Millennium P650 PCIe x1  
102b 2538 Parhelia APVe  
102b 3007 QID Low-profile PCIe  
102b 3087 Aurora VX3mp  
102b 30c7 QID LP PCIe  
2539 Millennium P690  
102b 0040 Millennium P690 PCIe x16  
102b 0042 ONYX  
102b 0043 SPECTRA  
102b 0080 Millennium P690 Plus LP PCIe x16  
102b 0081 Millennium P690 LP PCIe x16  
102b 0082 RAD LPX PCIe x16  
102b 00c0 Millennium P690 Plus LP PCI  
102b 00c2 Millennium P690 LP PCI  
102b 00c3 RAD LPX PCI

102b 0101 Millennium P690 PCI  
102b 0140 Millennium P690 LP PCIe x1  
102b 0180 Display Wall IP Decode 128 MB  
4164 Morphis QxT frame grabber  
43b4 Morphis Qxt encoding engine  
4510 Morphis COM port  
4536 VIA Framegrabber  
4686 Concord GX (customized Intel 82541)  
475b Solios eCL/XCL-B frame grabber  
475d Vio frame grabber family  
102b 4b90 Vio Duo frame grabber (single channel)  
102b 4b91  
Vio Duo frame grabber  
102b 4b92 Vio Analog frame grabber  
102b 4b93 Vio SDI Frame Grabber  
102b 4b94 Vio DVI-A frame grabber  
475f Solios (single-Full) CL frame grabber  
102b 475f Solios eCL/XCL-F frame grabber  
102b 4d5f Solios eV-CL (single-Full) frame grabber  
102b 4e5f Solios eM-CL (single-Full) frame grabber  
47a1 Solios eA/XA frame grabber  
102b 4be0 Solios eA/XA (single) frame grabber  
102b 4be1 Solios eA/XA (dual) frame grabber  
102b 4be2 Solios eA/XA (quad) frame grabber  
47a2 Solios COM port  
47c1 Solios (dual-Base/single-Medium) CL frame grabber  
102b 0000 Solios frame grabber  
102b 4b80 Solios eCL/XCL (single-Medium) frame grabber  
102b 4b81 Solios eCL/XCL (dual-Base) frame grabber  
102b 4d80 Solios eV-CL (single-Medium) frame grabber  
102b 4d81 Solios eV-CL (dual-Base) frame grabber  
102b 4e80 Solios eM-CL (single-Medium) frame grabber  
102b 4e81 Solios eM-CL (dual-Base) frame grabber  
47c2 Solios COM port  
4949 Radient frame grabber  
family  
102b 0010 Radient eCL (Single-full) frame grabber  
102b 0011 Radient eCLV (Single-full) frame grabber  
102b 0020 Radient eCL (Dual-base) frame grabber  
102b 0030 Radient eCL (Dual-full) frame grabber  
102b 0040 Radient eCL (Quad-base) frame grabber  
102b 0050 Radient eCL (Golden) frame grabber  
102b 1010 Radient eV-CXP (quad CXP-6) frame grabber  
102b 1015 Radient eV-CXP (dual CXP-6) frame grabber  
102b 1020 Radient eV-CXP (quad CXP-3) frame grabber  
102b 1050 Radient eV-CXP (Golden) frame grabber  
4cdc Morphis JPEG2000 accelerator  
4f54 Morphis (e)Quad frame grabber

4fc5 Morphis (e)Dual frame grabber  
5e10 Morphis aux I/O  
6573 Shark 10/100 Multiport SwitchNIC  
102c Chips and Technologies  
00b8 F64310  
00c0 F69000 HiQVideo  
102c 00c0 F69000 HiQVideo  
4c53 1000 CC7/CR7/CP7/VC7/VP7/VR7 mainboard  
4c53 1010 CP5/CR6 mainboard  
4c53 1020 VR6 mainboard  
4c53 1030 PC5 mainboard  
4c53 1050 CT7 mainboard  
4c53 1051 CE7 mainboard  
00d0 F65545  
00d8  
F65545  
00dc F65548  
00e0 F65550  
00e4 F65554  
00e5 F65555 HiQVPro  
0e11 b049 Armada 1700 Laptop Display Controller  
1179 0001 Satellite Pro/Satellite  
00f0 F68554  
00f4 F68554 HiQVision  
00f5 F68555  
0c30 F69030  
4c53 1000 CC7/CR7/CP7/VC7/VP7/VR7 mainboard  
4c53 1050 CT7 mainboard  
4c53 1051 CE7 mainboard  
4c53 1080 CT8 mainboard  
102d Wyse Technology Inc.  
50dc 3328 Audio  
102e Olivetti Advanced Technology  
102f Toshiba America  
0009 r4x00  
000a TX3927 MIPS RISC PCI Controller  
0020 ATM Meteor 155  
102f 00f8 ATM Meteor 155  
0030 TC35815CF PCI 10/100 Mbit Ethernet Controller  
0031 TC35815CF PCI 10/100 Mbit Ethernet Controller with WOL  
0032 TC35815CF PCI 10/100 Mbit Ethernet Controller on TX4939  
0105 TC86C001 [goku-s] IDE  
0106 TC86C001 [goku-s] USB 1.1 Host  
0107 TC86C001 [goku-s] USB Device Controller  
0108 TC86C001 [goku-s] I2C/SIO/GPIO Controller  
0180 TX4927/38 MIPS RISC PCI Controller  
0181 TX4925 MIPS RISC PCI Controller  
0182 TX4937

MIPS RISC PCI Controller  
01b4 Celleb platform IDE interface  
01b5 SCC USB 2.0 EHCI controller  
01b6 SCC USB 1.1 OHCI controller  
1030 TMC Research  
1031 Miro Computer Products AG  
5601 DC20 ASIC  
5607 Video I/O & motion JPEG compressor  
5631 Media 3D  
6057 MiroVideo DC10/DC30+  
1032 Compaq  
1033 NEC Corporation  
0000 Vr4181A USB Host or Function Control Unit  
0001 PCI to 486-like bus Bridge  
0002 PCI to VL98 Bridge  
0003 ATM Controller  
0004 R4000 PCI Bridge  
0005 PCI to 486-like bus Bridge  
0006 PC-9800 Graphic Accelerator  
0007 PCI to UX-Bus Bridge  
0008 PC-9800 Graphic Accelerator  
0009 PCI to PC9800 Core-Graph Bridge  
0016 PCI to VL Bridge  
001a [Nile II]  
0021 Vrc4373 [Nile I]  
0029 PowerVR PCX1  
002a PowerVR 3D  
002c Star Alpha 2  
002d PCI to C-bus Bridge  
0035 OHCI USB Controller  
1033 0035 USB Controller  
103c 1293 USB add-in card  
103c 1294 USB 2.0 add-in card  
1179 0001 USB  
1186 0035 DUB-C2 USB 2.0 2-port 32-bit cardbus controller  
12ee  
7000 Root Hub  
14c2 0105 PTI-205N USB 2.0 Host Controller  
1799 0001 Root Hub  
1931 000a GlobeTrotter Fusion Quad Lite (PPP data)  
1931 000b GlobeTrotter Fusion Quad Lite (GSM data)  
807d 0035 PCI-USB2 (OHCI subsystem)  
8086 4d44 D850EMV2 motherboard  
003b PCI to C-bus Bridge  
003e NAPCCARD Cardbus Controller  
0046 PowerVR PCX2 [midas]  
005a Vrc5074 [Nile 4]  
0063 uPD72862 [Firewarden] IEEE1394 OHCI 1.0 Link Controller

0067 PowerVR Neon 250 Chipset  
1010 0020 PowerVR Neon 250 AGP 32Mb  
1010 0080 PowerVR Neon 250 AGP 16Mb  
1010 0088 PowerVR Neon 250 16Mb  
1010 0090 PowerVR Neon 250 AGP 16Mb  
1010 0098 PowerVR Neon 250 16Mb  
1010 00a0 PowerVR Neon 250 AGP 32Mb  
1010 00a8 PowerVR Neon 250 32Mb  
1010 0120 PowerVR Neon 250 AGP 32Mb  
0072 uPD72874 IEEE1394 OHCI 1.1 3-port PHY-Link Ctrlr  
0074 56k Voice Modem  
1033 8014 RCV56ACF 56k Voice Modem  
009b Vrc5476  
00a5 VRC4173  
00a6 VRC5477 AC97  
00cd uPD72870 [Firewarden] IEEE1394a OHCI 1.0 Link/3-port  
PHY Controller  
12ee 8011 Root hub  
00ce uPD72871 [Firewarden] IEEE1394a OHCI 1.0 Link/1-port PHY Controller  
00df Vr4131  
00e0 uPD72010x USB 2.0 Controller  
1186 f100 DUB-C2 USB 2.0 2-port 32-bit cardbus controller  
12ee 7001 Root hub  
14c2 0205 PTI-205N USB 2.0 Host Controller  
1799 0002 Root Hub  
807d 1043 PCI-USB2 (EHCI subsystem)  
8086 4d44 D850EMV2 motherboard  
00e7 uPD72873 [Firewarden] IEEE1394a OHCI 1.1 Link/2-port PHY Controller  
00f2 uPD72874 [Firewarden] IEEE1394a OHCI 1.1 Link/3-port PHY Controller  
00f3 uPD6113x Multimedia Decoder/Processor [EMMA2]  
010c VR7701  
0125 uPD720400 PCI Express - PCI/PCI-X Bridge  
013a Dual Tuner/MPEG Encoder  
0194 uPD720200 USB 3.0 Host Controller  
1028 04a3 Precision M4600  
1028 04b2 Vostro 3350  
1028 04da Vostro 3750  
1043 8413 P8P67 Deluxe Motherboard  
104d 907a Vaio VPCF1  
1af4 1100 QEMU Virtual Machine  
1b96 0001 USB 3.0 PCIe Card  
01e7 uPD72873 [Firewarden] IEEE1394a OHCI 1.1 Link/2-port PHY Controller  
01f2  
uPD72874 [Firewarden] IEEE1394a OHCI 1.1 Link/3-port PHY Controller  
1034 Framatome Connectors USA Inc.  
1035 Comp. & Comm. Research Lab  
1036 Future Domain Corp.  
0000 TMC-18C30 [36C70]

1037 Hitachi Micro Systems  
1038 AMP, Inc  
1039 Silicon Integrated Systems [SiS]  
0001 AGP Port (virtual PCI-to-PCI bridge)  
0002 AGP Port (virtual PCI-to-PCI bridge)  
0003 AGP Port (virtual PCI-to-PCI bridge)  
0004 PCI-to-PCI bridge  
1039 0000 PCIe x16 port  
0006 85C501/2/3  
0008 SiS85C503/5513 (LPC Bridge)  
0009 5595 Power Management Controller  
000a PCI-to-PCI bridge  
1039 0000 PCIe x1 port  
0016 SiS961/2/3 SMBus controller  
0018 SiS85C503/5513 (LPC Bridge)  
0163 163 802.11b/g Wireless LAN Adapter  
0180 RAID bus controller 180 SATA/PATA [SiS]  
0181 SATA  
0182 182 SATA/RAID Controller  
1734 1095 D2030-A1  
0186 AHCI Controller (0106)  
0190 190 Ethernet Adapter  
0191 191 Gigabit Ethernet Adapter  
1043 8139 P5SD2-FM/S mainboard  
0200 5597/5598/6326 VGA  
1039 0000  
SiS5597 SVGA (Shared RAM)  
0204 82C204  
0205 SG86C205  
0300 300/305 PCI/AGP VGA Display Adapter  
107d 2720 Leadtek WinFast VR300  
0310 315H PCI/AGP VGA Display Adapter  
0315 315 PCI/AGP VGA Display Adapter  
0325 315PRO PCI/AGP VGA Display Adapter  
0330 330 [Xabre] PCI/AGP VGA Display Adapter  
0406 85C501/2  
0496 SiS85C496 PCI & CPU Memory Controller (PCM)  
0530 530 Host  
0540 540 Host  
0550 550 Host  
0597 5513C  
0601 85C601  
0620 620 Host  
0630 630 Host  
0633 633 Host  
0635 635 Host  
0645 SiS645 Host & Memory & AGP Controller  
0646 SiS645DX Host & Memory & AGP Controller

0648 645xx  
0649 SiS649 Host  
0650 650/M650 Host  
0651 651 Host  
0655 655 Host  
0660 660 Host  
0661 661FX/M661FX/M661MX Host  
0662 662 Host  
0671 671MX  
0730 730 Host  
0733 733 Host  
0735 735 Host  
0740 740 Host  
0741 741/741GX/M741 Host  
1849 0741 K7S41/K7S41GX motherboard  
0745 745 Host  
0746 746 Host  
0755 755 Host  
0760 760/M760 Host  
0761 761/M761 Host  
1734 1099  
D2030-A1 Motherboard  
0900 SiS900 PCI Fast Ethernet  
1019 0a14 K7S5A motherboard  
1039 0900 SiS900 10/100 Ethernet Adapter onboard  
1043 8035 CUSI-FX motherboard  
1043 80a7 Motherboard P4S800D-X  
1462 0900 MS-6701 motherboard  
0961 SiS961 [MuTIOL Media IO]  
0962 SiS962 [MuTIOL Media IO] LPC Controller  
0963 SiS963 [MuTIOL Media IO] LPC Controller  
0964 SiS964 [MuTIOL Media IO] LPC Controller  
0965 SiS965 [MuTIOL Media IO]  
0966 SiS966 [MuTIOL Media IO]  
0968 SiS968 [MuTIOL Media IO]  
1180 SATA Controller / IDE mode  
1182 SATA Controller / RAID mode  
1039 0180 SiS 966 4-port SATA controller  
1183 SATA Controller / IDE mode  
1039 0180 SiS 966 4-port SATA controller  
1184 AHCI Controller / RAID mode  
1185 AHCI IDE Controller (0106)  
3602 83C602  
5107 5107  
5300 SiS540 PCI Display Adapter  
5315 550 PCI/AGP VGA Display Adapter  
5401 486 PCI Chipset  
5511 5511/5512



5513 5513 IDE Controller  
1019 0970 P6STP-FL motherboard  
1039 5513 SiS5513 EIDE Controller  
(A,B step)  
1043 8035 CUSI-FX motherboard  
1462 7010 MS-6701 motherboard  
1631 5513 GA-8SIML Rev1.0 Motherboard  
1734 1095 D2030-A1 Motherboard  
5517 5517  
5571 5571  
5581 5581 Pentium Chipset  
5582 5582  
5591 5591/5592 Host  
5596 5596 Pentium Chipset  
5597 5597 [SiS5582]  
5600 5600 Host  
6204 Video decoder & MPEG interface  
6205 VGA Controller  
6236 6236 3D-AGP  
6300 630/730 PCI/AGP VGA Display Adapter  
1019 0970 P6STP-FL motherboard  
1043 8035 CUSI-FX motherboard  
104d 80e2 VAIO PCV-J200  
6306 530/620 PCI/AGP VGA Display Adapter  
6325 65x/M650/740 PCI/AGP VGA Display Adapter  
1039 6325 SiS 651 onboard [Asus P4SC-EA]  
1631 1004 SiS 651C onboard [Gigabyte GA-8SIML Rev1.0]  
6326 86C326 5598/6326  
1039 6326 SiS6326 GUI Accelerator  
1092 0a50 SpeedStar A50  
1092 0a70 SpeedStar A70  
1092 4910 SpeedStar A70  
1092 4920 SpeedStar A70  
10b0 6326 S6110-B (AGP)  
1569 6326 SiS6326 GUI Accelerator  
6330 661/741/760 PCI/AGP or 662/761Gx PCIE VGA Display  
Adapter  
1039 6330 [M]661xX/[M]741[GX]/[M]760 PCI/AGP VGA Adapter  
1043 8113 SiS Real 256E (ASUS P5S800-VM motherboard)  
1458 d000 SiS661FX GUI 2D/3D Accelerator  
1734 1099 D2030-A1  
6350 770/670 PCIE VGA Display Adapter  
6351 771/671 PCIE VGA Display Adapter  
7001 USB 1.1 Controller  
1019 0a14 K7S5A motherboard  
1039 7000 Onboard USB Controller  
1462 5470 ECS K7SOM+ motherboard  
1462 7010 MS-6701 motherboard

1734 1095 D2030-A1 Motherboard  
7002 USB 2.0 Controller  
1462 5470 K7SOM+ 5.2C Motherboard  
1462 7010 MS-6701 motherboard  
1509 7002 Onboard USB Controller  
1734 1095 D2030-A1  
7007 FireWire Controller  
1462 701d MS-6701  
7012 SiS7012 AC'97 Sound Controller  
1019 0f05 A928 (i-Buddie)  
1039 7012 SiS 7012 onboard [Asus P4SC-EA] AC'97 Sound Controller  
1043 818f A8S-X Motherboard  
13f6 0300 CMI9739(A) on ECS K7S series motherboard  
1462 5850 MSI 648 Max (MS-6585)  
1462 7010 MS-6701 motherboard  
15bd 1001 DFI 661FX motherboard  
1734  
109f D2030-A1 Motherboard  
1849 7012 K7S41GX motherboard  
# There are may be different modem codecs here (Intel537 compatible and incompatible)  
7013 AC'97 Modem Controller  
7016 SiS7016 PCI Fast Ethernet Adapter  
1039 7016 SiS7016 10/100 Ethernet Adapter  
7018 SiS PCI Audio Accelerator  
1014 01b6 SiS PCI Audio Accelerator  
1014 01b7 SiS PCI Audio Accelerator  
1019 7018 SiS PCI Audio Accelerator  
1025 000e SiS PCI Audio Accelerator  
1025 0018 SiS PCI Audio Accelerator  
1039 7018 SiS PCI Audio Accelerator  
1043 1453 SiS PCI Audio Accelerator  
1043 800b SiS PCI Audio Accelerator  
104d 80e2 VAIO PCV-J200  
1054 7018 SiS PCI Audio Accelerator  
107d 5330 SiS PCI Audio Accelerator  
107d 5350 SiS PCI Audio Accelerator  
1170 3209 SiS PCI Audio Accelerator  
1462 400a SiS PCI Audio Accelerator  
14a4 2089 SiS PCI Audio Accelerator  
14cd 2194 SiS PCI Audio Accelerator  
14ff 1100 SiS PCI Audio Accelerator  
152d 8808 SiS PCI Audio Accelerator  
1558 1103  
SiS PCI Audio Accelerator  
1558 2200 SiS PCI Audio Accelerator  
1563 7018 SiS PCI Audio Accelerator  
15c5 0111 SiS PCI Audio Accelerator  
270f a171 SiS PCI Audio Accelerator

a0a0 0022 SiS PCI Audio Accelerator  
7019 SiS7019 Audio Accelerator  
7502 Azalia Audio Controller  
1043 81a1 P5SD2-FM/S mainboard  
103a Seiko Epson Corporation  
103b Tatung Corp. Of America  
103c Hewlett-Packard Company  
1005 A4977A Visualize EG  
1008 Visualize FX  
1020 548XX Scope Interface  
1028 Tach TL Fibre Channel Host Adapter  
1029 Tach XL2 Fibre Channel Host Adapter  
107e 000f Interphase 5560 Fibre Channel Adapter  
9004 9210 1Gb/2Gb Family Fibre Channel Controller  
9004 9211 1Gb/2Gb Family Fibre Channel Controller  
102a Tach TS Fibre Channel Host Adapter  
107e 000e Interphase 5540/5541 Fibre Channel Adapter  
9004 9110 1Gb/2Gb Family Fibre Channel Controller  
9004 9111 1Gb/2Gb Family Fibre Channel Controller  
1030 J2585A DeskDirect 10/100VG NIC  
1031 J2585B HP 10/100VG PCI  
LAN Adapter  
103c 1040 J2973A DeskDirect 10BaseT NIC  
103c 1041 J2585B DeskDirect 10/100VG NIC  
103c 1042 J2970A DeskDirect 10BaseT/2 NIC  
1040 J2973A DeskDirect 10BaseT NIC  
1041 J2585B DeskDirect 10/100 NIC  
1042 J2970A DeskDirect 10BaseT/2 NIC  
1048 Diva Serial [GSP] Multiport UART  
103c 1049 Tosca Console  
103c 104a Tosca Secondary  
103c 104b Maestro SP2  
103c 1223 Superdome Console  
103c 1226 Keystone SP2  
103c 1227 Powerbar SP2  
103c 1282 Everest SP2  
103c 1301 Diva RMP3  
1054 PCI Local Bus Adapter  
1064 79C970 PCnet Ethernet Controller  
108b Visualize FXe  
10c1 NetServer Smart IRQ Router  
10ed TopTools Remote Control  
10f0 rio System Bus Adapter  
10f1 rio I/O Controller  
1219 NetServer PCI Hot-Plug Controller  
121a NetServer SMIC Controller  
121b NetServer Legacy COM Port Decoder  
121c NetServer PCI COM Port Decoder

1229 zx1 System Bus Adapter  
122a zx1 I/O Controller  
122e PCI-X Local Bus Adapter  
127b sx1000 System Bus Adapter  
127c  
sx1000 I/O Controller  
128d Diva [GSP] Management Board  
1290 Auxiliary Diva Serial Port  
103c 1291 Diva SP2  
1291 Auxiliary Diva Serial Port  
12b4 zx1 QuickSilver AGP8x Local Bus Adapter  
12eb sx2000 System Bus Adapter  
12ec sx2000 I/O Controller  
12ee PCI-X 2.0 Local Bus Adapter  
1302 RMP-3 Shared Memory Driver  
1303 RMP-3 (Remote Management Processor)  
22f6 iLO5 Virtual USB Controller  
1590 00e4 iLO5 Standard Virtual USB Controller  
2910 E2910A PCIBus Exerciser  
2925 E2925A 32 Bit, 33 MHz PCI Exerciser & Analyzer  
3206 Adaptec Embedded Serial ATA HostRAID  
3220 Smart Array P600  
103c 3225 3 Gb/s SAS RAID  
3230 Smart Array Controller  
103c 3223 Smart Array P800  
103c 3234 P400 SAS Controller  
103c 3235 P400i SAS Controller  
103c 3237 E500 SAS Controller  
103c 323d P700m SAS Controller  
3238 Smart Array E200i (SAS Controller)  
103c 3211 Smart Array E200i  
103c 3212 Smart Array E200  
3239 Smart Array Gen9 Controllers  
103c 21bd P244br  
103c 21be  
P741m  
103c 21bf H240ar  
103c 21c0 P440ar  
103c 21c1 P840ar  
103c 21c2 P440  
103c 21c3 P441  
103c 21c4 Smart Array  
103c 21c5 P841  
103c 21c6 H244br  
103c 21c7 H240  
103c 21c8 H241  
103c 21c9 Smart Array  
103c 21ca P246br

103c 21cb P840  
103c 21cc Smart Array  
103c 21cd P240nr  
103c 21ce H240nr  
323a Smart Array G6 controllers  
103c 3241 Smart Array P212  
103c 3243 Smart Array P410  
103c 3245 Smart Array P410i  
103c 3247 Smart Array P411  
103c 3249 Smart Array P812  
103c 324a Smart Array 712m (Mezzanine RAID controller)  
103c 324b Smart Array P711m (Mezzanine RAID controller)  
323b Smart Array Gen8 Controllers  
103c 3350 P222  
103c 3351 P420  
103c 3352 P421  
103c 3354 P420i  
103c 3355 P220i  
323c Smart Array Gen8+ Controllers  
103c 1920 P430i  
103c 1921 P830i  
103c 1922 P430  
103c 1923 P431  
103c 1924 P830  
103c 1925 Smart Array  
103c 1926 P731m  
103c 1928 P230i  
3300 Integrated Lights-Out Standard Virtual USB  
Controller  
103c 3304 iLO2  
103c 3305 iLO2  
103c 3309 iLO2 GXL/iLO3 GXE  
103c 330e iLO3  
103c 3381 iLO4  
3301 Integrated Lights-Out Standard Serial Port  
103c 3304 iLO2  
103c 3305 iLO2  
103c 330e iLO3  
103c 3381 iLO4  
# Virtual serial port which is presented on a Java applet  
3302 Integrated Lights-Out Standard KCS Interface  
103c 3304 iLO2  
103c 3305 iLO2  
103c 330e iLO3  
103c 3381 iLO4  
3305 Integrated Lights-Out (iLO2) Controller  
3306 Integrated Lights-Out Standard Slave Instrumentation & System Support  
103c 330e iLO3

103c 3381 iLO4  
1590 00e4 iLO5  
3307 Integrated Lights-Out Standard Management Processor Support and Messaging  
# HP DL380 G6  
103c 3309 iLO 2  
103c 330e iLO3  
103c 3381 iLO4  
3308 Integrated Lights-Out Standard MS Watchdog Timer  
103c 330e iLO3  
103c 3381 iLO4  
4030 zx2 System Bus Adapter  
4031 zx2 I/O Controller  
4037 PCIe Local Bus Adapter  
9602 AMD RS780/RS880 PCI to PCI bridge (int gfx)  
103c 1609 ProLiant MicroServer  
N36L  
103e Solliday Engineering  
103f Synopsys/Logic Modeling Group  
1040 Accelgraphics Inc.  
1041 Computrend  
1042 Micron  
1000 PC Tech RZ1000  
1001 PC Tech RZ1001  
3000 Samurai\_0  
3010 Samurai\_1  
3020 Samurai\_IDE  
1043 ASUSTeK Computer Inc.  
0675 ISDNLink P-IN100-ST-D  
0675 1704 ISDN Adapter (PCI Bus, D, C)  
0675 1707 ISDN Adapter (PCI Bus, DV, W)  
10cf 105e ISDN Adapter (PCI Bus, DV, W)  
# Should be 1022:9602  
9602 AMD RS780/RS880 PCI to PCI bridge (int gfx)  
1043 83a2 M4A785TD Motherboard  
1044 Adaptec (formerly DPT)  
1012 Domino RAID Engine  
a400 SmartCache/Raid I-IV Controller  
a500 PCI Bridge  
a501 SmartRAID V Controller  
1044 c001 PM1554U2 Ultra2 Single Channel  
1044 c002 PM1654U2 Ultra2 Single Channel  
1044 c003 PM1564U3 Ultra3 Single Channel  
1044 c004 PM1564U3 Ultra3 Dual Channel  
1044 c005 PM1554U2 Ultra2 Single Channel (NON ACPI)  
1044 c00a PM2554U2 Ultra2 Single Channel  
1044 c00b PM2654U2 Ultra2 Single Channel  
1044 c00c PM2664U3

Ultra3 Single Channel  
1044 c00d PM2664U3 Ultra3 Dual Channel  
1044 c00e PM2554U2 Ultra2 Single Channel (NON ACPI)  
1044 c00f PM2654U2 Ultra2 Single Channel (NON ACPI)  
1044 c014 PM3754U2 Ultra2 Single Channel (NON ACPI)  
1044 c015 PM3755U2B Ultra2 Single Channel (NON ACPI)  
1044 c016 PM3755F Fibre Channel (NON ACPI)  
1044 c01e PM3757U2 Ultra2 Single Channel  
1044 c01f PM3757U2 Ultra2 Dual Channel  
1044 c020 PM3767U3 Ultra3 Dual Channel  
1044 c021 PM3767U3 Ultra3 Quad Channel  
1044 c028 PM2865U3 Ultra3 Single Channel  
1044 c029 PM2865U3 Ultra3 Dual Channel  
1044 c02a PM2865F Fibre Channel  
1044 c03c 2000S Ultra3 Single Channel  
1044 c03d 2000S Ultra3 Dual Channel  
1044 c03e 2000F Fibre Channel  
1044 c046 3000S Ultra3 Single Channel  
1044 c047 3000S Ultra3 Dual Channel  
1044 c048 3000F Fibre Channel  
1044 c050 5000S Ultra3 Single Channel  
1044 c051 5000S Ultra3 Dual Channel  
1044 c052 5000F Fibre Channel  
1044 c05a 2400A UDMA Four Channel  
1044  
c05b 2400A UDMA Four Channel DAC  
1044 c064 3010S Ultra3 Dual Channel  
1044 c065 3410S Ultra160 Four Channel  
1044 c066 3010S Fibre Channel  
a511 SmartRAID V Controller  
1044 c032 ASR-2005S I2O Zero Channel  
1044 c035 ASR-2010S I2O Zero Channel  
c066 3010S Ultra3 Dual Channel  
1045 OPTi Inc.  
a0f8 82C750 [Vendetta] USB Controller  
c101 92C264  
c178 92C178  
c556 82X556 [Viper]  
c557 82C557 [Viper-M]  
c558 82C558 [Viper-M ISA+IDE]  
c567 82C750 [Vendetta], device 0  
c568 82C750 [Vendetta], device 1  
c569 82C579 [Viper XPress+ Chipset]  
c621 82C621 [Viper-M/N+]  
c700 82C700 [FireStar]  
c701 82C701 [FireStar Plus]  
c814 82C814 [Firebridge 1]  
c822 82C822

c824 82C824  
c825 82C825 [Firebridge 2]  
c832 82C832  
c861 82C861 OHCI USB Host  
c881 82C881 [FireLink] 1394 OHCI Link Controller  
c895 82C895  
c935 EV1935 ECTIVA MachOne PCIAudio  
d568 82C825 [Firebridge 2]  
d721 IDE [FireStar]  
1046 IPC Corporation, Ltd.  
1047 Genoa Systems Corp  
1048 Elsa AG  
0c60  
Gladiac MX  
0d22 Quadro4 900XGL [ELSA GLoria4 900XGL]  
1000 QuickStep 1000  
3000 QuickStep 3000  
8901 Gloria XL  
1048 0935 GLoria XL (Virge)  
1049 Fountain Technologies, Inc.  
# nee SGS Thomson Microelectronics  
104a STMicroelectronics  
0000 STLS2F Host Bridge  
0008 STG 2000X  
0009 STG 1764X  
0010 STG4000 [3D Prophet Kyro Series]  
104a 4018 ST PowerVR Kyro (64MB AGP TVO)  
1681 0010 PowerVR Kyro II [3D Prophet 4500]  
1681 0028 3D Prophet 4000XT  
1681 c010 3D Prophet 4500 TV-Out  
1681 c069 3D Prophet 4000XT  
0201 STPC Vega Northbridge  
0209 STPC Consumer/Industrial North- and Southbridge  
020a STPC Atlas/ConsumerS/Consumer IIA Northbridge  
020b STPC Consumer II ISA Bridge  
0210 STPC Atlas ISA Bridge  
021a STPC Consumer S Southbridge  
021b STPC Consumer IIA Southbridge  
0220 STPC Industrial PCI to PCCard bridge  
0228 STPC Atlas IDE  
0229 STPC Vega IDE  
0230 STPC Atlas/Vega OHCI USB Controller  
0238 STPC Vega LAN  
0500 ST70137 [Unicorn] ADSL DMT Transceiver  
104a  
0500 BeWAN ADSL PCI st  
0564 STPC Client Northbridge  
0981 21x4x DEC-Tulip compatible 10/100 Ethernet



1746 STG 1764X  
2774 21x4x DEC-Tulip compatible 10/100 Ethernet  
3520 MPEG-II decoder card  
55cc STPC Client Southbridge  
104b BusLogic  
0140 BT-946C (old) [multimaster 01]  
1040 BT-946C (BA80C30) [MultiMaster 10]  
8130 Flashpoint LT  
104c Texas Instruments  
0500 100 MBit LAN Controller  
0508 TMS380C2X Compressor Interface  
1000 Eagle i/f AS  
104c PCI1510 PC card Cardbus Controller  
3d04 TVP4010 [Permedia]  
3d07 TVP4020 [Permedia 2]  
1011 4d10 Comet  
1040 000f AccelStar II  
1040 0011 AccelStar II  
1048 0a31 WINNER 2000  
1048 0a32 GLoria Synergy  
1048 0a34 GLoria Synergy  
1048 0a35 GLoria Synergy  
1048 0a36 GLoria Synergy  
1048 0a43 GLoria Synergy  
1048 0a44 GLoria Synergy  
107d 2633 WinFast 3D L2300  
1092 0126 FIRE GL 1000 PRO  
1092 0127 FIRE GL 1000 PRO  
1092 0136 FIRE GL 1000 PRO  
1092 0141 FIRE GL 1000 PRO  
1092 0146 FIRE  
GL 1000 PRO  
1092 0148 FIRE GL 1000 PRO  
1092 0149 FIRE GL 1000 PRO  
1092 0152 FIRE GL 1000 PRO  
1092 0154 FIRE GL 1000 PRO  
1092 0155 FIRE GL 1000 PRO  
1092 0156 FIRE GL 1000 PRO  
1092 0157 FIRE GL 1000 PRO  
1097 3d01 Jeronimo Pro  
1102 100f Graphics Blaster Extreme  
3d3d 0100 Reference Permedia 2 3D  
8000 PCILynx/PCILynx2 IEEE 1394 Link Layer Controller  
105e 8003 FireBoard200  
1443 8003 FireBoard200  
1443 8005 FireBoard400  
1443 8006 FireBoard400  
e4bf 1010 CF1-1-SNARE

e4bf 1020 CF1-2-SNARE  
e4bf 1040 FireCompact400  
8009 TSB12LV22 IEEE-1394 Controller  
104d 8032 8032 OHCI i.LINK (IEEE 1394) Controller  
1443 8010 FireBoard400-OHCI  
8017 PCI4410 FireWire Controller  
8019 TSB12LV23 IEEE-1394 Controller  
11bd 000a Studio DV500-1394  
11bd 000e Studio DV  
1443 8010 FireBoard400-OHCI  
e4bf 1010 CF2-1-CYMBAL  
8020 TSB12LV26 IEEE-1394 Controller (Link)  
1028 00d8 Precision 530  
104d 80e2 VAIO PCV-J200  
11bd 000f Studio DV500-1394  
11bd  
001c Excalibur 4.1  
1443 8010 FireBoard400-OHCI  
8021 TSB43AA22 IEEE-1394 Controller (PHY/Link Integrated)  
104d 80df Vaio PCG-FX403  
104d 80e7 VAIO PCG-GR214EP/GR214MP/GR215MP/GR314MP/GR315MP  
8022 TSB43AB22 IEEE-1394a-2000 Controller (PHY/Link) [iOHCI-Lynx]  
104c 8023 TSB43AB22/A IEEE-1394a-2000 Controller (PHY/Link)  
8023 TSB43AB22A IEEE-1394a-2000 Controller (PHY/Link) [iOHCI-Lynx]  
1028 0168 Precision Workstation 670 Mainboard  
103c 088c NC8000 laptop  
1043 808b K8N4/A8N Series Mainboard  
1043 815b P5W DH Deluxe Motherboard  
1443 8023 FireCard400  
8086 5044 Desktop Board DP35DP  
8024 TSB43AB23 IEEE-1394a-2000 Controller (PHY/Link)  
107d 6620 Winfast DV2000 FireWire Controller  
1443 8024 FireBoard Blue  
1458 1000 Motherboard  
8025 TSB82AA2 IEEE-1394b Link Layer Controller  
1043 813c P5P series mainboard  
1443 8025 FireBoard800  
1458 1000 GA-K8N Ultra-9 Mainboard  
1546 8025 FWB-PCI01  
17fc 8025 GIC3800  
8026 TSB43AB21 IEEE-1394a-2000  
Controller (PHY/Link)  
1025 0035 TravelMate 660  
1025 003c Aspire 2001WLCi (Compaq CL50 motherboard)  
103c 0025 XE4500 Notebook  
103c 006a NX9500  
1043 808d A7V333 mainboard.  
8027 PCI4451 IEEE-1394 Controller

1028 00e5 Latitude C810  
1028 00e6 PCI4451 IEEE-1394 Controller (Dell Inspiron 8100)  
8029 PCI4510 IEEE-1394 Controller  
1028 0163 Latitude D505  
1028 0196 Inspiron 5160  
1071 8160 MIM2900  
802b PCI7410,7510,7610 OHCI-Lynx Controller  
1028 0139 Latitude D400  
1028 014e PCI7410,7510,7610 OHCI-Lynx Controller (Latitude D800)  
802e PCI7x20 1394a-2000 OHCI Two-Port PHY/Link-Layer Controller  
1028 018d Inspiron 700m/710m  
8031 PCIxx21/PCIxx11/PCIx515 PC Card Controller  
1025 0064 Extensa 3000 series laptop  
1025 0080 Aspire 5024WLMi  
103c 0934 Compaq nw8240/nx8220  
103c 0944 Compaq nc6220 Notebook PC  
103c 099c NX6110/NC6120  
103c 308b MX6125  
8032 OHCI Compliant IEEE 1394 Host Controller  
1025 0064 Extensa 3000 series laptop  
1025 0080  
Aspire 5024WLMi  
103c 0934 Compaq nw8240/nx8220  
103c 099c NX6110/NC6120  
103c 308b MX6125  
8033 PCIxx21/PCIxx11 Flash Media Controller  
1025 0064 Extensa 3000 series laptop  
1025 0080 Aspire 5024WLMi  
103c 0934 Compaq nw8240/nx8220  
103c 0944 Compaq nc6220 Notebook PC  
103c 099c NX6110/NC6120  
103c 308b MX6125  
8034 PCIxx21/PCIxx11 SD Host Controller  
1025 0080 Aspire 5024WLMi  
103c 0934 Compaq nw8240/nx8220  
103c 0944 Compaq nc6220 Notebook PC  
103c 099c NX6110/NC6120  
103c 308b MX6125  
8035 PCIxx21/PCIxx11 Smart Card Controller  
103c 0934 Compaq nw8240/nx8220  
103c 0944 Compaq nc6220 Notebook PC  
103c 099c NX6110/NC6120  
8036 PCI6515 Cardbus Controller  
8038 PCI6515 SmartCard Controller  
8039 PCIxx12 Cardbus Controller  
103c 309f Compaq nx9420 Notebook  
103c 30a1 NC2400  
103c 30a3 Compaq nw8440

104d 902d VAIO VGN-NR120E  
803a PCIxx12 OHCI Compliant IEEE 1394 Host Controller  
103c 309f nx9420  
103c 30a1 NC2400  
103c 30a3 Compaq  
nw8440  
104d 902d VAIO VGN-NR120E  
803b PCIxx12 Flash Media Controller  
103c 309f nx9420  
103c 30a3 Compaq nw8440  
104d 8212 VAIO VGN-N21E  
104d 902d VAIO VGN-NR120E  
803c PCIxx12 SDA Standard Compliant SD Host Controller  
103c 309f nx9420  
103c 30a3 Compaq nw8440  
803d PCIxx12 GemCore based SmartCard controller  
103c 309f Compaq nx9420 Notebook  
103c 30a1 NC2400  
103c 30a3 nc8430  
103c 30aa nc6310  
8101 TSB43DB42 IEEE-1394a-2000 Controller (PHY/Link)  
8201 PCI1620 Firmware Loading Function  
8204 PCI7410/7510/7610 PCI Firmware Loading Function  
1028 0139 Latitude D400  
1028 014e Latitude D800  
8231 XIO2000(A)/XIO2200A PCI Express-to-PCI Bridge  
5678 1234 DC-1394 PCIe  
8232 XIO3130 PCI Express Switch (Upstream)  
8233 XIO3130 PCI Express Switch (Downstream)  
8235 XIO2200A IEEE-1394a-2000 Controller (PHY/Link)  
5678 1234 DC-1394 PCIe  
823e XIO2213A/B/XIO2221 PCI Express to PCI Bridge [Cheetah Express]  
823f XIO2213A/B/XIO2221 IEEE-1394b OHCI Controller  
[Cheetah Express]  
1546 803c FWB-PCIE1X11B  
8240 XIO2001 PCI Express-to-PCI Bridge  
8241 TUSB73x0 SuperSpeed USB 3.0 xHCI Host Controller  
1014 04b2 S824 (8286-42A)  
8400 ACX 100 22Mbps Wireless Interface  
1186 3b00 DWL-650+ PC Card cardbus 22Mbs Wireless Adapter [AirPlus]  
1186 3b01 DWL-520+ 22Mbps PCI Wireless Adapter  
1395 2201 WL22-PC  
16ab 8501 WL-8305 IEEE802.11b+ Wireless LAN PCI Adapter  
8401 ACX 100 22Mbps Wireless Interface  
8888 Multicore DSP+ARM KeyStone II SOC  
9000 Wireless Interface (of unknown type)  
9065 TMS320DM642  
9066 ACX 111 54Mbps Wireless Interface

0308 3404 G-102 v1 802.11g Wireless Cardbus Adapter  
0308 3406 G-162 v2 802.11g Wireless Cardbus Adapter  
104c 9066 WL212 Sitecom Wireless Network PCI-Card 100M (Version 1)  
# Found in Philips ADSL ANNEX A WLAN Router SNA6500/18 sold by Belgacom  
104c 9067 TNETW1130GVF  
104c 9096 Trendnet TEW-412PC Wireless PCI Adapter (Version A)  
1186 3b04 DWL-G520+ Wireless PCI Adapter  
1186  
3b05 DWL-G650+ AirPlusG+ CardBus Wireless LAN  
1186 3b08 AirPlus G DWL-G630 Wireless Cardbus Adapter (rev.B1)  
1385 4c00 WG311v2 802.11g Wireless PCI Adapter  
13d1 aba0 SWLMP-54108 108Mbps Wireless mini PCI card 802.11g+  
14ea ab07 GW-NS54GM Wireless Cardbus Adapter  
16ec 010d USR5416 802.11g Wireless Turbo PCI Adapter  
16ec 010e USR5410 802.11g Wireless Cardbus Adapter  
1737 0033 WPC54G v2 802.11g Wireless-G Notebook Adapter  
17cf 0032 G-162 v1 802.11g Wireless Cardbus Adapter  
17cf 0033 Z-Com XG650 Wireless miniPCI 802.11b/g  
187e 340b G-302 v2 802.11g Wireless PCI Adapter  
187e 340c G-360 v2 802.11g Wireless PCI Adapter  
a001 TDC1570  
a100 TDC1561  
a102 TNETA1575 HyperSAR Plus w/PCI Host i/f & UTOPIA i/f  
a106 TMS320C6414 TMS320C6415 TMS320C6416  
175c 5000 ASI50xx Audio Adapter  
175c 6400 ASI6400 Cobranet series  
175c 8700 ASI87xx Radio Tuner card  
ac10 PCI1050  
ac11 PCI1053  
ac12 PCI1130  
ac13 PCI1031  
ac15 PCI1131  
ac16 PCI1250  
1014 0092 ThinkPad  
600  
ac17 PCI1220  
ac18 PCI1260  
ac19 PCI1221  
ac1a PCI1210  
ac1b PCI1450  
0e11 b113 Armada M700  
1014 0130 ThinkPad 600X/A21m/T20/T22  
ac1c PCI1225  
0e11 b121 Armada E500  
1028 0088 Latitude CPi A400XT  
ac1d PCI1251A  
ac1e PCI1211  
ac1f PCI1251B

ac20 TI 2030  
ac21 PCI2031  
ac22 PCI2032 PCI Docking Bridge  
ac23 PCI2250 PCI-to-PCI Bridge  
ac28 PCI2050 PCI-to-PCI Bridge  
ac2c PCI2060 PCI-to-PCI Bridge  
ac30 PCI1260 PC card Cardbus Controller  
ac40 PCI4450 PC card Cardbus Controller  
ac41 PCI4410 PC card Cardbus Controller  
ac42 PCI4451 PC card Cardbus Controller  
1028 00e6 PCI4451 PC card CardBus Controller (Inspiron 8100)  
ac44 PCI4510 PC card Cardbus Controller  
1028 0149 Inspiron 5100  
1028 0163 Latitude D505  
1028 0196 Inspiron 5160  
1071 8160 MIM2000  
ac46 PCI4520 PC card Cardbus Controller  
1014 0552 ThinkPad  
ac47 PCI7510 PC card Cardbus Controller  
1028 0139 Latitude D400  
1028 013f Precision M60  
1028 014e Latitude D800  
ac48  
PCI7610 PC Card Cardbus Controller  
ac49 PCI7410 PC Card Cardbus Controller  
ac4a PCI7510/7610 CardBus Bridge  
1028 0139 Latitude D400  
1028 014e Latitude D800  
ac4b PCI7610 SD/MMC controller  
ac4c PCI7610 Memory Stick controller  
ac50 PCI1410 PC card Cardbus Controller  
ac51 PCI1420 PC card Cardbus Controller  
0e11 004e Evo N600c  
1014 0148 ThinkPad A20m  
1014 023b ThinkPad T23  
1028 00b1 Latitude C600  
1028 012a Latitude C640  
1033 80cd Versa Note VXi  
10cf 1095 Lifebook S-4510/C6155  
e4bf 1000 CP2-2-HIPHOP  
ac52 PCI1451 PC card Cardbus Controller  
ac53 PCI1421 PC card Cardbus Controller  
ac54 PCI1620 PC Card Controller  
103c 08b0 tc1100 tablet  
ac55 PCI1520 PC card Cardbus Controller  
1014 0512 ThinkPad T30/T40  
103c 0025 XE4500 Notebook  
ac56 PCI1510 PC card Cardbus Controller

1014 0512 ThinkPad R50e  
1014 0528 ThinkPad R40e  
17aa 2012 ThinkPad T60/R60 series  
ac60 PCI2040 PCI to DSP Bridge Controller  
175c 5100 ASI51xx Audio Adapter  
175c  
6100 ASI61xx Audio Adapter  
175c 6200 ASI62xx Audio Adapter  
175c 8800 ASI88xx Audio Adapter  
186f 3001 WR-G303 PCI radio receiver  
186f 3005 WR-G305 PCI radio receiver  
186f 3101 WR-G313 PCI radio receiver  
186f 3105 WR-G315 PCI radio receiver  
ac8d PCI 7620  
ac8e PCI7420 CardBus Controller  
1028 018d Inspiron 700m/710m  
ac8f PCI7420/7620 SD/MS-Pro Controller  
1028 018d Inspiron 700m/710m  
b001 TMS320C6424  
fe00 FireWire Host Controller  
fe03 12C01A FireWire Host Controller  
104d Sony Corporation  
8004 DTL-H2500 [Playstation development board]  
8009 CXD1947Q i.LINK Controller  
800c DTL-H800 [PS1 sound development board]  
8039 CXD3222 i.LINK Controller  
8047 PS2 TOOL MRP  
8056 Rockwell HCF 56K modem  
808a Memory Stick Controller  
80ff PS2 Performance Analyzer  
814a PS2 Performance Analyzer  
8183 ATHENS [PS3 prototype developer interface card]  
81b0 BM-1 [PSP TOOL Board Management Device]  
81c3 VO-4 [PSP TOOL Video Output Device]  
81ce SxS  
Pro memory card  
81ff PS3 TOOL MRP  
8200 PS3 TOOL RSX Tracing FPGA  
820e CXD9208GP [PS3 PS2 emulation subsystem adapter]  
# 2nd ID  
905c SxS Pro memory card  
# 2nd ID  
907f SxS Pro+ memory card  
908f Aeolia ACPI  
909e Aeolia Ethernet Controller (Marvell Yukon 2 Family)  
909f Aeolia SATA AHCI Controller  
90a0 Aeolia SD/MMC Host Controller  
90a1 Aeolia PCI Express Glue and Miscellaneous Devices

90a2 Aeolia DMA Controller  
90a3 Aeolia Memory (DDR3/SPM)  
90a4 Aeolia USB 3.0 xHCI Host Controller  
90bc SxS Pro+ memory card  
90c0 PCIe x8 XAVC Codec Board  
90c8 Belize ACPI  
90c9 Belize Ethernet Controller  
90ca Belize SATA AHCI Controller  
90cb Belize SD/MMC Host Controller  
90cc Belize PCI Express Glue and Miscellaneous Devices  
90cd Belize DMA Controller  
90ce Belize Memory (DDR3/SPM)  
90cf Belize USB 3.0 xHCI Host Controller  
90d7 Baikal ACPI  
90d8 Baikal Ethernet Controller  
90d9 Baikal SATA AHCI Controller  
90da Baikal SD/MMC Host Controller  
90db Baikal PCI Express  
Glue and Miscellaneous Devices  
90dc Baikal DMA Controller  
90dd Baikal Memory (DDR3/SPM)  
90de Baikal USB 3.0 xHCI Host Controller  
90eb CXD90062GG  
9121 Nextorage NEM-PA NVMe SSD for PlayStation  
104e Oak Technology, Inc  
0017 OTI-64017  
0107 OTI-107 [Spitfire]  
0109 Video Adapter  
0111 OTI-64111 [Spitfire]  
0217 OTI-64217  
0317 OTI-64317  
104f Co-time Computer Ltd  
1050 Winbond Electronics Corp  
0000 NE2000  
0001 W83769F  
0033 W89C33D 802.11 a/b/g BB/MAC  
0105 W82C105  
0840 W89C840  
1050 0001 W89C840 Ethernet Adapter  
1050 0840 W89C840 Ethernet Adapter  
0940 W89C940  
5a5a W89C940F  
6692 W6692  
1043 1702 ISDN Adapter (PCI Bus, D, W)  
1043 1703 ISDN Adapter (PCI Bus, DV, W)  
1043 1707 ISDN Adapter (PCI Bus, DV, W)  
144f 1702 ISDN Adapter (PCI Bus, D, W)  
144f 1703 ISDN Adapter (PCI Bus, DV, W)



144f 1707 ISDN Adapter (PCI Bus, DV, W)  
9921 W99200F MPEG-1 Video Encoder  
9922 W99200F/W9922PF MPEG-1/2 Video Encoder  
9970 W9970CF  
1051 Anigma, Inc.  
1052  
?Young Micro Systems  
1053 Young Micro Systems  
1054 Hitachi, Ltd  
3009 2Gbps Fibre Channel to PCI HBA 3009  
300a 4Gbps Fibre Channel to PCI-X HBA 300a  
300b 4Gbps Fibre Channel to PCI-X HBA 300b  
300f ColdFusion 3 Chipset Processor to I/O Controller  
3010 ColdFusion 3 Chipset Memory Controller Hub  
3011 ColdFusion 3e Chipset Processor to I/O Controller  
3012 ColdFusion 3e Chipset Memory Controller Hub  
3017 Unassigned Hitachi Shared FC Device 3017  
301b Virtual VGA Device  
301d PCIe-to-Pcie Bridge with Virtualization IO Assist Feature  
3020 FIVE-EX based Fibre Channel to PCIe HBA  
302c M001 PCI Express Switch Upstream Port  
302d M001 PCI Express Switch Downstream Port  
3070 Hitachi FIVE-FX Fibre Channel to PCIe HBA  
3505 SH7751 PCI Controller (PCIC)  
350e SH7751R PCI Controller (PCIC)

1055 Microchip Technology / SMSC

7430 LAN7430

7431 LAN7431

9130 SLC90E66 [Victory66] IDE

9460 SLC90E66 [Victory66] ISA

9462 SLC90E66 [Victory66] USB

9463 SLC90E66 [Victory66]

ACPI

e420 LAN9420/LAN9420i

1056 ICL

# Motorola made a mistake and used 1507 instead of 1057 in some chips. Please look at the 1507 entry as well when updating this.

1057 Motorola

0001 MPC105 [Eagle]

0002 MPC106 [Grackle]

0003 MPC8240 [Kahlua]

0004 MPC107

0006 MPC8245 [Unity]

0008 MPC8540

0009 MPC8560

0012 MPC8548 [PowerQUICC III]

0100 MC145575 [HFC-PCI]

0431 KT1829c 100VG

1073 Nokia N770  
1219 Nokia N800  
1801 DSP56301 Digital Signal Processor  
14fb 0101 Transas Radar Imitator Board [RIM]  
14fb 0102 Transas Radar Imitator Board [RIM-2]  
14fb 0202 Transas Radar Integrator Board [RIB-2]  
14fb 0611 1 channel CAN bus Controller [CanPci-1]  
14fb 0612 2 channels CAN bus Controller [CanPci-2]  
14fb 0613 3 channels CAN bus Controller [CanPci-3]  
14fb 0614 4 channels CAN bus Controller [CanPci-4]  
14fb 0621 1 channel CAN bus Controller [CanPci2-1]  
14fb 0622 2 channels CAN bus Controller [CanPci2-2]  
14fb 0810 Transas VTS Radar Integrator  
Board [RIB-4]  
175c 4200 ASI4215 Audio Adapter  
175c 4300 ASI43xx Audio Adapter  
175c 4400 ASI4401 Audio Adapter  
ecc0 0010 Darla  
ecc0 0020 Gina  
ecc0 0030 Layla rev.0  
ecc0 0031 Layla rev.1  
ecc0 0040 Darla24 rev.0  
ecc0 0041 Darla24 rev.1  
ecc0 0050 Gina24 rev.0  
ecc0 0051 Gina24 rev.1  
ecc0 0070 Mona rev.0  
ecc0 0071 Mona rev.1  
ecc0 0072 Mona rev.2  
18c0 MPC8265A/8266/8272  
18c1 MPC8271/MPC8272  
3052 SM56 Data Fax Modem  
3410 DSP56361 Digital Signal Processor  
ecc0 0050 Gina24 rev.0  
ecc0 0051 Gina24 rev.1  
ecc0 0060 Layla24  
ecc0 0070 Mona rev.0  
ecc0 0071 Mona rev.1  
ecc0 0072 Mona rev.2  
ecc0 0080 Mia rev.0  
ecc0 0081 Mia rev.1  
ecc0 0090 Indigo  
ecc0 00a0 Indigo IO  
ecc0 00b0 Indigo DJ  
ecc0 0100 3G  
4801 Raven  
4802 Falcon  
4803 Hawk  
4806 CPX8216

# MPC7410 PowerPC microprocessor and PCI host bridge  
480b MPC7410  
4d68 20268  
5600 SM56 PCI Modem  
1057 0300 SM56 PCI Speakerphone Modem  
1057 0301 SM56 PCI Voice  
Modem  
1057 0302 SM56 PCI Fax Modem  
1057 5600 SM56 PCI Voice modem  
13d2 0300 SM56 PCI Speakerphone Modem  
13d2 0301 SM56 PCI Voice modem  
13d2 0302 SM56 PCI Fax Modem  
1436 0300 SM56 PCI Speakerphone Modem  
1436 0301 SM56 PCI Voice modem  
1436 0302 SM56 PCI Fax Modem  
144f 100c SM56 PCI Fax Modem  
1494 0300 SM56 PCI Speakerphone Modem  
1494 0301 SM56 PCI Voice modem  
14c8 0300 SM56 PCI Speakerphone Modem  
14c8 0302 SM56 PCI Fax Modem  
1668 0300 SM56 PCI Speakerphone Modem  
1668 0302 SM56 PCI Fax Modem  
5608 Wildcard X100P  
5803 MPC5200  
5806 MCF54 Coldfire  
5808 MPC8220  
5809 MPC5200B  
6400 MPC190 Security Processor (S1 family, encryption)  
6405 MPC184 Security Processor (S1 family)  
1058 Electronics & Telecommunications RSH  
1059 Kontron  
0004 FPGA M.2 (K20058)  
1059 0000 FPGA M.2 (K20058)  
105a Promise Technology, Inc.  
0d30 PDC20265 (FastTrak100 Lite/Ultra100)  
1043 8042 AV7266-E South Bridge Promise RAID  
105a 4d33 Ultra100  
0d38 20263  
105a  
4d39 Fasttrak66  
1275 20275  
3318 PDC20318 (SATA150 TX4)  
3319 PDC20319 (FastTrak S150 TX4)  
105a 3319 FastTrak S150 TX4 4 port SATA PCI board  
8086 3427 S875WP1-E mainboard  
3371 PDC20371 (FastTrak S150 TX2plus)  
3373 PDC20378 (FastTrak 378/SATA 378)  
1043 80f5 K8V Deluxe/PC-DL Deluxe motherboard

1462 590d KT6 Delta-FIS2R (MS-6590)  
1462 702e K8T NEO FIS2R motherboard  
3375 PDC20375 (SATA150 TX2plus)  
3376 PDC20376 (FastTrak 376)  
1043 809e A7V8X motherboard  
3515 PDC40719 [FastTrak TX4300/TX4310]  
3519 PDC40519 (FastTrak TX4200)  
3570 PDC20771 [FastTrak TX2300]  
3571 PDC20571 (FastTrak TX2200)  
3574 PDC20579 SATAII 150 IDE Controller  
3577 PDC40779 (SATA 300 779)  
3d17 PDC40718 (SATA 300 TX4)  
3d18 PDC20518/PDC40518 (SATAII 150 TX4)  
3d73 PDC40775 (SATA 300 TX2plus)  
3d75 PDC20575 (SATAII150 TX2plus)  
3f20 PDC42819 [FastTrak TX2650/TX4650]  
4302 80333 [SuperTrak EX4350]  
4d30 PDC20267 (FastTrak100/Ultra100)  
105a 4d33 Ultra100  
105a 4d39  
FastTrak100  
8086 5744 S845WD1-E mainboard  
4d33 20246  
105a 4d33 20246 IDE Controller  
4d38 PDC20262 (FastTrak66/Ultra66)  
105a 4d30 Ultra Device on SuperTrak  
105a 4d33 Ultra66  
105a 4d39 FastTrak66  
4d68 PDC20268 [Ultra100 TX2]  
105a 4d68 Ultra100 TX2  
4d69 20269  
105a 4d68 Ultra133TX2  
5275 PDC20276 (MBFastTrak133 Lite)  
1043 807e A7V333 motherboard.  
105a 0275 SuperTrak SX6000 IDE  
105a 1275 MBFastTrak133 Lite (tm) Controller (RAID mode)  
1458 b001 MBUltra 133  
5300 DC5300  
6268 PDC20270 (FastTrak100 LP/TX2/TX4)  
105a 4d68 FastTrak100 TX2  
6269 PDC20271 (FastTrak TX2000)  
105a 6269 FastTrak TX2/TX2000  
6300 PDC81731 [FastTrak SX8300]  
6621 PDC20621 (FastTrak S150 SX4/FastTrak SX4000 lite)  
6622 PDC20621 [SATA150 SX4] 4 Channel IDE RAID Controller  
6624 PDC20621 [FastTrak SX4100]  
6626 PDC20618 (Ultra 618)  
6629 PDC20619 (FastTrak TX4000)

7275 PDC20277 (SBFastTrak133 Lite)  
8002 SATAIII150 SX8  
8350 80333 [SuperTrak EX8350/EX16350], 80331  
[SuperTrak EX8300/EX16300]  
8650 81384 [SuperTrak EX SAS and SATA RAID Controller]  
105a 4600 SuperTrak EX4650A  
105a 4601 SuperTrak EX4650  
105a 4610 SuperTrak EX4650EL  
105a 8600 SuperTrak EX8650EL  
105a 8601 SuperTrak EX8650A  
105a 8602 SuperTrak EX8654  
105a 8603 SuperTrak EX8658  
105a 8604 SuperTrak EX8650  
105a 8610 SuperTrak EX8650M  
105a a600 SuperTrak EX12650  
105a b600 SuperTrak EX16650  
105a b601 SuperTrak EX16654  
105a b602 SuperTrak EX16658  
8760 PM8010 [SuperTrak EX SAS and SATA 6G RAID Controller]  
c350 80333 [SuperTrak EX12350]  
e350 80333 [SuperTrak EX24350]  
105b Foxconn International, Inc.  
9602 RS780/RS880 PCI to PCI bridge (int gfx)  
e0c3 T99W175 5G Modem [Snapdragon X55]  
105c Wipro Infotech Limited  
105d Number 9 Computer Company  
2309 Imagine 128  
2339 Imagine 128-II  
105d 0000 Imagine 128 series 2 4Mb VRAM  
105d 0001 Imagine 128 series 2 4Mb VRAM  
105d 0002 Imagine 128 series 2 4Mb VRAM  
105d 0003 Imagine 128 series  
2 4Mb VRAM  
105d 0004 Imagine 128 series 2 4Mb VRAM  
105d 0005 Imagine 128 series 2 4Mb VRAM  
105d 0006 Imagine 128 series 2 4Mb VRAM  
105d 0007 Imagine 128 series 2 4Mb VRAM  
105d 0008 Imagine 128 series 2e 4Mb DRAM  
105d 0009 Imagine 128 series 2e 4Mb DRAM  
105d 000a Imagine 128 series 2 8Mb VRAM  
105d 000b Imagine 128 series 2 8Mb H-VRAM  
11a4 000a Metheus 5 Megapixel  
13cc 0000 Metheus 5 Megapixel  
13cc 0004 Metheus 5 Megapixel  
13cc 0005 Metheus 5 Megapixel  
13cc 0006 Metheus 5 Megapixel  
13cc 0008 Metheus 5 Megapixel  
13cc 0009 Metheus 5 Megapixel

13cc 000a Metheus 5 Megapixel  
13cc 000c Metheus 5 Megapixel  
493d Imagine 128 T2R [Ticket to Ride]  
11a4 000a Metheus 5 Megapixel, Dual Head  
11a4 000b Metheus 5 Megapixel, Dual Head  
13cc 0002 Metheus 4 Megapixel, Dual Head  
13cc 0003 Metheus 5 Megapixel, Dual Head  
13cc 0007 Metheus 5 Megapixel, Dual Head  
13cc 0008 Metheus 5 Megapixel, Dual Head  
13cc 0009 Metheus 5 Megapixel, Dual Head  
13cc  
000a Metheus 5 Megapixel, Dual Head  
5348 Revolution 4  
105d 0037 Revolution IV-FP AGP (For SGI 1600SW)  
11a4 0028 PVS5600M  
11a4 0038 PVS5600D  
105e Vtech Computers Ltd  
105f Infotronic America Inc  
1060 United Microelectronics [UMC]  
0001 UM82C881  
0002 UM82C886  
0101 UM8673F  
0881 UM8881  
0886 UM8886F  
0891 UM8891A  
1001 UM886A  
673a UM8886BF  
673b EIDE Master/DMA  
8710 UM8710  
886a UM8886A  
8881 UM8881F  
8886 UM8886F  
888a UM8886A  
8891 UM8891A  
9017 UM9017F  
9018 UM9018  
9026 UM9026  
e881 UM8881N  
e886 UM8886N  
e88a UM8886N  
e891 UM8891N  
1061 I.I.T.  
0001 AGX016  
0002 IIT3204/3501  
1062 Maspar Computer Corp  
1063 Ocean Office Automation  
1064 Alcatel  
1102 Dynamite 2840 (ADSL PCI modem)

1065 Texas Microsystems  
1066 PicoPower Technology  
0000 PT80C826  
0001 PT86C521 [Vesuvius v1] Host Bridge  
0002 PT86C523 [Vesuvius v3] PCI-ISA Bridge Master  
0003 PT86C524 [Nile] PCI-to-PCI Bridge  
0004 PT86C525 [Nile-II] PCI-to-PCI Bridge  
0005  
National PC87550 System Controller  
8002 PT86C523 [Vesuvius v3] PCI-ISA Bridge Slave  
1067 Mitsubishi Electric  
0301 AccelGraphics AcceleCLIPSE  
0304 AccelGALAXY A2100 [OEM Evans & Sutherland]  
0308 Tornado 3000 [OEM Evans & Sutherland]  
1002 VG500 [VolumePro Volume Rendering Accelerator]  
1068 Diversified Technology  
1069 Mylex Corporation  
0001 DAC960P  
0002 DAC960PD  
0010 DAC960PG  
0020 DAC960LA  
0050 AcceleRAID 352/170/160 support Device  
1069 0050 AcceleRAID 352 support Device  
1069 0052 AcceleRAID 170 support Device  
1069 0054 AcceleRAID 160 support Device  
b166 AcceleRAID 600/500/400/Sapphire support Device  
1014 0242 iSeries 2872 DASD IOA  
1014 0266 Dual Channel PCI-X U320 SCSI Adapter  
1014 0278 Dual Channel PCI-X U320 SCSI RAID Adapter  
1014 02d3 Dual Channel PCI-X U320 SCSI Adapter  
1014 02d4 Dual Channel PCI-X U320 SCSI RAID Adapter  
1069 0200 AcceleRAID 400, Single Channel, PCI-X, U320, SCSI RAID  
1069 0202 AcceleRAID Sapphire, Dual Channel,  
PCI-X, U320, SCSI RAID  
1069 0204 AcceleRAID 500, Dual Channel, Low-Profile, PCI-X, U320, SCSI RAID  
1069 0206 AcceleRAID 600, Dual Channel, PCI-X, U320, SCSI RAID  
ba55 eXtremeRAID 1100 support Device  
ba56 eXtremeRAID 2000/3000 support Device  
1069 0030 eXtremeRAID 3000 support Device  
1069 0040 eXtremeRAID 2000 support Device  
ba57 eXtremeRAID 4000/5000 support Device  
1069 0072 eXtremeRAID 5000 support Device  
106a Aten Research Inc  
106b Apple Inc.  
0001 Bandit PowerPC host bridge  
0002 Grand Central I/O  
0003 Control Video  
0004 PlanB Video-In

0007 O'Hare I/O  
000b Apple Camera  
000c DOS on Mac  
000e Hydra Mac I/O  
0010 Heathrow Mac I/O  
0017 Paddington Mac I/O  
0018 UniNorth FireWire  
0019 KeyLargo USB  
001e UniNorth Internal PCI  
001f UniNorth PCI  
0020 UniNorth AGP  
0021 UniNorth GMAC (Sun GEM)  
0022 KeyLargo Mac I/O  
0024 UniNorth/Pangea GMAC (Sun GEM)  
0025 KeyLargo/Pangea Mac I/O  
0026 KeyLargo/Pangea USB  
0027 UniNorth/Pangea AGP  
0028 UniNorth/Pangea  
PCI  
0029 UniNorth/Pangea Internal PCI  
002d UniNorth 1.5 AGP  
002e UniNorth 1.5 PCI  
002f UniNorth 1.5 Internal PCI  
0030 UniNorth/Pangea FireWire  
0031 UniNorth 2 FireWire  
106b 5811 iBook G4 2004  
0032 UniNorth 2 GMAC (Sun GEM)  
0033 UniNorth 2 ATA/100  
0034 UniNorth 2 AGP  
0035 UniNorth 2 PCI  
0036 UniNorth 2 Internal PCI  
003b UniNorth/Intrepid ATA/100  
003e KeyLargo/Intrepid Mac I/O  
003f KeyLargo/Intrepid USB  
1af4 1100 QEMU Virtual Machine  
0040 K2 KeyLargo USB  
0041 K2 KeyLargo Mac/IO  
0042 K2 FireWire  
0043 K2 ATA/100  
0045 K2 HT-PCI Bridge  
0046 K2 HT-PCI Bridge  
0047 K2 HT-PCI Bridge  
0048 K2 HT-PCI Bridge  
0049 K2 HT-PCI Bridge  
004a CPC945 HT Bridge  
004b U3 AGP  
004c K2 GMAC (Sun GEM)  
004f Shasta Mac I/O



0050 Shasta IDE  
0051 Shasta (Sun GEM)  
0052 Shasta Firewire  
0053 Shasta PCI Bridge  
0054 Shasta PCI Bridge  
0055 Shasta PCI Bridge  
0056 U4 PCIe  
0057 U3 HT Bridge  
0058 U3L AGP Bridge  
0059 U3H AGP Bridge  
005b  
CPC945 PCIe Bridge  
0066 Intrepid2 AGP Bridge  
0067 Intrepid2 PCI Bridge  
0068 Intrepid2 PCI Bridge  
0069 Intrepid2 ATA/100  
006a Intrepid2 Firewire  
006b Intrepid2 GMAC (Sun GEM)  
0074 U4 HT Bridge  
100c Apple Silicon PCI Express Root Port  
1010 Apple Silicon USB4/Thunderbolt PCI Express Root Port  
# should be 14e4:1645  
1645 Broadcom NetXtreme BCM5701 Gigabit Ethernet  
1801 T2 Bridge Controller  
1802 T2 Secure Enclave Processor  
1803 Apple Audio Device  
2001 S1X NVMe Controller  
2002 S3ELab NVMe Controller  
2003 S3X NVMe Controller  
2005 ANS2 NVMe Controller  
106c Hynix Semiconductor  
8139 8139c 100BaseTX Ethernet Controller  
8801 Dual Pentium ISA/PCI Motherboard  
8802 PowerPC ISA/PCI Motherboard  
8803 Dual Window Graphics Accelerator  
8804 LAN Controller  
8805 100-BaseT LAN  
106d Sequent Computer Systems  
106e DFI, Inc  
106f City Gate Development Ltd  
1070 Daewoo Telecom Ltd  
1071 Mitac  
8160 Mitac 8060B Mobile Platform  
1072 GIT Co Ltd  
1073 Yamaha Corporation  
0001  
3D GUI Accelerator  
0002 YGV615 [RPA3 3D-Graphics Controller]

0003 YMF-740  
0004 YMF-724  
1073 0004 YMF724-Based PCI Audio Adapter  
0005 DS1 Audio  
1073 0005 DS-XG PCI Audio CODEC  
0006 DS1 Audio  
0008 DS1 Audio  
1073 0008 DS-XG PCI Audio CODEC  
000a DS1L Audio  
1073 0004 DS-XG PCI Audio CODEC  
1073 000a DS-XG PCI Audio CODEC  
8086 4d55 DS-XG PCI Audio CODEC [Intel MU440EX]  
000c YMF-740C [DS-1L Audio Controller]  
107a 000c DS-XG PCI Audio CODEC  
000d YMF-724F [DS-1 Audio Controller]  
1073 000d DS-XG PCI Audio CODEC  
0010 YMF-744B [DS-1S Audio Controller]  
1073 0006 DS-XG PCI Audio CODEC  
1073 0010 DS-XG PCI Audio CODEC  
0012 YMF-754 [DS-1E Audio Controller]  
1073 0012 DS-XG PCI Audio Codec  
0020 DS-1 Audio  
1000 SW1000XG [XG Factory]  
2000 DS2416 Digital Mixing Card  
1073 2000 DS2416 Digital Mixing Card  
1074 NexGen Microsystems  
4e78 82c500/1  
1075 Advanced Integrations Research  
1076 Chaintech Computer Co. Ltd  
1077 QLogic Corp.  
1016  
ISP10160 Single Channel Ultra3 SCSI Processor  
1020 ISP1020/1040 Fast-wide SCSI  
1022 ISP1022 Fast-wide SCSI  
1080 ISP1080 SCSI Host Adapter  
1216 ISP12160 Dual Channel Ultra3 SCSI Processor  
101e 8471 QLA12160 on AMI MegaRAID  
101e 8493 QLA12160 on AMI MegaRAID  
1240 ISP1240 SCSI Host Adapter  
1280 ISP1280 SCSI Host Adapter  
1634 FastLinQ QL45000 Series 40GbE Controller  
1077 e4f1 FastLinQ QL45212H 40GbE Adapter  
1077 e4f2 FastLinQ QL45211H 40GbE Adapter  
1077 e4f3 FastLinQ QL45412H 40GbE Adapter  
1077 e4f4 FastLinQ QL45411H 40GbE Adapter  
1644 FastLinQ QL45000 Series 100GbE Controller  
1077 e4f8 FastLinQ QL45611H 100GbE Adapter  
1654 FastLinQ QL45000 Series 50GbE Controller

1077 0032 QL45212 Flex 50Gb 2-port Ethernet Adapter  
1590 0223 Synergy 6810C 25/50Gb Ethernet Adapter  
1590 0287 Synergy 6820C 25/50Gb CNA  
1656 FastLinQ QL45000 Series 25GbE Controller  
1077 0033 QL45214 Flex 25Gb 4-port Ethernet Adapter  
1077 02a7 QL45212-DE 25GbE Adapter  
1077  
e4f6 FastLinQ QL45211H 25GbE Adapter  
1077 e4f7 FastLinQ QL45212H 25GbE Adapter  
1590 0245 10/20/25GbE 2P 4820c CNA  
165c FastLinQ QL45000 Series 10/25/40/50GbE Controller (FCoE)  
1077 0034 QL45262 Flex 50Gb 2-port Ethernet Adapter w/ iSCSI/FCoE  
1077 e4f1 FastLinQ QL45462H 40GbE FCoE Adapter  
1077 e4f2 FastLinQ QL45461H 40GbE FCoE Adapter  
1590 0245 10/20/25GbE 2P 4820c CNA FCoE  
165e FastLinQ QL45000 Series 10/25/40/50GbE Controller (iSCSI)  
1077 0034 QL45262 Flex 50Gb 2-port Ethernet Adapter w/ iSCSI/FCoE  
1077 e4f1 FastLinQ QL45462H 40GbE iSCSI Adapter  
1077 e4f2 FastLinQ QL45461H 40GbE iSCSI Adapter  
1590 0245 10/20/25GbE 2P 4820c CNA iSCSI  
1664 FastLinQ QL45000 Series Gigabit Ethernet Controller (SR-IOV VF)  
1077 e4f1 FastLinQ QL45462H 40GbE Adapter (SR-IOV VF)  
1077 e4f2 FastLinQ QL45461H 40GbE Adapter (SR-IOV VF)  
1077 e4f3 FastLinQ QL45412H 40GbE Adapter (SR-IOV VF)  
1077 e4f4 FastLinQ QL45411H 40GbE Adapter (SR-IOV VF)  
1077 e4f6 FastLinQ  
QL45211H 25GbE Adapter (SR-IOV VF)  
1077 e4f7 FastLinQ QL45212H 25GbE Adapter (SR-IOV VF)  
1077 e4f8 FastLinQ QL45611H 100GbE Adapter (SR-IOV VF)  
1590 0245 10/20/25GbE 2P 4820c CNA SRIOV  
2020 ISP2020A Fast!SCSI Basic Adapter  
2031 ISP8324-based 16Gb Fibre Channel to PCI Express Adapter  
103c 17e7 SN1000Q 16Gb Single Port Fibre Channel Adapter  
103c 17e8 SN1000Q 16Gb Dual Port Fibre Channel Adapter  
103c 1939 QMH2672 16Gb Dual Port Fibre Channel Adapter  
103c 8002 3830C 16G Fibre Channel Host Bus Adapter  
1077 0241 QLE2670 16Gb Single Port Fibre Channel Adapter  
2071 ISP2714-based 16/32Gb Fibre Channel to PCIe Adapter  
1077 0283 QLE2764 Quad Port 32Gb Fibre Channel to PCIe Adapter  
1077 029e QLE2694 Quad Port 16Gb Fibre Channel to PCIe Adapter  
1077 02a2 QLE2694L Quad Port 16Gb Fibre Channel to PCIe Adapter  
1077 02ad QLE2694U Quad Port 16/32Gb Fibre Channel to PCIe Adapter  
2081 ISP2814-based 64/32G Fibre Channel to PCIe Controller  
1077 02e1 QLE2874  
Quad Port 64GFC PCIe Gen4 x16 Adapter  
1077 02e3 QLE2774 Quad Port 32GFC PCIe Gen4 x16 Adapter  
2089 ISP2854-based 64/32G Fibre Channel to PCIe Controller with StorCryption  
1077 02e8 QLE2884 Quad Port 64GFC PCIe Gen4 x16 Adapter with StorCryption

1077 02ea QLE2784 Quad Port 32GFC PCIe Gen4 x16 Adapter with StorCrypton  
2100 QLA2100 64-bit Fibre Channel Adapter  
1077 0001 QLA2100 64-bit Fibre Channel Adapter  
2200 QLA2200 64-bit Fibre Channel Adapter  
1077 0002 QLA2200  
2261 ISP2722-based 16/32Gb Fibre Channel to PCIe Adapter  
1077 0299 QLE2740 Single Port 32Gb Fibre Channel to PCIe Adapter  
1077 029a QLE2742 Dual Port 32Gb Fibre Channel to PCIe Adapter  
1077 029b QLE2690 Single Port 16Gb Fibre Channel to PCIe Adapter  
1077 029c QLE2692 Dual Port 16Gb Fibre Channel to PCIe Adapter  
1077 02a7 QLE2690 Single Port 16Gb FC to PCIe Gen3 x8 Adapter  
1077 02a8 QLE2692 Dual Port 16Gb FC to PCIe Gen3 x8 Adapter  
1077 02ab QLE2740 Single Port 32Gb FC to PCIe Gen3 x8  
Adapter  
1077 02ac QLE2742 Dual Port 32Gb FC to PCIe Gen3 x8 Adapter  
1077 02b8 2x16Gb QME2692 FC HBA  
1077 02b9 2x32Gb QME2742 FC HBA  
1590 00f9 StoreFabric SN1100Q 16Gb Single Port Fibre Channel Host Bus Adapter  
1590 00fa StoreFabric SN1100Q 16Gb Dual Port Fibre Channel Host Bus Adapter  
1590 0203 StoreFabric SN1600Q 32Gb Single Port Fibre Channel Host Bus Adapter  
1590 0204 StoreFabric SN1600Q 32Gb Dual Port Fibre Channel Host Bus Adapter  
1590 022d 5830C 32Gb Dual Port Fibre Channel Adapter  
193d 100d NIC-FC680i-Mb-2x16G  
2281 ISP2812-based 64/32G Fibre Channel to PCIe Controller  
1077 02e2 QLE2872 Dual Port 64GFC PCIe Gen4 x8 Adapter  
1077 02e4 QLE2772 Dual Port 32GFC PCIe Gen4 x8 Adapter  
1077 02ee QLE2870 Single Port 64GFC PCIe Gen4 x8 Adapter  
1077 02f0 QLE2770 Single Port 32GFC PCIe Gen4 x8 Adapter  
1077 02f2 QLogic 1x32Gb QLE2770 FC HBA  
1077 02f3 QLogic 2x32Gb QLE2772 FC HBA  
1590 02d3 SN1610Q - 1P Enhanced 32GFC Single Port Fibre Channel  
Host Bus Adapter  
1590 02d4 SN1610Q - 2P Enhanced 32GFC Dual Port Fibre Channel Host Bus Adapter  
2289 ISP2852-based 64/32G Fibre Channel to PCIe Controller with StorCrypton  
1077 02e9 QLE2882 Dual Port 64GFC PCIe Gen4 x8 Adapter with StorCrypton  
1077 02eb QLE2782 Dual Port 32GFC PCIe Gen4 x8 Adapter with StorCrypton  
1077 02ef QLE2880 Single Port 64GFC PCIe Gen4 x8 Adapter with StorCrypton  
1077 02f1 QLE2780 Single Port 32GFC PCIe Gen4 x8 Adapter with StorCrypton  
2300 QLA2300 64-bit Fibre Channel Adapter  
2312 ISP2312-based 2Gb Fibre Channel to PCI-X HBA  
103c 0131 2Gb Fibre Channel - Single port [A7538A]  
103c 12ba 2Gb Fibre Channel - Dual port [A6826A]  
2322 ISP2322-based 2Gb Fibre Channel to PCI-X HBA  
2422 ISP2422-based 4Gb Fibre Channel to PCI-X HBA  
103c 12d7 4Gb Fibre Channel [AB379A]  
103c 12dd 4Gb Fibre Channel [AB429A]  
2432 ISP2432-based 4Gb Fibre Channel to PCI Express HBA  
103c 7040 FC1142SR 4Gb 1-port PCIe Fibre Channel Host Bus Adapter [HPAE311A]

1077  
0137 QLE2460 Single-Port 4Gbps FC-to-PCI-X/PCIe Host Bus Adapter  
1077 0138 QLE2462 Dual-Port 4Gbps FC-to-PCI-X/PCIe Host Bus Adapter  
2532 ISP2532-based 8Gb Fibre Channel to PCI Express HBA  
1014 041e FC EN0Y/EN12 PCIe2 LP 8 Gb 4-port Fibre Channel Adapter for POWER  
103c 3262 StorageWorks 81Q  
103c 3263 StorageWorks 82Q  
1077 015c QLE2560 PCI Express to 8Gb FC Single Channel  
1077 015d QLE2562 PCI Express to 8Gb FC Dual Channel  
1077 015e QLE2564 PCI Express to 8Gb FC Quad Channel  
1077 0167 QME2572 Dual Port FC8 HBA Mezzanine  
1590 00fc StoreFabric 84Q 8Gb Quad Port Fibre Channel Host Bus Adapter  
2971 ISP2684  
3022 ISP4022-based Ethernet NIC  
3032 ISP4032-based Ethernet IPv6 NIC  
4010 ISP4010-based iSCSI TOE HBA  
4022 ISP4022-based iSCSI TOE HBA  
4032 ISP4032-based iSCSI TOE IPv6 HBA  
5432 SP232-based 4Gb Fibre Channel to PCI Express HBA  
6312 SP202-based 2Gb Fibre Channel to PCI-X HBA  
6322 SP212-based 2Gb Fibre Channel to PCI-X HBA  
7220  
IBA7220 InfiniBand HCA  
7322 IBA7322 QDR InfiniBand HCA  
8000 10GbE Converged Network Adapter (TCP/IP Networking)  
8001 10GbE Converged Network Adapter (FCoE)  
1014 03af FC 5708/5270 10 Gb FCoE PCIe Dual Port Adapter for POWER  
8020 cLOM8214 1/10GbE Controller  
1028 1f64 QMD8262-k 10G DP bNDC KR  
103c 3346 CN1000Q Dual Port Converged Network Adapter  
103c 3733 NC523SFP 10Gb 2-port Server Adapter  
1077 0203 8200 Series Single Port 10GbE Converged Network Adapter (TCP/IP Networking)  
1077 0207 8200 Series Dual Port 10GbE Converged Network Adapter (TCP/IP Networking)  
1077 020b 3200 Series Dual Port 10Gb Intelligent Ethernet Adapter  
1077 020c 3200 Series Quad Port 1Gb Intelligent Ethernet Adapter  
1077 020f 3200 Series Single Port 10Gb Intelligent Ethernet Adapter  
1077 0210 QME8242-k 10GbE Dual Port Mezzanine Card  
1077 0233 QME8262-k 10GbE Dual Port Mezzanine Card  
8021 8200 Series 10GbE Converged Network Adapter (FCoE)  
103c 3348 CN1000Q Dual Port Converged  
Network Adapter  
1077 0211 QME8242-k 10GbE Dual Port Mezzanine Card, FCoE  
8022 8200 Series 10GbE Converged Network Adapter (iSCSI)  
103c 3347 CN1000Q Dual Port Converged Network Adapter  
1077 0212 QME8242-k 10GbE Dual Port Mezzanine Card, iSCSI  
8030 ISP8324 1/10GbE Converged Network Controller  
1077 0243 8300 Series Single Port 10GbE Converged Network Adapter (TCP/IP Networking)  
1077 0246 8300 Series Dual Port 10GbE Converged Network Adapter (TCP/IP Networking)

8031 8300 Series 10GbE Converged Network Adapter (FCoE)  
8032 8300 Series 10GbE Converged Network Adapter (iSCSI)  
8070 FastLinQ QL41000 Series 10/25/40/50GbE Controller  
1077 0001 10GE 2P QL41162HxRJ-DE Adapter  
1077 0002 10GE 2P QL41112HxCU-DE Adapter  
1077 0004 4x10GE QL41164HFCU CNA  
1077 0005 QLogic 4x10GE QL41164HMRJ CNA  
1077 0006 QLogic 4x10GE QL41164HMCU CNA  
1077 0007 QLogic 2x1GE+2x10GE QL41264HMCU CNA  
1077 0009 QLogic 2x1GE+2x10GE QL41162HMRJ CNA  
1077 000b 25GE 2P QL41262HxCU-DE  
Adapter  
1077 000f 2x25GE QL41262HMKR CNA  
1077 0010 2x25GE QL41232HMKR NIC  
1077 0011 FastLinQ QL41212HLCU 25GbE Adapter  
1077 0012 FastLinQ QL41112H 10GbE Adapter  
1077 0019 QL41232HOCU - Dual Port 25/10GbE SFP28 OCP Adapter  
1077 0039 QLogic QL41262 PCIe 25Gb 2-Port SFP28 Ethernet Adapter  
1077 0053 QLogic 2x25GE QL41232HQCUCU NIC  
1077 0054 2x10GE QL41132HQRJ NIC  
1077 0055 QLogic 2x10GE QL41132HQCUCU NIC  
1077 0056 2x10GE QL41132HxRJ NIC  
1077 0057 2x25GE QL41232HxCU NIC  
1077 0065 QLogic 4x10GE QL41154HQRJ CNA  
1077 0066 QLogic 4x10GE QL41154HQCUCU CNA  
1077 0068 10GbE 2p SFP+ QL41132HLCU-HC Adapter  
1077 0069 10GbE 2p BASE-T QL41132HQRJ-HC OCP3 Adapter  
1077 0070 10GbE 2p BASE-T QL41132HLRJ-HC Adapter  
1077 0071 10GbE 2p SFP+ QL41132HQCUCU-HC OCP3 Adapter  
1077 0072 10GbE 4p SFP+ QL41134HLCU-HC Adapter  
1077 0073 10/25GbE 2p SFP28 QL41232HQCUCU-HC OCP3 Adapter  
1077 0074 10/25GbE 2p SFP28 QL41232HLCU-HC Adapter  
1590 021a 10GbE 2P QL41162HLRJ-HP  
Adapter  
1590 021b 10GbE 2P QL41162HLRJ-HP Adapter  
1590 021d 10/25GbE 2P QL41222HLCU-HP Adapter  
1590 021e 10/25GbE 2P QL41162HMRJ-HP Adapter  
1590 021f 10/25GbE 2P QL41262HMCU-HP Adapter  
1590 0220 10/25GbE 2P QL41122HLRJ-HP Adapter  
1590 02bd 10Gb 2P 524SFP+ NIC  
193d 1030 NIC-ETH681i-Mb-2x25G  
193d 1032 NIC-ETH682i-Mb-2x25G  
8080 FastLinQ QL41000 Series 10/25/40/50GbE Controller (FCoE)  
1077 0001 10GE 2P QL41162HxRJ-DE Adapter  
1077 0002 10GE 2P QL41112HxCU-DE Adapter  
1077 0004 4x10GE QL41164HFCU CNA  
1077 0005 QLogic 4x10GE QL41164HMRJ CNA  
1077 0006 QLogic 4x10GE QL41164HMCU CNA

1077 0007 QLogic 2x1GE+2x10GE QL41264HMCU CNA  
1077 0009 QLogic 2x1GE+2x10GE QL41162HMRJ CNA  
1077 000b 25GE 2P QL41262HxCU-DE Adapter  
1077 000c QLogic 2x25GE QL41262HMCU CNA  
1077 000d FastLinQ QL41262H 25GbE FCoE Adapter  
1077 000e FastLinQ QL41162H 10GbE FCoE Adapter  
1077 000f 2x25GE QL41262HMKR CNA  
1590 021a 10GbE 2P QL41162HLRJ-HP Adapter  
1590 021b  
10GbE 2P QL41162HLRJ-HP Adapter  
8084 FastLinQ QL41000 Series 10/25/40/50GbE Controller (iSCSI)  
1077 0001 10GE 2P QL41162HxRJ-DE Adapter  
1077 0002 10GE 2P QL41112HxCU-DE Adapter  
1077 0003 4x10GE QL41164HxRJ CNA  
1077 0004 4x10GE QL41164HFUCU CNA  
1077 0005 QLogic 4x10GE QL41164HMRJ CNA  
1077 0006 QLogic 4x10GE QL41164HMCU CNA  
1077 0007 QLogic 2x25GE QL41262HMCU CNA  
1077 0009 QLogic 2x1GE+2x10GE QL41162HMRJ CNA  
1077 000b 25GE 2P QL41262HxCU-DE Adapter  
1077 000c QLogic 2x25GE QL41262HMCU CNA  
1077 000d FastLinQ QL41262H 25GbE iSCSI Adapter  
1077 000e FastLinQ QL41162H 10GbE iSCSI Adapter  
1077 000f 2x25GE QL41262HMKR CNA  
1077 0065 QLogic 4x10GE QL41154HQRJ CNA  
1077 0066 QLogic 4x10GE QL41154HQCU CNA  
1590 021a 10GbE 2P QL41162HLRJ-HP Adapter  
1590 021b 10GbE 2P QL41162HLRJ-HP Adapter  
8090 FastLinQ QL41000 Series Gigabit Ethernet Controller (SR-IOV VF)  
1077 0001 25GE 2P QL41262HxCU-DE Adapter  
1077 0002 10GE 2P QL41112HxCU-DE Adapter  
1077  
0003 4x10GE QL41164HxRJ CNA  
1077 0004 4x10GE QL41164HFUCU CNA  
1077 0005 QLogic 4x10GE QL41164HMRJ CNA  
1077 0006 QLogic 4x10GE QL41164HMCU CNA  
1077 0007 QLogic 2x1GE+2x10GE QL41264HMCU CNA  
1077 0009 QLogic 2x1GE+2x10GE QL41162HMRJ CNA  
1077 000b 25GE 2P QL41262HxCU-DE Adapter  
1077 000c QLogic 2x25GE QL41262HMCU CNA  
1077 000d FastLinQ QL41262H 25GbE FCoE Adapter (SR-IOV VF)  
1077 000e FastLinQ QL41162H 10GbE iSCSI Adapter (SR-IOV VF)  
1077 000f 2x25GE QL41262HMKR CNA  
1077 0010 2x25GE QL41232HMKR NIC  
1077 0011 FastLinQ QL41212H 25GbE Adapter (SR-IOV VF)  
1077 0012 FastLinQ QL41112H 10GbE Adapter (SR-IOV VF)  
1077 0053 QLogic 2x25GE QL41232HQCU NIC  
1077 0054 QLogic 2x10GE QL41132HQRJ NIC

1077 0055 QLogic 2x10GE QL41132HQCU NIC  
1077 0056 2x10GE QL41132HxRJ NIC  
1077 0057 2x25GE QL41232HxCU NIC  
1077 0065 QLogic 4x10GE QL41154HQRJ CNA  
1077 0066 QLogic 4x10GE QL41154HQCU CNA  
1590 021a 10GbE 2P QL41162HLRJ-HP Adapter  
1590 021b 10GbE  
2P QL41162HLRJ-HP Adapter  
1590 021e 10/25GbE 2P QL41162HMRJ-HP Adapter  
1590 021f 10/25GbE 2P QL41262HMCU-HP Adapter  
1590 02bd 10Gb 2P 524SFP+ NIC  
8430 ISP8324 1/10GbE Converged Network Controller (NIC VF)  
8431 8300 Series 10GbE Converged Network Adapter (FCoE VF)  
8432 ISP2432M-based 10GbE Converged Network Adapter (CNA)  
1078 Cyrix Corporation  
0000 5510 [Grappa]  
0001 PCI Master  
0002 5520 [Cognac]  
0100 5530 Legacy [Kahlua]  
0101 5530 SMI [Kahlua]  
0102 5530 IDE [Kahlua]  
0103 5530 Audio [Kahlua]  
0104 5530 Video [Kahlua]  
0400 ZFMicro PCI Bridge  
0401 ZFMicro Chipset SMI  
0402 ZFMicro Chipset IDE  
0403 ZFMicro Expansion Bus  
1079 I-Bus  
107a NetWorth  
# formerly Gateway 2000 / acquired by Acer Inc.  
107b Gateway, Inc.  
107c LG Electronics [Lucky Goldstar Co. Ltd]  
107d LeadTek Research Inc.  
0000 P86C850  
107e Interphase Corporation  
0001 5515 ATM Adapter [Flipper]  
0002 100 VG AnyLan Controller  
0004 5526 Fibre Channel Host Adapter  
0005 x526 Fibre  
Channel Host Adapter  
0008 5525/5575 ATM Adapter (155 Mbit) [Atlantic]  
9003 5535-4P-BRI-ST  
9007 5535-4P-BRI-U  
9008 5535-1P-SR  
900c 5535-1P-SR-ST  
900e 5535-1P-SR-U  
9011 5535-1P-PRI  
9013 5535-2P-PRI



9023 5536-4P-BRI-ST  
9027 5536-4P-BRI-U  
9031 5536-1P-PRI  
9033 5536-2P-PRI  
107f Data Technology Corporation  
0802 SL82C105  
1080 Contaq Microsystems  
0600 82C599  
c691 Cypress CY82C691  
c693 82c693  
1081 Supermac Technology  
0d47 Radius PCI to NuBUS Bridge  
1082 EFA Corporation of America  
1083 Forex Computer Corporation  
0001 FR710  
1084 Parador  
1086 J. Bond Computer Systems  
1087 Cache Computer  
1088 Microcomputer Systems (M) Son  
1089 Data General Corporation  
# Formerly Bit3 Computer Corp.  
108a SBS Technologies  
0001 VME Bridge Model 617  
0010 VME Bridge Model 618  
0040 dataBLIZZARD  
3000 VME Bridge Model 2706  
108c Oakleigh Systems Inc.  
108d Olicom  
0001 Token-Ring 16/4 PCI Adapter (3136/3137)  
0002 16/4 Token Ring  
0004 RapidFire OC-3139/3140 Token-Ring  
16/4 PCI Adapter  
108d 0004 OC-3139/3140 RapidFire Token-Ring 16/4 Adapter  
0005 GoCard 3250 Token-Ring 16/4 CardBus PC Card  
0006 OC-3530 RapidFire Token-Ring 100  
0007 RapidFire 3141 Token-Ring 16/4 PCI Fiber Adapter  
108d 0007 OC-3141 RapidFire Token-Ring 16/4 Adapter  
0008 RapidFire 3540 HSTR 100/16/4 PCI Adapter  
108d 0008 OC-3540 RapidFire HSTR 100/16/4 Adapter  
0011 OC-2315  
0012 OC-2325  
0013 OC-2183/2185  
0014 OC-2326  
0019 OC-2327/2250 10/100 Ethernet Adapter  
108d 0016 OC-2327 Rapidfire 10/100 Ethernet Adapter  
108d 0017 OC-2250 GoCard 10/100 Ethernet Adapter  
0021 OC-6151/6152 [RapidFire ATM 155]  
0022 ATM Adapter

108e Oracle/SUN  
0001 EBUS  
1000 STP2003QFP [PCIO] EBUS  
1001 Happy Meal 10/100 Ethernet [hme]  
1100 RIO EBUS  
108e 1100 RIO EBUS on Blade 100 motherboard  
1101 RIO 10/100 Ethernet [eri]  
108e 1101 RIO GEM on Blade 100 motherboard  
1102 RIO 1394  
108e 1102 RIO 1394 on Blade 100 motherboard  
1103 RIO USB  
108e 1103 RIO USB  
on Blade 100 motherboard  
1647 Broadcom 570x 10/100/1000 Ethernet [bge]  
1648 Broadcom 570x 10/100/1000 Ethernet [bge]  
16a7 Broadcom 570x 10/100/1000 Ethernet [bge]  
16a8 Broadcom 570x 10/100/1000 Ethernet [bge]  
2bad GEM 10/100/1000 Ethernet [ge]  
5000 Simba Advanced PCI Bridge  
108e 5000 Netra AX1105-500  
5043 SunPCI Co-processor  
5ca0 Crypto Accelerator 6000 [mca]  
6300 Intel 21554 PCI-PCI bus bridge [db21554]  
6301 Intel 21554 PCI-PCI bus bridge [db21554]  
6302 Intel 21554 PCI-PCI bus bridge [db21554]  
6303 Intel 21554 PCI-PCI bus bridge [db21554]  
6310 Intel 21554 PCI-PCI bus bridge [db21554]  
6311 Intel 21554 PCI-PCI bus bridge [db21554]  
6312 Intel 21554 PCI-PCI bus bridge [db21554]  
6313 Intel 21554 PCI-PCI bus bridge [db21554]  
6320 Intel 21554 PCI-PCI bus bridge [db21554]  
6323 Intel 21554 PCI-PCI bus bridge [db21554]  
6330 Intel 21554 PCI-PCI bus bridge [db21554]  
6331 Intel 21554 PCI-PCI bus bridge [db21554]  
6332 Intel 21554 PCI-PCI bus bridge [db21554]  
6333  
Intel 21554 PCI-PCI bus bridge [db21554]  
6340 Intel 21554 PCI-PCI bus bridge [db21554]  
6343 Intel 21554 PCI-PCI bus bridge [db21554]  
6350 Intel 21554 PCI-PCI bus bridge [db21554]  
6353 Intel 21554 PCI-PCI bus bridge [db21554]  
6722 Intel 21554 PCI-PCI bus bridge [db21554]  
676e SunPCiIII  
7063 SunPCiII / SunPCiIIpro  
8000 Psycho PCI Bus Module  
8001 Schizo PCI Bus Module  
8002 Schizo+ PCI Bus Module  
80f0 PCIe switch [px]

80f8 PCIe switch [px]  
9010 PCIe/PCI bridge switch [pxb\_plx]  
9020 PCIe/PCI bridge switch [pxb\_plx]  
9102 Davicom Fast Ethernet driver for Davicom DM9102A [dmfe]  
a000 Psycho UPA-PCI Bus Module [pcipsy]  
a001 Psycho UPA-PCI Bus Module [pcipsy]  
    108e a001 Ultra Iie on Blade 100 motherboard  
a801 Schizo Fireplane-PCI bus bridge module [pcisch]  
aaaa Multithreaded Shared 10GbE Ethernet Network Controller  
abba Cassini 10/100/1000  
abcd Multithreaded 10-Gigabit Ethernet Network Controller  
c416 Sun Fire System/System Controller Interface  
chip [sbbc]  
108f Systemsoft  
1090 Compro Computer Services, Inc.  
4610 PCI RTOM  
4620 GPIO HSD  
1091 Intergraph Corporation  
    0020 3D graphics processor  
    0021 3D graphics processor w/Texturing  
    0040 3D graphics frame buffer  
    0041 3D graphics frame buffer  
    0060 Proprietary bus bridge  
    00e4 Powerstorm 4D50T  
    0720 Motion JPEG codec  
    0780 Intense3D Wildcat 3410 (MSMT496)  
    07a0 Sun Expert3D-Lite Graphics Accelerator  
    1091 Sun Expert3D Graphics Accelerator  
1092 Diamond Multimedia Systems  
    0028 Viper V770  
        1092 4a00 Viper V770 32MB  
00a0 Speedstar Pro SE  
00a8 Speedstar 64  
0550 Viper V550  
08d4 Supra 2260 Modem  
094c SupraExpress 56i Pro  
1001 Video Crunch It 1001 capture card  
1092 Viper V330  
6120 Maximum DVD  
8810 Stealth SE  
8811 Stealth 64/SE  
8880 Stealth  
8881 Stealth  
88b0 Stealth 64  
88b1 Stealth 64  
88c0 Stealth 64  
88c1 Stealth 64  
88d0 Stealth 64

88d1 Stealth 64  
88f0 Stealth 64  
88f1 Stealth 64  
9999 DMD-I0928-1 "Monster sound" sound  
chip  
1093 National Instruments  
0160 PCI-DIO-96  
0162 PCI-MIO-16XE-50  
0fe1 PXI-8320  
1150 PCI-6533 (PCI-DIO-32HS)  
1170 PCI-MIO-16XE-10  
1180 PCI-MIO-16E-1  
1190 PCI-MIO-16E-4  
11b0 PXI-6070E  
11c0 PXI-6040E  
11d0 PXI-6030E  
1270 PCI-6032E  
1290 PCI-6704  
12b0 PCI-6534  
1310 PCI-6602  
1320 PXI-6533  
1330 PCI-6031E  
1340 PCI-6033E  
1350 PCI-6071E  
1360 PXI-6602  
13c0 PXI-6508  
1490 PXI-6534  
14e0 PCI-6110  
14f0 PCI-6111  
1580 PXI-6031E  
15b0 PXI-6071E  
1710 PXI-6509  
17c0 PXI-5690  
17d0 PCI-6503  
1870 PCI-6713  
1880 PCI-6711  
18b0 PCI-6052E  
18c0 PXI-6052E  
1920 PXI-6704  
1930 PCI-6040E  
19c0 PCI-4472  
1aa0 PXI-4110  
1ad0 PCI-6133  
1ae0 PXI-6133  
1e30 PCI-6624  
1e40 PXI-6624  
1e50 PXI-5404  
2410 PCI-6733

2420 PXI-6733  
2430 PCI-6731  
2470 PCI-4474  
24a0 PCI-4065  
24b0 PXI-4200  
24f0 PXI-4472  
2510 PCI-4472  
2520 PCI-4474  
27a0 PCI-6123  
27b0 PXI-6123  
2880 DAQCard-6601  
2890 PCI-6036E  
28a0 PXI-4461  
28b0 PCI-6013  
28c0 PCI-6014  
28d0  
PCI-5122  
28e0 PXI-5122  
29f0 PXI-7334  
2a00 PXI-7344  
2a60 PCI-6023E  
2a70 PCI-6024E  
2a80 PCI-6025E  
2ab0 PXI-6025E  
2b10 PXI-6527  
2b20 PCI-6527  
2b80 PXI-6713  
2b90 PXI-6711  
2c60 PCI-6601  
2c70 PXI-6601  
2c80 PCI-6035E  
2c90 PCI-6703  
2ca0 PCI-6034E  
2cb0 PCI-7344  
2cc0 PXI-6608  
2d20 PXI-5600  
2db0 PCI-6608  
2dc0 PCI-4070  
2dd0 PXI-4070  
2eb0 PXI-4472  
2ec0 PXI-6115  
2ed0 PCI-6115  
2ee0 PXI-6120  
2ef0 PCI-6120  
2fd1 PCI-7334  
2fd2 PCI-7350  
2fd3 PCI-7342  
2fd5 PXI-7350

2fd6 PXI-7342  
7003 PCI-6551  
7004 PXI-6551  
700b PXI-5421  
700c PCI-5421  
701a VXIpc-87xB  
701b VXIpc-770  
7023 PXI-2593  
7027 PCI-MXI-2 Universal  
702c PXI-7831R  
702d PCI-7831R  
702e PXI-7811R  
702f PCI-7811R  
7030 PCI-CAN (Series 2)  
7031 PCI-CAN/2 (Series 2)  
7032 PCI-CAN/LS (Series 2)  
7033 PCI-CAN/LS2 (Series 2)  
7034 PCI-CAN/DS (Series 2)  
7035 PXI-8460 (Series 2, 1 port)  
7036 PXI-8460 (Series 2, 2 ports)  
7037 PXI-8461 (Series 2, 1 port)  
7038  
PXI-8461 (Series 2, 2 ports)  
7039 PXI-8462 (Series 2)  
703f PXI-2566  
7040 PXI-2567  
7044 MXI-4 Connection Monitor  
7047 PXI-6653  
704c PXI-2530  
704f PXI-4220  
7050 PXI-4204  
7055 PXI-7830R  
7056 PCI-7830R  
705a PCI-CAN/XS (Series 2)  
705b PCI-CAN/XS2 (Series 2)  
705c PXI-8464 (Series 2, 1 port)  
705d PXI-8464 (Series 2, 2 ports)  
705e cRIO-9102  
7060 PXI-5610  
7064 PXI-1045 Trigger Routing Module  
7065 PXI-6652  
7066 PXI-6651  
7067 PXI-2529  
7068 PCI-CAN/SW (Series 2)  
7069 PCI-CAN/SW2 (Series 2)  
706a PXI-8463 (Series 2, 1 port)  
706b PXI-8463 (Series 2, 2 ports)  
7073 PCI-6723

7074 PXI-7833R  
7075 PXI-6552  
7076 PCI-6552  
707c PXI-1428  
707e PXI-4462  
7080 PXI-8430/2 (RS-232) Interface  
7081 PXI-8431/2 (RS-485) Interface  
7083 PCI-7833R  
7085 PCI-6509  
7086 PXI-6528  
7087 PCI-6515  
7088 PCI-6514  
708c PXI-2568  
708d PXI-2569  
70a9 PCI-6528  
70aa PCI-6229  
70ab PCI-6259  
70ac PCI-6289  
70ad PXI-6251  
70ae PXI-6220  
70af PCI-6221  
70b0  
PCI-6220  
70b1 PXI-6229  
70b2 PXI-6259  
70b3 PXI-6289  
70b4 PCI-6250  
70b5 PXI-6221  
70b6 PCI-6280  
70b7 PCI-6254  
70b8 PCI-6251  
70b9 PXI-6250  
70ba PXI-6254  
70bb PXI-6280  
70bc PCI-6284  
70bd PCI-6281  
70be PXI-6284  
70bf PXI-6281  
70c0 PCI-6143  
70c3 PCI-6511  
70c4 PXI-7330  
70c5 PXI-7340  
70c6 PCI-7330  
70c7 PCI-7340  
70c8 PCI-6513  
70c9 PXI-6515  
70ca PCI-1405  
70cc PCI-6512

70cd PXI-6514  
70ce PXI-1405  
70cf PCIe-GPIB  
70d0 PXI-2570  
70d1 PXI-6513  
70d2 PXI-6512  
70d3 PXI-6511  
70d4 PCI-6722  
70d6 PXI-4072  
70d7 PXI-6541  
70d8 PXI-6542  
70d9 PCI-6541  
70da PCI-6542  
70db PCI-8430/2 (RS-232) Interface  
70dc PCI-8431/2 (RS-485) Interface  
70dd PXI-8430/4 (RS-232) Interface  
70de PXI-8431/4 (RS-485) Interface  
70df PCI-8430/4 (RS-232) Interface  
70e0 PCI-8431/4 (RS-485) Interface  
70e1 PXI-2532  
70e2 PXI-8430/8 (RS-232) Interface  
70e3 PXI-8431/8 (RS-485) Interface  
70e4 PCI-8430/8 (RS-232) Interface  
70e5 PCI-8431/8 (RS-485) Interface  
70e6  
PXI-8430/16 (RS-232) Interface  
70e7 PCI-8430/16 (RS-232) Interface  
70e8 PXI-8432/2 (Isolated RS-232) Interface  
70e9 PXI-8433/2 (Isolated RS-485) Interface  
70ea PCI-8432/2 (Isolated RS-232) Interface  
70eb PCI-8433/2 (Isolated RS-485) Interface  
70ec PXI-8432/4 (Isolated RS-232) Interface  
70ed PXI-8433/4 (Isolated RS-485) Interface  
70ee PCI-8432/4 (Isolated RS-232) Interface  
70ef PCI-8433/4 (Isolated RS-485) Interface  
70f0 PXI-5922  
70f1 PCI-5922  
70f2 PCI-6224  
70f3 PXI-6224  
70f6 cRIO-9101  
70f7 cRIO-9103  
70f8 cRIO-9104  
70ff PXI-6723  
7100 PXI-6722  
7104 PCIx-1429  
7105 PCIe-1429  
710a PXI-4071  
710d PXI-6143



710e PCIe-GPIB  
710f PXI-5422  
7110 PCI-5422  
7111 PXI-5441  
7119 PXI-6561  
711a PXI-6562  
711b PCI-6561  
711c PCI-6562  
7120 PCI-7390  
7121 PXI-5122EX  
7122 PCI-5122EX  
7123 PXIe-5653  
7124 PCI-6510  
7125 PCI-6516  
7126 PCI-6517  
7127 PCI-6518  
7128 PCI-6519  
7137 PXI-2575  
713c PXI-2585  
713d PXI-2586  
7142 PXI-4224  
7144  
PXI-5124  
7145 PCI-5124  
7146 PCI-6132  
7147 PXI-6132  
7148 PCI-6122  
7149 PXI-6122  
714c PXI-5114  
714d PCI-5114  
7150 PXI-2564  
7152 PCI-5640R  
7156 PXI-1044 Trigger Routing Module  
715d PCI-1426  
7167 PXI-5412  
7168 PCI-5412  
716b PCI-6230  
716c PCI-6225  
716d PXI-6225  
716f PCI-4461  
7170 PCI-4462  
7171 PCI-6010  
7174 PXI-8360  
7177 PXI-6230  
717d PCIe-6251  
717f PCIe-6259  
7187 PCI-1410  
718b PCI-6521

718c PXI-6521  
7191 PCI-6154  
7193 PXI-7813R  
7194 PCI-7813R  
7195 PCI-8254R  
7197 PXI-5402  
7198 PCI-5402  
719f PCIe-6535  
71a0 PCIe-6536  
71a3 PXI-5650  
71a4 PXI-5652  
71a5 PXI-2594  
71a7 PXI-2595  
71a9 PXI-2596  
71aa PXI-2597  
71ab PXI-2598  
71ac PXI-2599  
71ad PCI-GPIB+  
71ae PCIe-1430  
71b7 PXI-1056 Trigger Routing Module  
71b8 PXI-1045 Trigger Routing Module  
71b9 PXI-1044 Trigger Routing Module  
71bb PXI-2584  
71bc PCI-6221 (37-pin)  
71bf PCIe-1427  
71c5 PCI-6520  
71c6 PXI-2576  
71c7 cRIO-9072  
71dc PCI-1588  
71e0  
PCI-6255  
71e1 PXI-6255  
71e2 PXI-5406  
71e3 PCI-5406  
71fc PXI-4022  
7209 PCI-6233  
720a PXI-6233  
720b PCI-6238  
720c PXI-6238  
7260 PXI-5142  
7261 PCI-5142  
726d PXI-5651  
7273 PXI-4461  
7274 PXI-4462  
7279 PCI-6232  
727a PXI-6232  
727b PCI-6239  
727c PXI-6239

727e SMBus Controller

1093 75ac PXIe-8388

1093 75ad PXIe-8389

1093 7650 PXIe-8381

1093 8360 PXIe-8360

1093 8370 PXIe-8370

1093 8375 PXIe-8375

7281 PCI-6236

7282 PXI-6236

7283 PXI-2554

7288 PXIe-5611

7293 PCIe-8255R

729d cRIO-9074

72a4 PCIe-4065

72a7 PCIe-6537

72a8 PXI-5152

72a9 PCI-5152

72aa PXI-5105

72ab PCI-5105

72b8 PXI-6682

72d0 PXI-2545

72d1 PXI-2546

72d2 PXI-2547

72d3 PXI-2548

72d4 PXI-2549

72d5 PXI-2555

72d6 PXI-2556

72d7 PXI-2557

72d8 PXI-2558

72d9 PXI-2559

72e8 PXIe-6251

72e9 PXIe-6259

72ef PXI-4498

72f0 PXI-4496

72fb PXIe-6672

730e PXI-4130

730f PXI-5922EX

7310 PCI-5922EX

731c PXI-2535

731d PXI-2536

7322 PXIe-6124

7327

PXI-6529

732c VXI-8360T

7331 PXIe-5602

7332 PXIe-5601

7333 PXI-5900

7335 PXI-2533

7336 PXI-2534  
7342 PXI-4461  
7349 PXI-5154  
734a PCI-5154  
7357 PXI-4065  
7359 PXI-4495  
7370 PXI-4461  
7373 sbRIO-9601  
7374 IOtech-9601  
7375 sbRIO-9602  
7378 sbRIO-9641  
737d PXI-5124EX  
7384 PXI-7851R  
7385 PXI-7852R  
7386 PCIe-7851R  
7387 PCIe-7852R  
7390 PXI-7841R  
7391 PXI-7842R  
7392 PXI-7853R  
7393 PCIe-7841R  
7394 PCIe-7842R  
7397 sbRIO-9611  
7398 sbRIO-9612  
7399 sbRIO-9631  
739a sbRIO-9632  
739b sbRIO-9642  
73a1 PXIe-4498  
73a2 PXIe-4496  
73a5 PXIe-5641R  
73a7 PXI-8250 Chassis Monitor Module  
73a8 PXI-8511 CAN/LS  
73a9 PXI-8511 CAN/LS  
73aa PXI-8512 CAN/HS  
73ab PXI-8512 CAN/HS  
73ac PXI-8513 CAN/XS  
73ad PXI-8513 CAN/XS  
73af PXI-8516 LIN  
73b1 PXI-8517 FlexRay  
73b2 PXI-8531 CANopen  
73b3 PXI-8531 CANopen  
73b4 PXI-8532 DeviceNet  
73b5 PXI-8532 DeviceNet  
73b6 PCI-8511 CAN/LS  
73b7 PCI-8511 CAN/LS  
73b8 PCI-8512 CAN/HS  
73b9  
PCI-8512 CAN/HS  
73ba PCI-8513 CAN/XS

73bb PCI-8513 CAN/XS  
73bd PCI-8516 LIN  
73bf PCI-8517 FlexRay  
73c0 PCI-8531 CANopen  
73c1 PCI-8531 CANopen  
73c2 PCI-8532 DeviceNet  
73c3 PCI-8532 DeviceNet  
73c5 PXIe-2527  
73c6 PXIe-2529  
73c8 PXIe-2530  
73c9 PXIe-2532  
73ca PXIe-2569  
73cb PXIe-2575  
73cc PXIe-2593  
73d5 PXI-7951R  
73d6 PXI-7952R  
73d7 PXI-7953R  
73e1 PXI-7854R  
73ec PXI-7954R  
73ed cRIO-9073  
73f0 PXI-5153  
73f1 PCI-5153  
73f4 PXI-2515  
73f6 cRIO-9111  
73f7 cRIO-9112  
73f8 cRIO-9113  
73f9 cRIO-9114  
73fa cRIO-9116  
73fb cRIO-9118  
7404 PXI-4132  
7405 PXIe-6674T  
7406 PXIe-6674  
740e PCIe-8430/16 (RS-232) Interface  
740f PCIe-8430/8 (RS-232) Interface  
7410 PCIe-8431/16 (RS-485) Interface  
7411 PCIe-8431/8 (RS-485) Interface  
7414 PCIe-GPIB+  
741c PXI-5691  
741d PXI-5695  
743c CSC-3059  
7448 PXI-2510  
7454 PXI-2512  
7455 PXI-2514  
7456 PXIe-2512  
7457 PXIe-2514  
745a PXI-6682H  
745e PXI-5153EX  
745f PCI-5153EX

7460 PXI-5154EX  
7461  
PCI-5154EX  
746d PXIe-5650  
746e PXIe-5651  
746f PXIe-5652  
7472 PXI-2800  
7495 PXIe-5603  
7497 PXIe-5605  
74ae PXIe-2515  
74b4 PXI-2531  
74b5 PXIe-2531  
74c1 PXIe-8430/16 (RS-232) Interface  
74c2 PXIe-8430/8 (RS-232) Interface  
74c3 PXIe-8431/16 (RS-485) Interface  
74c4 PXIe-8431/8 (RS-485) Interface  
74d5 PXIe-5630  
74d9 PCIe-8432/2 (Isolated RS-232) Interface  
74da PCIe-8433/2 (Isolated RS-485) Interface  
74db PCIe-8432/4 (Isolated RS-232) Interface  
74dc PCIe-8433/4 (Isolated RS-485) Interface  
74e8 NI 9148  
7515 PCIe-8430/2 (RS-232) Interface  
7516 PCIe-8430/4 (RS-232) Interface  
7517 PCIe-8431/2 (RS-485) Interface  
7518 PCIe-8431/4 (RS-485) Interface  
751b cRIO-9081  
751c cRIO-9082  
7528 PXIe-4497  
7529 PXIe-4499  
752a PXIe-4492  
7539 NI 9157  
753a NI 9159  
7598 PXI-2571  
75a4 PXI-4131A  
75b1 PCIe-7854R  
75ba PXI-2543  
75bb PXIe-2543  
75e5 PXI-6683  
75e6 PXI-6683H  
75ef PXIe-5632  
761c VXI-8360LT  
761f PXI-2540  
7620 PXIe-2540  
7621  
PXI-2541  
7622 PXIe-2541  
7626 NI 9154

7627 NI 9155  
7638 PXI-2720  
7639 PXI-2722  
763a PXIe-2725  
763b PXIe-2727  
763c PXI-4465  
764b PXIe-2790  
764c PXI-2520  
764d PXI-2521  
764e PXI-2522  
764f PXI-2523  
7652 PXIe-4080  
7654 PXI-2796  
7655 PXI-2797  
7656 PXI-2798  
7657 PXI-2799  
765d PXI-2542  
765e PXIe-2542  
765f PXI-2544  
7660 PXIe-2544  
766d PCIe-6535B  
766e PCIe-6536B  
766f PCIe-6537B  
76a3 PXIe-6535B  
76a4 PXIe-6536B  
76a5 PXIe-6537B  
76d8 PXIe-4081  
76d9 PXIe-4082  
77a8 PXIe-6375  
783e PXI-8368  
7882 PXIe-6376  
7883 PXIe-6378  
799e PXIe-6386  
799f PXIe-6396  
9020 PXI-2501  
9030 PXI-2503  
9040 PXI-2527  
9050 PXI-2565  
9060 PXI-2590  
9070 PXI-2591  
9080 PXI-2580  
9090 PCI-4021  
90a0 PXI-4021  
a001 PCI-MXI-2  
b001 PCI-1408  
b011 PXI-1408  
b021 PCI-1424  
b022 PXI-1424

b031 PCI-1413  
b041 PCI-1407  
b051 PXI-1407  
b061 PCI-1411  
b071 PCI-1422  
b081 PXI-1422  
b091 PXI-1411  
b0b1 PCI-1409  
b0c1 PXI-1409  
b0e1 PCI-1428

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PXIE/PCIe Device

1093 728a PXIe-5421  
1093 728b PXIe-5442  
1093 728d PXIe-5451  
1093 72a2 PXIe-5122  
1093 72da PXIe-5422  
1093 72f7 PXIe-6535  
1093 72f8 PXIe-6536  
1093 72f9 PXIe-6537  
1093 7326 PCIe-6509  
1093 736c PXIe-4140  
1093 738b PXIe-5622  
1093 73c4 PXIe-5450  
1093 73c7 PXIe-6545  
1093 73d4 PXIe-6544  
1093 7425 PCIe-6320  
1093 7427 PCIe-6321  
1093 7428 PXIe-6323  
1093 7429 PCIe-6323  
1093 742a PXIe-6341  
1093 742b PCIe-6341  
1093 742c PXIe-6343  
1093 742d PCIe-6343  
1093 742f PCIe-6351  
1093 7431 PCIe-6353  
1093 7432 PXIe-6361  
1093 7433 PCIe-6361  
1093 7434 PXIe-6363  
1093 7435 PCIe-6363  
1093 7436 PXIe-6356  
1093 7437 PXIe-6358  
1093 7438 PXIe-6366  
1093 7439 PXIe-6368  
1093 7468 PXIe-5185  
1093 7469 PXIe-5186  
1093 7492 PXIe-4300  
1093 7498 PXIe-6548



1093 7499 PXIe-6547  
1093 74a8 PXIe-4330  
1093 74a9 PXIe-4331  
1093 74b1 PXIe-4154  
1093 74b2 PXIe-4353  
1093 74b6 PCIe-1433  
1093 74cd  
PXIe-5643R  
1093 74d0 PXIe-7961R  
1093 74dd PXIe-6376  
1093 74de PXIe-6378  
1093 74e2 PXIe-7962R  
1093 74e3 PXIe-7965R  
1093 74e5 PXIe-4844  
1093 74f3 PCIe-5140  
1093 753c PXIe-1435  
1093 7548 PXIe-5622 (25MHz DDC)  
1093 754d PCIe-5155  
1093 7551 PXIe-6556  
1093 7553 PCIe-1473R  
1093 7570 PCIe-1474R  
1093 7571 PXIe-1475R  
1093 7572 PXIe-1476R  
1093 75a2 PXIe-5693  
1093 75a3 PXIe-5694  
1093 75a5 PXIe-4141  
1093 75ce PXIe-7966R  
1093 75cf PXIe-4357  
1093 75d2 PXIe-RevB-5643R  
1093 75d3 PXIe-5644R  
1093 75ee PXIe-5645R  
1093 7613 PXIe-6555  
1093 7619 PXIe-5185  
1093 761a PXIe-5186  
1093 7629 PXIe-4142  
1093 762a PXIe-4143  
1093 762b PXIe-4138  
1093 762c PXIe-4144  
1093 762d PXIe-4145  
1093 762e PXIe-5606  
1093 7644 PXIe-4841  
1093 764a PCIe-8237R-S  
1093 7658 PXIe-5162 (4CH)  
1093 76ab PXIe-4322  
1093 76ad PXIe-4112  
1093 76ae PXIe-4113  
1093 76b5 PXIe-7971R  
1093 76b6 PXIe-7972R

1093 76b7 PXIe-7975R  
1093  
76b8 PXIe-5696  
1093 76b9 PXIe-5654  
1093 76c8 PXIe-6614  
1093 76c9 PXIe-6612  
1093 76cb PXIe-5646R  
1093 76cc PXIe-5162 (2CH)  
1093 76ce CVS-1459  
1093 76d0 PXIe-5160 (2CH)  
1093 76d1 PXIe-5160 (4CH)  
1093 76dc PXIe-4610  
1093 76ec PXIe-2524  
1093 76ed PXIe-2525  
1093 76ee PXIe-2526  
1093 76ef PXIe-2737  
1093 76f0 PXIe-2738  
1093 76f1 PXIe-2739  
1093 76fb PCIE-1473R-LX110  
1093 76fc PXIe-5105  
1093 76fd PXIe-5114  
1093 76fe PXIe-5644R  
1093 76ff PXIe-5644R  
1093 7700 PXIe-5644R  
1093 7701 PXIe-5645R  
1093 7702 PXIe-5645R  
1093 7703 PXIe-5645R  
1093 770c PXIe-4139  
1093 7711 PXIe-4464  
1093 7712 PXIe-4463  
1093 7716 PCIE-6612  
1093 771d Unconfigured CA4 Switch  
1093 771e PXIe-4339  
1093 7735 cRIO-9033  
1093 773e PXIe-5624R  
1093 774b cRIO-9031  
1093 774d cRIO-9034  
1093 7755 cRIO-9030  
1093 7768 PXIe-2747  
1093 7769 PXIe-2748  
1093 776a PXIe-2746  
1093 7777 PXIe-7976R  
1093 7782 PXIe-5646R  
1093 7783  
PXIe-5646R  
1093 7784 PXIe-5646R  
1093 7790 PXIe-5170R (4CH)  
1093 7791 PXIe-5170R (8CH)

1093 7793 PXIe-5171R (8CH)  
1093 77a5 PXIe-6345  
1093 77a6 PXIe-6355  
1093 77a7 PXIe-6365  
1093 77a8 PXIe-6375  
1093 77aa CVS-1458  
1093 77ad IC-3173  
1093 77b4 PXIe-7820R  
1093 77b5 PXIe-7821R  
1093 77b6 PXIe-7822R  
1093 77b9 cRIO-9038  
1093 77ba PXIe-4136  
1093 77bb PXIe-4137  
1093 77c0 PXIe-5624R  
1093 77c1 PXIe-5624R  
1093 77c2 PXIe-5624R  
1093 77ca PXIe-6738  
1093 77cb PXIe-6739  
1093 77db cRIO-9035  
1093 77dc cRIO-9036  
1093 77dd cRIO-9039  
1093 7802 PXIe-4302  
1093 7803 PXIe-4303  
1093 7805 PXIe-4305  
1093 786f PXIe-4163  
1093 788e PXIe-4304  
1093 78f8 NI FlexRIO Module (KU035)  
1093 78f9 NI FlexRIO Module (KU040)  
1093 78fa NI FlexRIO Module (KU060)  
1093 78ff PXIe-4162  
1093 7995 PXIe-7911R  
1093 7996 PXIe-7912R  
1093 7997 PXIe-7915R  
1093 79d3 NI FlexRIO PCIe Module (KU035)  
1093 79d4 NI FlexRIO PCIe Module (KU040)  
1093  
79d5 NI FlexRIO PCIe Module (KU060)  
c801 PCI-GPIB  
c811 PCI-GPIB+  
c821 PXI-GPIB  
c831 PMC-GPIB  
c840 PCI-GPIB  
d130 PCI-232/2 Interface  
d140 PCI-232/4 Interface  
d150 PCI-232/8 Interface  
d160 PCI-485/2 Interface  
d170 PCI-485/4 Interface  
d190 PXI-8422/2 (Isolated RS-232) Interface

d1a0 PXI-8422/4 (Isolated RS-232) Interface  
d1b0 PXI-8423/2 (Isolated RS-485) Interface  
d1c0 PXI-8423/4 (Isolated RS-485) Interface  
d1d0 PXI-8420/2 (RS-232) Interface  
d1e0 PXI-8420/4 (RS-232) Interface  
d1f0 PXI-8420/8 (RS-232) Interface  
d1f1 PXI-8420/16 (RS-232) Interface  
d230 PXI-8421/2 (RS-485) Interface  
d240 PXI-8421/4 (RS-485) Interface  
d250 PCI-232/2 (Isolated) Interface  
d260 PCI-485/2 (Isolated) Interface  
d270 PCI-232/4 (Isolated) Interface  
d280 PCI-485/4 (Isolated) Interface  
d290 PCI-485/8 Interface  
d2a0 PXI-8421/8 (RS-485) Interface  
d2b0 PCI-232/16 Interface  
e111 PCI-CAN  
e131 PXI-8461 (1 port)  
e141 PCI-CAN/LS  
e151 PXI-8460 (1 port)  
e211  
PCI-CAN/2  
e231 PXI-8461 (2 ports)  
e241 PCI-CAN/LS2  
e251 PXI-8460 (2 ports)  
e261 PCI-CAN/DS  
e271 PXI-8462  
f110 VMEpc-650  
f120 VXIpc-650  
fe00 VXIpc-87x  
fe41 VXIpc-860  
fe51 VXIpc-74x  
fe61 VXIpc-850  
fe70 VXIpc-880  
1094 First International Computers [FIC]  
# nee CMD Technology Inc  
1095 Silicon Image, Inc.  
0240 Adaptec AAR-1210SA SATA HostRAID Controller  
0242 AAR-1220SA SATA RAID Controller  
0640 PCI0640  
0643 PCI0643  
0646 PCI0646  
0647 PCI0647  
0648 PCI0648  
1043 8025 CUBX motherboard  
0649 SiI 0649 Ultra ATA/100 PCI to ATA Host Controller  
0e11 005d Integrated Ultra ATA-100 Dual Channel Controller  
0e11 007e Integrated Ultra ATA-100 IDE RAID Controller

101e 0649 AMI MegaRAID IDE 100 Controller  
0650 PBC0650A  
0670 USB0670  
1095 0670 USB0670  
0673 USB0673  
0680 PCI0680 Ultra ATA-133 Host Controller  
1095 0680 SiI 0680 ATA/133 Controller  
1095 3680 Winic W-680 (Silicon Image 680 based)  
3112 SiI 3112 [SATALink/SATARaid] Serial ATA  
Controller  
1095 3112 SiI 3112 SATALink Controller  
1095 6112 SiI 3112 SATARaid Controller  
9005 0250 SATAConnect 1205SA Host Controller  
3114 SiI 3114 [SATALink/SATARaid] Serial ATA Controller  
1043 8167 A8N-SLI Deluxe/Premium Mainboard  
1095 3114 SiI 3114 SATALink Controller  
1095 6114 SiI 3114 SATARaid Controller  
3124 SiI 3124 PCI-X Serial ATA Controller  
1095 3124 SiI 3124 PCI-X Serial ATA Controller  
3132 SiI 3132 Serial ATA Raid II Controller  
3512 SiI 3512 [SATALink/SATARaid] Serial ATA Controller  
1095 3512 SiI 3512 SATALink Controller  
1095 6512 SiI 3512 SATARaid Controller  
3531 SiI 3531 [SATALink/SATARaid] Serial ATA Controller  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
1096 Alacron  
1097 Appian Technology  
1098 Quantum Designs (H.K.) Ltd  
0001 QD-8500  
0002 QD-8580  
1099 Samsung Electronics Co., Ltd  
109a Packard Bell  
109b Gemlight Computer Ltd.  
109c Megachips Corporation  
109d Zida Technologies Ltd.  
109e Brooktree Corporation  
0310 Bt848  
Video Capture  
032e Bt878 Video Capture  
0350 Bt848 Video Capture  
0351 Bt849A Video capture  
0369 Bt878 Video Capture  
1002 0001 TV-Wonder  
1002 0003 TV-Wonder/VE  
036c Bt879(??) Video Capture  
13e9 0070 Win/TV (Video Section)  
036e Bt878 Video Capture  
0000 0001 Euresys Picolo PCIe

0000 0002 Euresys PICOLO Pro 2  
0000 0004 Euresys PICOLO Pro 3E  
0070 13eb WinTV Series  
0070 ff01 Viewcast Osprey 200  
0071 0101 DigiTV PCI  
107d 6606 WinFast TV 2000  
11bd 0012 PCTV pro (TV + FM stereo receiver)  
11bd 001c PCTV Sat (DBC receiver)  
127a 0001 Bt878 Mediastream Controller NTSC  
127a 0002 Bt878 Mediastream Controller PAL BG  
127a 0003 Bt878a Mediastream Controller PAL BG  
127a 0048 Bt878/832 Mediastream Controller  
144f 3000 MagicTVView CPH060 - Video  
1461 0002 TV98 Series (TV/No FM/Remote)  
1461 0003 AverMedia UltraTV PCI 350  
1461 0004 AVerTV WDM Video Capture  
1461 0761 AVerTV DVB-T  
1461 0771 AverMedia AVerTV DVB-T 771  
14f1 0001  
Bt878 Mediastream Controller NTSC  
14f1 0002 Bt878 Mediastream Controller PAL BG  
14f1 0003 Bt878a Mediastream Controller PAL BG  
14f1 0048 Bt878/832 Mediastream Controller  
1805 0101 Euresys PICOLO Tetra  
1805 0102 Euresys PICOLO Tetra  
1805 0103 Euresys PICOLO Tetra  
1805 0104 Euresys PICOLO Tetra  
1805 0105 Euresys PICOLO Tetra  
1805 0106 Euresys PICOLO Tetra  
1805 0107 Euresys PICOLO Tetra  
1805 0108 Euresys PICOLO Tetra  
1805 0201 Euresys PICOLO Tetra-X  
1805 0202 Euresys PICOLO Tetra-X  
1805 0203 Euresys PICOLO Tetra-X  
1805 0204 Euresys PICOLO Tetra-X  
1805 0401 Euresys PICOLO Tymo  
1805 0402 Euresys PICOLO Tymo  
1805 0403 Euresys PICOLO Tymo  
1805 0404 Euresys PICOLO Tymo  
1805 1001 Euresys PICOLO Junior 4  
1822 0001 VisionPlus DVB card  
1851 1850 FlyVideo'98 - Video  
1851 1851 FlyVideo II  
1852 1852 FlyVideo'98 - Video (with FM Tuner)  
18ac d500 DViCO FusionHDTV5 Lite  
270f fc00 Digitop DTT-1000  
# Vendor/ID appear to be randomly

chosen  
aa00 1460 Spectra8 CardA Input0  
# Vendor/ID appear to be randomly chosen  
aa01 1461 Spectra8 CardA Input1  
# Vendor/ID appear to be randomly chosen  
aa02 1462 Spectra8 CardA Input2  
# Vendor/ID appear to be randomly chosen  
aa03 1463 Spectra8 CardA Input3  
# Vendor/ID appear to be randomly chosen  
aa04 1464 Spectra8 CardB Input0  
# Vendor/ID appear to be randomly chosen  
aa05 1465 Spectra8 CardB Input1  
# Vendor/ID appear to be randomly chosen  
aa06 1466 Spectra8 CardB Input2  
# Vendor/ID appear to be randomly chosen  
aa07 1467 Spectra8 CardB Input3  
# Vendor/ID appear to be randomly chosen  
aa08 1468 Spectra8 CardC Input0  
# Vendor/ID appear to be randomly chosen  
aa09 1469 Spectra8 CardC Input1  
# Vendor/ID appear to be randomly chosen  
aa0a 146a Spectra8 CardC Input2  
# Vendor/ID appear to be randomly chosen  
aa0b 146b Spectra8 CardC Input3  
# Vendor/ID appear to be randomly chosen  
aa0c 146c Spectra8 CardD Input0  
# Vendor/ID appear to be randomly chosen  
aa0d  
146d Spectra8 CardD Input1  
# Vendor/ID appear to be randomly chosen  
aa0e 146e Spectra8 CardD Input2  
# Vendor/ID appear to be randomly chosen  
aa0f 146f Spectra8 CardD Input3  
bd11 1200 PCTV pro (TV + FM stereo receiver)  
036f Bt879 Video Capture  
127a 0044 Bt879 Video Capture NTSC  
127a 0122 Bt879 Video Capture PAL I  
127a 0144 Bt879 Video Capture NTSC  
127a 0222 Bt879 Video Capture PAL BG  
127a 0244 Bt879a Video Capture NTSC  
127a 0322 Bt879 Video Capture NTSC  
127a 0422 Bt879 Video Capture NTSC  
127a 1122 Bt879 Video Capture PAL I  
127a 1222 Bt879 Video Capture PAL BG  
127a 1322 Bt879 Video Capture NTSC  
127a 1522 Bt879a Video Capture PAL I  
127a 1622 Bt879a Video Capture PAL BG  
127a 1722 Bt879a Video Capture NTSC

14f1 0044 Bt879 Video Capture NTSC  
14f1 0122 Bt879 Video Capture PAL I  
14f1 0144 Bt879 Video Capture NTSC  
14f1 0222 Bt879 Video Capture PAL BG  
14f1 0244 Bt879a Video Capture NTSC  
14f1 0322 Bt879 Video Capture NTSC  
14f1  
0422 Bt879 Video Capture NTSC  
14f1 1122 Bt879 Video Capture PAL I  
14f1 1222 Bt879 Video Capture PAL BG  
14f1 1322 Bt879 Video Capture NTSC  
14f1 1522 Bt879a Video Capture PAL I  
14f1 1622 Bt879a Video Capture PAL BG  
14f1 1722 Bt879a Video Capture NTSC  
1851 1850 FlyVideo'98 - Video  
1851 1851 FlyVideo II  
1852 1852 FlyVideo'98 - Video (with FM Tuner)  
0370 Bt880 Video Capture  
1851 1850 FlyVideo'98  
1851 1851 FlyVideo'98 EZ - video  
1852 1852 FlyVideo'98 (with FM Tuner)  
0878 Bt878 Audio Capture  
0000 0001 Euresys Pico PCIe  
0000 0002 Euresys PICOLO Pro 2 (Audio Section)  
0000 0004 Euresys PICOLO Pro 3E (Audio Section)  
0070 13eb WinTV Series  
0070 ff01 Viewcast Osprey 200  
0071 0101 DigiTV PCI  
1002 0001 TV-Wonder  
1002 0003 TV-Wonder/VE  
11bd 0012 PCTV pro (TV + FM stereo receiver, audio section)  
11bd 001c PCTV Sat (DBC receiver)  
127a 0001 Bt878 Video Capture (Audio Section)  
127a 0002 Bt878 Video Capture (Audio Section)  
127a  
0003 Bt878 Video Capture (Audio Section)  
127a 0048 Bt878 Video Capture (Audio Section)  
13e9 0070 Win/TV (Audio Section)  
144f 3000 MagicTView CPH060 - Audio  
1461 0002 Avermedia PCTV98 Audio Capture  
1461 0003 UltraTV PCI 350  
1461 0004 AVerTV WDM Audio Capture  
1461 0761 AVerTV DVB-T  
1461 0771 AverMedia AVerTV DVB-T 771  
14f1 0001 Bt878 Video Capture (Audio Section)  
14f1 0002 Bt878 Video Capture (Audio Section)  
14f1 0003 Bt878 Video Capture (Audio Section)  
14f1 0048 Bt878 Video Capture (Audio Section)



1805 0101 Euresys PICOLO Tetra (Audio Section)  
1805 0102 Euresys PICOLO Tetra (Audio Section)  
1805 0103 Euresys PICOLO Tetra (Audio Section)  
1805 0104 Euresys PICOLO Tetra (Audio Section)  
1805 0105 Euresys PICOLO Tetra (Audio Section)  
1805 0106 Euresys PICOLO Tetra (Audio Section)  
1805 0107 Euresys PICOLO Tetra (Audio Section)  
1805 0108 Euresys PICOLO Tetra (Audio Section)  
1805 0201 Euresys PICOLO Tetra-X (Audio Section)  
1805  
0202 Euresys PICOLO Tetra-X (Audio Section)  
1805 0203 Euresys PICOLO Tetra-X (Audio Section)  
1805 0204 Euresys PICOLO Tetra-X (Audio Section)  
1805 0401 Euresys PICOLO Tymo (Audio Section)  
1805 0402 Euresys PICOLO Tymo (Audio Section)  
1805 0403 Euresys PICOLO Tymo (Audio Section)  
1805 0404 Euresys PICOLO Tymo (Audio Section)  
1805 1001 Euresys PICOLO Junior 4 (Audio Section)  
1822 0001 VisionPlus DVB Card  
18ac d500 DViCO FusionHDTV5 Lite  
270f fc00 Digitop DTT-1000  
bd11 1200 PCTV pro (TV + FM stereo receiver, audio section)  
0879 Bt879 Audio Capture  
127a 0044 Bt879 Video Capture (Audio Section)  
127a 0122 Bt879 Video Capture (Audio Section)  
127a 0144 Bt879 Video Capture (Audio Section)  
127a 0222 Bt879 Video Capture (Audio Section)  
127a 0244 Bt879 Video Capture (Audio Section)  
127a 0322 Bt879 Video Capture (Audio Section)  
127a 0422 Bt879 Video Capture (Audio Section)  
127a 1122 Bt879 Video Capture (Audio Section)  
127a 1222 Bt879  
Video Capture (Audio Section)  
127a 1322 Bt879 Video Capture (Audio Section)  
127a 1522 Bt879 Video Capture (Audio Section)  
127a 1622 Bt879 Video Capture (Audio Section)  
127a 1722 Bt879 Video Capture (Audio Section)  
14f1 0044 Bt879 Video Capture (Audio Section)  
14f1 0122 Bt879 Video Capture (Audio Section)  
14f1 0144 Bt879 Video Capture (Audio Section)  
14f1 0222 Bt879 Video Capture (Audio Section)  
14f1 0244 Bt879 Video Capture (Audio Section)  
14f1 0322 Bt879 Video Capture (Audio Section)  
14f1 0422 Bt879 Video Capture (Audio Section)  
14f1 1122 Bt879 Video Capture (Audio Section)  
14f1 1222 Bt879 Video Capture (Audio Section)  
14f1 1322 Bt879 Video Capture (Audio Section)  
14f1 1522 Bt879 Video Capture (Audio Section)

14f1 1622 Bt879 Video Capture (Audio Section)  
14f1 1722 Bt879 Video Capture (Audio Section)  
0880 Bt880 Audio Capture  
2115 BtV 2115 Mediastream controller  
2125 BtV 2125 Mediastream controller  
2164 BtV 2164  
2165 BtV  
2165  
8230 Bt8230 ATM Segment/Reassembly Ctrlr (SRC)  
8472 Bt8472  
8474 Bt8474  
109f Trigem Computer Inc.  
10a0 Meidensha Corporation  
10a1 Juko Electronics Ind. Co. Ltd  
10a2 Quantum Corporation  
10a3 Everex Systems Inc  
10a4 Globe Manufacturing Sales  
10a5 Smart Link Ltd.  
3052 SmartPCI562 56K Modem  
5449 SmartPCI561 modem  
10a6 Informtech Industrial Ltd.  
10a7 Benchmarq Microelectronics  
10a8 Sierra Semiconductor  
0000 STB Horizon 64  
10a9 Silicon Graphics Intl. Corp.  
0001 Crosstalk to PCI Bridge  
0002 Linc I/O controller  
0003 IOC3 I/O controller  
0004 O2 MACE  
0005 RAD Audio  
0006 HPCEX  
0007 RPCEX  
0008 DiVO VIP  
0009 AceNIC Gigabit Ethernet  
10a9 8002 AceNIC Gigabit Ethernet  
0010 AMP Video I/O  
0011 GRIP  
0012 SGH PSHAC GSN  
0208 SSIM1 SAS Adapter  
1001 Magic Carpet  
1002 Lithium  
1003 Dual JPEG 1  
1004 Dual JPEG 2  
1005 Dual JPEG 3  
1006 Dual JPEG 4  
1007 Dual JPEG 5  
1008 Cesium  
100a IOC4 I/O controller

1504 SSIM1 Fibre Channel Adapter  
2001  
Fibre Channel  
2002 ASDE  
4001 TIO-CE PCI Express Bridge  
4002 TIO-CE PCI Express Port  
8001 O2 1394  
8002 G-net NT  
# PCIe x1 Low Profile  
802b REACT external interrupt controller  
10aa ACC Microelectronics  
0000 ACCM 2188  
2051 2051 CPU bridge  
5842 2051 ISA bridge  
10ab Digicom  
10ac Honeywell IAC  
10ad Symphony Labs  
0001 W83769F  
0003 SL82C103  
0005 SL82C105  
0103 SL82c103  
0105 SL82c105  
0565 W83C553F/W83C554F  
10ae Cornerstone Technology  
10af Micro Computer Systems Inc  
10b0 CardExpert Technology  
10b1 Cabletron Systems Inc  
10b2 Raytheon Company  
10b3 Databook Inc  
3106 DB87144  
b106 DB87144  
10b4 STB Systems Inc  
1b1d Velocity 128 3D  
10b4 237e Velocity 4400  
10b5 PLX Technology, Inc.  
0001 i960 PCI bus interface  
0557 PCI9030 32-bit 33MHz PCI <-> IOBus Bridge  
10b5 9030 Digium Tormenta 2 T400P-SS7 or E400P-SS7 Quad T1 or E1 PCI card  
1000 PCI9030 32-bit 33MHz PCI <-> IOBus Bridge  
10b5 9030 ATCOM AT400P Quad T1 PCI card  
1024 Acromag, Inc. IndustryPack  
Carrier Card  
1042 Brandywine / jxi2, Inc. - PMC-SyncClock32, IRIG A & B, Nasa 36  
106a Dual OX16C952 4 port serial adapter [Megawolf Romulus/4]  
1076 VScom 800 8 port serial adaptor  
1077 VScom 400 4 port serial adaptor  
1078 VScom 210 2 port serial and 1 port parallel adaptor  
1103 VScom 200 2 port serial adaptor

1146 VScOm 010 1 port parallel adaptor  
1147 VScOm 020 2 port parallel adaptor  
2000 PCI9030 32-bit 33MHz PCI <-> IOBus Bridge  
10b5 9030 ATCOM AE400P Quad E1 PCI card  
2300 Euresys DOMINO Gamma  
2374 Euresys DOMINO Alpha  
2491 Euresys GRABLINK Value  
2493 Euresys GRABLINK Expert  
2540 IXXAT CAN-Interface PC-I 04/PCI  
2724 Thales PCSM Security Card  
3376 Cosateq 4 Port CAN Card  
4000 PCI9030 32-bit 33MHz PCI <-> IOBus Bridge  
10b5 9030 Tormenta 3 Varion V400P/ATCOM TE400P Quad E1/T1/J1 PCI card  
4001 PCI9030 32-bit 33MHz PCI <-> IOBus Bridge  
10b5 9030 ATCOM A400PE Quad E1 PCI card  
4002 PCI9030 32-bit 33MHz PCI <-> IOBus Bridge  
10b5 9030 ATCOM  
A400PT Quad T1 PCI card  
6140 PCI6140 32-bit 33MHz PCI-to-PCI Bridge  
6150 PCI6150 32-bit 33MHz PCI-to-PCI Bridge  
6152 PCI6152 32-bit 66MHz PCI-to-PCI Bridge  
6154 PCI6154 64-bit 66MHz PCI-to-PCI Bridge  
6254 PCI6254 64-bit 66MHz PCI-to-PCI Bridge  
6466 PCI6466 64-bit 66MHz PCI-to-PCI Bridge  
6520 PCI6520 64-bit 133MHz PCI-X-to-PCI-X Bridge  
6540 PCI6540 64-bit 133MHz PCI-X-to-PCI-X Bridge  
1775 1100 CR11 Single Board Computer  
4c53 10e0 PSL09 PrPMC  
6541 PCI6540/6466 PCI-PCI bridge (non-transparent mode, primary side)  
1775 1100 CR11 Single Board Computer  
4c53 10e0 PSL09 PrPMC  
6542 PCI6540/6466 PCI-PCI bridge (non-transparent mode, secondary side)  
1775 1100 CR11 Single Board Computer  
4c53 10e0 PSL09 PrPMC  
8111 PEX 8111 PCI Express-to-PCI Bridge  
8112 PEX8112 x1 Lane PCI Express-to-PCI Bridge  
8114 PEX 8114 PCI Express-to-PCI/PCI-X Bridge  
8311 PEX8311 x1 Lane PCI Express-to-Generic Local Bus Bridge  
8505 PEX 8505 5-lane, 5-port PCI Express Switch  
8508  
PEX 8508 8-lane, 5-port PCI Express Switch  
8509 PEX 8509 8-lane, 8-port PCI Express Switch  
8512 PEX 8512 12-lane, 5-port PCI Express Switch  
8516 PEX 8516 Versatile PCI Express Switch  
8517 PEX 8517 16-lane, 5-port PCI Express Switch  
8518 PEX 8518 16-lane, 5-port PCI Express Switch  
8524 PEX 8524 24-lane, 6-port PCI Express Switch  
8525 PEX 8525 24-lane, 5-port PCI Express Switch

8532 PEX 8532 Versatile PCI Express Switch  
8533 PEX 8533 32-lane, 6-port PCI Express Switch  
8547 PEX 8547 48-lane, 3-port PCI Express Switch  
8548 PEX 8548 48-lane, 9-port PCI Express Switch  
8603 PEX 8603 3-lane, 3-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8604 PEX 8604 4-lane, 4-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8605 PEX 8605 PCI Express 4-port Gen2 Switch  
8606 PEX 8606 6 Lane, 6 Port PCI Express Gen 2 (5.0 GT/s) Switch  
8608 PEX 8608 8-lane, 8-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8609 PEX 8609 8-lane, 8-Port PCI Express Gen 2 (5.0 GT/s) Switch with DMA  
8612 PEX  
8612 12-lane, 4-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8613 PEX 8613 12-lane, 3-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8614 PEX 8614 12-lane, 12-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8615 PEX 8615 12-lane, 12-Port PCI Express Gen 2 (5.0 GT/s) Switch with DMA  
8616 PEX 8616 16-lane, 4-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8617 PEX 8617 16-lane, 4-Port PCI Express Gen 2 (5.0 GT/s) Switch with P2P  
8618 PEX 8618 16-lane, 16-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8619 PEX 8619 16-lane, 16-Port PCI Express Gen 2 (5.0 GT/s) Switch with DMA  
8624 PEX 8624 24-lane, 6-Port PCI Express Gen 2 (5.0 GT/s) Switch [ExpressLane]  
13a3 1845 DX1845 Acceleration Card  
8625 PEX 8625 24-lane, 24-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8632 PEX 8632 32-lane, 12-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8636 PEX 8636 36-lane, 24-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8647 PEX 8647 48-Lane, 3-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8648 PEX 8648 48-lane, 12-Port PCI Express  
Gen 2 (5.0 GT/s) Switch  
8649 PEX 8649 48-lane, 12-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8664 PEX 8664 64-lane, 16-Port PCI Express Gen 2 (5.0 GT/s) Switch  
8680 PEX 8680 80-lane, 20-Port PCI Express Gen 2 (5.0 GT/s) Multi-Root Switch  
8696 PEX 8696 96-lane, 24-Port PCI Express Gen 2 (5.0 GT/s) Multi-Root Switch  
8717 PEX 8717 16-lane, 8-Port PCI Express Gen 3 (8.0 GT/s) Switch with DMA  
8718 PEX 8718 16-Lane, 5-Port PCI Express Gen 3 (8.0 GT/s) Switch  
8724 PEX 8724 24-Lane, 6-Port PCI Express Gen 3 (8 GT/s) Switch, 19 x 19mm FCBGA  
8725 PEX 8725 24-Lane, 10-Port PCI Express Gen 3 (8.0 GT/s) Multi-Root Switch with DMA  
8732 PEX 8732 32-lane, 8-Port PCI Express Gen 3 (8.0 GT/s) Switch  
8734 PEX 8734 32-lane, 8-Port PCI Express Gen 3 (8.0GT/s) Switch  
8747 PEX 8747 48-Lane, 5-Port PCI Express Gen 3 (8.0 GT/s) Switch  
8748 PEX 8748 48-Lane, 12-Port PCI Express Gen 3 (8 GT/s) Switch, 27 x 27mm FCBGA  
8749 PEX 8749 48-Lane, 18-Port PCI Express Gen 3 (8.0 GT/s) Multi-Root  
Switch with DMA  
87a0 PEX PCI Express Switch NT0 Port Link Interface  
87a1 PEX PCI Express Switch NT1 Port Link Interface  
87b0 PEX PCI Express Switch NT0 Port Virtual Interface  
1093 7761 PXIe-8830mc  
87b1 PEX PCI Express Switch NT1 Port Virtual Interface  
87d0 PEX PCI Express Switch DMA interface  
9016 PLX 9016 8-port serial controller

9030 PCI9030 32-bit 33MHz PCI <-> IOBus Bridge  
 10b5 2695 Hilscher CIF50-PB/DPS Profibus  
 10b5 2862 Alpermann+Velte PCL PCI LV (3V/5V): Timecode Reader Board  
 10b5 2906 Alpermann+Velte PCI TS (3V/5V): Time Synchronisation Board  
 10b5 2940 Alpermann+Velte PCL PCI D (3V/5V): Timecode Reader Board  
 10b5 2977 IXXAT iPC-I XC16/PCI CAN Board  
 10b5 2978 SH ARC-PCIu/SH ARC-PCI104/SH ARC-PCIE SOHARD ARCNET card  
 10b5 3025 Alpermann+Velte PCL PCI L (3V/5V): Timecode Reader Board  
 10b5 3068 Alpermann+Velte PCL PCI HD (3V/5V): Timecode Reader Board  
 10b5 3463 Alpermann+Velte PCL PCI D (v2) (3V/5V): Timecode Reader Board  
 10b5 3591  
 PLURA PCL PCI L (v2) (3.3V/5V): Time Code Reader Board  
 12fe 0111 CPCI-ASIO4 (ESD 4-port Serial Interface Board)  
 1369 9c01 VX222v2  
 1369 9d01 VX222-Mic  
 1369 9d02 VX222-Mic  
 1369 9e01 PCX924v2  
 1369 9f01 PCX924-Mic  
 1369 9f02 PCX924-Mic  
 1369 a001 PCX22v2  
 1369 a701 LCM220v2  
 1369 a801 LCM200  
 1397 3136 4xS0-ISDN PCI Adapter  
 1397 3137 S2M-E1-ISDN PCI Adapter  
 1518 0200 ThinkIO-C  
 15ed 1002 M CCS 8-port Serial Hot Swap  
 15ed 1003 M CCS 16-port Serial Hot Swap  
 # MIL-STD-1553B Board  
 e1c5 0001 TE1-PCI  
 e1c5 0005 TA1-PCI  
 e1c5 0006 TA1-PCI4  
 9036 9036  
 9050 PCI <-> IOBus Bridge  
 103c 10b0 82350 PCI GPIB  
 10b5 1067 IXXAT CAN i165  
 10b5 114e Wasco WITIO PCI168extended  
 10b5 1169 Wasco OPTOIO32standard 32 digital in, 32 digital out  
 10b5 1172 IK220 (Heidenhain)  
 10b5 2036 SatPak GPS  
 10b5 2221 Alpermann+Velte PCL PCI LV: Timecode Reader Board  
 10b5 2273 SH ARC-PCI SOHARD ARCNET card  
 10b5 2431 Alpermann+Velte PCL PCI D: Timecode Reader  
 Board  
 10b5 2905 Alpermann+Velte PCI TS: Time Synchronisation Board  
 10b5 3196 Goramo PLX200SYN sync serial card  
 10b5 9050 PCI-I04 PCI Passive PC/CAN Interface  
 11a9 5334 PDS4  
 12fe 0001 CAN-PCI/331 CAN bus controller

1369 8901 PCX11+ PCI  
1369 8f01 VX222  
1369 9401 PCX924  
1369 9501 PCX22  
1498 0362 TPMC866 8 Channel Serial Card  
1522 0001 RockForce 4 Port V.90 Data/Fax/Voice Modem  
1522 0002 RockForce 2 Port V.90 Data/Fax/Voice Modem  
1522 0003 RockForce 6 Port V.90 Data/Fax/Voice Modem  
1522 0004 RockForce 8 Port V.90 Data/Fax/Voice Modem  
1522 0010 RockForce2000 4 Port V.90 Data/Fax/Voice Modem  
1522 0020 RockForce2000 2 Port V.90 Data/Fax/Voice Modem  
15ed 1000 Macrolink M CCS 8-port Serial  
15ed 1001 Macrolink M CCS 16-port Serial  
15ed 1002 Macrolink M CCS 8-port Serial Hot Swap  
15ed 1003 Macrolink M CCS 16-port Serial Hot Swap  
5654 2036 OpenSwitch 6 Telephony card  
5654 3132 OpenSwitch 12 Telephony card  
5654 5634 OpenLine4 Telephony  
Card  
d531 c002 PCIIntelliCAN 2xSJA1000 CAN bus  
d84d 4006 EX-4006 1P  
d84d 4008 EX-4008 1P EPP/ECP  
d84d 4014 EX-4014 2P  
d84d 4018 EX-4018 3P EPP/ECP  
d84d 4025 EX-4025 1S(16C550) RS-232  
d84d 4027 EX-4027 1S(16C650) RS-232  
d84d 4028 EX-4028 1S(16C850) RS-232  
d84d 4036 EX-4036 2S(16C650) RS-232  
d84d 4037 EX-4037 2S(16C650) RS-232  
d84d 4038 EX-4038 2S(16C850) RS-232  
d84d 4052 EX-4052 1S(16C550) RS-422/485  
d84d 4053 EX-4053 2S(16C550) RS-422/485  
d84d 4055 EX-4055 4S(16C550) RS-232  
d84d 4058 EX-4055 4S(16C650) RS-232  
d84d 4065 EX-4065 8S(16C550) RS-232  
d84d 4068 EX-4068 8S(16C650) RS-232  
d84d 4078 EX-4078 2S(16C552) RS-232+1P  
9052 PCI9052 PCI <-> IOBus Bridge  
9054 PCI9054 32-bit 33MHz PCI <-> IOBus Bridge  
10b5 2455 Wessex Techology PHIL-PCI  
10b5 2696 Innes Corp AM Radcap card  
10b5 2717 Innes Corp Auricon card  
10b5 2844 Innes Corp TVS Encoder card  
12c7 4001 Intel Dialogic DM/V960-4T1 PCI  
12d9 0002 PCI Prosody Card rev  
1.5  
14b4 d100 Dektec DTA-100  
14b4 d114 Dektec DTA-120

16df 0011 PIKA PrimeNet MM PCI  
16df 0012 PIKA PrimeNet MM cPCI 8  
16df 0013 PIKA PrimeNet MM cPCI 8 (without CAS Signaling)  
16df 0014 PIKA PrimeNet MM cPCI 4  
16df 0015 PIKA Daytona MM  
16df 0016 PIKA InLine MM  
9056 PCI9056 32-bit 66MHz PCI <-> IOBus Bridge  
10b5 2979 CellinkBlade 11 - CPCI board VoATM AAL1  
10b5 3268 IXXAT iPC-I XC16/PCIe CAN Board  
10b5 3334 Cambridge Pixel HPx Radar Input Card  
10b5 3352 Alpermann+Velte PCL PCIe HD: Timecode Reader Board  
10b5 3353 Alpermann+Velte PCL PCIe D: Timecode Reader Board  
10b5 3354 Plura PCL PCIe LV: Timecode Reader Board  
10b5 3355 Plura PCL PCIe L: Timecode Reader Board  
10b5 3415 Plura PCIe TS: Time Synchronisation Board  
10b5 3493 Plura PCL PCIe 3G: Timecode Reader Board  
10b5 3565 Cambridge Pixel HPx Radar Output Card  
1369 c001 LX6464ES  
1369 c201 LX1616ES  
14b4 d10a DekTec DTA-110T  
14b4 d128 Dektec DTA-140  
14b4 d140 Dektec DTA-140  
1a0e  
006f Dektec DTA-111  
9060 PCI9060 32-bit 33MHz PCI <-> IOBus Bridge  
906d 9060SD  
125c 0640 Aries 16000P  
906e 9060ES  
9080 PCI9080 32-bit; 33MHz PCI <-> IOBus Bridge  
103c 10eb (Agilent) E2777B 83K Series Optical Communication Interface  
103c 10ec (Agilent) E6978-66442 PCI CIC  
10b5 1123 Sectra KK631 encryption board  
10b5 9080 9080 [real subsystem ID not set]  
12d9 0002 PCI Prosody Card  
12df 4422 4422PCI ["Do-All" Telemetry Data Acquisition System]  
1369 9601 PCX822np  
1369 a102 PCX822v2  
1369 a201 PCX442  
1369 a301 LCM440v2  
1369 a401 VX822  
1369 a402 VX822v2  
1369 a901 LCM420  
1369 aa01 VX820v2  
1517 000b ECSG-1R3ADC-PMC Clock synthesizer  
9656 PCI9656 PCI <-> IOBus Bridge  
1517 000f ECDR-GC314-PMC Receiver  
1885 0700 Tsunami FPGA PMC with Altera Stratix S40  
1885 0701 Tsunami FPGA PMC with Altera Stratix S30



9733 PEX 9733 33-lane, 9-port PCI Express Gen 3 (8.0 GT/s) Switch  
1d49 0001 ThinkSystem 1610-4P NVMe Switch Adapter  
1d49  
0002 ThinkSystem 810-4P NVMe Switch Adapter  
9749 PEX 9749 49-lane, 13-port PCI Express Gen 3 (8.0 GT/s) Switch  
1d49 0004 ThinkSystem 1610-8P NVMe Switch Adapter  
a100 Blackmagic Design DeckLink  
bb04 B&B 3PCIOSD1A Isolated PCI Serial  
c001 CronyxOmega-PCI (8-port RS232)  
d00d PCI9030 32-bit 33MHz PCI <-> IOBus Bridge  
10b5 9030 Digium Tormenta 2 T400P or E400P Quad T1 or E1 PCI card  
d33d PCI9030 32-bit 33MHz PCI <-> IOBus Bridge  
10b5 9030 Tormenta 3 Varion V401PT Quad T1/J1 PCI card  
d44d PCI9030 32-bit 33MHz PCI <-> IOBus Bridge  
10b5 17f6 Allo CP100P/E 1-port E1/T1/J1 PCI/PCIe card  
10b5 17f7 Allo CP400P/E 4-port E1/T1/J1 PCI/PCIe card  
10b5 17f8 Allo CP200P/E 2-port E1/T1/J1 PCI/PCIe card  
10b5 9030 Tormenta 3 Varion V401PE Quad E1 PCI card  
10b6 Madge Networks  
0001 Smart 16/4 PCI Ringnode  
0002 Smart 16/4 PCI Ringnode Mk2  
10b6 0002 Smart 16/4 PCI Ringnode Mk2  
10b6 0006 16/4 CardBus Adapter  
0003 Smart 16/4 PCI Ringnode Mk3  
0e11 b0fd  
Compaq NC4621 PCI, 4/16, WOL  
10b6 0003 Smart 16/4 PCI Ringnode Mk3  
10b6 0007 Presto PCI Plus Adapter  
0004 Smart 16/4 PCI Ringnode Mk1  
0006 16/4 Cardbus Adapter  
10b6 0006 16/4 CardBus Adapter  
0007 Presto PCI Adapter  
10b6 0007 Presto PCI  
0009 Smart 100/16/4 PCI-HS Ringnode  
10b6 0009 Smart 100/16/4 PCI-HS Ringnode  
000a Token Ring 100/16/4 Ringnode/Ringrunner  
10b6 000a Token Ring 100/16/4 Ringnode/Ringrunner  
000b 16/4 CardBus Adapter Mk2  
10b6 0008 16/4 CardBus Adapter Mk2  
10b6 000b 16/4 Cardbus Adapter Mk2  
000c RapidFire 3140V2 16/4 TR Adapter  
10b6 000c RapidFire 3140V2 16/4 TR Adapter  
1000 Collage 25/155 ATM Client Adapter  
1001 Collage 155 ATM Server Adapter  
10b7 3Com Corporation  
0001 3c985 1000BaseSX (SX/TX)  
# wrong ID?  
9850 0001 3c985B-SX

0013 AR5212 802.11abg NIC (3CRDAG675)  
10b7 2031 3CRDAG675 11a/b/g Wireless PCI Adapter  
0910 3C910-A01  
1006 MINI PCI type 3B Data Fax Modem  
1007 Mini PCI 56k Winmodem  
10b7 615b Mini PCI  
56K Modem  
10b7 615c Mini PCI 56K Modem  
1201 3c982-TXM 10/100baseTX Dual Port A [Hydra]  
1202 3c982-TXM 10/100baseTX Dual Port B [Hydra]  
1700 3c940 10/100/1000Base-T [Marvell]  
1043 80eb A7V600/P4P800/K8V motherboard  
10b7 0010 3C940 Gigabit LOM Ethernet Adapter  
10b7 0020 3C941 Gigabit LOM Ethernet Adapter  
147b 1407 KV8-MAX3 motherboard  
3390 3c339 TokenLink Velocity  
3590 3c359 TokenLink Velocity XL  
10b7 3590 TokenLink Velocity XL Adapter (3C359/359B)  
4500 3c450 HomePNA [Tornado]  
5055 3c555 Laptop Hurricane  
5057 3c575 Megahertz 10/100 LAN CardBus [Boomerang]  
10b7 5a57 3C575 Megahertz 10/100 LAN Cardbus PC Card  
5157 3cCFE575BT Megahertz 10/100 LAN CardBus [Cyclone]  
10b7 5b57 3C575 Megahertz 10/100 LAN Cardbus PC Card  
5257 3cCFE575CT CardBus [Cyclone]  
10b7 5c57 FE575C-3Com 10/100 LAN CardBus-Fast Ethernet  
5900 3c590 10BaseT [Vortex]  
5920 3c592 EISA 10mbps Demon/Vortex  
5950 3c595 100BaseTX [Vortex]  
5951 3c595 100BaseT4 [Vortex]  
5952 3c595  
100Base-MII [Vortex]  
5970 3c597 EISA Fast Demon/Vortex  
5b57 3c595 Megahertz 10/100 LAN CardBus [Boomerang]  
10b7 5b57 3C575 Megahertz 10/100 LAN Cardbus PC Card  
6000 3CRSHPW796 [OfficeConnect Wireless CardBus]  
6001 3com 3CRWE154G72 [Office Connect Wireless LAN Adapter]  
6055 3c556 Hurricane CardBus [Cyclone]  
6056 3c556B CardBus [Tornado]  
10b7 6556 10/100 Mini PCI Ethernet Adapter  
6560 3cCFE656 CardBus [Cyclone]  
10b7 656a 3CCFEM656 10/100 LAN+56K Modem CardBus  
6561 3cCFEM656 10/100 LAN+56K Modem CardBus  
10b7 656b 3CCFEM656 10/100 LAN+56K Modem CardBus  
6562 3cCFEM656B 10/100 LAN+Winmodem CardBus [Cyclone]  
10b7 656b 3CCFEM656B 10/100 LAN+56K Modem CardBus  
6563 3cCFEM656B 10/100 LAN+56K Modem CardBus  
10b7 656b 3CCFEM656 10/100 LAN+56K Modem CardBus

6564 3cXFEM656C 10/100 LAN+Winmodem CardBus [Tornado]  
7646 3cSOHO100-TX Hurricane  
7770 3CRWE777 PCI Wireless Adapter [Airconnect]  
7940 3c803 FDDILink UTP Controller  
7980 3c804 FDDILink SAS Controller  
7990  
3c805 FDDILink DAS Controller  
80eb 3c940B 10/100/1000Base-T  
8811 Token ring  
9000 3c900 10BaseT [Boomerang]  
9001 3c900 10Mbps Combo [Boomerang]  
9004 3c900B-TPO Etherlink XL [Cyclone]  
10b7 9004 3C900B-TPO Etherlink XL TPO 10Mb  
9005 3c900B-Combo Etherlink XL [Cyclone]  
10b7 9005 3C900B-Combo Etherlink XL Combo  
9006 3c900B-TPC Etherlink XL [Cyclone]  
900a 3c900B-FL 10base-FL [Cyclone]  
9050 3c905 100BaseTX [Boomerang]  
9051 3c905 100BaseT4 [Boomerang]  
9054 3C905B-TX Fast Etherlink XL PCI  
10b7 9054 3C905B-TX Fast Etherlink XL PCI  
9055 3c905B 100BaseTX [Cyclone]  
1028 0080 3C905B Fast Etherlink XL 10/100  
1028 0081 3C905B Fast Etherlink XL 10/100  
1028 0082 3C905B Fast Etherlink XL 10/100  
1028 0083 3C905B Fast Etherlink XL 10/100  
1028 0084 3C905B Fast Etherlink XL 10/100  
1028 0085 3C905B Fast Etherlink XL 10/100  
1028 0086 3C905B Fast Etherlink XL 10/100  
1028 0087 3C905B Fast Etherlink XL 10/100  
1028 0088 3C905B Fast Etherlink XL  
10/100  
1028 0089 3C905B Fast Etherlink XL 10/100  
1028 0090 3C905B Fast Etherlink XL 10/100  
1028 0091 3C905B Fast Etherlink XL 10/100  
1028 0092 3C905B Fast Etherlink XL 10/100  
1028 0093 3C905B Fast Etherlink XL 10/100  
1028 0094 3C905B Fast Etherlink XL 10/100  
1028 0095 3C905B Fast Etherlink XL 10/100  
1028 0096 3C905B Fast Etherlink XL 10/100  
1028 0097 3C905B Fast Etherlink XL 10/100  
1028 0098 3C905B Fast Etherlink XL 10/100  
1028 0099 3C905B Fast Etherlink XL 10/100  
10b7 9055 3C905B Fast Etherlink XL 10/100  
9056 3c905B-T4 Fast EtherLink XL [Cyclone]  
9058 3c905B Deluxe Etherlink 10/100/BNC [Cyclone]  
905a 3c905B-FX Fast Etherlink XL FX 100baseFx [Cyclone]  
9200 3c905C-TX/TX-M [Tornado]

1028 0095 3C920 Integrated Fast Ethernet Controller  
1028 0097 3C920 Integrated Fast Ethernet Controller  
1028 00b4 OptiPlex GX110  
1028 00d8 Precision 530  
1028 00fe Optiplex GX240  
1028 012a 3C920 Integrated Fast Ethernet Controller [Latitude C640]  
10b7  
1000 3C905CX-TX/TX-M Fast Etherlink for PC Management NIC  
10b7 7000 10/100 Mini PCI Ethernet Adapter  
10f1 2466 Tiger MPX S2466 (3C920 Integrated Fast Ethernet Controller)  
144d c005 X10 Laptop  
9201 3C920B-EMB Integrated Fast Ethernet Controller [Tornado]  
1043 80ab A7N8X Deluxe onboard 3C920B-EMB Integrated Fast Ethernet Controller  
9202 3Com 3C920B-EMB-WNM Integrated Fast Ethernet Controller  
9210 3C920B-EMB-WNM Integrated Fast Ethernet Controller  
9300 3CSOHO100B-TX 910-A01 [tulip]  
9800 3c980-TX Fast Etherlink XL Server Adapter [Cyclone]  
10b7 9800 3c980-TX Fast Etherlink XL Server Adapter  
9805 3c980-C 10/100baseTX NIC [Python-T]  
10b7 1201 EtherLink Server 10/100 Dual Port A  
10b7 1202 EtherLink Server 10/100 Dual Port B  
10b7 9805 3c980 10/100baseTX NIC [Python-T]  
10f1 2462 Thunder K7 S2462  
9900 3C990-TX [Typhoon]  
9902 3CR990-TX-95 [Typhoon 56-bit]  
9903 3CR990-TX-97 [Typhoon 168-bit]  
9904 3C990B-TX-M/3C990BSVR [Typhoon2]  
10b7 1000 3CR990B-TX-M  
[Typhoon2]  
10b7 2000 3CR990BSVR [Typhoon2 Server]  
9905 3CR990-FX-95/97/95 [Typhon Fiber]  
10b7 1101 3CR990-FX-95 [Typhoon Fiber 56-bit]  
10b7 1102 3CR990-FX-97 [Typhoon Fiber 168-bit]  
10b7 2101 3CR990-FX-95 Server [Typhoon Fiber 56-bit]  
10b7 2102 3CR990-FX-97 Server [Typhoon Fiber 168-bit]  
9908 3CR990SVR95 [Typhoon Server 56-bit]  
9909 3CR990SVR97 [Typhoon Server 168-bit]  
990a 3C990SVR [Typhoon Server]  
990b 3C990SVR [Typhoon Server]  
10b8 Standard Microsystems Corp [SMC]  
0005 83c170 EPIC/100 Fast Ethernet Adapter  
1055 e000 LANEPIC 10/100 [EVB171Q-PCI]  
1055 e002 LANEPIC 10/100 [EVB171G-PCI]  
10b8 a011 EtherPower II 10/100  
10b8 a014 EtherPower II 10/100  
10b8 a015 EtherPower II 10/100  
10b8 a016 EtherPower II 10/100  
10b8 a017 EtherPower II 10/100

0006 83c175 EPIC/100 Fast Ethernet Adapter  
1055 e100 LANEPIC Cardbus Fast Ethernet Adapter  
1055 e102 LANEPIC Cardbus Fast Ethernet Adapter  
1055 e300 LANEPIC Cardbus Fast Ethernet Adapter  
1055  
e302 LANEPIC Cardbus Fast Ethernet Adapter  
10b8 a012 LANEPIC Cardbus Fast Ethernet Adapter  
13a2 8002 LANEPIC Cardbus Fast Ethernet Adapter  
13a2 8006 LANEPIC Cardbus Fast Ethernet Adapter  
1000 FDC 37c665  
1001 FDC 37C922  
a011 83C170QF  
b106 SMC34C90  
# Split off ALi Corporation in 2003  
10b9 ULi Electronics Inc.  
0101 CMI8338/C3DX PCI Audio Device  
0111 C-Media CMI8738/C3DX Audio Device (OEM)  
10b9 0111 C-Media CMI8738/C3DX Audio Device (OEM)  
0780 Multi-IO Card  
0782 Multi-IO Card  
1435 M1435  
1445 M1445  
1449 M1449  
1451 M1451  
1461 M1461  
1489 M1489 Cache-Memory PCI Controller (CMP) [FinALi 486] CPU to PCI bridge  
1511 M1511 [Aladdin]  
1512 M1512 [Aladdin]  
1513 M1513 [Aladdin]  
1521 M1521 [Aladdin III]  
10b9 1521 ALI M1521 Aladdin III CPU Bridge  
1523 M1523  
10b9 1523 ALI M1523 ISA Bridge  
1531 M1531 [Aladdin IV]  
1533 M1533/M1535/M1543 PCI to ISA Bridge [Aladdin IV/V/V+]  
1014 053b ThinkPad R40e  
10b9 1533 ALi M1533 Aladdin IV/V  
ISA Bridge  
1541 M1541  
10b9 1541 ALI M1541 Aladdin V/V+ AGP System Controller  
1543 M1543  
1563 M1563 HyperTransport South Bridge  
10b9 1563 ASRock 939Dual-SATA2 Motherboard  
1849 1563 ASRock 939Dual-SATA2 Motherboard  
1573 PCI to LPC Controller  
1575 M1575 South Bridge  
1621 M1621  
1631 ALI M1631 PCI North Bridge Aladdin Pro III

1632 M1632M Northbridge+Trident  
1641 ALI M1641 PCI North Bridge Aladdin Pro IV  
1644 M1644/M1644T Northbridge+Trident  
1646 M1646 Northbridge+Trident  
1647 M1647 Northbridge [MAGiK 1 / MobileMAGiK 1]  
1651 M1651/M1651T Northbridge [Aladdin-Pro 5/5M,Aladdin-Pro 5T/5TM]  
1671 M1671 Super P4 Northbridge [AGP4X,PCI and SDR/DDR]  
1672 M1672 Northbridge [CyberALADDiN-P4]  
1681 M1681 P4 Northbridge [AGP8X,HyperTransport and SDR/DDR]  
1687 M1687 K8 Northbridge [AGP8X and HyperTransport]  
1689 M1689 K8 Northbridge [Super K8 Single Chip]  
1695 M1695 Host Bridge  
1697 M1697 HTT Host Bridge  
3141 M3141  
3143 M3143  
3145 M3145  
3147 M3147  
3149  
M3149  
3151 M3151  
3307 M3307  
3309 M3309  
3323 M3325 Video/Audio Decoder  
5212 M4803  
5215 MS4803  
5217 M5217H  
5219 M5219  
5225 M5225  
5228 M5228 ALi ATA/RAID Controller  
5229 M5229 IDE  
1014 050f ThinkPad R30  
1014 053d ThinkPad R40e  
103c 0024 Pavilion ze4400 builtin IDE  
103c 0025 XE4500 Notebook  
1043 8053 A7A266 Motherboard IDE  
1849 5229 ASRock 939Dual-SATA2 Motherboard IDE (PATA)  
5235 M5225  
5237 USB 1.1 Controller  
1014 0540 ThinkPad R40e  
103c 0024 Pavilion ze4400 builtin USB  
103c 0025 XE4500 Notebook  
104d 810f VAIO PCG-U1 USB/OHCI Revision 1.0  
10b9 5237 M5273 USB OHCI PCI adapter  
1849 5237 ASRock 939Dual-SATA2 Motherboard  
5239 USB 2.0 Controller  
10b9 5239 M5273 USB PCI adapter  
1849 5239 ASRock 939Dual-SATA2 Motherboard  
5243 M1541 PCI to AGP Controller

5246 AGP8X Controller  
5247 PCI to AGP Controller  
5249 M5249 HTT to PCI Bridge  
524b PCI Express Root Port  
524c PCI Express Root Port  
524d PCI Express Root Port  
524e  
PCI Express Root Port  
5251 M5251 P1394 OHCI 1.0 Controller  
5253 M5253 P1394 OHCI 1.1 Controller  
5261 M5261 Ethernet Controller  
5263 ULi 1689,1573 integrated ethernet.  
5281 ALi M5281 Serial ATA / RAID Host Controller  
5287 ULi 5287 SATA  
5288 ULi M5288 SATA  
1043 8056 A8R-MVP Mainboard  
5289 ULi 5289 SATA  
5450 Lucent Technologies Soft Modem AMR  
5451 M5451 PCI AC-Link Controller Audio Device  
1014 0506 ThinkPad R30  
1014 053e ThinkPad R40e  
103c 0024 Pavilion ze4400 builtin Audio  
103c 0025 XE4500 Notebook  
5453 M5453 PCI AC-Link Controller Modem Device  
5455 M5455 PCI AC-Link Controller Audio Device  
10b9 5455 ASRock 939Dual-SATA2 Motherboard  
1849 0850 ASRock 939Dual-SATA2 Motherboard  
5457 M5457 AC'97 Modem Controller  
1014 0535 ThinkPad R40e  
103c 0024 Pavilion ze4400 builtin Modem Device  
103c 0025 XE4500 Notebook  
5459 SmartLink SmartPCI561 56K Modem  
545a SmartLink SmartPCI563 56K Modem  
5461 HD Audio Controller  
5471 M5471 Memory  
Stick Controller  
5473 M5473 SD-MMC Controller  
7101 M7101 Power Management Controller [PMU]  
1014 0510 ThinkPad R30  
1014 053c ThinkPad R40e  
103c 0024 Pavilion ze4400  
103c 0025 XE4500 Notebook  
1849 7101 ASRock 939Dual-SATA2 Motherboard  
10ba Mitsubishi Electric Corp.  
0301 AccelGraphics AccelECLIPSE  
0304 AccelGALAXY A2100 [OEM Evans & Sutherland]  
0308 Tornado 3000 [OEM Evans & Sutherland]  
10dd 0024 Tornado 3000

1002 VG500 [VolumePro Volume Rendering Accelerator]

10bb Dapha Electronics Corporation

10bc Advanced Logic Research

10bd Surecom Technology

0e34 NE-34

10be Tseng Labs International Co.

10bf Most Inc

10c0 Boca Research Inc.

9135 iX3D Ultimate Rez

10c1 ICM Co., Ltd.

10c2 Auspex Systems Inc.

10c3 Samsung Semiconductors, Inc.

10c4 Award Software International Inc.

10c5 Xerox Corporation

10c6 Rambus Inc.

10c7 Media Vision

10c8 Neomagic Corporation

0001 NM2070 [MagicGraph 128]

0002 NM2090 [MagicGraph 128V]

0003 NM2093 [MagicGraph 128ZV]

0004

NM2160 [MagicGraph 128XD]

1014 00ba MagicGraph 128XD

1025 1007 MagicGraph 128XD

1028 0074 MagicGraph 128XD

1028 0075 MagicGraph 128XD

1028 007d MagicGraph 128XD

1028 007e MagicGraph 128XD

1033 802f MagicGraph 128XD

104d 801b MagicGraph 128XD

104d 802f MagicGraph 128XD

104d 830b MagicGraph 128XD

10ba 0e00 MagicGraph 128XD

10c8 0004 MagicGraph 128XD

10cf 1029 MagicGraph 128XD

10f7 8308 MagicGraph 128XD

10f7 8309 MagicGraph 128XD

10f7 830b MagicGraph 128XD

10f7 830d MagicGraph 128XD

10f7 8312 MagicGraph 128XD

0005 NM2200 [MagicGraph 256AV]

1014 00dd ThinkPad 570

1028 0088 Latitude CPi A

0006 NM2360 [MagicMedia 256ZX]

1014 0152 ThinkPad 600X

0016 NM2380 [MagicMedia 256XL+]

10c8 0016 MagicMedia 256XL+

0025 NM2230 [MagicGraph 256AV+]



0083 NM2093 [MagicGraph 128ZV+]  
8005 NM2200 [MagicMedia 256AV Audio]  
0e11 b0d1 MagicMedia 256AV Audio Device on Discovery  
0e11 b126 MagicMedia 256AV Audio Device on  
Durango  
1014 00dd ThinkPad 390/i1720/i1721  
1025 1003 MagicMedia 256AV Audio Device on TravelMate 720  
1028 0088 Latitude CPi A  
1028 008f MagicMedia 256AV Audio Device on Colorado Inspiron  
103c 0007 MagicMedia 256AV Audio Device on Voyager II  
103c 0008 MagicMedia 256AV Audio Device on Voyager III  
103c 000d MagicMedia 256AV Audio Device on Omnibook 900  
10c8 8005 MagicMedia 256AV Audio Device on FireAnt  
110a 8005 MagicMedia 256AV Audio Device  
14c0 0004 MagicMedia 256AV Audio Device  
8006 NM2360 [MagicMedia 256ZX Audio]  
8016 NM2380 [MagicMedia 256XL+ Audio]  
10c9 Dataexpert Corporation  
10ca Fujitsu Microelectr., Inc.  
10cb Omron Corporation  
# nee Mentor ARC Inc  
10cc Mai Logic Incorporated  
0660 Articia S Host Bridge  
0661 Articia S PCI Bridge  
10cd Advanced System Products, Inc  
1100 ASC1100  
1200 ASC1200 [(abp940) Fast SCSI-II]  
1300 ASC1300 / ASC3030 [ABP940-U / ABP960-U / ABP3925]  
10cd 1310 ASC1300/3030 SCSI adapter  
1195 1320 Ultra-SCSI CardBus  
PC Card REX CB31  
2300 ABP940-UW  
2500 ABP940-U2W  
2700 ABP3950-U3W  
10ce Radius  
# nee Citicorp TTI  
10cf Fujitsu Limited.  
01ef PCEA4 PCI-Express Dual Port ESCON Adapter  
1414 On-board USB 1.1 companion controller  
1415 On-board USB 2.0 EHCI controller  
1422 E8410 nVidia graphics adapter  
142d HD audio (Realtek ALC262)  
1430 82566MM Intel 1Gb copper LAN interface  
1623 PCEA4 PCI-Express Dual Port ESCON Adapter  
2001 mb86605  
200c MB86613L IEEE1394 OHCI 1.0 Controller  
2010 MB86613S IEEE1394 OHCI 1.1 Controller  
2019 MB86295S [CORAL P]

201e MB86296S [CORAL PA]  
202b MB86297A [Carmine Graphics Controller]  
10d1 FuturePlus Systems Corp.  
10d2 Molex Incorporated  
10d3 Jabil Circuit Inc  
10d4 Hualon Microelectronics  
10d5 Autologic Inc.  
10d6 Ceta  
10d7 BCM Advanced Research  
10d8 Advanced Peripherals Labs  
10d9 Macronix, Inc. [MXIC]  
0431 MX98715  
0512 MX98713  
0531 MX987x5  
1186 1200 DFE-540TX ProFAST 10/100 Adapter  
8625 MX86250  
8626 Macronix MX86251 + 3Dfx  
Voodoo Rush  
8888 MX86200  
10da Compaq IPG-Austin  
0508 TC4048 Token Ring 4/16  
3390 Tl3c3x9  
10db Rohm LSI Systems, Inc.  
10dc CERN/ECP/EDU  
0001 STAR/RD24 SCI-PCI (PMC)  
0002 TAR/RD24 SCI-PCI (PMC)  
0021 HIPPI destination  
0022 HIPPI source  
10dc ATT2C15-3 FPGA  
10dd Evans & Sutherland  
0100 Lightning 1200  
10dd 0023 Lightning 1200 15+16M  
10de NVIDIA Corporation  
0008 NV1 [STG2000X-B Series]  
0009 NV1 [NV1 Series]  
0018 NV3 [Riva 128]  
0019 NV3 [Riva 128ZX]  
0020 NV4 [Riva TNT]  
1043 0200 V3400 TNT  
1048 0c18 Erazor II SGRAM  
1048 0c19 Erazor II  
1048 0c1b Erazor II  
1048 0c1c Erazor II  
1092 0550 Viper V550  
1092 0552 Viper V550  
1092 4804 Viper V550  
1092 4808 Viper V550  
1092 4810 Viper V550

1092 4812 Viper V550  
1092 4815 Viper V550  
1092 4820 Viper V550 with TV out  
1092 4822 Viper V550  
1092 4904 Viper V550  
1092 4914 Viper V550  
1092 8225 Viper V550  
10b4 273d Velocity 4400  
10b4 273e Velocity 4400  
10b4 2740 Velocity 4400  
10de  
0020 Riva TNT  
1102 1015 Graphics Blaster CT6710  
1102 1016 Graphics Blaster RIVA TNT  
0028 NV5 [Riva TNT2 / TNT2 Pro]  
1043 0200 AGP-V3800 SGRAM  
1043 0201 AGP-V3800 SDRAM  
1043 0205 PCI-V3800  
1043 4000 AGP-V3800PRO  
1048 0c21 Synergy II  
1048 0c28 Erazor III  
1048 0c29 Erazor III  
1048 0c2a Erazor III  
1048 0c2b Erazor III  
1048 0c31 Erazor III Pro  
1048 0c32 Erazor III Pro  
1048 0c33 Erazor III Pro  
1048 0c34 Erazor III Pro  
107d 2134 WinFast 3D S320 II + TV-Out  
1092 4804 Viper V770  
1092 4a00 Viper V770  
1092 4a02 Viper V770 Ultra  
1092 5a00 RIVA TNT2/TNT2 Pro  
1092 5a40 Viper V770D AGP  
1092 6a02 Viper V770 Ultra  
1092 7a02 Viper V770 Ultra  
10de 0005 RIVA TNT2 Pro  
10de 000f Compaq NVIDIA TNT2 Pro  
1102 1020 3D Blaster RIVA TNT2  
1102 1026 3D Blaster RIVA TNT2 Digital  
1462 8806 MS-8806 AGPhantom Graphics Card  
14af 5810 Maxi Gamer Xentor  
0029 NV5 [Riva TNT2 Ultra]  
1043 0200 AGP-V3800 Deluxe  
1043 0201  
AGP-V3800 Ultra SDRAM  
1043 0205 PCI-V3800 Ultra  
1048 0c2e Erazor III Ultra

1048 0c2f Erazor III Ultra  
1048 0c30 Erazor III Ultra  
1102 1021 3D Blaster RIVA TNT2 Ultra  
1102 1029 3D Blaster RIVA TNT2 Ultra  
1102 102f 3D Blaster RIVA TNT2 Ultra  
14af 5820 Maxi Gamer Xentor 32  
4843 4f34 Dynamite  
002a NV5 [Riva TNT2]  
002b NV5 [Riva TNT2]  
002c NV5 [Vanta / Vanta LT]  
1043 0200 AGP-V3800 Combat SDRAM  
1043 0201 AGP-V3800 Combat  
1048 0c20 TNT2 Vanta  
1048 0c21 TNT2 Vanta  
1048 0c25 TNT2 Vanta 16MB  
1092 6820 Viper V730  
1102 1031 CT6938 VANTA 8MB  
1102 1034 CT6894 VANTA 16MB  
14af 5008 Maxi Gamer Phoenix 2  
002d NV5 [Riva TNT2 Model 64 / Model 64 Pro]  
1043 0200 AGP-V3800M  
1043 0201 AGP-V3800M  
1048 0c3a Erazor III LT  
1048 0c3b Erazor III LT  
107d 2137 WinFast 3D S325  
10de 0006 RIVA TNT2 Model 64/Model 64 Pro  
10de 001e M64 AGP4x  
1102 1023 CT6892 RIVA TNT2 Value  
1102 1024 CT6932 RIVA TNT2 Value 32Mb  
1102 102c CT6931  
RIVA TNT2 Value [Jumper]  
1102 1030 CT6931 RIVA TNT2 Value  
# S26361-D1243-V116  
110a 006f GM1000-16  
# S26361-D1243-V216  
110a 0081 GM1000-16  
1462 8808 MSI-8808  
14af 5620 Gamer Cougar Video Edition  
1554 1041 Pixelview RIVA TNT2 M64  
1569 002d Palit Microsystems Daytona TNT2 M64  
0034 MCP04 SMBus  
0035 MCP04 IDE  
0036 MCP04 Serial ATA Controller  
0037 MCP04 Ethernet Controller  
0038 MCP04 Ethernet Controller  
003a MCP04 AC'97 Audio Controller  
003b MCP04 USB Controller  
003c MCP04 USB Controller

003d MCP04 PCI Bridge  
003e MCP04 Serial ATA Controller  
0040 NV40 [GeForce 6800 Ultra]  
0041 NV40 [GeForce 6800]  
1043 817b V9999 Gamer Edition  
107d 2992 WinFast A400  
1458 310f Geforce 6800 GV-N6812  
0042 NV40 [GeForce 6800 LE]  
107d 299b WinFast A400 LE  
0043 NV40 [GeForce 6800 XE]  
0044 NV40 [GeForce 6800 XT]  
0045 NV40 [GeForce 6800 GT]  
1043 817d V9999GT  
1458 3140 GV-N68T256D  
0047 NV40 [GeForce 6800 GS]  
1682 2109 GeForce 6800 GS  
0048 NV40  
[GeForce 6800 XT]  
004e NV40GL [Quadro FX 4000]  
0050 CK804 ISA Bridge  
1043 815a K8N4/A8N Series Mainboard  
10f1 2865 Tomcat K8E (S2865)  
1458 0c11 GA-K8N Ultra-9 Mainboard  
1462 7100 MSI K8N Diamond  
1462 7125 K8N Neo4-F mainboard  
147b 1c1a KN8-Ultra Mainboard  
1565 3402 NF4 AM2L Mainboard  
0051 CK804 ISA Bridge  
1028 0225 PowerEdge T105 ISA Bridge  
0052 CK804 SMBus  
1028 0225 PowerEdge T105 SMBus  
1043 815a K8N4/A8N Series Mainboard  
10f1 2865 Tomcat K8E (S2865)  
1458 0c11 GA-K8N Ultra-9 Mainboard  
1462 7100 MSI K8N Diamond  
1462 7125 K8N Neo4-F mainboard  
147b 1c1a KN8-Ultra Mainboard  
1565 3402 NF4 AM2L Mainboard  
0053 CK804 IDE  
1043 815a K8N4/A8N Series Mainboard  
10f1 2865 Tomcat K8E (S2865)  
1458 5002 GA-K8N Ultra-9 Mainboard  
1462 7100 MSI K8N Diamond  
1462 7125 K8N Neo4-F mainboard  
147b 1c1a KN8-Ultra Mainboard  
1565 3402 NF4 AM2L Mainboard  
0054 CK804 Serial ATA Controller  
1028 0225 PowerEdge T105 Serial ATA

1043  
815a A8N Series Mainboard  
10f1 2865 Tomcat K8E (S2865)  
1458 b003 GA-K8N Ultra-9 Mainboard  
1462 7100 MSI K8N Diamond  
1462 7125 K8N Neo4-F mainboard  
147b 1c1a KN8-Ultra Mainboard  
1565 5401 NF4 AM2L Mainboard  
0055 CK804 Serial ATA Controller  
1028 0225 PowerEdge T105 Serial ATA  
1043 815a K8N4/A8N Series Mainboard  
10f1 2865 Tomcat K8E (S2865)  
1458 b003 GA-K8N Ultra-9 Mainboard  
1462 7125 K8N Neo4-F mainboard  
147b 1c1a KN8-Ultra Mainboard  
1565 5401 NF4 AM2L Mainboard  
0056 CK804 Ethernet Controller  
0057 CK804 Ethernet Controller  
1043 8141 K8N4/A8N Series Mainboard  
10de cb84 NF4 Lanparty  
10f1 2865 Tomcat K8E (S2865)  
1458 e000 GA-K8N Ultra-9 Mainboard  
1462 7100 MSI K8N Diamond  
1462 7125 K8N Neo4-F mainboard  
147b 1c1a KN8-Ultra Mainboard  
1565 2501 NF4 AM2L Mainboard  
0058 CK804 AC'97 Modem  
0059 CK804 AC'97 Audio Controller  
1043 812a K8N4/A8N Series Mainboard  
10f1 2865 Tomcat K8E (S2865)  
1462 7585 K8N Neo4-F mainboard  
147b  
1c1a KN8-Ultra Mainboard  
1565 8211 NF4 AM2L Mainboard  
005a CK804 USB Controller  
1028 0225 PowerEdge T105 onboard USB  
1043 815a K8N4/A8N Series Mainboard  
10f1 2865 Tomcat K8E (S2865)  
1458 5004 GA-K8N Ultra-9 Mainboard  
1462 7100 MSI K8N Diamond  
1462 7125 K8N Neo4-F mainboard  
147b 1c1a KN8-Ultra Mainboard  
1565 3402 NF4 AM2L Mainboard  
005b CK804 USB Controller  
1028 0225 PowerEdge T105 onboard USB  
1043 815a K8N4/A8N Series Mainboard  
10f1 2865 Tomcat K8E (S2865)  
1458 5004 GA-K8N Ultra-9 Mainboard

1462 7100 MSI K8N Diamond  
1462 7125 K8N Neo4-F mainboard  
147b 1c1a KN8-Ultra Mainboard  
1565 3402 NF4 AM2L Mainboard  
005c CK804 PCI Bridge  
005d CK804 PCIE Bridge  
005e CK804 Memory Controller  
1028 0225 PowerEdge T105 Memory Controller  
1043 815a A8N Series Mainboard  
10de 005e ECS Elitegroup NFORCE3-A939 motherboard.  
10f1 2865 Tomcat K8E (S2865)  
10f1 2891 Thunder K8SRE Mainboard  
1458 5000 GA-K8N Ultra-9 Mainboard  
1462  
7100 K8N Diamond Mainboard  
1462 7125 K8N Neo4-F Mainboard  
147b 1c1a KN8-Ultra Mainboard  
1565 3402 NF4 AM2L Mainboard  
005f CK804 Memory Controller  
0060 nForce2 ISA Bridge  
1043 80ad A7N8X Mainboard  
147b 1c02 NF7-S/NF7 (nVidia-nForce2) 2.X  
a0a0 03ba UK79G-1394 motherboard  
0064 nForce2 SMBus (MCP)  
147b 1c02 NF7-S/NF7 (nVidia-nForce2) 2.X  
a0a0 03bb UK79G-1394 motherboard  
0065 nForce2 IDE  
10de 0c11 nForce 2 EIDE Controller  
a0a0 03b2 UK79G-1394 motherboard  
0066 nForce2 Ethernet Controller  
1043 80a7 A7N8X Mainboard onboard nForce2 Ethernet  
10de 0c11 nForce MCP-T Networking Adapter  
a0a0 03b3 UK79G-1394 motherboard  
0067 nForce2 USB Controller  
1043 0c11 A7N8X Mainboard  
a0a0 03b4 UK79G-1394 motherboard  
0068 nForce2 USB Controller  
1043 0c11 A7N8X Mainboard  
a0a0 03b4 UK79G-1394 motherboard  
006a nForce2 AC97 Audio Controller (MCP)  
1043 8095 nForce2 AC97 Audio Controller (MCP)  
a0a0 0304 UK79G-1394 motherboard  
006b nForce  
Audio Processing Unit  
10de 006b nForce2 MCP Audio Processing Unit  
a0a0 0304 UK79G-1394 motherboard  
006c nForce2 External PCI Bridge  
006d nForce2 PCI Bridge

006e nForce2 FireWire (IEEE 1394) Controller  
a0a0 0306 UK79G-1394 motherboard  
0080 MCP2A ISA bridge  
147b 1c09 NV7 Motherboard  
0084 MCP2A SMBus  
147b 1c09 NV7 Motherboard  
0085 MCP2A IDE  
147b 1c09 NV7 Motherboard  
0086 MCP2A Ethernet Controller  
0087 MCP2A USB Controller  
147b 1c09 NV7 Motherboard  
0088 MCP2A USB Controller  
147b 1c09 NV7 Motherboard  
008a MCP2S AC'97 Audio Controller  
147b 1c09 NV7 Motherboard  
008b MCP2A PCI Bridge  
008c MCP2A Ethernet Controller  
008e nForce2 Serial ATA Controller  
0090 G70 [GeForce 7800 GTX]  
0091 G70 [GeForce 7800 GTX]  
0092 G70 [GeForce 7800 GT]  
0093 G70 [GeForce 7800 GS]  
0094 High Definition Audio  
0095 G70 [GeForce 7800 SLI]  
0097 G70 [GeForce GTS 250]  
0098 G70M [GeForce Go 7800]  
0099 G70M [GeForce Go 7800 GTX]  
009d G70GL [Quadro FX 4500]  
00a0  
NV0A [Aladdin TNT2 IGP]  
14af 5810 Maxi Gamer Xentor  
00c0 NV41 [GeForce 6800 GS]  
00c1 NV41 [GeForce 6800]  
00c2 NV41 [GeForce 6800 LE]  
00c3 NV41 [GeForce 6800 XT]  
00c5 NV41  
00c6 NV41  
00c7 NV41  
00c8 NV41M [GeForce Go 6800]  
00c9 NV41M [GeForce Go 6800 Ultra]  
00cc NV41GLM [Quadro FX Go1400]  
00cd NV42GL [Quadro FX 3450/4000 SDI]  
10de 029b Quadro FX 3450  
00ce NV41GL [Quadro FX 1400]  
00cf NV41  
00d0 nForce3 LPC Bridge  
00d1 nForce3 Host Bridge  
00d2 nForce3 AGP Bridge



00d3 CK804 Memory Controller  
00d4 nForce3 SMBus  
00d5 nForce3 IDE  
00d6 nForce3 Ethernet  
00d7 nForce3 USB 1.1  
00d8 nForce3 USB 2.0  
00d9 nForce3 Audio  
00da nForce3 Audio  
00dd nForce3 PCI Bridge  
00df CK8S Ethernet Controller  
1043 80a7 K8N-E  
105b 0c43 Winfast NF3250K8AA  
147b 1c0b NF8 Mainboard  
00e0 nForce3 250Gb LPC Bridge  
1043 813f K8N-E  
10de 0c11 Winfast NF3250K8AA  
1462 7030 K8N Neo-FSR v2.0  
147b 1c0b NF8 Mainboard  
1849 00e0 Motherboard (one of many)  
00e1 nForce3 250Gb Host Bridge  
1043 813f K8N-E  
1462 7030 K8N Neo-FSR v2.0  
147b 1c0b NF8 Mainboard  
1849 00e1 Motherboard (one of many)  
00e2 nForce3 250Gb AGP Host to PCI Bridge  
00e3 nForce3 Serial ATA Controller  
1043 813f K8N-E  
105b 0c43 Winfast NF3250K8AA  
147b 1c0b NF8 Mainboard  
1849 00e3 Motherboard (one of many)  
00e4 nForce 250Gb PCI System Management  
1043 813f K8N-E  
105b 0c43 Winfast NF3250K8AA  
1462 7030 K8N Neo-FSR v2.0  
147b 1c0b NF8 Mainboard  
1849 00e4 Motherboard (one of many)  
00e5 CK8S Parallel ATA Controller (v2.5)  
1043 813f K8N-E  
105b 0c43 Winfast NF3250K8AA  
1462 7030 K8N Neo-FSR v2.0  
147b 1c0b NF8 Mainboard  
1849 00e5 Motherboard (one of many)  
f849 00e5 Motherboard (one of many)  
00e6 CK8S Ethernet Controller  
00e7 CK8S USB Controller  
1043 813f K8N-E  
105b 0c43 Winfast NF3250K8AA

1462 7030 K8N Neo-FSR v2.0  
147b 1c0b NF8 Mainboard  
1849 00e7 Motherboard (one of many)  
00e8 nForce3 EHCI USB  
2.0 Controller  
1043 813f K8N-E  
105b 0c43 Winfast NF3250K8AA  
1462 7030 K8N Neo-FSR v2.0  
147b 1c0b NF8 Mainboard  
1849 00e8 Motherboard (one of many)  
00ea nForce3 250Gb AC'97 Audio Controller  
1043 819d K8N-E  
105b 0c43 Winfast NF3250K8AA  
1462 b010 K8N Neo-FSR v2.0  
147b 1c0b NF8 Mainboard  
00ed nForce3 250Gb PCI-to-PCI Bridge  
00ee nForce3 Serial ATA Controller 2  
00f1 NV43 [GeForce 6600 GT]  
1043 81a6 N6600GT TD 128M AGP  
1043 81c6 N6600GT TD 128M AGP  
1458 3150 GV-N66T128VP  
1554 1191 PixelView PV-N43UA (128KD)  
1682 2119 GeForce 6600 GT AGP  
00f2 NV43 [GeForce 6600]  
1554 1194 PixelView PV-N43AT (256KD)  
1682 211c GeForce 6600 256MB DDR DUAL DVI TV  
00f3 NV43 [GeForce 6200]  
00f4 NV43 [GeForce 6600 LE]  
00f5 G70/G71 [GeForce 7800 GS AGP]  
00f6 NV43 [GeForce 6800 GS/XT]  
1682 217e XFX GeForce 6800 XTreme 256MB DDR3 AGP  
00f8 NV45GL [Quadro FX 3400/4400]  
00f9 NV40 [GeForce 6800 GT/GTO/Ultra]  
10de 00f9 NV40 [GeForce 6800 GT]  
1682  
2120 GEFORCE 6800 GT PCI-E  
00fa NV39 [GeForce PCX 5750]  
00fb NV35 [GeForce PCX 5900]  
00fc NV37GL [Quadro FX 330/GeForce PCX 5300]  
00fd NV37GL [Quadro PCI-E Series]  
00fe NV38GL [Quadro FX 1300]  
00ff NV19 [GeForce PCX 4300]  
0100 NV10 [GeForce 256 SDR]  
1043 0200 AGP-V6600 SGRAM  
1043 0201 AGP-V6600 SDRAM  
1043 4008 AGP-V6600 SGRAM  
1043 4009 AGP-V6600 SDRAM  
1048 0c41 Erazor X

1048 0c43 ERAZOR X PCI  
1048 0c48 Synergy Force  
1102 102d CT6941 GeForce 256  
14af 5022 3D Prophet SE  
0101 NV10 [GeForce 256 DDR]  
1043 0202 AGP-V6800 DDR  
1043 400a AGP-V6800 DDR SGRAM  
1043 400b AGP-V6800 DDR SDRAM  
1048 0c42 Erazor X  
107d 2822 WinFast GeForce 256  
1102 102e CT6970/CT6971  
14af 5021 3D Prophet DDR-DVI  
0103 NV10GL [Quadro]  
1048 0c40 GLoria II-64  
1048 0c44 GLoria II  
1048 0c45 GLoria II  
1048 0c4a GLoria II-64 Pro  
1048 0c4b GLoria II-64 Pro DVII  
10a9 9002 VPro VR3  
0110 NV11 [GeForce2 MX/MX 400]  
1043 4015 AGP-V7100 Pro  
1043  
4021 V7100 Deluxe Combo  
1043 4031 V7100 Pro with TV output  
1048 0c60 Gladiac MX  
1048 0c61 Gladiac 511PCI  
1048 0c63 Gladiac 511TV-OUT 32MB  
1048 0c64 Gladiac 511TV-OUT 64MB  
1048 0c65 Gladiac 511TWIN  
1048 0c66 Gladiac 311  
10b0 0001 GeForce2 MX Jumbo TV  
10de 0091 Dell OEM GeForce 2 MX 400  
10de 00a1 Apple OEM GeForce2 MX  
1462 8523 MS-8852  
1462 8817 MSI GeForce2 MX400 Pro32S [MS-8817]  
14af 7102 3D Prophet II MX  
14af 7103 3D Prophet II MX Dual-Display  
1545 0023 Xtasy Rev. B2  
1554 1081 MVGA-NVG11AM(400)  
0111 NV11 [GeForce2 MX200]  
0112 NV11M [GeForce2 Go]  
0113 NV11GL [Quadro2 MXR/EX/Go]  
1028 00e5 Quadro2 Go  
0140 NV43 [GeForce 6600 GT]  
1458 3125 GV-NX66T128D  
1458 3126 GV-NX66T256DE  
1462 8939 MS-8983  
0141 NV43 [GeForce 6600]

1043 81b0 EN6600 Silencer  
107d 593a LR2A22 128MB TV OUT  
107d 597b WINFAST PX6600  
1458 3124 GV-NX66128DP Turbo Force Edition  
0142 NV43 [GeForce 6600 LE]  
0143 NV43 [GeForce 6600 VE]  
0144  
NV43M [GeForce Go 6600]  
0145 NV43 [GeForce 6610 XL]  
0146 NV43M [GeForce Go6200 TE / 6600 TE]  
0147 NV43 [GeForce 6700 XL]  
0148 NV43M [GeForce Go 6600]  
0149 NV43M [GeForce Go 6600 GT]  
014a NV43 [Quadro NVS 440]  
014b NV43  
014d NV43GL [Quadro FX 550]  
014e NV43GL [Quadro FX 540]  
014f NV43 [GeForce 6200]  
0150 NV15 [GeForce2 GTS/Pro]  
1043 4016 V7700 AGP Video Card  
1043 402a AGP-V7700  
1048 0c50 Gladiac  
1048 0c52 Gladiac-64  
107d 2840 WinFast GeForce2 GTS with TV output  
107d 2842 WinFast GeForce 2 Pro  
10de 002e GeForce2 GTS  
1462 815a MS-8815  
1462 8831 Creative GeForce2 Pro  
0151 NV15 [GeForce2 Ti]  
1043 405f V7700Ti  
1462 5506 Creative 3D Blaster GeForce2 Titanium  
1462 8364 MS-8836  
0152 NV15 [GeForce2 Ultra]  
1048 0c56 GLADIAC Ultra  
0153 NV15GL [Quadro2 Pro]  
0160 NV44 [GeForce 6500]  
0161 NV44 [GeForce 6200 TurboCache]  
0162 NV44 [GeForce 6200 SE TurboCache]  
0163 NV44 [GeForce 6200 LE]  
0164 NV44M [GeForce Go 6200]  
0165 NV44  
[Quadro NVS 285]  
0166 NV44M [GeForce Go 6400]  
0167 NV44M [GeForce Go 6200]  
0168 NV44M [GeForce Go 6400]  
0169 NV44 [GeForce 6250]  
016a NV44 [GeForce 7100 GS]  
016d NV44

016e NV44  
016f NV44  
0170 NV17 [GeForce4 MX 460]  
1462 8630 MS-8863  
0171 NV17 [GeForce4 MX 440]  
10b0 0002 Gainward Pro/600 TV  
10de 0008 Apple OEM GeForce4 MX 440  
1462 8661 G4MX440-VTP  
1462 8730 MX440SES-T (MS-8873)  
1462 8743 MS-8874  
1462 8852 GeForce4 MX440 PCI  
147b 8f00 Abit Siluro GeForce4MX440  
0172 NV17 [GeForce4 MX 420]  
1462 8730 MS-8873  
1462 8784 MS-8878  
0173 NV17 [GeForce4 MX 440-SE]  
0174 NV17M [GeForce4 440 Go]  
0175 NV17M [GeForce4 420 Go]  
0176 NV17M [GeForce4 420 Go 32M]  
103c 08b0 tc1100 tablet  
144d c005 X10 Laptop  
4c53 1090 Cx9 / Vx9 mainboard  
0177 NV17M [GeForce4 460 Go]  
0178 NV17GL [Quadro4 550 XGL]  
0179 NV17M [GeForce4 440 Go 64M]  
10de 0179 GeForce4 MX (Mac)  
017a NV17GL [Quadro NVS]  
017b NV17GL [Quadro4 550 XGL]  
017c NV17GL [Quadro4  
500 GoGL]  
017f NV17  
0181 NV18 [GeForce4 MX 440 AGP 8x]  
1043 8063 GeForce4 MX 440 AGP 8X  
1043 806f V9180 Magic  
1462 8880 MS-StarForce GeForce4 MX 440 with AGP8X  
1462 8900 MS-8890 GeForce 4 MX440 AGP8X  
1462 9350 MSI GeForce4 MX T8X with AGP8X  
147b 8f0d Siluro GF4 MX-8X  
1554 1111 PixelView MVGA-NVG18A  
0182 NV18 [GeForce4 MX 440SE AGP 8x]  
0183 NV18 [GeForce4 MX 420 AGP 8x]  
0184 NV18 [GeForce4 MX]  
0185 NV18 [GeForce4 MX 4000]  
0186 NV18M [GeForce4 448 Go]  
0187 NV18M [GeForce4 488 Go]  
0188 NV18GL [Quadro4 580 XGL]  
0189 NV18 [GeForce4 MX with AGP8X (Mac)]  
018a NV18GL [Quadro NVS 280 SD]

018b NV18GL [Quadro4 380 XGL]  
018c NV18GL [Quadro NVS 50 PCI]  
018d NV18M [GeForce4 448 Go]  
0190 G80 [GeForce 8800 GTS / 8800 GTX]  
0191 G80 [GeForce 8800 GTX]  
0192 G80 [GeForce 8800 GTS]  
0193 G80 [GeForce 8800 GTS]  
107d 20bd WinFast PX 8800 GTS TDH  
0194 G80 [GeForce 8800 Ultra]  
0197 G80GL [Tesla C870]  
019d G80GL [Quadro FX 5600]  
019e G80GL  
[Quadro FX 4600]  
01a0 nForce 220/420 NV1A [GeForce2 MX]  
01a4 nForce CPU bridge  
01ab nForce 420 Memory Controller (DDR)  
01ac nForce 220/420 Memory Controller  
01ad nForce 220/420 Memory Controller  
01b0 nForce Audio Processing Unit  
01b1 nForce AC'97 Audio Controller  
01b2 nForce ISA Bridge  
01b4 nForce PCI System Management  
01b7 nForce AGP to PCI Bridge  
01b8 nForce PCI-to-PCI bridge  
01bc nForce IDE  
01c1 nForce AC'97 Modem Controller  
01c2 nForce USB Controller  
01c3 nForce Ethernet Controller  
01d0 G72 [GeForce 7350 LE]  
01d1 G72 [GeForce 7300 LE]  
107d 5efa WinFast PX7300LE-TD128  
107d 5efb WinFast PX7300LE-TD256  
1462 0345 7300LE PCI Express Graphics Adapter  
01d2 G72 [GeForce 7550 LE]  
01d3 G72 [GeForce 7200 GS / 7300 SE]  
1043 8203 EN7300SE  
1043 8250 EN7200GS  
01d5 G72  
01d6 G72M [GeForce Go 7200]  
01d7 G72M [Quadro NVS 110M/GeForce Go 7300]  
01d8 G72M [GeForce Go 7400]  
1028 01d7 XPS M1210  
01d9 G72M [GeForce Go 7450]  
01da G72M [Quadro  
NVS 110M]  
01db G72M [Quadro NVS 120M]  
01dc G72GLM [Quadro FX 350M]  
01dd G72 [GeForce 7500 LE]

01de G72GL [Quadro FX 350]  
10de 01dc Quadro FX Go350M  
01df G72 [GeForce 7300 GS]  
01e0 nForce2 IGP2  
147b 1c09 NV7 Motherboard  
01e8 nForce2 AGP  
01ea nForce2 Memory Controller 0  
a0a0 03b9 UK79G-1394 motherboard  
01eb nForce2 Memory Controller 1  
a0a0 03b9 UK79G-1394 motherboard  
01ec nForce2 Memory Controller 2  
a0a0 03b9 UK79G-1394 motherboard  
01ed nForce2 Memory Controller 3  
a0a0 03b9 UK79G-1394 motherboard  
01ee nForce2 Memory Controller 4  
10de 01ee MSI Delta-L nForce2 memory controller  
a0a0 03b9 UK79G-1394 motherboard  
01ef nForce2 Memory Controller 5  
a0a0 03b9 UK79G-1394 motherboard  
01f0 NV1F C17 [GeForce4 MX IGP]  
a0a0 03b5 UK79G-1394 motherboard  
0200 NV20 [GeForce3]  
1043 402f AGP-V8200 DDR  
1048 0c70 GLADIAC 920  
0201 NV20 [GeForce3 Ti 200]  
1462 8503 G3Ti200 Pro VT128  
0202 NV20 [GeForce3 Ti 500]  
1043 405b V8200 T5  
1545  
002f Xtasy 6964  
0203 NV20GL [Quadro DCC]  
0211 NV48 [GeForce 6800]  
0212 NV48 [GeForce 6800 LE]  
0215 NV48 [GeForce 6800 GT]  
0218 NV48 [GeForce 6800 XT]  
0221 NV44A [GeForce 6200]  
1043 81e1 N6200/TD/256M/A  
3842 a341 256A8N341DX  
0222 NV44 [GeForce 6200 A-LE]  
0224 NV44  
0240 C51PV [GeForce 6150]  
1043 81cd A8N-VM CSM  
1462 7207 K8NGM2 series  
0241 C51 [GeForce 6150 LE]  
0242 C51G [GeForce 6100]  
105b 0cad Winfast 6100K8MB  
0243 C51 PCI Express Bridge  
0244 C51 [GeForce Go 6150]

103c 30b5 Presario V3242AU  
103c 30b7 Presario V6133CL  
10de 0244 GeForce Go 6150  
0245 C51 [Quadro NVS 210S/GeForce 6150LE]  
0246 C51 PCI Express Bridge  
0247 C51 [GeForce Go 6100]  
1043 1382 MCP51 PCI-X GeForce Go 6100  
0248 C51 PCI Express Bridge  
0249 C51 PCI Express Bridge  
024a C51 PCI Express Bridge  
024b C51 PCI Express Bridge  
024c C51 PCI Express Bridge  
024d C51 PCI Express Bridge  
024e C51 PCI Express Bridge  
024f C51 PCI Express Bridge  
0250 NV25 [GeForce4  
Ti 4600]  
0251 NV25 [GeForce4 Ti 4400]  
1043 8023 v8440 GeForce 4 Ti4400  
10de 0251 PNY GeForce4 Ti 4400  
1462 8710 PNY GeForce4 Ti 4400  
0252 NV25 [GeForce4 Ti]  
0253 NV25 [GeForce4 Ti 4200]  
107d 2896 WinFast A250 LE TD (Dual VGA/TV-out/DVI)  
147b 8f09 Siluro (Dual VGA/TV-out/DVI)  
0258 NV25GL [Quadro4 900 XGL]  
0259 NV25GL [Quadro4 750 XGL]  
025b NV25GL [Quadro4 700 XGL]  
0260 MCP51 LPC Bridge  
103c 2a34 Pavilion a1677c  
103c 30b7 Presario V6133CL  
1043 81bc A8N-VM CSM Mainboard  
1458 5001 GA-M55plus-S3G  
1462 7207 K8NGM2 series  
0261 MCP51 LPC Bridge  
105b 0cad Winfast 6100K8MB  
0262 MCP51 LPC Bridge  
0263 MCP51 LPC Bridge  
0264 MCP51 SMBus  
103c 2a34 Pavilion a1677c  
103c 30b7 Presario V6133CL  
1043 81bc A8N-VM CSM Mainboard  
105b 0cad Winfast 6100K8MB  
1462 7207 K8NGM2 series  
0265 MCP51 IDE  
103c 2a34 Pavilion a1677c  
103c 30b7 Presario V6133CL  
1043 81bc A8N-VM CSM Mainboard



1462 7207 K8NGM2 series  
# Foxconn has used a  
wrong vendor ID for this one  
f05b 0cad Winfast 6100K8MB  
0266 MCP51 Serial ATA Controller  
103c 2a34 Pavilion a1677c  
103c 30b7 Presario V6133CL  
1043 81bc A8N-VM CSM Mainboard  
1462 7207 K8NGM2 series  
0267 MCP51 Serial ATA Controller  
103c 2a34 Pavilion a1677c  
1043 81bc A8N-VM CSM Mainboard  
1462 7207 K8NGM2 series  
0268 MCP51 Ethernet Controller  
0269 MCP51 Ethernet Controller  
103c 2a34 Pavilion a1677c  
103c 30b7 Presario V6133CL  
1043 8141 A8N-VM CSM Mainboard  
1462 7207 K8NGM2 series  
026a MCP51 MCI  
026b MCP51 AC97 Audio Controller  
105b 0cad Winfast 6100K8MB  
026c MCP51 High Definition Audio  
103c 2a34 Pavilion a1677c  
103c 30b5 Presario V3242AU  
103c 30b7 Presario V6133CL  
10de cb84 ASUSTeK Computer Inc. A8N-VM CSM Mainboard  
1462 7207 K8NGM2 series  
026d MCP51 USB Controller  
103c 2a34 Pavilion a1677c  
103c 30b7 Presario V6133CL  
1043 81bc A8N-VM CSM Mainboard  
105b 0cad Winfast 6100K8MB  
1462 7207 K8NGM2 series  
026e  
MCP51 USB Controller  
103c 2a34 Pavilion a1677c  
103c 30b7 Presario V6133CL  
1043 81bc A8N-VM CSM Mainboard  
105b 0cad Winfast 6100K8MB  
1462 7207 K8NGM2 series  
026f MCP51 PCI Bridge  
103c 30b7 Presario V6133CL  
0270 MCP51 Host Bridge  
103c 2a34 Pavilion a1677c  
103c 30b7 Presario V6133CL  
1043 81bc A8N-VM CSM Mainboard  
105b 0cad Winfast 6100K8MB

1458 5001 GA-M55plus-S3G  
1462 7207 K8NGM2 series  
0271 MCP51 PMU  
103c 30b5 Presario V3242AU  
103c 30b7 Presario V6133CL  
0272 MCP51 Memory Controller 0  
103c 2a34 Pavilion a1677c  
105b 0cad Winfast 6100K8MB  
027e C51 Memory Controller 2  
103c 2a34 Pavilion a1677c  
103c 30b7 Presario V6133CL  
1043 81cd A8N-VM CSM Mainboard  
1458 5000 GA-M55plus-S3G  
1462 7207 K8NGM2 series  
027f C51 Memory Controller 3  
103c 2a34 Pavilion a1677c  
103c 30b7 Presario V6133CL  
1043 81cd A8N-VM CSM Mainboard  
1458 5000 GA-M55plus-S3G  
1462 7207 K8NGM2 series  
0280 NV28 [GeForce4 Ti 4800]  
0281 NV28 [GeForce4  
Ti 4200 AGP 8x]  
0282 NV28 [GeForce4 Ti 4800 SE]  
0286 NV28M [GeForce4 Ti 4200 Go AGP 8x]  
0288 NV28GL [Quadro4 980 XGL]  
0289 NV28GL [Quadro4 780 XGL]  
028c NV28GLM [Quadro4 Go700]  
0290 G71 [GeForce 7900 GTX]  
0291 G71 [GeForce 7900 GT/GTO]  
10de 042b NX7900GTO-T2D512E [7900 GTO]  
0292 G71 [GeForce 7900 GS]  
0293 G71 [GeForce 7900 GX2]  
0294 G71 [GeForce 7950 GX2]  
0295 G71 [GeForce 7950 GT]  
1043 8225 GeForce 7950 GT  
107d 2a68 WinFast PX7950GT TDH  
1462 0663 NX7950GT-VT2D512EZ-HD  
0297 G71M [GeForce Go 7950 GTX]  
0298 G71M [GeForce Go 7900 GS]  
0299 G71M [GeForce Go 7900 GTX]  
029a G71GLM [Quadro FX 2500M]  
029b G71GLM [Quadro FX 1500M]  
029c G71GL [Quadro FX 5500]  
029d G71GL [Quadro FX 3500]  
1028 019b G71GLM [Quadro FX 3500M]  
029e G71GL [Quadro FX 1500]  
029f G71GL [Quadro FX 4500 X2]

# Xbox Graphics Processing Unit (Integrated). GeForce3 derivative (NV20 < NV2A < NV25).

02a0 NV2A [XGPU]

02a5 MCPX CPU Bridge

02a6 MCPX Memory Controller

02e0

G73 [GeForce 7600 GT AGP]

02e0 2249 GF 7600GT 560M 256MB DDR3 DUAL DVI TV

02e1 G73 [GeForce 7600 GS AGP]

1682 222b PV-T73K-UAL3 (256MB)

1682 2247 GF 7600GS 512MB DDR2

02e2 G73 [GeForce 7300 GT AGP]

02e3 G71 [GeForce 7900 GS AGP]

02e4 G71 [GeForce 7950 GT AGP]

1682 2271 PV-T71A-YDF7 (512MB)

02e5 G71 [GeForce 7600 GS AGP]

02f0 C51 Host Bridge

103c 2a34 Pavilion a1677c

103c 30b7 Presario V6133CL

1043 81cd A8N-VM CSM Mainboard

1462 7207 K8NGM2 series

02f1 C51 Host Bridge

1458 5000 GA-M55plus-S3G

02f2 C51 Host Bridge

02f3 C51 Host Bridge

02f4 C51 Host Bridge

02f5 C51 Host Bridge

02f6 C51 Host Bridge

02f7 C51 Host Bridge

02f8 C51 Memory Controller 5

103c 2a34 Pavilion a1677c

103c 30b7 Presario V6133CL

1043 81cd A8N-VM CSM Mainboard

1458 5000 GA-M55plus-S3G

1462 7207 K8NGM2 series

02f9 C51 Memory Controller 4

103c 2a34 Pavilion a1677c

103c 30b7 Presario V6133CL

1043 81cd A8N-VM CSM Mainboard

1458 5000

GA-M55plus-S3G

1462 7207 K8NGM2 series

02fa C51 Memory Controller 0

103c 2a34 Pavilion a1677c

103c 30b7 Presario V6133CL

1043 81cd A8N-VM CSM Mainboard

1458 5000 GA-M55plus-S3G

1462 7207 K8NGM2 series

02fb C51 PCI Express Bridge

02fc C51 PCI Express Bridge  
103c 30b7 Presario V6133CL  
02fd C51 PCI Express Bridge  
103c 30b7 Presario V6133CL  
02fe C51 Memory Controller 1  
103c 2a34 Pavilion a1677c  
103c 30b7 Presario V6133CL  
1043 81cd A8N-VM CSM Mainboard  
1458 5000 GA-M55plus-S3G  
1462 7207 K8NGM2 series  
02ff C51 Host Bridge  
103c 2a34 Pavilion a1677c  
103c 30b7 Presario V6133CL  
1043 81cd A8N-VM CSM Mainboard  
1458 5000 GA-M55plus-S3G  
1462 7207 K8NGM2 series  
0300 NV30 [GeForce FX]  
0301 NV30 [GeForce FX 5800 Ultra]  
0302 NV30 [GeForce FX 5800]  
0308 NV30GL [Quadro FX 2000]  
0309 NV30GL [Quadro FX 1000]  
0311 NV31 [GeForce FX 5600 Ultra]  
0312 NV31 [GeForce FX 5600]  
0314 NV31 [GeForce FX 5600XT]  
1043 814a V9560XT/TD  
0316  
NV31M  
0318 NV31GL  
031a NV31M [GeForce FX Go5600]  
031b NV31M [GeForce FX Go5650]  
031c NV31GLM [Quadro FX Go700]  
0320 NV34 [GeForce FX 5200]  
0321 NV34 [GeForce FX 5200 Ultra]  
0322 NV34 [GeForce FX 5200]  
1043 02fb V9250 Magic  
1043 8180 V9520-X/TD/128M  
107d 2967 WinFast A340T 128MB  
1462 9110 MS-8911 (FX5200-TD128)  
1462 9171 MS-8917 (FX5200-T128)  
1462 9360 MS-8936 (FX5200-T128)  
1682 1351 GeForce FX 5200  
0323 NV34 [GeForce FX 5200LE]  
0324 NV34M [GeForce FX Go5200 64M]  
1028 0196 Inspiron 5160  
103c 006a Pavilion ZD7000 laptop  
1071 8160 MIM2000  
0325 NV34M [GeForce FX Go5250]  
0326 NV34 [GeForce FX 5500]

1458 310d GeForce FX 5500 128 MB  
1682 2034 GeForce 5500 256 MB  
0327 NV34 [GeForce FX 5100]  
0328 NV34M [GeForce FX Go5200 32M/64M]  
0329 NV34M [GeForce FX Go5200]  
10de 0010 Powerbook G4  
032a NV34GL [Quadro NVS 280 PCI]  
032b NV34GL [Quadro FX 500/600 PCI]  
032c NV34M [GeForce FX Go5300 / Go5350]  
032d NV34M [GeForce FX Go5100]  
032e  
NV34  
032f NV34 [GeForce FX 5200]  
0330 NV35 [GeForce FX 5900 Ultra]  
1043 8137 V9950 Ultra / 256 MB  
0331 NV35 [GeForce FX 5900]  
1043 8145 V9950GE  
0332 NV35 [GeForce FX 5900XT]  
0333 NV38 [GeForce FX 5950 Ultra]  
0334 NV35 [GeForce FX 5900ZT]  
1462 9373 FX5900ZT-VTD128 (MS-8937)  
0338 NV35GL [Quadro FX 3000]  
033f NV35GL [Quadro FX 700]  
0341 NV36 [GeForce FX 5700 Ultra]  
1462 9380 MS-8938 (FX5700U-TD128)  
0342 NV36 [GeForce FX 5700]  
0343 NV36 [GeForce FX 5700LE]  
0344 NV36 [GeForce FX 5700VE]  
0347 NV36M [GeForce FX Go5700]  
103c 006a NX9500  
0348 NV36M [GeForce FX Go5700]  
034c NV36 [Quadro FX Go1000]  
034d NV36  
034e NV36GL [Quadro FX 1100]  
0360 MCP55 LPC Bridge  
0361 MCP55 LPC Bridge  
1028 0221 PowerEdge R805 MCP55 LPC Bridge  
0362 MCP55 LPC Bridge  
147b 1c24 KN9 series mainboard  
0363 MCP55 LPC Bridge  
0364 MCP55 LPC Bridge  
1028 0221 PowerEdge R805 MCP55 LPC Bridge  
0365 MCP55 LPC Bridge  
0366 MCP55 LPC Bridge  
0367 MCP55 LPC  
Bridge  
0368 MCP55 SMBus Controller  
1028 020c PowerEdge M605 MCP55 SMBus

1028 0221 PowerEdge R805 MCP55 SMBus  
147b 1c24 KN9 series mainboard  
0369 MCP55 Memory Controller  
147b 1c24 KN9 series mainboard  
036a MCP55 Memory Controller  
036b MCP55 SMU  
036c MCP55 USB Controller  
1028 020c PowerEdge M605 MCP55 USB Controller  
1028 0221 PowerEdge R805 MCP55 USB Controller  
147b 1c24 KN9 series mainboard  
036d MCP55 USB Controller  
1028 020c PowerEdge M605 MCP55 USB Controller  
1028 0221 PowerEdge R805 MCP55 USB Controller  
147b 1c24 KN9 series mainboard  
036e MCP55 IDE  
147b 1c24 KN9 series mainboard  
0370 MCP55 PCI bridge  
0371 MCP55 High Definition Audio  
147b 1c24 KN9 series mainboard  
0372 MCP55 Ethernet  
0373 MCP55 Ethernet  
147b 1c24 KN9 series mainboard  
0374 MCP55 PCI Express bridge  
0375 MCP55 PCI Express bridge  
0376 MCP55 PCI Express bridge  
0377 MCP55 PCI Express bridge  
0378 MCP55 PCI Express bridge  
037a MCP55 Memory Controller  
037e  
MCP55 SATA Controller  
037f MCP55 SATA Controller  
1028 0221 PowerEdge R805 MCP55 SATA Controller  
147b 1c24 KN9 series mainboard  
038b G73 [GeForce 7650 GS]  
0390 G73 [GeForce 7650 GS]  
0391 G73 [GeForce 7600 GT]  
1458 3427 GV-NX76T128D-RH  
1462 0452 NX7600GT-VT2D256E  
0392 G73 [GeForce 7600 GS]  
1462 0622 NX7600GS-T2D256EH  
0393 G73 [GeForce 7300 GT]  
10de 0412 NX7300GT-TD256EH  
1462 0412 NX7300GT-TD256EH  
0394 G73 [GeForce 7600 LE]  
0395 G73 [GeForce 7300 GT]  
0396 G73  
0397 G73M [GeForce Go 7700]  
0398 G73M [GeForce Go 7600]

1025 006c Aspire 9814WKMi  
0399 G73M [GeForce Go 7600 GT]  
039a G73M [Quadro NVS 300M]  
039b G73M [GeForce Go 7900 SE]  
039c G73GLM [Quadro FX 550M]  
10de 039c Quadro FX 560M  
039d G73  
039e G73GL [Quadro FX 560]  
039f G73  
03a0 C55 Host Bridge  
03a1 C55 Host Bridge  
03a2 C55 Host Bridge  
03a3 C55 Host Bridge  
03a4 C55 Host Bridge  
03a5 C55 Host Bridge  
03a6 C55 Host Bridge  
03a7 C55 Host Bridge  
03a8 C55 Memory  
Controller  
03a9 C55 Memory Controller  
03aa C55 Memory Controller  
03ab C55 Memory Controller  
03ac C55 Memory Controller  
03ad C55 Memory Controller  
03ae C55 Memory Controller  
03af C55 Memory Controller  
03b0 C55 Memory Controller  
03b1 C55 Memory Controller  
03b2 C55 Memory Controller  
03b3 C55 Memory Controller  
03b4 C55 Memory Controller  
03b5 C55 Memory Controller  
03b6 C55 Memory Controller  
03b7 C55 PCI Express bridge  
03b8 C55 PCI Express bridge  
03b9 C55 PCI Express bridge  
03ba C55 Memory Controller  
03bb C55 PCI Express bridge  
03bc C55 Memory Controller  
03d0 C61 [GeForce 6150SE nForce 430]  
1028 020e Inspiron 531  
03d1 C61 [GeForce 6100 nForce 405]  
03d2 C61 [GeForce 6100 nForce 400]  
03d5 C61 [GeForce 6100 nForce 420]  
03d6 C61 [GeForce 7025 / nForce 630a]  
03e0 MCP61 LPC Bridge  
1028 020e Inspiron 531  
1849 03e0 939NF6G-VSTA Board

03e1 MCP61 LPC Bridge  
1043 83a4 M4N68T series motherboard

03e2 MCP61 Host Bridge  
1043 83a4 M4N68T  
series motherboard

03e3 MCP61 LPC Bridge

03e4 MCP61 High Definition Audio

03e5 MCP61 Ethernet

03e6 MCP61 Ethernet

03e7 MCP61 SATA Controller

03e8 MCP61 PCI Express bridge  
1028 020e Inspiron 531  
1849 03e8 939NF6G-VSTA Board

03e9 MCP61 PCI Express bridge  
1028 020e Inspiron 531  
1849 03e9 939NF6G-VSTA Board

03ea MCP61 Memory Controller  
1028 020e Inspiron 531  
1849 03ea 939NF6G-VSTA Board

03eb MCP61 SMBus  
1028 020e Inspiron 531  
1043 83a4 M4N68T series motherboard  
1849 03eb 939NF6G-VSTA Board

03ec MCP61 IDE  
1025 0392 ET1350  
1028 020e Inspiron 531  
1043 83a4 M4N68T series motherboard  
1849 03ec 939NF6G-VSTA Board

03ee MCP61 Ethernet

03ef MCP61 Ethernet  
1025 8000 ET1350  
1028 020e Inspiron 531  
1043 83a4 M4N68T series motherboard  
1849 03ef 939NF6G-VSTA Board

03f0 MCP61 High Definition Audio  
1028 020e Inspiron 531  
1043 8415 M4N68T series motherboard  
1849 0888 939NF6G-VSTA Board

03f1 MCP61 USB 1.1 Controller  
1028  
020e Inspiron 531  
1043 83a4 M4N68T series motherboard  
1849 03f1 939NF6G-VSTA Board

03f2 MCP61 USB 2.0 Controller  
1028 020e Inspiron 531  
1043 83a4 M4N68T series motherboard  
1849 03f2 939NF6G-VSTA Board

03f3 MCP61 PCI bridge



1028 020e Inspiron 531  
1849 03f3 939NF6G-VSTA Board  
03f4 MCP61 SMU  
03f5 MCP61 Memory Controller  
1028 020e Inspiron 531  
1043 83a4 M4N68T series motherboard  
1849 03eb 939NF6G-VSTA Board  
03f6 MCP61 SATA Controller  
1028 020e Inspiron 531  
1043 83a4 M4N68T series motherboard  
1849 03f6 939NF6G-VSTA Board  
03f7 MCP61 SATA Controller  
0400 G84 [GeForce 8600 GTS]  
1043 8241 EN8600GTS  
0401 G84 [GeForce 8600 GT]  
0402 G84 [GeForce 8600 GT]  
1458 3455 GV-NX86T512H  
1462 0910 NX8600GT-T2D256EZ  
0403 G84 [GeForce 8600 GS]  
0404 G84 [GeForce 8400 GS]  
1462 1230 NX8400GS-TD256E  
0405 G84M [GeForce 9500M GS]  
0406 G84 [GeForce 8300 GS]  
0407 G84M [GeForce 8600M GT]  
0408 G84M [GeForce 9650M GS]  
0409 G84M [GeForce  
8700M GT]  
040a G84GL [Quadro FX 370]  
040b G84GLM [Quadro NVS 320M]  
040c G84GLM [Quadro FX 570M]  
17aa 20d9 ThinkPad T61p  
040d G84GLM [Quadro FX 1600M]  
040e G84GL [Quadro FX 570]  
040f G84GL [Quadro FX 1700]  
0410 G92 [GeForce GT 330]  
0414 G92 [GeForce 9800 GT]  
0418 G92 [GeForce GT 330 OEM]  
0420 G86 [GeForce 8400 SE]  
0421 G86 [GeForce 8500 GT]  
1462 0960 NX8500GT-TD512EH/M2  
0422 G86 [GeForce 8400 GS]  
0423 G86 [GeForce 8300 GS]  
0424 G86 [GeForce 8400 GS]  
0425 G86M [GeForce 8600M GS]  
1025 0121 Aspire 5920G  
1043 1514 F3SV  
0426 G86M [GeForce 8400M GT]  
0427 G86M [GeForce 8400M GS]

103c 30cc Pavilion dv6700  
103c 30cf Pavilion dv9668eg Laptop  
0428 G86M [GeForce 8400M G]  
0429 G86M [Quadro NVS 140M]  
17aa 20d8 ThinkPad T61  
042a G86M [Quadro NVS 130M]  
042b G86M [Quadro NVS 135M]  
042c G86 [GeForce 9400 GT]  
042d G86GLM [Quadro FX 360M]  
042e G86M [GeForce 9300M G]  
042f G86 [Quadro NVS 290]  
0440 MCP65 LPC Bridge  
0441 MCP65 LPC  
Bridge  
0442 MCP65 LPC Bridge  
103c 30cf Pavilion dv9668eg Laptop  
0443 MCP65 LPC Bridge  
0444 MCP65 Memory Controller  
103c 30cf Pavilion dv9668eg Laptop  
0445 MCP65 Memory Controller  
0446 MCP65 SMBus  
103c 30cf Pavilion dv9668eg Laptop  
0447 MCP65 SMU  
103c 30cf Pavilion dv9500/9600/9700 series  
0448 MCP65 IDE  
103c 30cf Pavilion dv9668eg Laptop  
0449 MCP65 PCI bridge  
10de cb84 HP Pavilion dv9668eg Laptop  
044a MCP65 High Definition Audio  
103c 30cf Pavilion dv9668eg Laptop  
044b MCP65 High Definition Audio  
044c MCP65 AHCI Controller  
044d MCP65 AHCI Controller  
044e MCP65 AHCI Controller  
044f MCP65 AHCI Controller  
0450 MCP65 Ethernet  
103c 30cf Pavilion dv9668eg Laptop  
0451 MCP65 Ethernet  
0452 MCP65 Ethernet  
0453 MCP65 Ethernet  
0454 MCP65 USB 1.1 OHCI Controller  
103c 30cf Pavilion dv9668eg Laptop  
0455 MCP65 USB 2.0 EHCI Controller  
103c 30cf Pavilion dv9668eg Laptop  
0456 MCP65 USB Controller  
0457 MCP65 USB Controller  
0458 MCP65

PCI Express bridge  
10de 0000 MCP65 PCI Express bridge  
0459 MCP65 PCI Express bridge  
10de 0000 MCP65 PCI Express bridge  
045a MCP65 PCI Express bridge  
10de 0000 MCP65 PCI Express bridge  
045b MCP65 PCI Express bridge  
10de 0000 MCP65 PCI Express bridge  
045c MCP65 SATA Controller  
045d MCP65 SATA Controller  
103c 30cf Pavilion dv9668eg Laptop  
045e MCP65 SATA Controller  
045f MCP65 SATA Controller  
0531 C67 [GeForce 7150M / nForce 630M]  
0533 C67 [GeForce 7000M / nForce 610M]  
053a C68 [GeForce 7050 PV / nForce 630a]  
053b C68 [GeForce 7050 PV / nForce 630a]  
1043 8308 M2N68-AM Motherboard  
053e C68 [GeForce 7025 / nForce 630a]  
0541 MCP67 Memory Controller  
0542 MCP67 SMBus  
1043 8308 M2N68-AM Motherboard  
0543 MCP67 Co-processor  
0547 MCP67 Memory Controller  
1043 8308 M2N68-AM Motherboard  
1849 0547 ALiveNF7G-HDready  
0548 MCP67 ISA Bridge  
1043 8308 M2N68-AM Motherboard  
054c MCP67 Ethernet  
1043 8308 M2N68-AM Motherboard  
1849 054c  
ALiveNF7G-HDready, MCP67 Gigabit Ethernet  
054d MCP67 Ethernet  
054e MCP67 Ethernet  
054f MCP67 Ethernet  
0550 MCP67 AHCI Controller  
1043 8308 M2N68-AM Motherboard  
0554 MCP67 AHCI Controller  
1043 8308 M2N68-AM Motherboard  
0555 MCP67 SATA Controller  
1043 8308 M2N68-AM Motherboard  
055c MCP67 High Definition Audio  
1043 8290 M2N68-AM Motherboard  
055d MCP67 High Definition Audio  
055e MCP67 OHCI USB 1.1 Controller  
1043 8308 M2N68-AM Motherboard  
055f MCP67 EHCI USB 2.0 Controller  
1043 8308 M2N68-AM Motherboard

0560 MCP67 IDE Controller  
f043 8308 M2N68-AM Motherboard  
0561 MCP67 PCI Bridge  
0562 MCP67 PCI Express Bridge  
1849 0562 ALiveNF7G-HDready  
0563 MCP67 PCI Express Bridge  
0568 MCP78S [GeForce 8200] Memory Controller  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH  
1849 0568 K10N78FullHD-hSLI R3.0 Memory Controller  
0569 MCP78S [GeForce 8200] PCI Express Bridge  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462  
7508 K9N2GM-FIH  
1849 0569 K10N78FullHD-hSLI R3.0 PCI Express Bridge  
056a MCP73 [nForce 630i] USB 2.0 Controller (EHCI)  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
056c MCP73 IDE Controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
056d MCP73 PCI Express bridge  
1019 297a MCP73PVT-SM  
10de cb73 MCP73 PCI Bridge  
056e MCP73 PCI Express bridge  
1019 297a MCP73PVT-SM  
10de 0000 MCP73 PCIe x16 port  
056f MCP73 PCI Express bridge  
1019 297a MCP73PVT-SM  
10de 0000 MCP73 PCIe x1 port  
05b1 NF200 PCIe 2.0 switch  
05b8 NF200 PCIe 2.0 switch for GTX 295  
05be NF200 PCIe 2.0 switch for Quadro Plex S4 / Tesla S870 / Tesla S1070 / Tesla S2050  
05e0 GT200b [GeForce GTX 295]  
05e1 GT200 [GeForce GTX 280]  
05e2 GT200 [GeForce GTX 260]  
05e3 GT200b [GeForce GTX 285]  
1682 2490 GX-285N-ZDF  
05e6 GT200b [GeForce GTX 275]  
05e7 GT200GL [Tesla C1060 / M1060]  
10de 0595 Tesla T10 Processor  
10de 068f Tesla T10 Processor  
10de  
0697 Tesla M1060  
10de 0714 Tesla M1060

10de 0743 Tesla M1060  
05ea GT200 [GeForce GTX 260]  
05eb GT200 [GeForce GTX 295]  
05ed GT200GL [Quadro Plex 2200 D2]  
05f1 GT200 [GeForce GTX 280]  
05f2 GT200 [GeForce GTX 260]  
05f8 GT200GL [Quadro Plex 2200 S4]  
05f9 GT200GL [Quadro CX]  
05fd GT200GL [Quadro FX 5800]  
05fe GT200GL [Quadro FX 4800]  
05ff GT200GL [Quadro FX 3800]  
0600 G92 [GeForce 8800 GTS 512]  
0601 G92 [GeForce 9800 GT]  
0602 G92 [GeForce 8800 GT]  
0603 G92 [GeForce GT 230 OEM]  
0604 G92 [GeForce 9800 GX2]  
0605 G92 [GeForce 9800 GT]  
0606 G92 [GeForce 8800 GS]  
0607 G92 [GeForce GTS 240]  
0608 G92M [GeForce 9800M GTX]  
0609 G92M [GeForce 8800M GTS]  
106b 00a7 GeForce 8800 GS  
060a G92M [GeForce GTX 280M]  
060b G92M [GeForce 9800M GT]  
060c G92M [GeForce 8800M GTX]  
060d G92 [GeForce 8800 GS]  
060f G92M [GeForce GTX 285M]  
0610 G92 [GeForce 9600 GSO]  
1682 2385 GeForce 9600 GSO 768mb  
0611 G92 [GeForce 8800 GT]  
107d 2ab0  
Winfast PX8800 GT PCI-E  
1462 1170 NX8800GT series model V117 2xDVI+TV  
19da 1040 ZT-88TES2P-FSP  
0612 G92 [GeForce 9800 GTX / 9800 GTX+]  
0613 G92 [GeForce 9800 GTX+]  
0614 G92 [GeForce 9800 GT]  
107d 2ab3 WinFast PX9800 GT (S-Fanpipe)  
0615 G92 [GeForce GTS 250]  
3842 1150 GeForce GTS 250 P/N 512-P3-1150-TR  
# Overclocked  
3842 1151 GeForce GTS 250 P/N 512-P3-1151-TR  
3842 1155 GeForce GTS 250 P/N 01G-P3-1155-TR  
# Overclocked  
3842 1156 GeForce GTS 250 P/N 01G-P3-1156-TR  
0617 G92M [GeForce 9800M GTX]  
0618 G92M [GeForce GTX 260M]  
0619 G92GL [Quadro FX 4700 X2]

061a G92GL [Quadro FX 3700]  
061b G92GL [Quadro VX 200]  
061c G92GLM [Quadro FX 3600M]  
061d G92GLM [Quadro FX 2800M]  
061e G92GLM [Quadro FX 3700M]  
061f G92GLM [Quadro FX 3800M]  
0620 G94 [GeForce 9800 GT]  
0621 G94 [GeForce GT 230]  
0622 G94 [GeForce 9600 GT]  
107d 2ac1 WinFast PX9600GT 1024MB  
1458 3481 GV-NX96T512HP  
0623 G94 [GeForce 9600 GS]  
0624 G94 [GeForce 9600 GT Green Edition]  
0625  
G94 [GeForce 9600 GSO 512]  
0626 G94 [GeForce GT 130]  
0627 G94 [GeForce GT 140]  
0628 G94M [GeForce 9800M GTS]  
062a G94M [GeForce 9700M GTS]  
062b G94M [GeForce 9800M GS]  
062c G94M [GeForce 9800M GTS]  
062d G94 [GeForce 9600 GT]  
062e G94 [GeForce 9600 GT]  
106b 0605 GeForce GT 130  
062f G94 [GeForce 9800 S]  
0630 G94 [GeForce 9600 GT]  
0631 G94M [GeForce GTS 160M]  
0632 G94M [GeForce GTS 150M]  
0633 G94 [GeForce GT 220]  
0635 G94 [GeForce 9600 GSO]  
0637 G94 [GeForce 9600 GT]  
0638 G94GL [Quadro FX 1800]  
063a G94GLM [Quadro FX 2700M]  
063f G94 [GeForce 9600 GE]  
0640 G96C [GeForce 9500 GT]  
0641 G96C [GeForce 9400 GT]  
1682 4009 PV-T94G-ZAFG  
0642 G96 [D9M-10]  
0643 G96 [GeForce 9500 GT]  
0644 G96 [GeForce 9500 GS]  
174b 9600 Geforce 9500GS 512M DDR2 V/D/HDMI  
0645 G96C [GeForce 9500 GS]  
0646 G96C [GeForce GT 120]  
0647 G96CM [GeForce 9600M GT]  
0648 G96CM [GeForce 9600M GS]  
0649 G96CM [GeForce 9600M GT]  
1043 202d GeForce GT 220M  
064a

G96M [GeForce 9700M GT]  
064b G96M [GeForce 9500M G]  
064c G96CM [GeForce 9650M GT]  
064e G96C [GeForce 9600 GSO / 9800 GT]  
0651 G96CM [GeForce G 110M]  
0652 G96CM [GeForce GT 130M]  
152d 0850 GeForce GT 240M LE  
0653 G96CM [GeForce GT 120M]  
0654 G96CM [GeForce GT 220M]  
1043 14a2 GeForce GT 320M  
1043 14d2 GeForce GT 320M  
0655 G96 [GeForce GT 120 Mac Edition]  
0656 G96 [GeForce GT 120 Mac Edition]  
0658 G96GL [Quadro FX 380]  
0659 G96CGL [Quadro FX 580]  
065a G96GLM [Quadro FX 1700M]  
065b G96C [GeForce 9400 GT]  
065c G96GLM [Quadro FX 770M]  
065d G96 [GeForce 9500 GA / 9600 GT / GTS 250]  
065f G96C [GeForce G210]  
06c0 GF100 [GeForce GTX 480]  
06c4 GF100 [GeForce GTX 465]  
06ca GF100M [GeForce GTX 480M]  
06cb GF100 [GeForce GTX 480]  
06cd GF100 [GeForce GTX 470]  
06d0 GF100GL  
06d1 GF100GL [Tesla C2050 / C2070]  
10de 0771 Tesla C2050  
10de 0772 Tesla C2070  
06d2 GF100GL [Tesla M2070]  
10de 0774 Tesla M2070  
10de 0830 Tesla M2070  
10de 0842  
Tesla M2070  
10de 088f Tesla X2070  
10de 0908 Tesla M2070  
06d8 GF100GL [Quadro 6000]  
06d9 GF100GL [Quadro 5000]  
06da GF100GLM [Quadro 5000M]  
06dc GF100GL [Quadro 6000]  
06dd GF100GL [Quadro 4000]  
06de GF100GL [Tesla T20 Processor]  
10de 0773 Tesla S2050  
10de 082f Tesla M2050  
10de 0840 Tesla X2070  
10de 0842 Tesla M2050  
10de 0846 Tesla M2050  
10de 0866 Tesla M2050

10de 0907 Tesla M2050  
10de 091e Tesla M2050  
06df GF100GL [Tesla M2070-Q]  
10de 084d Tesla M2070-Q  
10de 087f Tesla M2070-Q  
06e0 G98 [GeForce 9300 GE]  
107d 5a96 Geforce 9300GE  
06e1 G98 [GeForce 9300 GS]  
06e2 G98 [GeForce 8400]  
06e3 G98 [GeForce 8300 GS]  
06e4 G98 [GeForce 8400 GS Rev. 2]  
1458 3475 GV-NX84S256HE [GeForce 8400 GS]  
06e5 G98M [GeForce 9300M GS]  
06e6 G98 [GeForce G 100]  
06e7 G98 [GeForce 9300 SE]  
06e8 G98M [GeForce 9200M GS]  
103c 360b GeForce 9200M GE  
06e9 G98M [GeForce 9300M GS]  
1043 19b2 U6V laptop  
06ea G98M [Quadro NVS 150M]  
06eb G98M [Quadro  
NVS 160M]  
06ec G98M [GeForce G 105M]  
06ed G98 [GeForce 9600 GT / 9800 GT]  
06ee G98 [GeForce 9600 GT / 9800 GT / GT 240]  
06ef G98M [GeForce G 103M]  
06f1 G98M [GeForce G 105M]  
06f8 G98 [Quadro NVS 420]  
06f9 G98GL [Quadro FX 370 LP]  
06fa G98 [Quadro NVS 450]  
06fb G98GLM [Quadro FX 370M]  
06fd G98 [Quadro NVS 295]  
06ff G98 [HICx16 + Graphics]  
10de 0711 HICx8 + Graphics  
0751 MCP78S [GeForce 8200] Memory Controller  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH  
1849 0751 K10N78FullHD-hSLI R3.0 Memory Controller  
0752 MCP78S [GeForce 8200] SMBus  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH  
1849 0752 K10N78FullHD-hSLI R3.0 SMBus  
0753 MCP78S [GeForce 8200] Co-Processor  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH



1849 0753 K10N78FullHD-hSLI R3.0 Co-Processor  
0754 MCP78S [GeForce 8200] Memory Controller  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462 7508  
K9N2GM-FIH  
1849 0754 K10N78FullHD-hSLI R3.0 Memory Controller  
0759 MCP78S [GeForce 8200] IDE  
1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH  
1849 0759 K10N78FullHD-hSLI R3.0 IDE  
075a MCP78S [GeForce 8200] PCI Bridge  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1849 075a K10N78FullHD-hSLI R3.0 PCI Bridge  
075b MCP78S [GeForce 8200] PCI Express Bridge  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH  
1849 075b K10N78FullHD-hSLI R3.0 PCI Express Bridge  
075c MCP78S [GeForce 8200] LPC Bridge  
103c 2a9e Pavilion p6310f  
1462 7508 K9N2GM-FIH  
1849 075c K10N78FullHD-hSLI R3.0 LPC Bridge  
075d MCP78S [GeForce 8200] LPC Bridge  
1043 82e8 M3N72-D  
0760 MCP77 Ethernet  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH  
1849 0760 K10N78FullHD-hSLI R3.0 Ethernet  
0761 MCP77 Ethernet  
0762 MCP77 Ethernet  
0763 MCP77 Ethernet  
0774 MCP72XE/MCP72P/MCP78U/MCP78S High Definition Audio  
103c 2a9e Pavilion p6310f  
# has a  
Realtek ALC1200 HDAudio Codec  
1043 82fe M3N72-D  
1462 7508 K9N2GM-FIH  
1849 3662 K10N78FullHD-hSLI R3.0 High Definition Audio  
0778 MCP78S [GeForce 8200] PCI Express Bridge  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH  
1849 0778 K10N78FullHD-hSLI R3.0 PCI Express Bridge  
077a MCP78S [GeForce 8200] PCI Bridge  
103c 2a9e Pavilion p6310f

1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH  
1849 077a K10N78FullHD-hSLI R3.0 PCI Bridge  
077b MCP78S [GeForce 8200] OHCI USB 1.1 Controller  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH  
1849 077b K10N78FullHD-hSLI R3.0 OHCI USB 1.1 Controller  
077c MCP78S [GeForce 8200] EHCI USB 2.0 Controller  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH  
1849 077c K10N78FullHD-hSLI R3.0 EHCI USB 2.0 Controller  
077d MCP78S [GeForce 8200] OHCI USB 1.1 Controller  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH  
1849 077d K10N78FullHD-hSLI  
R3.0 OHCI USB 1.1 Controller  
077e MCP78S [GeForce 8200] EHCI USB 2.0 Controller  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1462 7508 K9N2GM-FIH  
1849 077e K10N78FullHD-hSLI R3.0 EHCI USB 2.0 Controller  
07c0 MCP73 Host Bridge  
1afa 7150 JW-IN7150-HD  
07c1 MCP73 Host Bridge  
1019 297a MCP73PVT-SM  
07c2 MCP73 Host Bridge  
07c3 MCP73 Host Bridge  
147b 1c3e I-N73V motherboard  
07c5 MCP73 Host Bridge  
07c8 MCP73 Memory Controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
07cb nForce 610i/630i memory controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
07cd nForce 610i/630i memory controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
07ce nForce 610i/630i memory controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD

07cf nForce 610i/630i memory controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V  
motherboard  
1afa 7150 JW-IN7150-HD  
07d0 nForce 610i/630i memory controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
07d1 nForce 610i/630i memory controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
07d2 nForce 610i/630i memory controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
07d3 nForce 610i/630i memory controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
07d6 nForce 610i/630i memory controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
07d7 MCP73 LPC Bridge  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
07d8 MCP73 SMBus  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
07d9 MCP73 Memory Controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
07da MCP73  
Co-processor  
1afa 7150 JW-IN7150-HD  
07dc MCP73 Ethernet  
147b 1c3e I-N73V motherboard  
07dd MCP73 Ethernet  
07de MCP73 Ethernet  
07df MCP73 Ethernet  
07e0 C73 [GeForce 7150 / nForce 630i]  
1afa 7150 JW-IN7150-HD  
07e1 C73 [GeForce 7100 / nForce 630i]

1019 297a MCP73PVT-SM  
07e2 C73 [GeForce 7050 / nForce 630i]  
07e3 C73 [GeForce 7050 / nForce 610i]  
147b 1c3e I-N73V motherboard  
07e5 C73 [GeForce 7100 / nForce 620i]  
07f0 MCP73 SATA Controller (IDE mode)  
147b 1c3e I-N73V motherboard  
07f4 GeForce 7100/nForce 630i SATA  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
07f8 MCP73 SATA RAID Controller  
147b 1c3e I-N73V motherboard  
07fc MCP73 High Definition Audio  
1019 297a MCP73PVT-SM  
10de 07fc MCP73 High Definition Audio  
147b 1c3e I-N73V motherboard  
07fe MCP73 OHCI USB 1.1 Controller  
1019 297a MCP73PVT-SM  
147b 1c3e I-N73V motherboard  
1afa 7150 JW-IN7150-HD  
0840 C77 [GeForce 8200M]  
0844 C77 [GeForce 9100M G]  
0845 C77 [GeForce  
8200M G]  
0846 C77 [GeForce 9200]  
0847 C78 [GeForce 9100]  
103c 2a9e Pavilion p6310f  
0848 C77 [GeForce 8300]  
0849 C77 [GeForce 8200]  
1462 7508 K9N2GM-FIH  
1849 0849 K10N78FullHD-hSLI R3.0 GeForce 8200  
084a C77 [nForce 730a]  
084b C77 [GeForce 8200]  
084c C77 [nForce 780a/980a SLI]  
084d C77 [nForce 750a SLI]  
1043 82e8 M3N72-D mGPU  
084f C77 [GeForce 8100 / nForce 720a]  
0860 C79 [GeForce 9300]  
0861 C79 [GeForce 9400]  
0862 C79 [GeForce 9400M G]  
0863 C79 [GeForce 9400M]  
106b 00aa MacBook5,1  
0864 C79 [GeForce 9300]  
0865 C79 [GeForce 9300 / ION]  
0866 C79 [GeForce 9400M G]  
106b 00b1 GeForce 9400M  
0867 C79 [GeForce 9400]  
106b 00ad iMac 9,1

0868 C79 [nForce 760i SLI]  
0869 MCP7A [GeForce 9400]  
086a C79 [GeForce 9400]  
086c C79 [GeForce 9300 / nForce 730i]  
086d C79 [GeForce 9200]  
086e C79 [GeForce 9100M G]  
086f MCP79 [GeForce 8200M G]  
1043 16b2 F5GL Notebook  
0870 C79 [GeForce 9400M]  
0871 C79 [GeForce 9200]  
0872 C79 [GeForce  
G102M]  
1043 19b4 GeForce G102M  
1043 1aa2 GeForce G102M  
1043 1c02 GeForce G102M  
1043 1c42 GeForce G205M  
0873 C79 [GeForce G102M]  
1043 19b4 GeForce G102M  
1043 1c12 GeForce G102M  
1043 1c52 GeForce G205M  
0874 C79 [ION]  
0876 C79 [GeForce 9400M / ION]  
087a C79 [GeForce 9400]  
087d C79 [ION]  
19da a123 IONITX-F-E  
087e C79 [ION LE]  
087f C79 [ION LE]  
08a0 MCP89 [GeForce 320M]  
08a2 MCP89 [GeForce 320M]  
08a3 MCP89 [GeForce 320M]  
08a4 MCP89 [GeForce 320M]  
08a5 MCP89 [GeForce 320M]  
0a20 GT216 [GeForce GT 220]  
1043 8311 ENGT220/DI/1GD3(LP)/V2  
0a21 GT216M [GeForce GT 330M]  
0a22 GT216 [GeForce 315]  
0a23 GT216 [GeForce 210]  
0a24 GT216 [GeForce 405]  
0a26 GT216 [GeForce 405]  
0a27 GT216 [GeForce 405]  
0a28 GT216M [GeForce GT 230M]  
0a29 GT216M [GeForce GT 330M]  
0a2a GT216M [GeForce GT 230M]  
0a2b GT216M [GeForce GT 330M]  
0a2c GT216M [NVS 5100M]  
0a2d GT216M [GeForce GT 320M]  
0a30 GT216 [GeForce 505]  
0a32 GT216 [GeForce GT 415]

0a34  
GT216M [GeForce GT 240M]  
0a35 GT216M [GeForce GT 325M]  
0a38 GT216GL [Quadro 400]  
0a3c GT216GLM [Quadro FX 880M]  
0a60 GT218 [GeForce G210]  
0a62 GT218 [GeForce 205]  
0a63 GT218 [GeForce 310]  
0a64 GT218 [ION]  
0a65 GT218 [GeForce 210]  
1043 8334 EN210 SILENT  
1458 36a9 GV-N210D3-1GI (rev. 6.0/6.1)  
1462 8094 N210 [Geforce 210] PCIe graphics adapter  
19da 7222 GeForce 210 1GB [Synergy Edition]  
0a66 GT218 [GeForce 310]  
0a67 GT218 [GeForce 315]  
0a68 GT218M [GeForce G 105M]  
0a69 GT218M [GeForce G 105M]  
0a6a GT218M [NVS 2100M]  
0a6c GT218M [NVS 3100M]  
1028 040b Latitude E6510  
17aa 2142 ThinkPad T410  
0a6e GT218M [GeForce 305M]  
0a6f GT218M [ION]  
0a70 GT218M [GeForce 310M]  
0a71 GT218M [GeForce 305M]  
0a72 GT218M [GeForce 310M]  
0a73 GT218M [GeForce 305M]  
0a74 GT218M [GeForce G210M]  
1b0a 903a GeForce G210  
0a75 GT218M [GeForce 310M]  
0a76 GT218M [ION 2]  
0a78 GT218GL [Quadro FX 380 LP]  
0a7a GT218M [GeForce 315M]  
104d 907e GeForce  
315M  
1179 fc50 GeForce 315M  
1179 fc61 GeForce 315M  
1179 fc71 GeForce 315M  
1179 fc90 GeForce 315M  
1179 fcc0 GeForce 315M  
1179 fcd0 GeForce 315M  
1179 fce2 GeForce 315M  
1179 fcf2 GeForce 315M  
1179 fd16 GeForce 315M  
1179 fd40 GeForce 315M  
1179 fd50 GeForce 315M  
1179 fd52 GeForce 315M

1179 fd61 GeForce 315M  
1179 fd71 GeForce 315M  
1179 fd92 GeForce 315M  
1179 fd96 GeForce 315M  
1179 fdd0 GeForce 315M  
1179 fdd2 GeForce 315M  
1179 fdfe GeForce 315M  
144d c0a2 GeForce 315M  
144d c0b2 GeForce 315M  
144d c581 GeForce 315M  
144d c587 GeForce 315M  
144d c588 GeForce 315M  
144d c597 GeForce 315M  
144d c606 GeForce 315M  
1462 aa51 GeForce 405  
1462 aa58 GeForce 405  
1462 ac71 GeForce 405  
1462 ac81 GeForce 315M  
1462 ac82 GeForce 405  
1462 ae33 GeForce 405  
1642 3980 GeForce 405  
17aa 3950 GeForce 405M  
17aa 397d GeForce 405M  
1b0a 2091 GeForce 315M  
1b0a 90b4 GeForce 405  
1bfd 0003 GeForce 405  
1bfd 8006 GeForce  
405  
1bfd 8007 GeForce 315M  
0a7b GT218 [GeForce 505]  
0a7c GT218GLM [Quadro FX 380M]  
0a80 MCP79 Host Bridge  
0a81 MCP79 Host Bridge  
0a82 MCP79 Host Bridge  
0a83 MCP79 Host Bridge  
0a84 MCP79 Host Bridge  
0a85 MCP79 Host Bridge  
0a86 MCP79 Host Bridge  
0a87 MCP79 Host Bridge  
0a88 MCP79 Memory Controller  
0a89 MCP79 Memory Controller  
0a98 MCP79 Memory Controller  
1043 1a87 F5GL Notebook  
10de cb79 iMac 9,1  
0aa0 MCP79 PCI Express Bridge  
1043 1a87 F5GL Notebook  
10de cb79 Apple iMac 9,1  
0aa2 MCP79 SMBus

1043 1a87 F5GL Notebook  
10de cb79 Apple iMac 9,1  
19da a123 IONITX-F-E  
0aa3 MCP79 Co-processor  
1043 1a87 F5GL Notebook  
10de cb79 Apple iMac 9,1  
19da a123 IONITX-F-E  
0aa4 MCP79 Memory Controller  
1043 1a87 F5GL Notebook  
19da a123 IONITX-F-E  
0aa5 MCP79 OHCI USB 1.1 Controller  
1043 1a87 F5GL Notebook  
10de cb79 Apple iMac 9,1  
19da a123 IONITX-F-E  
0aa6 MCP79 EHCI USB 2.0 Controller  
1043 1a87 F5GL Notebook  
10de cb79  
Apple iMac 9,1  
19da a123 IONITX-F-E  
0aa7 MCP79 OHCI USB 1.1 Controller  
10de cb79 Apple iMac 9,1  
19da a123 IONITX-F-E  
0aa8 MCP79 OHCI USB 1.1 Controller  
0aa9 MCP79 EHCI USB 2.0 Controller  
10de cb79 Apple iMac 9,1  
19da a123 IONITX-F-E  
0aaa MCP79 EHCI USB 2.0 Controller  
0aab MCP79 PCI Bridge  
1043 1a87 F5GL Notebook  
10de cb79 Apple iMac 9,1  
0aac MCP79 LPC Bridge  
0aad MCP79 LPC Bridge  
19da a123 IONITX-F-E  
0aae MCP79 LPC Bridge  
1043 1a87 F5GL Notebook  
10de cb79 Apple iMac 9,1  
0aaf MCP79 LPC Bridge  
0ab0 MCP79 Ethernet  
1043 1215 F5GL Notebook  
10de cb79 Apple iMac 9,1  
19da a123 IONITX-F-E  
0ab1 MCP79 Ethernet  
0ab2 MCP79 Ethernet  
0ab3 MCP79 Ethernet  
0ab4 MCP79 SATA Controller  
19da a123 IONITX-F-E  
0ab5 MCP79 SATA Controller  
0ab6 MCP79 SATA Controller



0ab7 MCP79 SATA Controller  
0ab8 MCP79 AHCI Controller  
1043 1a87 F5GL Notebook  
0ab9 MCP79 AHCI Controller  
10de cb79 Apple iMac 9,1  
0aba MCP79 AHCI Controller  
0abb  
MCP79 AHCI Controller  
0abc MCP79 RAID Controller  
0abd MCP79 RAID Controller  
0abe MCP79 RAID Controller  
0abf MCP79 RAID Controller  
0ac0 MCP79 High Definition Audio  
1043 1903 F5GL Notebook  
10de cb79 Apple iMac 9,1  
0ac1 MCP79 High Definition Audio  
0ac2 MCP79 High Definition Audio  
0ac3 MCP79 High Definition Audio  
0ac4 MCP79 PCI Express Bridge  
10de cb79 Apple iMac 9,1  
0ac5 MCP79 PCI Express Bridge  
0ac6 MCP79 PCI Express Bridge  
1043 1a87 F5GL Notebook  
10de cb79 Apple iMac 9,1  
0ac7 MCP79 PCI Express Bridge  
1043 1a87 F5GL Notebook  
10de cb79 Apple iMac 9,1  
0ac8 MCP79 PCI Express Bridge  
0ad0 MCP78S [GeForce 8200] SATA Controller (non-AHCI mode)  
1462 7508 K9N2GM-FIH  
1849 0ad0 K10N78FullHD-hSLI R3.0 IDE  
0ad4 MCP78S [GeForce 8200] AHCI Controller  
103c 2a9e Pavilion p6310f  
1043 82e8 M3N72-D  
1849 0ad4 K10N78FullHD-hSLI R3.0 AHCI Controller  
0ad8 MCP78S [GeForce 8200] SATA Controller (RAID mode)  
0be2 GT216 HDMI Audio Controller  
1043  
8311 ENGT220/DI/1GD3(LP)/V2  
0be3 High Definition Audio Controller  
1028 040b Latitude E6510  
10de 066d G98 [GeForce 8400GS]  
1462 8094 N210 [Geforce 210] PCIe graphics adapter  
0be4 High Definition Audio Controller  
0be5 GF100 High Definition Audio Controller  
0be9 GF106 High Definition Audio Controller  
1558 8687 CLEVO/KAPOK W860CU  
3842 1452 GeForce GTS 450

0bea GF108 High Definition Audio Controller  
3842 1430 GeForce GT 430  
0beb GF104 High Definition Audio Controller  
1462 2322 N460GTX Cyclone 1GD5/OC  
0bee GF116 High Definition Audio Controller  
0bf0 Tegra2 PCIe x4 Bridge  
0bf1 Tegra2 PCIe x2 Bridge  
0ca0 GT215 [GeForce GT 330]  
0ca2 GT215 [GeForce GT 320]  
0ca3 GT215 [GeForce GT 240]  
0ca4 GT215 [GeForce GT 340]  
0ca5 GT215 [GeForce GT 220]  
0ca7 GT215 [GeForce GT 330]  
0ca8 GT215M [GeForce GTS 260M]  
0ca9 GT215M [GeForce GTS 250M]  
0cac GT215 [GeForce GT 220/315]  
0caf GT215M [GeForce GT 335M]  
0cb0 GT215M [GeForce GTS 350M]  
0cb1 GT215M  
[GeForce GTS 360M]  
0cbc GT215GLM [Quadro FX 1800M]  
0d60 MCP89 HOST Bridge  
0d68 MCP89 Memory Controller  
0d69 MCP89 Memory Controller  
0d76 MCP89 PCI Express Bridge  
0d79 MCP89 SMBus  
0d7a MCP89 Co-Processor  
0d7b MCP89 Memory Controller  
0d7d MCP89 Ethernet  
0d80 MCP89 LPC Bridge  
0d85 MCP89 SATA Controller  
0d88 MCP89 SATA Controller (AHCI mode)  
0d89 MCP89 SATA Controller (AHCI mode)  
0d8d MCP89 SATA Controller (RAID mode)  
0d94 MCP89 High Definition Audio  
0d9c MCP89 OHCI USB 1.1 Controller  
0d9d MCP89 EHCI USB 2.0 Controller  
0dc0 GF106 [GeForce GT 440]  
0dc4 GF106 [GeForce GTS 450]  
0dc5 GF106 [GeForce GTS 450 OEM]  
0dc6 GF106 [GeForce GTS 450 OEM]  
0dcd GF106M [GeForce GT 555M]  
0dce GF106M [GeForce GT 555M]  
0dd1 GF106M [GeForce GTX 460M]  
1558 8687 CLEVO/KAPOK W860CU  
0dd2 GF106M [GeForce GT 445M]  
0dd3 GF106M [GeForce GT 435M]  
0dd6 GF106M [GeForce GT 550M]

Odd8 GF106GL [Quadro 2000]  
10de 0914 Quadro 2000D  
Odda GF106GLM [Quadro 2000M]  
0de0  
GF108 [GeForce GT 440]  
0de1 GF108 [GeForce GT 430]  
3842 1430 GeForce GT 430  
0de2 GF108 [GeForce GT 420]  
0de3 GF108M [GeForce GT 635M]  
0de4 GF108 [GeForce GT 520]  
0de5 GF108 [GeForce GT 530]  
0de7 GF108 [GeForce GT 610]  
0de8 GF108M [GeForce GT 620M]  
0de9 GF108M [GeForce GT 620M/630M/635M/640M LE]  
1025 0692 GeForce GT 620M  
1025 0725 GeForce GT 620M  
1025 0728 GeForce GT 620M  
1025 072b GeForce GT 620M  
1025 072e GeForce GT 620M  
1025 0753 GeForce GT 620M  
1025 0754 GeForce GT 620M  
17aa 3977 GeForce GT 640M LE  
1b0a 20c6 GeForce GT 630M  
1b0a 2210 GeForce GT 635M  
0dea GF108M [GeForce 610M]  
17aa 365a GeForce 615  
17aa 365b GeForce 615  
17aa 365e GeForce 615  
17aa 3660 GeForce 615  
17aa 366c GeForce 615  
0deb GF108M [GeForce GT 555M]  
0dec GF108M [GeForce GT 525M]  
0ded GF108M [GeForce GT 520M]  
0dee GF108M [GeForce GT 415M]  
0def GF108M [NVS 5400M]  
0df0 GF108M [GeForce GT 425M]  
0df1 GF108M [GeForce GT 420M]  
0df2 GF108M  
[GeForce GT 435M]  
0df3 GF108M [GeForce GT 420M]  
0df4 GF108M [GeForce GT 540M]  
152d 0952 GeForce GT 630M  
152d 0953 GeForce GT 630M  
0df5 GF108M [GeForce GT 525M]  
0df6 GF108M [GeForce GT 550M]  
0df7 GF108M [GeForce GT 520M]  
0df8 GF108GL [Quadro 600]  
0df9 GF108GLM [Quadro 500M]

0dfa GF108GLM [Quadro 1000M]  
0dfc GF108GLM [NVS 5200M]  
0e08 GF119 HDMI Audio Controller  
1043 83a0 ENGT520 SILENT  
# 1024MB with passive cooling (heatsink)  
10b0 104a Gainward GeForce GT 610  
0e09 GF110 High Definition Audio Controller  
0e0a GK104 HDMI Audio Controller  
0e0b GK106 HDMI Audio Controller  
0e0c GF114 HDMI Audio Controller  
0e0f GK208 HDMI/DP Audio Controller  
0e12 TegraK1 PCIe x4 Bridge  
0e13 TegraK1 PCIe x1 Bridge  
0e1a GK110 High Definition Audio Controller  
0e1b GK107 HDMI Audio Controller  
103c 197b ZBook 15  
1043 8428 GTX650-DC-1GD5  
0e1c Tegra3+ PCIe x4 Bridge  
0e1d Tegra3+ PCIe x2 Bridge  
0e22 GF104 [GeForce GTX 460]  
1462 2322 N460GTX Cyclone 1GD5/OC  
0e23  
GF104 [GeForce GTX 460 SE]  
0e24 GF104 [GeForce GTX 460 OEM]  
0e30 GF104M [GeForce GTX 470M]  
0e31 GF104M [GeForce GTX 485M]  
0e3a GF104GLM [Quadro 3000M]  
0e3b GF104GLM [Quadro 4000M]  
0f00 GF108 [GeForce GT 630]  
0f01 GF108 [GeForce GT 620]  
0f02 GF108 [GeForce GT 730]  
0f03 GF108 [GeForce GT 610]  
0f06 GF108 [GeForce GT 730]  
0fa0 GK11x [GK11x\_FPGA]  
0fa5 GK11x  
0fa7 GK11x [Tegra on x86 (PEATRANS)]  
0fb0 GM200 High Definition Audio  
0fb8 GP108 High Definition Audio Controller  
0fb9 GP107GL High Definition Audio Controller  
0fba GM206 High Definition Audio Controller  
0fbb GM204 High Definition Audio Controller  
0fbc GM107 High Definition Audio Controller [GeForce 940MX]  
0fc0 GK107 [GeForce GT 640 OEM]  
0fc1 GK107 [GeForce GT 640]  
0fc2 GK107 [GeForce GT 630 OEM]  
0fc4 GK107 [D14P1-15]  
0fc5 GK107 [GeForce GT 1030]  
0fc6 GK107 [GeForce GTX 650]

1043 8428 GTX650-DC-1GD5  
0fc8 GK107 [GeForce GT 740]  
0fc9 GK107 [GeForce GT 730]  
0fcb GK107 [EXK107]  
0fcc  
GK107 [GeForce GT 720]  
0fcd GK107M [GeForce GT 755M]  
0fce GK107M [GeForce GT 640M LE]  
0fcf GK107 [GEN3 ESI]  
0fd0 GK107 [NB1G]  
0fd1 GK107M [GeForce GT 650M]  
1043 1597 GeForce GT 650M  
1043 15a7 GeForce GT 650M  
1043 2103 N56VZ  
1043 2105 GeForce GT 650M  
1043 2141 GeForce GT 650M  
0fd2 GK107M [GeForce GT 640M]  
1028 054f GeForce GT 640M  
1028 055f GeForce GT 640M  
1028 0595 GeForce GT 640M LE  
1028 05b2 GeForce GT 640M LE  
0fd3 GK107M [GeForce GT 640M LE]  
0fd4 GK107M [GeForce GTX 660M]  
0fd5 GK107M [GeForce GT 650M Mac Edition]  
0fd6 GK107M [N13P-GS-W]  
0fd7 GK107 [GK107-GTX]  
0fd8 GK107M [GeForce GT 640M Mac Edition]  
0fd9 GK107M [GeForce GT 645M]  
0fda GK107 [GK107-ES-A1]  
0fdb GK107 [GK107-ESP-A1]  
0fdc GK107 [GK107-INT22-A1]  
0fdd GK107 [GK107-INT11-A1]  
0fde GK107 [GK107-ES-KA-E1]  
0fdf GK107M [GeForce GT 740M]  
0fe0 GK107M [GeForce GTX 660M Mac Edition]  
0fe1 GK107M [GeForce GT 730M]  
0fe2 GK107M [GeForce GT 745M]  
0fe3  
GK107M [GeForce GT 745M]  
103c 2b16 GeForce GT 745A  
17aa 3675 GeForce GT 745A  
0fe4 GK107M [GeForce GT 750M]  
0fe5 GK107 [GeForce K340 USM]  
0fe6 GK107 [GRID K1 NVS USM]  
# GRID K1 USM  
0fe7 GK107GL [GRID K100 vGPU]  
10de 101e GRID K100  
0fe8 GK107M [N14P-GS]

0fe9 GK107M [GeForce GT 750M Mac Edition]  
0fea GK107M [GeForce GT 755M Mac Edition]  
0fec GK107M [GeForce 710A]  
0fed GK107M [GeForce 820M]  
0fee GK107M [GeForce 810M]  
0fef GK107GL [GRID K340]  
0ff0 GK107 [NB1Q]  
0ff1 GK107 [NVS 1000]  
0ff2 GK107GL [GRID K1]  
0ff3 GK107GL [Quadro K420]  
0ff5 GK107GL [GRID K1 Tesla USM]  
0ff6 GK107GLM [Quadro K1100M]  
103c 197b ZBook 15  
# GRID K1 Quadro USM  
0ff7 GK107GL [GRID K140Q vGPU]  
10de 1037 GRID K140Q  
0ff8 GK107GLM [Quadro K500M]  
0ff9 GK107GL [Quadro K2000D]  
0ffa GK107GL [Quadro K600]  
0ffb GK107GLM [Quadro K2000M]  
0ffc GK107GLM [Quadro K1000M]  
0ffd GK107 [NVS 510]  
0ffe GK107GL [Quadro K2000]  
0fff GK107GL [Quadro 410]  
1001 GK110B [GeForce GTX  
TITAN Z]  
1003 GK110 [GeForce GTX Titan LE]  
1004 GK110 [GeForce GTX 780]  
3842 0784 GK110B [GeForce GTX 780 SC w/ ACX Cooler]  
3842 1784 GK110B [GeForce GTX 780 Dual FTW w/ ACX Cooler]  
3842 1788 GK110B [GeForce GTX 780 Dual Classified w/ ACX Cooler]  
1005 GK110 [GeForce GTX TITAN]  
1043 8451 GTX TITAN-6GD5  
# Reference Model  
10de 1035 GeForce GTX Titan  
# 06G-P4-2790-KR  
3842 2790 GeForce GTX Titan  
# 06G-P4-2791-KR  
3842 2791 GeForce GTX Titan SC  
# 06G-P4-2793-KR  
3842 2793 GeForce GTX Titan SC Signature  
# 06G-P4-2794-KR  
3842 2794 GeForce GTX Titan SC Hydro Copper  
# 06G-P4-2795-KR  
3842 2795 GeForce GTX Titan SC Hydro Copper Signature  
1007 GK110 [GeForce GTX 780 Rev. 2]  
1008 GK110 [GeForce GTX 780 Ti 6GB]  
100a GK110B [GeForce GTX 780 Ti]

100c GK110B [GeForce GTX TITAN Black]  
101e GK110GL [Tesla K20X]  
101f GK110GL [Tesla K20]  
1020 GK110GL [Tesla K20X]  
1021 GK110GL [Tesla K20Xm]  
1022 GK110GL [Tesla K20c]  
1023 GK110BGL [Tesla K40m]  
10de 097e  
12GB Computational Accelerator  
1024 GK180GL [Tesla K40c]  
1026 GK110GL [Tesla K20s]  
1027 GK110BGL [Tesla K40st]  
1028 GK110GL [Tesla K20m]  
1029 GK110BGL [Tesla K40s]  
102a GK110BGL [Tesla K40t]  
102d GK210GL [Tesla K80]  
102e GK110BGL [Tesla K40d]  
102f GK110BGL [Tesla Stella Solo]  
103a GK110GL [Quadro K6000]  
103c GK110GL [Quadro K5200]  
103f GK110BGL [Tesla Stella SXM]  
1040 GF119 [GeForce GT 520]  
1043 83a0 ENGT520 SILENT  
1042 GF119 [GeForce 510]  
1045 GF119  
1048 GF119 [GeForce 605]  
1049 GF119 [GeForce GT 620 OEM]  
104a GF119 [GeForce GT 610]  
# 1024MB with passive cooling (heatsink)  
10b0 104a Gainward GeForce GT 610  
104b GF119 [GeForce GT 625 OEM]  
104c GF119 [GeForce GT 705]  
104d GF119 [GeForce GT 710]  
1050 GF119M [GeForce GT 520M]  
1051 GF119M [GeForce GT 520MX]  
1052 GF119M [GeForce GT 520M]  
1054 GF119M [GeForce 410M]  
1055 GF119M [GeForce 410M]  
1056 GF119M [NVS 4200M]  
1057 GF119M [Quadro NVS 4200M]  
1058 GF119M [GeForce 610M]  
103c  
2aed GeForce 610  
103c 2af1 GeForce 610  
1043 10ac GeForce GT 610M  
1043 10bc GeForce GT 610M  
1043 1652 GeForce GT 610M  
17aa 367a GeForce 610M

17aa 3682 GeForce 800A  
17aa 3687 GeForce 800A  
17aa 3692 GeForce 705A  
17aa 3695 GeForce 800A  
17aa a117 GeForce 610M  
1059 GF119M [GeForce 610M]  
105a GF119M [GeForce 610M]  
1043 2111 GeForce GT 610M  
1043 2112 GeForce GT 610M  
105b GF119M [GeForce 705M]  
103c 2afb GeForce 705A  
17aa 309d GeForce 705A  
17aa 30b1 GeForce 800A  
17aa 30f3 GeForce 705A  
17aa 36a1 GeForce 800A  
107c GF119 [NVS 315]  
107d GF119 [NVS 310]  
1080 GF110 [GeForce GTX 580]  
1081 GF110 [GeForce GTX 570]  
10de 087e Leadtek WinFast GTX 570  
1082 GF110 [GeForce GTX 560 Ti OEM]  
1084 GF110 [GeForce GTX 560 OEM]  
1086 GF110 [GeForce GTX 570 Rev. 2]  
1087 GF110 [GeForce GTX 560 Ti 448 Cores]  
1088 GF110 [GeForce GTX 590]  
1089 GF110 [GeForce GTX 580 Rev. 2]  
108b GF110 [GeForce GTX 580]  
108e GF110GL [Tesla C2090]  
1091 GF110GL  
[Tesla M2090]  
10de 088e Tesla X2090  
10de 0891 Tesla X2090  
10de 0974 Tesla X2090  
10de 098d Tesla X2090  
1094 GF110GL [Tesla M2075]  
10de 0888 Tesla M2075  
1096 GF110GL [Tesla C2050 / C2075]  
10de 0910 Tesla C2075  
10de 0911 Tesla C2050  
109a GF100GLM [Quadro 5010M]  
109b GF100GL [Quadro 7000]  
10de 0918 Quadro 7000  
10c0 GT218 [GeForce 9300 GS Rev. 2]  
10c3 GT218 [GeForce 8400 GS Rev. 3]  
10c5 GT218 [GeForce 405]  
10d8 GT218 [NVS 300]  
10ef GP102 HDMI Audio Controller  
10f0 GP104 High Definition Audio Controller



10f1 GP106 High Definition Audio Controller  
1043 85b6 DUAL-GTX1060-O6G [GeForce GTX 1060 6GB Dual]  
10f7 TU102 High Definition Audio Controller  
10f8 TU104 HD Audio Controller  
10f9 TU106 High Definition Audio Controller  
1043 8673 TURBO-RTX2070-8G  
1140 GF117M [GeForce 610M/710M/810M/820M / GT 620M/625M/630M/720M]  
1019 0799 GeForce 820M  
1019 999f GeForce GT 720M  
1025 0600 GeForce GT 620M  
1025 0606 GeForce GT 620M  
1025  
064a GeForce GT 620M  
1025 064c GeForce GT 620M  
1025 067a GeForce GT 620M  
1025 0680 GeForce GT 620M  
1025 0686 GeForce 710M  
1025 0689 GeForce 710M  
1025 068b GeForce 710M  
1025 068d GeForce 710M  
1025 068e GeForce 710M  
1025 0691 GeForce 710M  
1025 0692 GeForce GT 620M  
1025 0694 GeForce GT 620M  
1025 0702 GeForce GT 620M  
1025 0719 GeForce GT 620M  
1025 0725 GeForce GT 620M  
1025 0728 GeForce GT 620M  
1025 072b GeForce GT 620M  
1025 072e GeForce GT 620M  
1025 0732 GeForce GT 620M  
1025 0763 GeForce GT 720M  
1025 0773 GeForce 710M  
1025 0774 GeForce 710M  
1025 0776 GeForce GT 720M  
1025 077a GeForce 710M  
1025 077b GeForce 710M  
1025 077c GeForce 710M  
1025 077d GeForce 710M  
1025 077e GeForce 710M  
1025 077f GeForce 710M  
1025 0781 GeForce GT 720M  
1025 0798 GeForce GT 720M  
1025 0799 GeForce GT 720M  
1025 079b GeForce GT 720M  
1025 079c GeForce GT 720M  
1025 0807 GeForce GT 720M  
1025 0821 GeForce GT 720M

1025  
0823 GeForce GT 720M  
1025 0830 GeForce GT 720M  
1025 0833 GeForce GT 720M  
1025 0837 GeForce GT 720M  
1025 083e GeForce 820M  
1025 0841 GeForce 710M  
1025 0854 GeForce 820M  
1025 0855 GeForce 820M  
1025 0856 GeForce 820M  
1025 0857 GeForce 820M  
1025 0858 GeForce 820M  
1025 0863 GeForce 820M  
1025 0868 GeForce 820M  
1025 0869 GeForce 810M  
1025 0873 GeForce 820M  
1025 0878 GeForce 820M  
1025 087b GeForce 820M  
1025 087c GeForce 810M  
1025 0881 GeForce 820M  
1025 088a GeForce 820M  
1025 089b GeForce 820M  
1025 090f GeForce 820M  
1025 0921 GeForce 820M  
1025 092e GeForce 810M  
1025 092f GeForce 820M  
1025 0932 GeForce 820M  
1025 093a GeForce 820M  
1025 093c GeForce 820M  
1025 093f GeForce 820M  
1025 0941 GeForce 820M  
1025 0945 GeForce 820M  
1025 0954 GeForce 820M  
1025 0965 GeForce 820M  
1028 054d GeForce GT 630M  
1028 054e GeForce GT 630M  
1028 0554 GeForce GT 620M  
1028 0557 GeForce GT 620M  
1028 0562 GeForce  
GT 625M  
1028 0565 GeForce GT 630M  
1028 0568 GeForce GT 630M  
1028 0590 GeForce GT 630M  
1028 0592 GeForce GT 625M  
1028 0594 GeForce GT 625M  
1028 0595 GeForce GT 625M  
1028 05a2 GeForce GT 625M  
1028 05b1 GeForce GT 625M

1028 05b3 GeForce GT 625M  
1028 05da GeForce GT 630M  
1028 05de GeForce GT 720M  
1028 05e0 GeForce GT 720M  
1028 05e8 GeForce GT 630M  
1028 05f4 GeForce GT 720M  
1028 060f GeForce GT 720M  
1028 064e GeForce 820M  
1028 0652 GeForce 820M  
1028 0653 GeForce 820M  
1028 0655 GeForce 820M  
1028 065e GeForce 820M  
1028 0662 GeForce 820M  
1028 068d GeForce 820M  
1028 06ad GeForce 820M  
1028 06ae GeForce 820M  
1028 06af GeForce 820M  
1028 06b0 GeForce 820M  
1028 06c0 GeForce 820M  
1028 06c1 GeForce 820M  
103c 18ef GeForce GT 630M  
103c 18f9 GeForce GT 630M  
103c 18fb GeForce GT 630M  
103c 18fd GeForce GT 630M  
103c 18ff GeForce GT 630M  
103c 218a GeForce 820M  
103c 21bb GeForce 820M  
103c 21bc GeForce  
820M  
103c 220e GeForce 820M  
103c 2210 GeForce 820M  
103c 2212 GeForce 820M  
103c 2214 GeForce 820M  
103c 2218 GeForce 820M  
103c 225b GeForce 820M  
103c 225d GeForce 820M  
103c 226d GeForce 820M  
103c 226f GeForce 820M  
103c 22d2 GeForce 820M  
103c 22d9 GeForce 820M  
103c 2335 GeForce 820M  
103c 2337 GeForce 820M  
103c 2aef GeForce GT 720A  
103c 2af9 GeForce 710A  
1043 10dd NVS 5200M  
1043 10ed NVS 5200M  
1043 11fd GeForce GT 720M  
1043 124d GeForce GT 720M

1043 126d GeForce GT 720M  
1043 131d GeForce GT 720M  
1043 13fd GeForce GT 720M  
1043 14c7 GeForce GT 720M  
1043 1507 GeForce GT 620M  
1043 15ad GeForce 820M  
1043 15ed GeForce 820M  
1043 160d GeForce 820M  
1043 163d GeForce 820M  
1043 166d GeForce 820M  
1043 16cd GeForce 820M  
1043 16dd GeForce 820M  
1043 170d GeForce 820M  
1043 176d GeForce 820M  
1043 178d GeForce 820M  
1043 179d GeForce 820M  
1043 17dd GeForce 820M  
1043 2132 GeForce GT 620M  
1043 2136  
NVS 5200M  
1043 21ba GeForce GT 720M  
1043 21fa GeForce GT 720M  
1043 220a GeForce GT 720M  
1043 221a GeForce GT 720M  
1043 223a GeForce GT 710M  
1043 224a GeForce GT 710M  
1043 227a GeForce 820M  
1043 228a GeForce 820M  
1043 232a GeForce 820M  
1043 233a GeForce 820M  
1043 235a GeForce 820M  
1043 236a GeForce 820M  
1043 238a GeForce 820M  
1043 8595 GeForce GT 720M  
1043 85ea GeForce GT 720M  
1043 85eb GeForce 820M  
1043 85ec GeForce 820M  
1043 85ee GeForce GT 720M  
1043 85f3 GeForce 820M  
1043 860e GeForce 820M  
1043 861a GeForce 820M  
1043 861b GeForce 820M  
1043 8628 GeForce 820M  
1043 8643 GeForce 820M  
1043 864c GeForce 820M  
1043 8652 GeForce 820M  
1043 8660 GeForce 820M  
1043 8661 GeForce 820M

105b 0dac GeForce GT 720M  
105b 0dad GeForce GT 720M  
105b 0ef3 GeForce GT 720M  
1072 152d GeForce GT 720M  
10cf 17f5 GeForce GT 720M  
1179 fa01 GeForce 710M  
1179 fa02 GeForce 710M  
1179 fa03 GeForce 710M  
1179 fa05  
GeForce 710M  
1179 fa11 GeForce 710M  
1179 fa13 GeForce 710M  
1179 fa18 GeForce 710M  
1179 fa19 GeForce 710M  
1179 fa21 GeForce 710M  
1179 fa23 GeForce 710M  
1179 fa2a GeForce 710M  
1179 fa32 GeForce 710M  
1179 fa33 GeForce 710M  
1179 fa36 GeForce 710M  
1179 fa38 GeForce 710M  
1179 fa42 GeForce 710M  
1179 fa43 GeForce 710M  
1179 fa45 GeForce 710M  
1179 fa47 GeForce 710M  
1179 fa49 GeForce 710M  
1179 fa58 GeForce 710M  
1179 fa59 GeForce 710M  
1179 fa88 GeForce 710M  
1179 fa89 GeForce 710M  
144d b092 GeForce GT 620M  
144d c0d5 GeForce GT 630M  
144d c0d7 GeForce GT 620M  
144d c0e2 NVS 5200M  
144d c0e3 NVS 5200M  
144d c0e4 NVS 5200M  
144d c10d GeForce 820M  
144d c652 GeForce GT 620M on NP300E5C series laptop  
144d c709 GeForce 710M  
144d c711 GeForce 710M  
144d c736 GeForce 710M  
144d c737 GeForce 710M  
144d c745 GeForce 820M  
144d c750 GeForce 820M  
1462 10b8 GeForce GT 710M  
1462 10e9 GeForce GT 720M  
1462 1116

GeForce 820M  
1462 aa33 GeForce 720M  
1462 aaa2 GeForce GT 720M  
1462 aaa3 GeForce 820M  
1462 acb2 GeForce GT 720M  
1462 acc1 GeForce GT 720M  
1462 ae61 GeForce 720M  
1462 ae65 GeForce GT 720M  
1462 ae6a GeForce 820M  
1462 ae71 GeForce GT 720M  
14c0 0083 GeForce 820M  
152d 0926 GeForce 620M  
152d 0982 GeForce GT 630M  
152d 0983 GeForce GT 630M  
152d 1005 GeForce GT 820M  
152d 1012 GeForce 710M  
152d 1019 GeForce 820M  
152d 1030 GeForce GT 630M  
152d 1055 GeForce 710M  
152d 1067 GeForce GT 720M  
152d 1072 GeForce GT 720M  
152d 1086 GeForce 820M  
152d 1092 GeForce 820M  
17aa 2200 NVS 5200M  
17aa 2213 GeForce GT 720M  
17aa 2220 GeForce GT 720M  
17aa 309c GeForce GT 720A  
17aa 30b4 GeForce 820A  
17aa 30b7 GeForce 720A  
17aa 30e4 GeForce 820A  
17aa 361b GeForce 820A  
17aa 361c GeForce 820A  
17aa 361d GeForce 820A  
17aa 3656 GeForce GT 620M  
17aa 365a GeForce 705M  
17aa 365e GeForce 800M  
17aa 3661 GeForce 820A  
17aa  
366c GeForce 800M  
17aa 3685 GeForce 800M  
17aa 3686 GeForce 800M  
17aa 3687 GeForce 705A  
17aa 3696 GeForce 820A  
17aa 369b GeForce 820A  
17aa 369c GeForce 820A  
17aa 369d GeForce 820A  
17aa 369e GeForce 820A  
17aa 36a9 GeForce 820A

17aa 36af GeForce 820A  
17aa 36b0 GeForce 820A  
17aa 36b6 GeForce 820A  
17aa 3800 GeForce GT 720M  
17aa 3801 GeForce GT 720M  
17aa 3802 GeForce GT 720M  
17aa 3803 GeForce GT 720M  
17aa 3804 GeForce GT 720M  
17aa 3806 GeForce GT 720M  
17aa 3808 GeForce GT 720M  
17aa 380d GeForce 820M  
17aa 380e GeForce 820M  
17aa 380f GeForce 820M  
17aa 3811 GeForce 820M  
17aa 3812 GeForce 820M  
17aa 3813 GeForce 820M  
17aa 3816 GeForce 820M  
17aa 3818 GeForce 820M  
17aa 381a GeForce 820M  
17aa 381c GeForce 820M  
17aa 3901 GeForce 610M / GT 620M  
17aa 3902 GeForce 710M  
17aa 3903 GeForce 610M/710M  
17aa 3904 GeForce GT 620M/625M  
17aa 3905 GeForce GT 720M  
17aa 3907 GeForce 820M  
17aa 3910 GeForce 720M  
17aa  
3912 GeForce 720M  
17aa 3913 GeForce 820M  
17aa 3915 GeForce 820M  
17aa 3977 GeForce GT 720M  
17aa 3983 GeForce 610M  
17aa 5001 GeForce 610M  
17aa 5003 GeForce GT 720M  
17aa 5005 GeForce 705M  
17aa 500d GeForce GT 620M  
17aa 5014 GeForce 710M  
17aa 5017 GeForce 710M  
17aa 5019 GeForce 710M  
17aa 501a GeForce 710M  
17aa 501f GeForce GT 720M  
17aa 5025 GeForce 710M  
17aa 5027 GeForce 710M  
17aa 502a GeForce 710M  
17aa 502b GeForce GT 720M  
17aa 502d GeForce 710M  
17aa 502e GeForce GT 720M

17aa 502f GeForce GT 720M  
17aa 5030 GeForce 705M  
17aa 5031 GeForce 705M  
17aa 5032 GeForce 820M  
17aa 5033 GeForce 820M  
17aa 503e GeForce 710M  
17aa 503f GeForce 820M  
17aa 5040 GeForce 820M  
1854 0177 GeForce 710M  
1854 0180 GeForce 710M  
1854 0190 GeForce GT 720M  
1854 0192 GeForce GT 720M  
1854 0224 GeForce 820M  
1b0a 01c0 GeForce 820M  
1b0a 20dd GeForce GT 620M  
1b0a 20df GeForce GT 620M  
1b0a 210e GeForce 820M  
1b0a  
2202 GeForce GT 720M  
1b0a 90d7 GeForce 820M  
1b0a 90dd GeForce 820M  
1b50 5530 GeForce 820M  
1b6c 5531 GeForce GT 720M  
1bab 0106 GeForce 820M  
1d05 1013 GeForce 810M  
1180 GK104 [GeForce GTX 680]  
1043 83f1 GTX680-DC2-2GD5  
3842 3682 GeForce GTX 680 Mac Edition  
1182 GK104 [GeForce GTX 760 Ti]  
1183 GK104 [GeForce GTX 660 Ti]  
1184 GK104 [GeForce GTX 770]  
1185 GK104 [GeForce GTX 660 OEM]  
10de 106f GK104 [GeForce GTX 760 OEM]  
1186 GK104 [GeForce GTX 660 Ti]  
1187 GK104 [GeForce GTX 760]  
1188 GK104 [GeForce GTX 690]  
1189 GK104 [GeForce GTX 670]  
10de 1074 GK104 [GeForce GTX 760 Ti OEM]  
118a GK104GL [GRID K520]  
118b GK104GL [GRID K2 GeForce USM]  
118c GK104 [GRID K2 NVS USM]  
# GRID K2 USM  
118d GK104GL [GRID K200 vGPU]  
10de 101d GRID K200  
118e GK104 [GeForce GTX 760 OEM]  
118f GK104GL [Tesla K10]  
1191 GK104 [GeForce GTX 760 Rev. 2]  
1193 GK104 [GeForce GTX 760 Ti OEM]



1194 GK104GL [Tesla K8]  
1195 GK104 [GeForce GTX 660 Rev. 2]  
1198  
GK104M [GeForce GTX 880M]  
1199 GK104M [GeForce GTX 870M]  
119a GK104M [GeForce GTX 860M]  
119d GK104M [GeForce GTX 775M Mac Edition]  
119e GK104M [GeForce GTX 780M Mac Edition]  
119f GK104M [GeForce GTX 780M]  
11a0 GK104M [GeForce GTX 680M]  
11a1 GK104M [GeForce GTX 670MX]  
11a2 GK104M [GeForce GTX 675MX Mac Edition]  
11a3 GK104M [GeForce GTX 680MX]  
106b 010d iMac 13,2  
11a4 GK104 [GK104-ESA]  
11a5 GK104 [GK104-ESA]  
11a7 GK104M [GeForce GTX 675MX]  
11a8 GK104GLM [Quadro K5100M]  
11a9 GK104M [GeForce GTX 870M]  
11aa GK104 [GK104-INT]  
11ac GK104 [GK104-CS]  
11af GK104GLM [GRID IceCube]  
11b0 GK104GL [GRID K240Q / K260Q vGPU]  
10de 101a GRID K240Q  
10de 101b GRID K260Q  
11b1 GK104GL [GRID K2 Tesla USM]  
11b4 GK104GL [Quadro K4200]  
11b6 GK104GLM [Quadro K3100M]  
11b7 GK104GLM [Quadro K4100M]  
11b8 GK104GLM [Quadro K5100M]  
11b9 GK104GLM  
11ba GK104GL [Quadro K5000]  
11bb GK104GL [Quadro 4100]  
11bc GK104GLM [Quadro K5000M]  
11bd GK104GLM [Quadro  
K4000M]  
11be GK104GLM [Quadro K3000M]  
11bf GK104GL [GRID K2]  
11c0 GK106 [GeForce GTX 660]  
11c1 GK106 [D14P2-30]  
11c2 GK106 [GeForce GTX 650 Ti Boost]  
1043 845b GeForce GTX 650 Ti Boost DirectCU II OC  
1462 2874 GeForce GTX 650 Ti Boost TwinFroze II OC  
1569 11c2 GeForce GTX 650 Ti Boost OC  
19da 1281 GeForce GTX 650 Ti Boost OC  
3842 3657 GeForce GTX 650 Ti Boost  
3842 3658 GeForce GTX 650 Ti Boost Superclocked  
11c3 GK106 [GeForce GTX 650 Ti OEM]

10de 1030 GeForce GTX 650 Ti OEM  
11c4 GK106 [GeForce GTX 645 OEM]  
11c5 GK106 [GeForce GT 740]  
11c6 GK106 [GeForce GTX 650 Ti]  
11c7 GK106 [GeForce GTX 750 Ti]  
11c8 GK106 [GeForce GTX 650 OEM]  
11cb GK106 [GeForce GT 740]  
11d0 GK106 [GK106-INT353]  
11d1 GK106 [GK106-INT343]  
11d2 GK106 [GK106-INT232]  
11d3 GK106 [GK106-ES]  
11e0 GK106M [GeForce GTX 770M]  
11e1 GK106M [GeForce GTX 765M]  
11e2 GK106M [GeForce GTX 765M]  
11e3 GK106M [GeForce GTX 760M]  
17aa 3683 GeForce GTX 760A  
11e7 GK106M  
11fa  
GK106GL [Quadro K4000]  
11fc GK106GLM [Quadro K2100M]  
11ff GK106 [NB1Q]  
1200 GF114 [GeForce GTX 560 Ti]  
1201 GF114 [GeForce GTX 560]  
1202 GF114 [GeForce GTX 560 Ti OEM]  
1203 GF114 [GeForce GTX 460 SE v2]  
1205 GF114 [GeForce GTX 460 v2]  
1206 GF114 [GeForce GTX 555]  
1207 GF114 [GeForce GT 645 OEM]  
1208 GF114 [GeForce GTX 560 SE]  
1210 GF114M [GeForce GTX 570M]  
1211 GF114M [GeForce GTX 580M]  
1212 GF114M [GeForce GTX 675M]  
1213 GF114M [GeForce GTX 670M]  
1241 GF116 [GeForce GT 545 OEM]  
1243 GF116 [GeForce GT 545]  
1244 GF116 [GeForce GTX 550 Ti]  
1245 GF116 [GeForce GTS 450 Rev. 2]  
1246 GF116M [GeForce GT 550M]  
1247 GF116M [GeForce GT 555M/635M]  
1043 1752 GeForce GT 555M  
1043 2050 GeForce GT 555M  
1043 2051 GeForce GT 555M  
1043 212a GeForce GT 635M  
1043 212b GeForce GT 635M  
1043 212c GeForce GT 635M  
152d 0930 GeForce GT 635M  
1248 GF116M [GeForce GT 555M/635M]  
152d 0930 GeForce GT 635M

17c0 10e7 GeForce GT 555M  
17c0 10e8 GeForce  
GT 555M  
17c0 10ea GeForce GT 555M  
1854 0890 GeForce GT 555M  
1854 0891 GeForce GT 555M  
1854 1795 GeForce GT 555M  
1854 1796 GeForce GT 555M  
1854 3005 GeForce GT 555M  
1249 GF116 [GeForce GTS 450 Rev. 3]  
124b GF116 [GeForce GT 640 OEM]  
124d GF116M [GeForce GT 555M/635M]  
1028 0491 GeForce GT 555M  
1028 0570 GeForce GT 555M  
1028 0571 GeForce GT 555M  
1462 108d GeForce GT 555M  
1462 10cc GeForce GT 635M  
1251 GF116M [GeForce GT 560M]  
1280 GK208 [GeForce GT 635]  
1281 GK208 [GeForce GT 710]  
1282 GK208 [GeForce GT 640 Rev. 2]  
1283 GK208 [D15M2-10]  
1284 GK208 [GeForce GT 630 Rev. 2]  
1285 GK208 [GK208-100]  
1286 GK208 [GeForce GT 720]  
1287 GK208B [GeForce GT 730]  
1288 GK208B [GeForce GT 720]  
1289 GK208 [GeForce GT 710]  
128a GK208B  
128b GK208B [GeForce GT 710]  
1043 85f7 GT710-SL-1GD5  
1043 8770 GT710-4H-SL-2GD5  
128c GK208B  
1290 GK208M [GeForce GT 730M]  
103c 2afa GeForce GT 730A  
103c 2b04 GeForce GT 730A  
1043 13ad GeForce  
GT 730M  
1043 13cd GeForce GT 730M  
1291 GK208M [GeForce GT 735M]  
1292 GK208M [GeForce GT 740M]  
17aa 3675 GeForce GT 740A  
17aa 367c GeForce GT 740A  
17aa 3684 GeForce GT 740A  
1293 GK208M [GeForce GT 730M]  
1294 GK208M [GeForce GT 740M]  
1295 GK208M [GeForce 710M]  
103c 2b0d GeForce 710A

103c 2b0f GeForce 710A  
103c 2b11 GeForce 710A  
103c 2b20 GeForce 810A  
103c 2b21 GeForce 810A  
103c 2b22 GeForce 810A  
17aa 367a GeForce 805A  
17aa 367c GeForce 710A  
1296 GK208M [GeForce 825M]  
1298 GK208M [GeForce GT 720M]  
1299 GK208BM [GeForce 920M]  
17aa 30bb GeForce 920A  
17aa 30df GeForce 920A  
17aa 36a7 GeForce 920A  
17aa 36af GeForce 920M  
129a GK208BM [GeForce 910M]  
12a0 GK208  
12ad GK208 [GK208-ES]  
12ae GK208 [GK208-CS1-C]  
12af GK208 [GK208-INT]  
12b0 GK208 [GK208-CS-Q]  
12b1 GK208 [GK208 INT]  
12b9 GK208GLM [Quadro K610M]  
12ba GK208GLM [Quadro K510M]  
130b GK110 [Q12U-1]  
1340 GM108M [GeForce 830M]  
103c 2b2b GeForce 830A  
1341  
GM108M [GeForce 840M]  
17aa 3697 GeForce 840A  
17aa 3699 GeForce 840A  
17aa 369c GeForce 840A  
1344 GM108M [GeForce 845M]  
1346 GM108M [GeForce 930M]  
1347 GM108M [GeForce 940M]  
1348 GM108M [GeForce 945M / 945A]  
1349 GM108M [GeForce 930M]  
134b GM108M [GeForce 940MX]  
134d GM108M [GeForce 940MX]  
17aa 2248 ThinkPad T570  
134e GM108M [GeForce 930MX]  
134f GM108M [GeForce 920MX]  
137a GM108GLM [Quadro K620M / Quadro M500M]  
17aa 505a Quadro M500M  
137b GM108GLM [Quadro M520 Mobile]  
137d GM108M [GeForce 940A]  
1380 GM107 [GeForce GTX 750 Ti]  
1381 GM107 [GeForce GTX 750]  
1382 GM107 [GeForce GTX 745]

1389 GM107GL [GRID M30]  
1390 GM107M [GeForce 845M]  
1391 GM107M [GeForce GTX 850M]  
17aa 3697 GeForce GTX 850A  
17aa a125 GeForce GTX 850A  
1392 GM107M [GeForce GTX 860M]  
1393 GM107M [GeForce 840M]  
1398 GM107M [GeForce 845M]  
1399 GM107M [GeForce 945M]  
139a GM107M [GeForce GTX 950M]  
17aa 362c GeForce GTX 950A  
17aa 362f GeForce GTX 950A  
17aa  
363f GeForce GTX 950A  
17aa 3640 GeForce GTX 950A  
17aa 3647 GeForce GTX 950A  
17aa 36b9 GeForce GTX 950A  
139b GM107M [GeForce GTX 960M]  
1028 06e4 XPS 15 9550  
103c 2b4c GeForce GTX 960A  
139c GM107M [GeForce 940M]  
139d GM107M [GeForce GTX 750 Ti]  
13ad GM204 [GM107 INT52]  
13ae GM204 [GM107 CS1]  
13b0 GM107GLM [Quadro M2000M]  
13b1 GM107GLM [Quadro M1000M]  
13b2 GM107GLM [Quadro M600M]  
13b3 GM107GLM [Quadro K2200M]  
13b4 GM107GLM [Quadro M620 Mobile]  
13b6 GM107GLM [Quadro M1200 Mobile]  
13b9 GM107GL [NVS 810]  
13ba GM107GL [Quadro K2200]  
13bb GM107GL [Quadro K620]  
13bc GM107GL [Quadro K1200]  
13bd GM107GL [Tesla M10]  
10de 110a GRID M40  
10de 1160 Tesla M10  
10de 11d2 GRID M10-8Q  
13be GM204 [GM107 CS1]  
13bf GM204 [GM107 INT52]  
13c0 GM204 [GeForce GTX 980]  
1043 8504 GTX980-4GD5  
13c1 GM204  
13c2 GM204 [GeForce GTX 970]  
13c3 GM204  
13c4 GM204 [D17U-20]  
13d7 GM204M [GeForce GTX 980M]  
13d8 GM204M [GeForce GTX 960 OEM / 970M]

13d9  
GM204M [GeForce GTX 965M]  
13da GM204M [GeForce GTX 980 Mobile]  
13e4 GM204 [Graphics Device ES-A]  
13e7 GM204GL [GeForce GTX 980 Engineering Sample]  
13f0 GM204GL [Quadro M5000]  
13f1 GM204GL [Quadro M4000]  
13f2 GM204GL [Tesla M60]  
10de 114d GRID M60-1Q  
10de 114e GRID M60-2Q  
10de 1150 GRID M60-8Q  
10de 11b0 GRID M60-4A  
13f3 GM204GL [Tesla M6]  
10de 1184 GRID M6-8Q  
13f8 GM204GLM [Quadro M5000M / M5000 SE]  
13f9 GM204GLM [Quadro M4000M]  
13fa GM204GLM [Quadro M3000M]  
10de 11c9 Quadro M3000 SE  
13fb GM204GLM [Quadro M5500]  
1401 GM206 [GeForce GTX 960]  
1402 GM206 [GeForce GTX 950]  
1404 GM206 [GeForce GTX 960 FAKE]  
1406 GM206 [GeForce GTX 960 OEM]  
1407 GM206 [GeForce GTX 750 v2]  
1427 GM206M [GeForce GTX 965M]  
103c 825b OMEN-17-w001nv  
1430 GM206GL [Quadro M2000]  
1431 GM206GL [Tesla M4]  
1436 GM206GLM [Quadro M2200 Mobile]  
15c2 GP100 [CMP 100-100]  
15f0 GP100GL [Quadro GP100]  
15f1 GP100GL  
15f7 GP100GL [Tesla P100 PCIe 12GB]  
15f8  
GP100GL [Tesla P100 PCIe 16GB]  
15f9 GP100GL [Tesla P100 SXM2 16GB]  
15fa GP100GL [DGX Station / PH402 SKU 200]  
15fb GP100GL [GP100 SKU 200]  
15fc GP100GL [Tesla P100-DGXS-16GB]  
15ff GP100GL [GP100 SKU 15ff]  
1617 GM204M [GeForce GTX 980M]  
1618 GM204M [GeForce GTX 970M]  
1619 GM204M [GeForce GTX 965M]  
161a GM204M [GeForce GTX 980 Mobile]  
1667 GM204M [GeForce GTX 965M]  
1725 GP100  
172e GP100  
172f GP100

174d GM108M [GeForce MX130]  
174e GM108M [GeForce MX110]  
1789 GM107GL [GRID M3-3020]  
179c GM107 [GeForce 940MX]  
1025 1094 Acer Aspire E5-575G  
17c2 GM200 [GeForce GTX TITAN X]  
17c8 GM200 [GeForce GTX 980 Ti]  
17f0 GM200GL [Quadro M6000]  
10de 1141 VCA 6000  
17f1 GM200GL [Quadro M6000 24GB]  
17fd GM200GL [Tesla M40]  
1ad0 Tegra PCIe x8 Endpoint  
1ad1 Tegra PCIe x4/x8 Endpoint/Root Complex  
1ad2 Tegra PCIe x1 Root Complex  
1ad3 Xavier SATA Controller  
1ad6 TU102 USB 3.1 Host Controller  
1ad7 TU102 USB Type-C UCSI Controller  
1ad8 TU104 USB 3.1  
Host Controller  
1ad9 TU104 USB Type-C UCSI Controller  
1ada TU106 USB 3.1 Host Controller  
1043 8673 TURBO-RTX2070-8G  
1adb TU106 USB Type-C UCSI Controller  
1043 8673 TURBO-RTX2070-8G  
1aeb TU116 High Definition Audio Controller  
1aec TU116 USB 3.1 Host Controller  
1aed TU116 USB Type-C UCSI Controller  
1aef GA102 High Definition Audio Controller  
1af1 GA100 [A100 NVSwitch]  
1b00 GP102 [TITAN X]  
1b01 GP102 [GeForce GTX 1080 Ti 10GB]  
1b02 GP102 [TITAN Xp]  
1b04 GP102  
1b06 GP102 [GeForce GTX 1080 Ti]  
1b07 GP102 [P102-100]  
1b30 GP102GL [Quadro P6000]  
1b38 GP102GL [Tesla P40]  
1b39 GP102GL [Tesla P10]  
1b70 GP102GL  
1b78 GP102GL  
1b80 GP104 [GeForce GTX 1080]  
1b81 GP104 [GeForce GTX 1070]  
1b82 GP104 [GeForce GTX 1070 Ti]  
1b83 GP104 [GeForce GTX 1060 6GB]  
1b84 GP104 [GeForce GTX 1060 3GB]  
1b87 GP104 [P104-100]  
1ba0 GP104M [GeForce GTX 1080 Mobile]  
1ba1 GP104M [GeForce GTX 1070 Mobile]

1458 1651 GeForce GTX 1070 Max-Q  
1462 11e8 GeForce GTX  
1070 Max-Q  
1462 11e9 GeForce GTX 1070 Max-Q  
1558 9501 GeForce GTX 1070 Max-Q  
1ba2 GP104M [GeForce GTX 1070 Mobile]  
1ba9 GP104M  
1baa GP104M  
1bad GP104 [GeForce GTX 1070 Engineering Sample]  
1bb0 GP104GL [Quadro P5000]  
1bb1 GP104GL [Quadro P4000]  
1bb3 GP104GL [Tesla P4]  
1bb4 GP104GL [Tesla P6]  
1bb5 GP104GLM [Quadro P5200 Mobile]  
103c 842f P5200 [Zbook 17 G5 mobile workstation]  
1bb6 GP104GLM [Quadro P5000 Mobile]  
1bb7 GP104GLM [Quadro P4000 Mobile]  
1462 11e9 Quadro P4000 Max-Q  
1bb8 GP104GLM [Quadro P3000 Mobile]  
1bb9 GP104GLM [Quadro P4200 Mobile]  
103c 842f P4200 [Zbook 17 G5 mobile workstation]  
1bbb GP104GLM [Quadro P3200 Mobile]  
103c 842f P3200 [Zbook 17 G5 mobile workstation]  
1bc7 GP104 [P104-101]  
1be0 GP104BM [GeForce GTX 1080 Mobile]  
1028 07c0 GeForce GTX 1080 Max-Q  
1458 355b GeForce GTX 1080 Max-Q  
1be1 GP104BM [GeForce GTX 1070 Mobile]  
1c00 GP106  
1c01 GP106  
1c02 GP106 [GeForce GTX 1060 3GB]  
1c03 GP106 [GeForce GTX 1060  
6GB]  
1043 85b6 DUAL-GTX1060-O6G [GeForce GTX 1060 6GB Dual]  
1c04 GP106 [GeForce GTX 1060 5GB]  
1c06 GP106 [GeForce GTX 1060 6GB Rev. 2]  
1c07 GP106 [P106-100]  
1c09 GP106 [P106-090]  
1c20 GP106M [GeForce GTX 1060 Mobile]  
17aa 39b9 GeForce GTX 1060 Max-Q 3GB  
1c21 GP106M [GeForce GTX 1050 Ti Mobile]  
1c22 GP106M [GeForce GTX 1050 Mobile]  
1c23 GP106M [GeForce GTX 1060 Mobile Rev. 2]  
1414 0020 GTX 1060 Mobile  
1c2d GP106M  
1c30 GP106GL [Quadro P2000]  
1c31 GP106GL [Quadro P2200]  
1c35 GP106M [Quadro P2000 Mobile / DRIVE PX 2 AutoChauffeur]



1c36 GP106 [P106M]  
1c60 GP106BM [GeForce GTX 1060 Mobile 6GB]  
103c 8390 GeForce GTX 1060 Max-Q 6GB  
1c61 GP106BM [GeForce GTX 1050 Ti Mobile]  
1c62 GP106BM [GeForce GTX 1050 Mobile]  
1c70 GP106GL  
1c81 GP107 [GeForce GTX 1050]  
1c82 GP107 [GeForce GTX 1050 Ti]  
1043 8613 PH-GTX1050TI-4G  
1458 3763 GV-N105TOC-4GD  
1c83 GP107 [GeForce GTX 1050 3GB]  
1c8c GP107M [GeForce GTX 1050 Ti Mobile]  
1c8d GP107M [GeForce GTX  
1050 Mobile]  
1c8e GP107M  
1c8f GP107M [GeForce GTX 1050 Ti Max-Q]  
1c90 GP107M [GeForce MX150]  
1c91 GP107M [GeForce GTX 1050 3 GB Max-Q]  
1c92 GP107M [GeForce GTX 1050 Mobile]  
1c94 GP107M [GeForce MX350]  
1c96 GP107M [GeForce MX350]  
1ca7 GP107GL  
1ca8 GP107GL  
1caa GP107GL  
1cb1 GP107GL [Quadro P1000]  
1cb2 GP107GL [Quadro P600]  
1cb3 GP107GL [Quadro P400]  
1cb6 GP107GL [Quadro P620]  
1cba GP107GLM [Quadro P2000 Mobile]  
103c 842c P2000 [Zbook 15 G5 mobile workstation]  
103c 842f P2000 [Zbook 17 G5 mobile workstation]  
1cbb GP107GLM [Quadro P1000 Mobile]  
103c 8429 P1000 [Zbook Studio G5 mobile workstation]  
103c 842c P1000 [Zbook 15 G5 mobile workstation]  
103c 842f P1000 [Zbook 17 G5 mobile workstation]  
103c 8451 P1000 [Zbook Studio x360 G5 mobile workstation]  
1cbc GP107GLM [Quadro P600 Mobile]  
1cbd GP107GLM [Quadro P620]  
1ccc GP107BM [GeForce GTX 1050 Ti Mobile]  
1ccd GP107BM [GeForce GTX 1050 Mobile]  
1cfa GP107GL [Quadro P2000]  
1cfb GP107GL  
[Quadro P1000]  
1d01 GP108 [GeForce GT 1030]  
1d02 GP108 [GeForce GT 1010]  
1d10 GP108M [GeForce MX150]  
17aa 225e ThinkPad T480  
1d11 GP108M [GeForce MX230]

1d12 GP108M [GeForce MX150]  
1d72 1701 Mi Notebook Pro [GeForce MX150]  
1d13 GP108M [GeForce MX250]  
1d16 GP108M [GeForce MX330]  
1d33 GP108GLM [Quadro P500 Mobile]  
1d34 GP108GLM [Quadro P520]  
1d52 GP108BM [GeForce MX250]  
1d56 GP108BM [GeForce MX330]  
1d81 GV100 [TITAN V]  
1d83 GV100 [CMP 100-200]  
1d84 GV100 [CMP 100-210]  
1db0 GV100GL [Tesla GV100 SXM2-16GB SKU 890]  
1db1 GV100GL [Tesla V100 SXM2 16GB]  
1db2 GV100GL [Tesla V100 DGXS 16GB]  
1db3 GV100GL [Tesla V100 FHHL 16GB]  
1db4 GV100GL [Tesla V100 PCIe 16GB]  
1db5 GV100GL [Tesla V100 SXM2 32GB]  
1db6 GV100GL [Tesla V100 PCIe 32GB]  
1db7 GV100GL [Tesla V100 DGXS 32GB]  
1db8 GV100GL [Tesla V100 SXM3 32GB]  
10de 131d Tesla V100-SXM3-32GB-H  
1dba GV100GL [Quadro GV100]  
10de 12eb TITAN V CEO Edition  
1dbd GV100GL [Tesla GV100 DGX1-V]  
1dbe  
GV100 Engineering Sample  
1dc1 GV100 [CMP 100-200]  
1df0 GV100GL [Tesla PG500-216]  
1df2 GV100GL [Tesla PG503-216]  
1df5 GV100GL [Tesla V100 SXM2 16GB]  
1df6 GV100GL [Tesla V100S PCIe 32GB]  
1e02 TU102 [TITAN RTX]  
1e03 TU102 [GeForce RTX 2080 Ti 12GB]  
1e04 TU102 [GeForce RTX 2080 Ti]  
1e07 TU102 [GeForce RTX 2080 Ti Rev. A]  
1462 3715 RTX 2080 Ti GAMING X TRIO  
1e09 TU102 [CMP 50HX]  
1e2d TU102 [GeForce RTX 2080 Ti Engineering Sample]  
1e2e TU102 [GeForce RTX 2080 Ti 12GB Engineering Sample]  
1e30 TU102GL [Quadro RTX 6000/8000]  
10de 129e Quadro RTX 8000  
10de 12ba Quadro RTX 6000  
1e35 TU102GL [Tesla T10]  
1e36 TU102GL [Quadro RTX 6000]  
1e37 TU102GL [Tesla T10 16GB / GRID RTX T10-2/T10-4/T10-8]  
10de 1304 Tesla T10 16GB  
10de 1347 GRID RTX T10-8  
10de 1348 GRID RTX T10-4

10de 1349 GRID RTX T10-2  
10de 1370 Tesla T10 16GB  
10de 13a5 GRID RTX T10-8  
1e38 TU102GL [Tesla T40 24GB]  
1e3c TU102GL  
1e3d TU102GL  
1e3e TU102GL  
1e78 TU102GL [Quadro  
RTX 6000/8000]  
10de 13d8 Quadro RTX 8000  
10de 13d9 Quadro RTX 6000  
1e81 TU104 [GeForce RTX 2080 SUPER]  
1e82 TU104 [GeForce RTX 2080]  
1e84 TU104 [GeForce RTX 2070 SUPER]  
1e87 TU104 [GeForce RTX 2080 Rev. A]  
1e89 TU104 [GeForce RTX 2060]  
1e90 TU104M [GeForce RTX 2080 Mobile]  
1e91 TU104M [GeForce RTX 2070 SUPER Mobile / Max-Q]  
1e93 TU104M [GeForce RTX 2080 SUPER Mobile / Max-Q]  
1eab TU104M  
1eae TU104M [GeForce GTX 2080 Engineering Sample]  
1eb0 TU104GL [Quadro RTX 5000]  
1eb1 TU104GL [Quadro RTX 4000]  
1eb4 TU104GL [T4G]  
1eb5 TU104GLM [Quadro RTX 5000 Mobile / Max-Q]  
1eb6 TU104GLM [Quadro RTX 4000 Mobile / Max-Q]  
1eb8 TU104GL [Tesla T4]  
1eb9 TU104GL  
1eba TU104GL [PG189 SKU600]  
1ebe TU104GL  
1ec2 TU104 [GeForce RTX 2070 SUPER]  
1ec7 TU104 [GeForce RTX 2070 SUPER]  
1ed0 TU104BM [GeForce RTX 2080 Mobile]  
1ed1 TU104BM [GeForce RTX 2070 SUPER Mobile / Max-Q]  
1ed3 TU104BM [GeForce RTX 2080 SUPER Mobile / Max-Q]  
1ef5 TU104GLM [Quadro RTX 5000 Mobile  
Refresh]  
1f02 TU106 [GeForce RTX 2070]  
1043 8673 TURBO RTX 2070  
1f03 TU106 [GeForce RTX 2060 12GB]  
1f04 TU106  
1f06 TU106 [GeForce RTX 2060 SUPER]  
1f07 TU106 [GeForce RTX 2070 Rev. A]  
1f08 TU106 [GeForce RTX 2060 Rev. A]  
1f09 TU106 [GeForce GTX 1660 SUPER]  
1f0a TU106 [GeForce GTX 1650]  
1f0b TU106 [CMP 40HX]  
1f10 TU106M [GeForce RTX 2070 Mobile]

1f11 TU106M [GeForce RTX 2060 Mobile]  
1f12 TU106M [GeForce RTX 2060 Max-Q]  
1f14 TU106M [GeForce RTX 2070 Mobile / Max-Q Refresh]  
1f15 TU106M [GeForce RTX 2060 Mobile]  
1f2e TU106M  
1f36 TU106GLM [Quadro RTX 3000 Mobile / Max-Q]  
1f42 TU106 [GeForce RTX 2060 SUPER]  
1f47 TU106 [GeForce RTX 2060 SUPER]  
1f50 TU106BM [GeForce RTX 2070 Mobile / Max-Q]  
1f51 TU106BM [GeForce RTX 2060 Mobile]  
1f54 TU106BM [GeForce RTX 2070 Mobile]  
1f55 TU106BM [GeForce RTX 2060 Mobile]  
1f76 TU106GLM [Quadro RTX 3000 Mobile Refresh]  
1f81 TU117  
1f82 TU117 [GeForce GTX 1650]  
1f83 TU117 [GeForce GTX 1630]  
1f91 TU117M  
[GeForce GTX 1650 Mobile / Max-Q]  
1f92 TU117M [GeForce GTX 1650 Mobile]  
1f94 TU117M [GeForce GTX 1650 Mobile]  
1f95 TU117M [GeForce GTX 1650 Ti Mobile]  
1f96 TU117M [GeForce GTX 1650 Mobile / Max-Q]  
1f97 TU117M [GeForce MX450]  
1f98 TU117M [GeForce MX450]  
1f99 TU117M [GeForce GTX 1650 Mobile / Max-Q]  
1f9c TU117M [GeForce MX450]  
1f9d TU117M [GeForce GTX 1650 Mobile / Max-Q]  
# via Lenovo 496.90  
1f9f TU117M [GeForce MX550]  
1fa0 TU117M [GeForce MX550]  
1fa1 TU117M  
1fae TU117GL  
1fb0 TU117GLM [Quadro T1000 Mobile]  
1fb1 TU117GL [T600]  
1fb2 TU117GLM [Quadro T400 Mobile]  
1fb6 TU117GLM [T600 Laptop GPU]  
1028 0b10 Precision 3571  
1fb7 TU117GLM [T550 Laptop GPU]  
1fb8 TU117GLM [Quadro T2000 Mobile / Max-Q]  
1fb9 TU117GLM [Quadro T1000 Mobile]  
1fba TU117GLM [T600 Mobile]  
1fbb TU117GLM [Quadro T500 Mobile]  
1fbc TU117GLM [T1200 Laptop GPU]  
1fbf TU117GL  
1fd9 TU117BM [GeForce GTX 1650 Mobile Refresh]  
1fdd TU117BM [GeForce GTX 1650 Mobile Refresh]  
1ff0

TU117GL [T1000 8GB]  
1ff2 TU117GL [T400 4GB / T400E]  
1ff9 TU117GLM [Quadro T1000 Mobile]  
2080 GA100  
2081 GA100  
2082 GA100 [CMP 170HX]  
20b0 GA100 [A100 SXM4 40GB]  
20b1 GA100 [A100 PCIe 40GB]  
20b2 GA100 [A100 SXM4 80GB]  
20b3 GA100 [A100-SXM-64GB]  
20b4 GA100  
20b5 GA100 [A100 PCIe 80GB]  
20b6 GA100GL [PG506-232]  
20b7 GA100GL [A30 PCIe]  
20b8 GA100 [A100X]  
20b9 GA100 [A30X]  
20bb GA100 [DRIVE A100 PROD]  
20bd GA100 [A800 SXM4 40GB]  
20be GA100 [GRID A100A]  
20bf GA100 [GRID A100B]  
20c0 GA100 [Initial DevID]  
20c2 GA100 [CMP 170HX]  
20f0 GA100 [A100-PG506-207]  
20f1 GA100 [A100 PCIe 40GB]  
20f2 GA100 [A100-PG506-217]  
20f3 GA100 [A800-SXM4-80GB]  
20f5 GA100 [A800 80GB PCIe]  
20f6 GA100 [A800 40GB PCIe]  
20fd GA100 [AX800 Converged Accelerator]  
20fe GA100 [INT SKU]  
20ff GA100  
2182 TU116 [GeForce GTX 1660 Ti]  
2183 TU116  
2184 TU116 [GeForce GTX 1660]  
2187 TU116 [GeForce GTX 1650 SUPER]  
2188 TU116 [GeForce GTX 1650]  
2189 TU116 [CMP 30HX]  
2191  
TU116M [GeForce GTX 1660 Ti Mobile]  
2192 TU116M [GeForce GTX 1650 Ti Mobile]  
21ae TU116GL  
21bf TU116GL  
21c2 TU116  
21c3 TU116  
21c4 TU116 [GeForce GTX 1660 SUPER]  
21d1 TU116BM [GeForce GTX 1660 Ti Mobile]  
2200 GA102  
2203 GA102 [GeForce RTX 3090 Ti]

2204 GA102 [GeForce RTX 3090]  
147d 10de NVIDIA Geforce RTX 3090 Founders Edition  
2205 GA102 [GeForce RTX 3080 Ti 20GB]  
2206 GA102 [GeForce RTX 3080]  
10de 1467 GA102 [GeForce RTX 3080]  
10de 146d GA102 [GeForce RTX 3080 20GB]  
1462 3892 RTX 3080 10GB GAMING X TRIO  
2207 GA102 [GeForce RTX 3070 Ti]  
2208 GA102 [GeForce RTX 3080 Ti]  
220a GA102 [GeForce RTX 3080 12GB]  
220d GA102 [CMP 90HX]  
2216 GA102 [GeForce RTX 3080 Lite Hash Rate]  
222b GA102 [GeForce RTX 3090 Engineering Sample]  
222f GA102 [GeForce RTX 3080 11GB / 12GB Engineering Sample]  
2230 GA102GL [RTX A6000]  
2231 GA102GL [RTX A5000]  
2232 GA102GL [RTX A4500]  
2233 GA102GL [RTX A5500]  
2235 GA102GL [A40]  
2236 GA102GL [A10]  
2237  
GA102GL [A10G]  
2238 GA102GL [A10M]  
223f GA102GL  
228b GA104 High Definition Audio Controller  
228e GA106 High Definition Audio Controller  
2296 Tegra PCIe Endpoint Virtual Network  
22a3 GH100 [H100 NVSwitch]  
22ba AD102 High Definition Audio Controller  
2302 GH100  
2313 GH100 [H100 CNX]  
2321 GH100 [H100L 94GB]  
2322 GH100 [H800 PCIe]  
2324 GH100 [H800]  
2329 GH100 [H20]  
2330 GH100 [H100 SXM5 80GB]  
2331 GH100 [H100 PCIe]  
2335 GH100 [H200 SXM 141GB]  
2336 GH100 [H100]  
2337 GH100 [H100 SXM5 64GB]  
2338 GH100 [H100 SXM5 96GB]  
2339 GH100 [H100 SXM5 94GB]  
233a GH100 [H800L 94GB]  
233d GH100 [H100 96GB]  
2342 GH100 [GH200 120GB / 480GB]  
2343 GH100  
2345 GH100 [GH100-88K-A1]  
237f GH100 [Skinny Joe]

23b0 GH100  
23f0 GH100  
2414 GA103 [GeForce RTX 3060 Ti]  
2420 GA103M [GeForce RTX 3080 Ti Mobile]  
2438 GA103GLM [RTX A5500 Laptop GPU]  
2460 GA103M [GeForce RTX 3080 Ti Laptop GPU]  
2480 GA104 [Reserved Dev ID A]  
2482 GA104 [GeForce RTX 3070 Ti]  
2483  
GA104  
2484 GA104 [GeForce RTX 3070]  
10de 146b GA104 [GeForce RTX 3070]  
10de 14ae GA104 [GeForce RTX 3070 16GB]  
2486 GA104 [GeForce RTX 3060 Ti]  
19da 6630 ZT-A30610H-10M [RTX 3060 Ti Twin Edge OC]  
2487 GA104 [GeForce RTX 3060]  
2488 GA104 [GeForce RTX 3070 Lite Hash Rate]  
2489 GA104 [GeForce RTX 3060 Ti Lite Hash Rate]  
248a GA104 [CMP 70HX]  
248c GA104 [GeForce RTX 3070 Ti]  
248d GA104 [GeForce RTX 3070]  
248e GA104 [GeForce RTX 3060 Ti]  
249c GA104M [GeForce RTX 3080 Mobile / Max-Q 8GB/16GB]  
249d GA104M [GeForce RTX 3070 Mobile / Max-Q]  
249f GA104M  
24a0 GA104 [Geforce RTX 3070 Ti Laptop GPU]  
24a4 GA104M  
24ac GA104 [GeForce RTX 30x0 Engineering Sample]  
24ad GA104 [GeForce RTX 3060 Engineering Sample]  
24af GA104 [GeForce RTX 3070 Engineering Sample]  
24b0 GA104GL [RTX A4000]  
24b1 GA104GL [RTX A4000H]  
24b6 GA104GLM [RTX A5000 Mobile]  
24b7 GA104GLM [RTX A4000 Mobile]  
24b8 GA104GLM [RTX A3000 Mobile]  
24b9 GA104GLM [RTX A3000 12GB Laptop GPU]  
24ba  
GA104GLM [RTX A4500 Laptop GPU]  
24bb GA104GLM [RTX A3000 Laptop GPU]  
24bf GA104 [GeForce RTX 3070 Engineering Sample]  
24c0 GA104 [Initial Dev ID B]  
24c7 GA104 [GeForce RTX 3060 8GB]  
24c8 GA104 [GeForce RTX 3070 GDDR6X]  
24c9 GA104 [GeForce RTX 3060 Ti GDDR6X]  
24dc GA104M [GeForce RTX 3080 Mobile / Max-Q 8GB/16GB]  
24dd GA104M [GeForce RTX 3070 Mobile / Max-Q]  
24df GA104M  
24e0 GA104M [Geforce RTX 3070 Ti Laptop GPU]

24fa GA104 [RTX A4500 Embedded GPU ]  
2501 GA106 [GeForce RTX 3060]  
2503 GA106 [GeForce RTX 3060]  
2504 GA106 [GeForce RTX 3060 Lite Hash Rate]  
2505 GA106  
2507 GA106 [Geforce RTX 3050]  
2508 GA106 [GeForce RTX 3050 OEM]  
2509 GA106 [GeForce RTX 3060 12GB Rev. 2]  
2520 GA106M [GeForce RTX 3060 Mobile / Max-Q]  
2521 GA106M [GeForce RTX 3060 Laptop GPU]  
2523 GA106M [GeForce RTX 3050 Ti Mobile / Max-Q]  
252f GA106 [GeForce RTX 3060 Engineering Sample]  
2531 GA106 [RTX A2000]  
2544 GA106 [GeForce RTX 3060]  
2560 GA106M [GeForce RTX 3060  
Mobile / Max-Q]  
2561 GA106M [GeForce RTX 3060 Laptop GPU]  
2563 GA106M [GeForce RTX 3050 Ti Mobile / Max-Q]  
2571 GA106 [RTX A2000 12GB]  
2582 GA107 [GeForce RTX 3050 8GB]  
2583 GA107 [GeForce RTX 3050 4GB]  
2584 GA107 [GeForce RTX 3050 6GB]  
25a0 GA107M [GeForce RTX 3050 Ti Mobile]  
25a2 GA107M [GeForce RTX 3050 Mobile]  
25a3 GA107  
25a4 GA107  
25a5 GA107M [GeForce RTX 3050 Mobile]  
25a6 GA107M [GeForce MX570]  
25a7 GA107M [GeForce MX570]  
25a9 GA107M [GeForce RTX 2050]  
25aa GA107M [GeForce MX570 A]  
25ab GA107M [GeForce RTX 3050 4GB Laptop GPU]  
25ac GN20-P0-R-K2 [GeForce RTX 3050 6GB Laptop GPU]  
25ad GA107 [GeForce RTX 2050]  
25af GA107 [GeForce RTX 3050 Engineering Sample]  
25b5 GA107GLM [RTX A4 Mobile]  
# A16 - 25B6 10DE 14A9 / A2 - 25B6 10DE 157E  
25b6 GA107GL [A2 / A16]  
25b8 GA107GLM [RTX A2000 Mobile]  
25b9 GA107GLM [RTX A1000 Laptop GPU]  
25ba GA107GLM [RTX A2000 8GB Laptop GPU]  
25bb GA107GLM [RTX A500 Laptop GPU]  
25bc GA107GLM [RTX A1000 6GB  
Laptop GPU]  
25bd GA107GLM [RTX A500 Laptop GPU]  
25e0 GA107BM [GeForce RTX 3050 Ti Mobile]  
25e2 GA107BM [GeForce RTX 3050 Mobile]  
25e5 GA107BM [GeForce RTX 3050 Mobile]



25ec GN20-P0-R-K2 [GeForce RTX 3050 6GB Laptop GPU]  
25ed GA107 [GeForce RTX 2050]  
25f9 GA107 [RTX A1000 Embedded GPU ]  
25fa GA107 [RTX A2000 Embedded GPU]  
25fb GA107 [RTX A500 Embedded GPU]  
2681 AD102 [RTX TITAN Ada]  
2684 AD102 [GeForce RTX 4090]  
2685 AD102 [GeForce RTX 4090 D]  
26b1 AD102GL [RTX 6000 Ada Generation]  
26b2 AD102GL [RTX 5000 Ada Generation]  
26b3 AD102GL [RTX 5880 Ada Generation]  
26b5 AD102GL [L40]  
26b7 AD102GL [L20]  
26b8 AD102GL [L40G]  
26b9 AD102GL [L40S]  
26ba AD102GL [L20]  
26f5 AD102GL [L40 CNX]  
2702 AD103 [GeForce RTX 4080 SUPER]  
2703 AD103 [GeForce RTX 4080 SUPER]  
2704 AD103 [GeForce RTX 4080]  
2705 AD103 [GeForce RTX 4070 Ti SUPER]  
2709 AD103 [GeForce RTX 4070]  
2717 GN21-X11 [GeForce RTX 4090 Laptop GPU]  
2730 AD103GLM [RTX 5000 Ada Generation Laptop GPU]  
2757 GN21-X11  
2770 AD103GLM [RTX 5000 Ada Generation Embedded GPU]  
2782 AD104 [GeForce RTX 4070 Ti]  
2783 AD104 [GeForce RTX 4070 SUPER]  
2785 AD104 [AC AD104 20GB]  
2786 AD104 [GeForce RTX 4070]  
2788 AD104 [GeForce RTX 4060 Ti]  
27a0 AD104M [GeForce RTX 4080 Max-Q / Mobile]  
27b0 AD104GL [RTX 4000 SFF Ada Generation]  
27b1 AD104GL [RTX 4500 Ada Generation]  
27b2 AD104GL [RTX 4000 Ada Generation]  
27b6 AD104GL [L2]  
27b7 AD104GL [L16]  
27b8 AD104GL [L4]  
27ba AD104GLM [RTX 4000 Ada Generation Laptop GPU]  
27bb AD104GLM [RTX 3500 Ada Generation Laptop GPU]  
27e0 AD104M [GeForce RTX 4080 Max-Q / Mobile]  
27fa AD104GLM [RTX 4000 Ada Generation Embedded GPU]  
27fb AD104GLM [RTX 3500 Ada Generation Embedded GPU]  
2803 AD106 [GeForce RTX 4060 Ti]  
2805 AD106 [GeForce RTX 4060 Ti 16GB]  
2808 AD106 [GeForce RTX 4060]  
2820 AD106M [GeForce RTX 4070 Max-Q / Mobile]

2838 AD106GLM [RTX 3000 Ada Generation Laptop GPU]  
2860 AD106M [GeForce RTX 4070 Max-Q / Mobile]  
2878  
AD106GLM [RTX 3000 Ada Generation Embedded GPU]  
2882 AD107 [GeForce RTX 4060]  
28a0 AD107M [GeForce RTX 4060 Max-Q / Mobile]  
28a1 AD107M [GeForce RTX 4050 Max-Q / Mobile]  
28b0 AD107GL [RTX 2000 Ada Generation]  
28b8 AD107GLM [RTX 2000 Ada Generation Laptop GPU]  
28b9 AD107GLM [RTX 1000 Ada Generation Laptop GPU]  
28ba AD107GLM [RTX 500 Ada Generation Laptop GPU]  
28bb AD107GLM [RTX 500 Ada Generation Laptop GPU]  
28e0 AD107M [GeForce RTX 4060 Max-Q / Mobile]  
28e1 AD107M [GeForce RTX 4050 Max-Q / Mobile]  
28f8 AD107GLM [RTX 2000 Ada Generation Embedded GPU]  
10df Emulex Corporation  
0720 OneConnect NIC (Skyhawk)  
103c 1934 FlexFabric 20Gb 2-port 650M Adapter  
103c 1935 FlexFabric 20Gb 2-port 650FLB Adapter  
103c 21d4 StoreFabric CN1200E 10Gb Converged Network Adapter  
103c 220a FlexFabric 10Gb 2-port 556FLR-SFP+ Adapter  
103c 803f Ethernet 10Gb 2-port 557SFP+ Adapter  
103c 8144 FlexFabric 10GB 2-port 556FLR-T Adapter  
17aa 1056 ThinkServer OCm14102-UX-L  
AnyFabric  
17aa 1057 ThinkServer OCm14104-UX-L AnyFabric  
17aa 1059 ThinkServer OCm14104-UT-L AnyFabric  
17aa 4014 ThinkServer OCm14102-NX-L AnyFabric  
0722 OneConnect iSCSI Initiator (Skyhawk)  
0723 OneConnect iSCSI Initiator + Target (Skyhawk)  
0724 OneConnect FCoE Initiator (Skyhawk)  
0728 OneConnect NIC (Skyhawk-VF)  
072a OneConnect iSCSI Initiator (Skyhawk-VF)  
072b OneConnect iSCSI Initiator + Target (Skyhawk-VF)  
072c OneConnect FCoE Initiator (Skyhawk-VF)  
1ae5 LP6000 Fibre Channel Host Adapter  
e100 Proteus-X: LightPulse IOV Fibre Channel Host Adapter  
e131 LightPulse 8Gb/s PCIe Shared I/O Fibre Channel Adapter  
e180 Proteus-X: LightPulse IOV Fibre Channel Host Adapter  
e200 LPe15000/LPe16000 Series 8Gb/16Gb Fibre Channel Adapter  
1014 03f1 PCIe2 2-Port 16Gb Fibre Channel Adapter for POWER (FC EL5B; CCIN 577F)  
1014 04e3 PCIe3 4-Port 10GbE SR Adapter for POWER (FC EN15/EN16; CCIN 2CE3)  
1014 04e4 PCIe3 4-Port 10GbE SFP+ Adapter for POWER (FC EN18;  
CCIN 2CE4)  
10df e280 LPe16002B-M6 2-Port 16Gb Fibre Channel Adapter  
10df e281 LPe16000B-M6 1-Port 16Gb Fibre Channel Adapter  
10df e282 Flex System FC5054 4-port 16Gb FC Adapter  
e208 LightPulse 16Gb Fibre Channel Host Adapter (Lancer-VF)

e220 OneConnect NIC (Lancer)  
17aa 1054 ThinkServer LPm16002B-M6-L AnyFabric  
17aa 1055 ThinkServer LPm16004B-M8-L AnyFabric  
e240 OneConnect iSCSI Initiator (Lancer)  
e260 OneConnect FCoE Initiator (Lancer)  
e268 OneConnect 10Gb FCoE Converged Network Adapter (Lancer-VF)  
e300 LPe31000/LPe32000 Series 16Gb/32Gb Fibre Channel Adapter  
1014 0614 PCIe3 4-Port 16Gb Fibre Channel Adapter for POWER (FC EN1C/EN1D; CCIN 578E)  
1014 0615 PCIe3 2-Port 32Gb Fibre Channel Adapter for POWER (FC EN1A/EN1B; CCIN 578F)  
1014 06a0 PCIe3 2-Port 16Gb Fibre Channel Adapter for POWER (FC EN1L/EN1M; CCIN 2CFC)  
10df e300 LPe32002-M2 2-Port 32Gb Fibre Channel Adapter  
10df e301 LPe32000-M2 1-Port 32Gb Fibre Channel Adapter  
10df e310 LPe31002-M6  
2-Port 16Gb Fibre Channel Adapter  
10df e311 LPe31000-M6 1-Port 16Gb Fibre Channel Adapter  
10df e312 LPe31004-M6 4-Port 16Gb Fibre Channel Adapter  
10df e320 LPe32002-M2-D 2-Port 32Gb Fibre Channel Adapter  
10df e321 LPe32000-M2-D 1-Port 32Gb Fibre Channel Adapter  
10df e322 LPe31002-M6-D 2-Port 16Gb Fibre Channel Adapter  
10df e323 LPe31000-M6-D 1-Port 16Gb Fibre Channel Adapter  
10df e324 LPm32002-D 2-Port 32Gb Fibre Channel Mezz Card  
10df e325 LPm31002-D 2-Port 16Gb Fibre Channel Mezz Card  
10df e330 LPe32002-M2-L 2-Port 32Gb PCIe Fibre Channel Adapter  
10df e331 LPe32000-M2-L 1-Port 32Gb PCIe Fibre Channel Adapter  
10df e332 LPe31002-M6-L 2-Port 16Gb PCIe Fibre Channel Adapter  
10df e333 LPe31000-M6-L 1-Port 16Gb PCIe Fibre Channel Adapter  
1590 0201 StoreFabric SN1600E 1-Port 32Gb Fibre Channel Adapter  
1590 0202 StoreFabric SN1600E 2-Port 32Gb Fibre Channel Adapter  
1590 0213 StoreFabric SN1200E 1-Port 16Gb Fibre Channel Adapter  
1590 0214  
StoreFabric SN1200E 2-Port 16Gb Fibre Channel Adapter  
1590 022e Synergy 5330C 2-Port 32Gb Fibre Channel Mezz Card  
193d 1060 NIC-FC730i-Mb-2P  
f011 Saturn: LightPulse Fibre Channel Host Adapter  
f015 Saturn: LightPulse Fibre Channel Host Adapter  
f085 LP850 Fibre Channel Host Adapter  
f095 LP952 Fibre Channel Host Adapter  
f098 LP982 Fibre Channel Host Adapter  
f0a1 Thor LightPulse Fibre Channel Host Adapter  
f0a5 Thor LightPulse Fibre Channel Host Adapter  
f0b5 Viper LightPulse Fibre Channel Host Adapter  
f0d1 Helios LightPulse Fibre Channel Host Adapter  
f0d5 Helios LightPulse Fibre Channel Host Adapter  
f0e1 Zephyr LightPulse Fibre Channel Host Adapter  
f0e5 Zephyr LightPulse Fibre Channel Host Adapter  
f0f5 Neptune LightPulse Fibre Channel Host Adapter  
f100 LPe12000 Series 8Gb Fibre Channel Adapter  
1014 038a 8Gb PCI Express Dual Port FC Adapter for POWER

103c 3282 8Gb Dual-port PCI-e FC HBA  
10df f140 LPe12000-M8-L 1-Port 8Gb PCIe Fibre Channel Adapter  
10df  
f141 LPe12002-M8-L 2-Port 8Gb PCIe Fibre Channel Adapter  
f111 Saturn-X LightPulse Fibre Channel Host Adapter  
f112 Saturn-X LightPulse Fibre Channel Host Adapter  
f180 LPSe12002 EmulexSecure Fibre Channel Adapter  
f400 LPe35000/LPe36000 Series 32Gb/64Gb Fibre Channel Adapter  
10df f401 LPe35000-M2 1-Port 32Gb Fibre Channel Adapter  
10df f402 LPe35002-M2 2-Port 32Gb Fibre Channel Adapter  
10df f403 LPe36000-M64 1-Port 64Gb Fibre Channel Adapter  
10df f404 LPe36002-M64 2-Port 64Gb Fibre Channel Adapter  
10df f405 LPe35004-M2 4-Port 32Gb Fibre Channel Adapter  
10df f406 LPe35004-X6 4-Port Fibre Channel Adapter  
10df f410 LPe35002-M2-D 2-Port 32Gb Fibre Channel Adapter  
10df f411 LPe35000-M2-D 1-Port 32Gb Fibre Channel Adapter  
10df f418 LPe35000-M2-L 1-Port 32Gb PCIe Fibre Channel Adapter  
10df f419 LPe35002-M2-L 2-Port 32Gb PCIe Fibre Channel Adapter  
10df f421 LPe36002-M2-L 2-Port 64Gb PCIe Fibre Channel Adapter  
10df f422 LPe36002-M64-D 2-Port 64Gb Fibre  
Channel Adapter  
1590 02d5 StoreFabric SN1610E 1-Port 32Gb Fibre Channel Adapter  
1590 02d6 StoreFabric SN1610E 2-Port 32Gb Fibre Channel Adapter  
f500 LPe37000/LPe38000 Series 32Gb/64Gb Fibre Channel Adapter  
1014 06c1 PCIe4 4-Port 32Gb Fibre Channel Adapter for POWER (FC EN1L/EN1M; CCIN 2CFC)  
1014 06c2 PCIe4 2-Port 64Gb Fibre Channel Adapter for POWER (FC EN1N/EN1P; CCIN 2CFD)  
f700 LP7000 Fibre Channel Host Adapter  
f701 LP7000 Fibre Channel Host Adapter Alternate ID (JX1:2-3, JX2:1-2)  
f800 LP8000 Fibre Channel Host Adapter  
f801 LP8000 Fibre Channel Host Adapter Alternate ID (JX1:2-3, JX2:1-2)  
f900 LP9000 Fibre Channel Host Adapter  
f901 LP9000 Fibre Channel Host Adapter Alternate ID (JX1:2-3, JX2:1-2)  
f980 LP9802 Fibre Channel Host Adapter  
f981 LP9802 Fibre Channel Host Adapter Alternate ID  
f982 LP9802 Fibre Channel Host Adapter Alternate ID  
fa00 Thor-X LightPulse Fibre Channel Host Adapter  
fb00 Viper LightPulse Fibre Channel Host Adapter  
fc00 Thor-X  
LightPulse Fibre Channel Host Adapter  
10df fc00 LP10000 LightPulse Fibre Channel Host Adapter  
fc10 Helios-X LightPulse Fibre Channel Host Adapter  
fc20 Zephyr-X LightPulse Fibre Channel Host Adapter  
fc40 Saturn-X: LightPulse Fibre Channel Host Adapter  
fc50 Proteus-X: LightPulse IOV Fibre Channel Host Adapter  
fd00 Helios-X LightPulse Fibre Channel Host Adapter  
# Also IBM FC 5759 / FC 1910 for POWER  
10df fd02 LightPulse LP11002 Dual-port 4Gigabit PCI Fibre Channel Adapter  
fd11 Helios-X LightPulse Fibre Channel Host Adapter

fd12 Helios-X LightPulse Fibre Channel Host Adapter  
fe00 Zephyr-X LightPulse Fibre Channel Host Adapter  
fe05 Zephyr-X: LightPulse FCoE Adapter  
fe11 Zephyr-X LightPulse Fibre Channel Host Adapter  
fe12 Zephyr-X LightPulse FCoE Adapter  
ff00 Neptune LightPulse Fibre Channel Host Adapter  
10e0 Integrated Micro Solutions Inc.  
5026 IMS5026/27/28  
5027 IMS5027  
5028 IMS5028  
8849 IMS8849  
8853 IMS8853  
9128 IMS9128 [Twin turbo 128]  
10e1  
Tekram Technology Co.,Ltd.  
0391 TRM-S1040  
10e1 0391 DC-315U SCSI-3 Host Adapter  
690c DC-690c  
dc29 DC-290  
10e2 Aptix Corporation  
10e3 Tundra Semiconductor Corp.  
0000 CA91C042 [Universe]  
0108 Tsi108 Host Bridge for Single PowerPC  
0148 Tsi148 [Tempe]  
1775 1100 VR11 Single Board Computer  
0860 CA91C860 [QSpan]  
0862 CA91C862A [QSpan-II]  
8111 Tsi381 PCIe to PCI Bridge  
8260 CA91L8200B [Dual PCI PowerSpan II]  
8261 CA91L8260B [Single PCI PowerSpan II]  
a108 Tsi109 Host Bridge for Dual PowerPC  
10e4 Tandem Computers  
8029 Realtek 8029 Network Card  
10e5 Micro Industries Corporation  
10e6 Gainbery Computer Products Inc.  
10e7 Vadem  
10e8 Applied Micro Circuits Corp.  
1072 INES GPIB-PCI (AMCC5920 based)  
2011 Q-Motion Video Capture/Edit board  
4750 S5930 [Matchmaker]  
5920 S5920  
801d Roper Scientific PCI TAXI interface  
8043 LANai4.x [Myrinet LANai interface chip]  
8062 S5933\_PARASTATION  
807d S5933 [Matchmaker]  
8088 Kongsberg Spacetec Format Synchronizer  
8089

Kongsberg Spacetec Serial Output Board  
809c S5933\_HEPC3  
80b9 Harmonix Hi-Card P8 (4x active ISDN BRI)  
80d7 PCI-9112  
80d8 PCI-7200  
80d9 PCI-9118  
80da PCI-9812  
80fc APCI1500 Signal processing controller (16 dig. inputs + 16 dig. outputs)  
811a PCI-IEEE1355-DS-DE Interface  
814c Fastcom ESCC-PCI (Commtech, Inc.)  
8170 S5933 [Matchmaker] (Chipset Development Tool)  
81e6 Multimedia video controller  
828d APCI3001 Signal processing controller (up to 16 analog inputs)  
8291 Fastcom 232/8-PCI (Commtech, Inc.)  
82c4 Fastcom 422/4-PCI (Commtech, Inc.)  
82c5 Fastcom 422/2-PCI (Commtech, Inc.)  
82c6 Fastcom IG422/1-PCI (Commtech, Inc.)  
82c7 Fastcom IG232/2-PCI (Commtech, Inc.)  
82ca Fastcom 232/4-PCI (Commtech, Inc.)  
82db AJA HDNTV HD SDI Framestore  
82e2 Fastcom DIO24H-PCI (Commtech, Inc.)  
8406 PCIcanx/PCIcan CAN interface [Kvaser AB]  
8407 PCIcan II CAN interface (A1021, PCB-07, PCB-08) [Kvaser AB]  
8851 S5933 on Innes Corp FM Radio Capture card  
e004 X-Gene  
PCIe bridge  
10e9 Alps Electric Co., Ltd.  
10ea Integraphics  
1680 IGA-1680  
1682 IGA-1682  
1683 IGA-1683  
2000 CyberPro 2000  
2010 CyberPro 2000A  
5000 CyberPro 5000  
5050 CyberPro 5050  
5202 CyberPro 5202  
# CyberPro5202 Audio Function  
5252 CyberPro5252  
10eb Artists Graphics  
0101 3GA  
8111 Twist3 Frame Grabber  
10ec Realtek Semiconductor Co., Ltd.  
0139 RTL-8139/8139C/8139C+ Ethernet Controller  
2600 Killer E2600 GbE Controller  
3000 Killer E3000 2.5GbE Controller  
4321 RTL8852BE 802.11ax PCIe Wireless Network Adapter  
5208 RTS5208 PCI Express Card Reader  
5209 RTS5209 PCI Express Card Reader

5227 RTS5227 PCI Express Card Reader  
17aa 220e ThinkPad T440p  
17aa 2214 ThinkPad X240  
5229 RTS5229 PCI Express Card Reader  
1025 0813 Aspire R7-571  
103c 194e ProBook 455 G1 Notebook  
103c 1985 Pavilion 17-e163sg Notebook PC  
17aa 3832 Yoga 520  
522a RTS522A PCI Express Card Reader  
103c 8079 EliteBook 840 G3  
103c 825b OMEN-17-w001nv  
17aa 5124  
ThinkPad E595  
5249 RTS5249 PCI Express Card Reader  
103c 1909 ZBook 15  
524a RTS524A PCI Express Card Reader  
5250 RTS5250 PCI Express Card Reader  
525a RTS525A PCI Express Card Reader  
1028 06d6 Latitude 7275 tablet  
1028 06dc Latitude E7470  
1028 06e4 XPS 15 9550  
1028 06e6 Latitude 11 5175 2-in-1  
1028 09be Latitude 7410  
1028 0b10 Precision 3571  
1028 0c06 Precision 3580  
17aa 224f ThinkPad X1 Carbon 5th Gen  
5260 RTS5260 PCI Express Card Reader  
5261 RTS5261 PCI Express Card Reader  
5286 RTS5286 PCI Express Card Reader  
5287 RTL8411B PCI Express Card Reader  
1025 1094 Acer Aspire E5-575G  
5288 RTS5288 PCI Express Card Reader  
5289 RTL8411 PCI Express Card Reader  
1043 1457 K55A Laptop  
5760 RTS5763DL x2 NVMe SSD Controller  
5762 RTS5762 NVMe SSD Controller  
5763 RTS5763DL NVMe SSD Controller (DRAM-less)  
5765 RTS5765DL NVMe SSD Controller (DRAM-less)  
5772 RTS5772DL NVMe SSD Controller (DRAM-less)  
8029 RTL-8029(AS)  
10b8 2011 EZ-Card (SMC1208)  
10ec  
8029 RTL-8029(AS)  
1113 1208 EN1208  
1186 0300 DE-528  
1259 2400 AT-2400  
1af4 1100 QEMU Virtual Machine  
8125 RTL8125 2.5GbE Controller

4c52 2022 LRES2022PT Single-port 2.5Gb Ethernet Network Adapter  
8129 RTL-8129  
10ec 8129 RT8129 Fast Ethernet Adapter  
11ec 8129 RTL8111/8168 PCIe Gigabit Ethernet (misconfigured)  
8136 RTL810xE PCI Express Fast Ethernet controller  
103c 1985 RTL8106E on Pavilion 17-e163sg Notebook PC  
103c 2a8c Compaq 500B Microtower  
103c 2ab1 Pavilion p6774  
103c 30cc Pavilion dv6700  
1179 ff64 RTL8102E PCI-E Fast Ethernet NIC  
17c0 1053 RTL8101e Medion WIM 2210 Notebook PC [MD96850]  
8137 RTL8104E PCIe Fast Ethernet Controller  
8138 RT8139 (B/C) Cardbus Fast Ethernet Adapter  
10ec 8138 RT8139 (B/C) Fast Ethernet Adapter  
8139 RTL-8100/8101L/8139 PCI Fast Ethernet Adapter  
0357 000a TTP-Monitoring Card V2.0  
1025 005a TravelMate 290  
1025 8920 ALN-325  
1025 8921 ALN-325  
103c 006a NX9500  
103c 2a20 Pavilion  
t3030.de Desktop PC  
103c 30d9 Presario C700  
1043 1045 L8400B, L3C/S, X58LE notebook  
1043 8109 P5P800-MX Mainboard  
1071 8160 MIM2000  
10bd 0320 EP-320X-R  
10ec 8139 RTL-8100/8101L/8139 PCI Fast Ethernet Adapter  
10f7 8338 Panasonic CF-Y5 laptop  
1113 ec01 LevelOne FNC-0107TX/FNC-0109TX  
1186 1104 DFE-520TX Fast Ethernet PCI Adapter (rev. D1)  
1186 1300 DFE-538TX  
1186 1320 SN5200  
1186 8139 DRN-32TX  
11f6 8139 FN22-3(A) LinxPRO Ethernet Adapter  
1259 2500 AT-2500TX  
1259 2503 AT-2500TX/ACPI  
1385 f31d FA311 v2  
1395 2100 AMB2100  
1429 d010 ND010/ND012  
1432 9130 EN-9130TX  
1436 8139 RT8139  
144d c00c P30/P35 notebook  
1458 e000 GA-7VM400M/7VT600 Motherboard  
1462 0131 MS-1013 Notebook  
1462 217c Aspire L250  
1462 788c 865PE Neo2-V Mainboard  
146c 1439 FE-1439TX



1489 6001 GF100TXR11  
1489 6002 GF100TXRA  
149c 139a LFE-8139ATX  
149c 8139 LFE-8139TX  
14cb 0200 LNR-100 Family 10/100 Base-TX Ethernet  
1565 2300 P4TSV Onboard  
LAN (RTL8100B)  
1631 7003 Onboard RTL8111 on GA-8SIML Rev1.0 Mainboard  
1695 9001 Onboard RTL8101L 10/100 MBit  
16ec 00ff USR997900A  
1799 5000 F5D5000 PCI Card/Desktop Network PCI Card  
1799 5010 F5D5010 CardBus Notebook Network Card  
187e 3303 FN312  
1904 8139 RTL8139D Fast Ethernet Adapter  
1af4 1100 QEMU Virtual Machine  
2646 0001 KNE120TX  
8e2e 7000 KF-230TX  
8e2e 7100 KF-230TX/2  
a0a0 0007 ALN-325C  
8161 RTL8111/8168/8411 PCI Express Gigabit Ethernet Controller  
10ec 8168 TP-Link TG-3468 v4.0 Gigabit PCI Express Network Adapter  
8167 RTL-8110SC/8169SC Gigabit Ethernet  
105b 0e10 RTL-8110SC-GR on a N15235/A74MX mainboard  
1458 e000 GA-MA69G-S3H Motherboard  
1462 235c P965 Neo MS-7235 mainboard  
1462 236c 945P Neo3-F motherboard  
8168 RTL8111/8168/8211/8411 PCI Express Gigabit Ethernet Controller  
1019 8168 RTL8111/8168 PCI Express Gigabit Ethernet controller  
1025 1094 Acer Aspire E5-575G  
1028 0283 Vostro 220  
1028 04b2 Vostro 3350  
1028  
04da Vostro 3750  
1028 05d7 Alienware X51 R2  
1028 06f2 Latitude 3470  
1028 06f3 Latitude 3570  
1028 0869 Vostro 3470  
103c 1611 Pavilion DM1Z-3000  
103c 1950 ProBook 450/455  
103c 2a6f Asus IPIBL-LB Motherboard  
103c 825b OMEN-17-w001nv  
103c 8615 Pavilion Laptop 15-cw1xxx  
103c 86d4 Pavilion Laptop 15-ec0xxx  
# Rev 29, uses r8169 Driver on Linux  
103c 8882 HP ProDesk 405 G8 Desktop Mini PC  
103c 8b17 ProBook 445 G9/455 G9 [RTL8111HSH-CG GbE Controller]  
1043 11f5 Notebook motherboard (one of many models)  
1043 16d5 U6V/U31J laptop

1043 81aa P5B  
1043 82c6 M3A78 Series Motherboard  
1043 83a3 M4A785/P7P55 Motherboard  
1043 8432 P8P67 and other motherboards  
1043 8505 P8 series motherboard  
1043 8554 H81M-C Motherboard  
1043 859e AM1I-A Motherboard  
1043 8677 Onboard RTL8111H Ethernet  
105b 0d7c D270S/D250S Motherboard  
10ec 8168 RTL8111/8168 PCI Express Gigabit Ethernet controller  
144d c652 RTL8168 on a NP300E5C series laptop  
1458  
e000 Onboard Ethernet  
1462 238c Onboard RTL8111b on MSI P965 Platinum Mainboard  
1462 345c RTL8111B on MS-7345 Motherboard  
1462 368c K9AG Neo2  
1462 4180 Wind PC MS-7418  
1462 7522 X58 Pro-E  
1462 7c37 X570-A PRO motherboard  
1734 11c0 RTL8211DN on Esprimo P510 D3171 motherboard  
1775 11cc CC11/CL11  
17aa 3098 ThinkCentre E73  
17aa 3814 Z50-75  
17aa 3823 Lenovo V130-15IGM Laptop - Type 81HL  
17aa 5068 Thinkpad E480/E580  
17aa 5124 ThinkPad E595  
1849 8168 Motherboard (one of many)  
7470 3468 TG-3468 Gigabit PCI Express Network Adapter  
8086 2055 NUC Kit DN2820FYKH  
8086 d615 Desktop Board D510MO/D525MW  
ea50 ce19 mCOM10-L1900  
8169 RTL8169 PCI Gigabit Ethernet Controller  
1025 0079 Aspire 5024WLMi  
10bd 3202 EP-320G-TX1 32-bit PCI Gigabit Ethernet Adapter  
10ec 8169 RTL8169/8110 Family PCI Gigabit Ethernet NIC  
1259 c107 CG-LAPCIGT  
1371 434e ProG-2000L  
1385 311a GA311  
1385 5200 GA511 Gigabit PC Card  
1458 e000 GA-8I915ME-G  
Mainboard  
1462 030c K8N Neo-FSR v2.0 mainboard  
1462 065c Hetis 865GV-E (MS-7065)  
1462 702c K8T NEO 2 motherboard  
1462 7094 K8T Neo2-F V2.0  
16ec 011f USR997903  
1734 1091 D2030-A1  
a0a0 0449 AK86-L motherboard

816a RTL8111xP UART #1  
ea50 ce19 mCOM10-L1900

816b RTL8111xP UART #2  
ea50 ce19 mCOM10-L1900

816c RTL8111xP IPMI interface  
ea50 ce19 mCOM10-L1900

816d RTL811x EHCI host controller  
ea50 ce19 mCOM10-L1900

816e Realtek RealManage BMC

8171 RTL8191SEvA Wireless LAN Controller

8172 RTL8191SEvB Wireless LAN Controller

8173 RTL8192SE Wireless LAN Controller

8174 RTL8192SE Wireless LAN Controller

8176 RTL8188CE 802.11b/g/n WiFi Adapter  
1043 84b5 PCE-N10  
1a3b 1139 AW-NE139H Half-size Mini PCIe Card

8177 RTL8191CE PCIe Wireless Network Adapter

8178 RTL8192CE PCIe Wireless Network Adapter

8179 RTL8188EE Wireless Network Adapter  
103c 197d RTL8188EE mini-PCIe card

8180 RTL8180L 802.11b MAC  
1385 4700 MA521 802.11b Wireless  
PC Card  
1737 0019 WPC11v4 802.11b Wireless-B Notebook Adapter

8185 RTL-8185 IEEE 802.11a/b/g Wireless LAN Controller

818b RTL8192EE PCIe Wireless Network Adapter

8190 RTL8190 802.11n PCI Wireless Network Adapter

8191 RTL8192CE PCIe Wireless Network Adapter

8192 RTL8192E/RTL8192SE Wireless LAN Controller

8193 RTL8192DE Wireless LAN Controller

8196 RTL8196 Integrated PCI-e Bridge

8197 SmartLAN56 56K Modem

8199 RTL8187SE Wireless LAN Controller  
1462 6894 MN54G2 / MS-6894 Wireless Mini PCIe Card

8723 RTL8723AE PCIe Wireless Network Adapter

8812 RTL8812AE 802.11ac PCIe Wireless Network Adapter

8813 RTL8813AE 802.11ac PCIe Wireless Network Adapter

8821 RTL8821AE 802.11ac PCIe Wireless Network Adapter

8852 RTL8852AE 802.11ax PCIe Wireless Network Adapter

a85a RTL8852AE WiFi 6 802.11ax PCIe Adapter

b723 RTL8723BE PCIe Wireless Network Adapter  
10ec 8739 Dell Wireless 1801  
17aa b736 Z50-75

b821 RTL8821CE PCIe 802.11ac Wireless Network Controller

b822  
RTL8822BE 802.11a/b/g/n/ac WiFi adapter  
103c 831b Realtek RTL8822BE 802.11ac 2x2 Wi-Fi + Bluetooth 4.2 Combo Adapter (MU-MIMO supported)  
17aa 5124 ThinkPad E595

17aa b023 ThinkPad E595  
b852 RTL8852BE PCIe 802.11ax Wireless Network Controller  
b85b RTL8852BE PCIe 802.11ax Wireless Network Controller [1T1R]  
c821 RTL8821CE 802.11ac PCIe Wireless Network Adapter  
c822 RTL8822CE 802.11ac PCIe Wireless Network Adapter  
c82f RTL8822CE 802.11ac PCIe Wireless Network Adapter  
c852 RTL8852CE PCIe 802.11ax Wireless Network Controller  
d723 RTL8723DE 802.11b/g/n PCIe Adapter  
10ed Ascii Corporation  
7310 V7310  
10ee Xilinx Corporation  
0001 EUROCOM for PCI (ECOMP)  
0002 Octal E1/T1 for PCI ETP Card  
0007 Default PCIe endpoint ID  
0205 Wildcard TE205P  
0210 Wildcard TE210P  
0300 Spartan 3 Designs (Xilinx IP)  
0314 Wildcard TE405P/TE410P (1st Gen)  
0405 Wildcard TE405P (2nd Gen)  
0410 Wildcard TE410P (2nd Gen)  
0600 Xilinx 6 Designs (Xilinx IP)  
3fc0 RME Digi96  
3fc1  
RME Digi96/8  
3fc2 RME Digi96/8 Pro  
3fc3 RME Digi96/8 Pad  
3fc4 RME Digi9652 (Hammerfall)  
3fc5 RME Hammerfall DSP  
3fc6 RME Hammerfall DSP MADI  
5000 Alveo U200 XDMA Platform  
5004 Alveo U250 XDMA Platform  
5005 Alveo U250  
500c Alveo U280 XDMA Platform  
5020 Alveo U50 XMDA Platform  
505c Alveo U55C  
5074 Alveo X3522, Quad Port, 10/25GbE Adaptable Accelerator Card  
5084 Alveo X3522, Quad Port, 10/25GbE Low Latency Network Adapter  
6987 SmartSSD  
6988 SmartSSD  
7011 7-Series FPGA Hard PCIe block (AXI/debug)  
7038 FPGA Card XC7VX690T  
17aa 402f FPGA XC7VX690T-3FFG1157E  
8019 Memory controller  
1eec 0201 VSEC10232X Dual-port 100Gb/s Ethernet PCIe  
8380 Ellips ProfiXpress Profibus Master  
8381 Ellips Santos Frame Grabber  
9134 SmartSSD  
9234 SmartSSD

9434 SmartSSD  
d000 Alveo U200 Golden Image  
d004 Alveo U250 Golden Image  
d00c Alveo U280 Golden Image  
d020 Alveo U50 Golden Image  
d154 Copley Controls CAN card (PCI-CAN-02)  
# SED is assigned Xilinx PCI  
device IDs ebf0 through ebff  
ebf0 SED Systems Modulator/Demodulator  
ebf1 SED Systems Audio Interface Card  
ebf2 SED Systems Common PCI Interface  
ebf3 SED Systems PCIe-AXI Bridge  
10ef Racore Computer Products, Inc.  
8154 M815x Token Ring Adapter  
10f0 Peritek Corporation  
10f1 Tyan Computer  
2865 Tyan Thunder K8E S2865  
5300 Tyan S5380 Mainboard  
10f2 Achme Computer, Inc.  
10f3 Alaris, Inc.  
10f4 S-MOS Systems, Inc.  
10f5 NKK Corporation  
a001 NDR4000 [NR4600 Bridge]  
10f6 Creative Electronic Systems SA  
10f7 Matsushita Electric Industrial Co., Ltd.  
10f8 Altos India Ltd  
10f9 PC Direct  
10fa Truevision  
000c TARGA 1000  
10fb Thesys Gesellschaft fuer Mikroelektronik mbH  
186f TH 6255  
10fc I-O Data Device, Inc.  
# What's in the cardbus end of a Sony ACR-A01 card, comes with newer Vaio CD-RW drives  
0003 Cardbus IDE Controller  
0005 Cardbus SCSI CBSC II  
10fd Soyo Computer, Inc  
10fe Fast Multimedia AG  
10ff NCube  
1100 Jazz Multimedia  
1101 Initio Corporation  
0002 INI-920  
Ultra SCSI Adapter  
1060 INI-A100U2W  
1622 INI-1623 PCI SATA-II Controller  
9100 INI-9100/9100W  
9400 INI-940 Fast Wide SCSI Adapter  
9401 INI-935 Fast Wide SCSI Adapter  
9500 INI-950 SCSI Adapter

9502 INI-950P Ultra Wide SCSI Adapter  
1102 Creative Labs  
0002 EMU10k1 [Sound Blaster Live! Series]  
100a 1102 SB Live! 5.1 Digital OEM SB0220 EMU10K1-JFF  
1102 0020 CT4670/4850 SBLive! Value  
1102 0021 CT4620 SBLive!  
1102 002f M002/M003 Integrated SBLive!  
1102 100a SB0220/0229 SBLive! 5.1 Digital OEM  
1102 4001 E-mu APS  
1102 8022 CT4780 SBLive! Value  
1102 8023 CT4790 SoundBlaster PCI512  
1102 8024 CT4760 SBLive!  
1102 8025 CT1140/SB0040 Integrated SBLive!  
1102 8026 CT4830 SBLive! Value  
1102 8027 CT4832 SBLive! Value  
1102 8028 CT4870 SBLive! Value  
1102 8029 CT4872 SBLive! Value  
1102 802a CT4890 SoundBlaster PCI256  
1102 802b CT4891 SoundBlaster PCI256  
1102 8031 CT4831 SBLive! Value  
1102 8032 CT4871 SBLive! Value  
1102 8033 CT4893  
SoundBlaster PCI256  
1102 8035 CT0060 SBLive!  
1102 8040 CT4760 SBLive!  
1102 8050 CT4750 SoundBlaster PCI512  
1102 8051 CT4850 SBLive! Value  
1102 8061 SB060 SBLive! Player 5.1  
1102 8062 SB0100 SBLive! 5.1  
1102 8063 DXW Integrated SBLive! 5.1  
1102 8064 SB0100/SB0102 SBLive! 5.1  
1102 8065 SB0220/0222 SBLive! 5.1 Digital  
1102 8066 SB0228 SBLive! 5.1 Digital  
1102 8067 SB0220 SBLive! 5.1  
1102 8068 CT0061 SBLive!  
1102 8069 SB0101 SBLive! 5.1 Value  
1102 806a SB0103 SBLive! 5.1  
1102 806b SB0105 SBLive! 5.1  
1102 806c SB0221 SBLive! 5.1  
1102 8071 SB0150 SoundBlaster PCI512  
# EMU8008 PCI version of emu8000 chip  
0003 SB AWE64(D)  
1102 0010 CT4600 AWE64D  
1102 0030 CT4650 AWE64D  
1102 0031 CT4655 AWE64D  
0004 EMU10k2/CA0100/CA0102/CA10200 [Sound Blaster Audigy Series]  
1102 0040 SB0090 Audigy Player  
# Probably an early engineering sample

1102 0041 CT4820 SBLive!2  
1102 0042 CT0070 Audigy  
1102 0043 CT0072 Audigy  
1102 0051 SB0090 Audigy  
Player/Platinum (EX)  
1102 0052 SB0162 Audigy ES  
1102 0053 CT0090/SB0092 Audigy Player/OEM  
1102 0054 SB0161 Audigy ES  
1102 0055 SB0192 Audigy  
1102 0056 SB0191 Audigy  
1102 0057 SB0091 Audigy  
1102 0058 SB0095 Audigy Player/OEM  
1102 0059 SB0230 Audigy  
1102 005a SB0231 Audigy  
1102 005b SB0232 Audigy  
1102 005c SB0238 Audigy  
1102 1002 SB0240 Audigy 2 Platinum 6.1  
1102 1003 SB0350 Audigy 2 / SB0243 Audigy 2 OEM  
1102 1004 SB0242 Audigy 2  
1102 1005 SB0280 Audigy 2 Platinum Ex  
1102 1006 SB0245 Audigy 2 OEM  
1102 1007 SB0240/SB0244 Audigy 2 Platinum  
1102 1008 SB0320 Audigy 2  
1102 1009 SB0249 Audigy 2 OEM  
1102 100a SB0246 Audigy 2  
1102 2001 SB0360 Audigy 2 ZS Platinum Pro  
1102 2002 SB0350 Audigy 2 ZS  
1102 2003 SB0352 Audigy 2 ZS  
1102 2004 SB0355 Audigy 2 ZS  
1102 2005 SB0359 Audigy 2 ZS  
1102 2006 SB035x Audigy 2 OEM  
1102 2007 SB0380 Audigy 4 Pro  
1102 4001 E-MU 1010 [MAEM8810]  
1102 4002 E-MU 0404  
1102 4003  
E-MU 1010  
0005 EMU20k1 [Sound Blaster X-Fi Series]  
1102 0021 X-Fi Platinum  
1102 002c X-Fi XtremeGamer FATALITY PRO  
1102 1003 X-Fi XtremeMusic  
# This chip is also known as CA0103 on Sound Blaster 5.1 SB0680 card.  
0006 EMU10k1X / CA0103 [SB Live! OEM / SB 5.1 / Ectiva 5.1]  
1102 1001 SB0680 Sound Blaster 5.1  
1102 1003 SB0203 SB Live! 5.1 (Dell)  
1102 1004 TP0033 Ectiva Audio 5.1  
0007 CA0106/CA0111 [SB Live!/Audigy/X-Fi Series]  
1102 0007 SBLive! 24bit  
1102 1001 SB0310 Audigy LS

1102 1002 SB0312 Audigy LS  
1102 1006 SB0410 SBLive! 24-bit  
1102 100a SB0570 [SB Audigy SE]  
1102 1012 SB0790 X-Fi XA  
1102 1013 Soundblaster X-Fi Xtreme Audio  
1462 1009 K&N Diamond  
0008 CA0108/CA10300 [Sound Blaster Audigy Series]  
1102 0008 EMU0404 Digital Audio System  
1102 1001 SB0400 Audigy 2 Value  
1102 1021 SB0610 Audigy 4 Value  
1102 1022 SBxxx Audigy 2/4 Value  
1102 1023 SB0612 Audigy 2 LS  
1102 1024 SB1550 Audigy 5/Rx  
1102 1101 SBxxxx Audigy 2 SA  
1102  
2001 SB0530 Audigy 2 ZS Notebook  
1102 2021 SBxxxx Audigy 4 Notebook  
1102 4002 E-MU 0404  
1102 4003 E-MU 1010  
1102 4004 EMU1010 Digital Audio System [MAEM8960]  
1102 4005 E-MU 0404 [MAEM8984]  
1102 4007 E-MU 1010 [MAEM8982]  
1102 4201 E-MU 0202 [MAEM8950]  
0009 CA0110 [Sound Blaster X-Fi Xtreme Audio]  
1102 0010 MB0820 Integrated  
1102 0018 SB1040 PCI Express  
000b EMU20k2 [Sound Blaster X-Fi Titanium Series]  
1102 0041 SB0880 [SoundBlaster X-Fi Titanium PCI-e]  
1102 0062 SB1270 [SoundBlaster X-Fi Titanium HD]  
0012 CA0132 Sound Core3D [Sound Blaster Recon3D / Z-Series / Sound BlasterX AE-5 Plus]  
1102 0010 SB1570 SB Audigy Fx  
1102 0191 CA0132 Sound Core3D - CA0113 [ Sound BlasterX AE-5 Plus]  
4001 SB Audigy FireWire Port  
1102 0010 SB Audigy FireWire Port  
7002 SB Live! Game Port  
1102 0020 Gameport Joystick  
7003 SB Audigy Game Port  
1102 0040 SB Audigy Game Port  
1102 0060 SB Audigy2 MIDI/Game Port  
7004 [SB Live! Value] Input device  
controller  
7005 SB Audigy LS Game Port  
1102 1001 SB0310 Audigy LS MIDI/Game port  
1102 1002 SB0312 Audigy LS MIDI/Game port  
7006 [SB X-Fi Xtreme Audio] CA0110-IBG PCIe to PCI Bridge  
8938 Ectiva EV1938  
1033 80e5 SlimTower-Jim (NEC)  
1071 7150 Mitac 7150



110a 5938 Siemens Scenic Mobile 510PIII  
13bd 100c Ceres-C (Sharp, Intel BX)  
13bd 100d Sharp, Intel Banister  
13bd 100e TwinHead P09S/P09S3 (Sharp)  
13bd f6f1 Marlin (Sharp)  
14ff 0e70 P88TE (TWINHEAD INTERNATIONAL Corp)  
14ff c401 Notebook 9100/9200/2000 (TWINHEAD INTERNATIONAL Corp)  
156d b400 G400 - Geo (AlphaTop (Taiwan))  
156d b550 G560 (AlphaTop (Taiwan))  
156d b560 G560 (AlphaTop (Taiwan))  
156d b700 G700/U700 (AlphaTop (Taiwan))  
156d b795 G795 (AlphaTop (Taiwan))  
156d b797 G797 (AlphaTop (Taiwan))  
# nee Triones Technologies, Inc.  
1103 HighPoint Technologies, Inc.  
0003 HPT343/345/346/363  
0004 HPT366/368/370/370A/372/372N  
1103 0001 HPT370A  
1103 0004 HPT366 UDMA66 (r1)  
/ HPT368 UDMA66 (r2) / HPT370 UDMA100 (r3) / HPT370 UDMA100 RAID (r4)  
1103 0005 HPT370 UDMA100  
1103 0006 HPT302/302N  
0005 HPT372A/372N  
0006 HPT302/302N  
0007 HPT371/371N  
0008 HPT374  
0009 HPT372N  
0620 RocketRAID 620 2 Port SATA-III Controller  
0622 RocketRAID 622 2 Port SATA-III Controller  
0640 RocketRAID 640 4 Port SATA-III Controller  
0641 RocketRAID 640L 4 Port SATA-III Controller  
0642 RocketRAID 642L SATA-III Controller (2 eSATA ports + 2 internal SATA ports)  
0644 RocketRAID 644 4 Port SATA-III Controller (eSATA)  
0645 RocketRAID 644L 4 Port SATA-III Controller (eSATA)  
0646 RocketRAID 644LS SATA-III Controller (4 eSATA devices connected by 1 SAS cable)  
0750 Rocket 750 PCIe Gen2 SATA III Controller  
0840 RocketRAID 840 PCIe Gen3 SATA III Controller  
1720 RocketRAID 1720 (2x SATA II RAID Controller)  
1740 RocketRAID 1740  
1742 RocketRAID 1742  
2210 RocketRAID 2210 SATA-II Controller  
11ab 11ab 88SX6042  
2300 RocketRAID 230x 4 Port SATA-II Controller  
2310  
RocketRAID 2310 4 Port SATA-II Controller  
2320 RocketRAID 2320 SATA-II Controller  
2322 RocketRAID 2322 SATA-II Controller  
2340 RocketRAID 2340 16 Port SATA-II Controller

2640 RocketRAID 2640 SAS/SATA Controller  
2720 RocketRAID 2720 PCIe Gen2 6Gb/s SAS/SATA Controller  
2722 RocketRAID 2722  
# SFF-8087 Mini-SAS 16 port internal  
2740 RocketRAID 2740  
# SFF-8088 Mini-SAS 16 port external  
2744 RocketRaid 2744  
# SFF-8088 8 port external / SFF-8087 24 port internal  
2782 RocketRAID 2782  
2840 RocketRAID 2840 PCIe Gen3 6Gb/s SAS/SATA Controller  
3120 RocketRAID 3120  
3220 RocketRAID 3220  
3320 RocketRAID 3320  
3520 RocketRAID 3520 PCIe Gen1 8-Port SATA II Controller  
3530 RocketRAID 3530 PCIe Gen1 12-Port SATA II Controller  
3740 RocketRAID 3740 PCIe Gen3 12Gb/s SAS/SATA Controller  
4310 RocketRaid 4310  
4320 RocketRAID 4320 SAS Controller  
7103 SSD7103 PCIe Gen3 x16 4-Port M.2 NVMe RAID Controller  
7105 SSD7105 PCIe Gen3 x16 4-Port M.2 NVMe RAID Controller  
7110  
SSD7110 PCIe Gen3 x16 NVMe RAID Controller  
7505 SSD7505 PCIe Gen4 x16 4-Port M.2 NVMe RAID Controller  
7540 SSD7540 PCIe Gen4 x16 8-Port M.2 NVMe RAID Controller  
7580 SSD7580 PCIe Gen4 x16 8-Port M.2 NVMe RAID Controller  
1104 RasterOps Corp.  
1105 Sigma Designs, Inc.  
1105 REALmagic Xcard MPEG 1/2/3/4 DVD Decoder  
8300 REALmagic Hollywood Plus DVD Decoder  
8400 EM840x REALmagic DVD/MPEG-2 Audio/Video Decoder  
8401 EM8401 REALmagic DVD/MPEG-2 A/V Decoder  
8470 EM8470 REALmagic DVD/MPEG-4 A/V Decoder  
8471 EM8471 REALmagic DVD/MPEG-4 A/V Decoder  
8475 EM8475 REALmagic DVD/MPEG-4 A/V Decoder  
1105 0001 REALmagic X-Card  
8476 EM8476 REALmagic DVD/MPEG-4 A/V Decoder  
127d 0000 CineView II  
8485 EM8485 REALmagic DVD/MPEG-4 A/V Decoder  
8486 EM8486 REALmagic DVD/MPEG-4 A/V Decoder  
# Found in Cisco DMP-4305G  
c621 EM8621L Digital Media Processor  
c622 EM8622L MPEG-4.10 (H.264) and SMPTE 421M (VC-1) A/V Decoder  
1106 VIA Technologies, Inc.  
0102 Embedded VIA Ethernet  
Controller  
0130 VT6305 1394.A Controller  
0198 P4X600 Host Bridge  
0204 K8M800 Host Bridge

0208 PT890 Host Bridge  
0238 K8T890 Host Bridge  
0258 PT880 Host Bridge  
0259 CN333/CN400/PM880 Host Bridge  
0269 KT880 Host Bridge  
0282 K8T800Pro Host Bridge  
1043 80a3 A8V Deluxe  
0290 K8M890 Host Bridge  
0293 PM896 Host Bridge  
0296 P4M800 Host Bridge  
0305 VT8363/8365 [KT133/KM133]  
1019 0987 K7VZA Mainboard  
1043 8033 A7V Mainboard  
1043 803e A7V-E Mainboard  
1043 8042 A7V133/A7V133-C Mainboard  
147b a401 KT7/KT7-RAID/KT7A/KT7A-RAID Mainboard  
0308 PT880 Ultra/PT894 Host Bridge  
1043 8199 P4V800D-X Mainboard  
1849 0308 Motherboard  
0314 CN700/VN800/P4M800CE/Pro Host Bridge  
0324 CX700/VX700 Host Bridge  
0327 P4M890 Host Bridge  
0336 K8M890CE Host Bridge  
0340 PT900 Host Bridge  
0351 K8T890CF Host Bridge  
0353 VX800/820-Series Chipset Host-Bridge Controller  
0364 CN896/VN896/P4M900 Host Bridge  
1043 81ce P5VD2-VM motherboard  
0391 VT8371 [KX133]  
0409  
VX855/VX875 Host Bridge: Host Control  
0410 VX900 Series Host Bridge: Host Control  
0415 VT6415 PATA IDE Host Controller  
1043 838f Motherboard  
0501 VT8501 [Apollo MVP4]  
0505 VT82C505  
# Shares chip with :0576. The VT82C576M has :1571 instead of :0561.  
0561 VT82C576MV  
0571 VT82C586A/B/VT82C686/A/B/VT823x/A/C PIPC Bus Master IDE  
1019 0985 P6VXA Motherboard  
1019 0a81 L7VTA v1.0 Motherboard (KT400-8235)  
1043 8052 VT8233A Bus Master ATA100/66/33 IDE  
1043 808c A7V8X / A7V333 motherboard  
1043 80a1 A7V8X-X motherboard rev. 1.01  
1043 80ed A7V600/K8V-X/A8V Deluxe motherboard  
1106 0571 VT82C586/B/VT82C686/A/B/VT8233/A/C/VT8235 PIPC Bus Master IDE  
1179 0001 Magnia Z310  
1297 f641 FX41 motherboard

1458 5002 GA-7VAX Mainboard  
1462 5901 KT6 Delta-FIS2R (MS-6590)  
1462 7020 K8T NEO 2 motherboard  
1462 7094 K8T Neo2-F V2.0  
1462 7120 KT4AV motherboard  
1462 7181 K8MM3-V mainboard  
147b 1407 KV8-MAX3 motherboard  
# probably all K7VT2/4\*/6  
1849  
0571 K7VT series Motherboards  
0576 VT82C576 3V [Apollo Master]  
0581 CX700/VX700/VX800/820-Series Serial ATA RAID-Controller  
# Upgrade bios to get correct ID: 5324 instead of 0581  
1106 0581 Wrong IDE ID  
0585 VT82C585VP [Apollo VP1/VPX]  
0586 VT82C586/A/B PCI-to-ISA [Apollo VP]  
1106 0000 MVP3 ISA Bridge  
0591 VT8237A SATA 2-Port Controller  
0595 VT82C595 [Apollo VP2]  
0596 VT82C596 ISA [Mobile South]  
1106 0000 VT82C596/A/B PCI to ISA Bridge  
1458 0596 VT82C596/A/B PCI to ISA Bridge  
0597 VT82C597 [Apollo VP3]  
0598 VT82C598 [Apollo MVP3]  
0601 VT8601 [Apollo ProMedia]  
0605 VT8605 [ProSavage PM133]  
103c 1254 D9840-60001 [Brio BA410 Motherboard]  
1043 802c CUV4X mainboard  
0680 VT82C680 [Apollo P6]  
0686 VT82C686 [Apollo Super South]  
1019 0985 P6VXA Motherboard  
103c 1256 D9840-60001 [Brio BA410 Motherboard]  
1043 802c CUV4X mainboard  
1043 8033 A7V Mainboard  
1043 803e A7V-E Mainboard  
1043 8040 A7M266 Mainboard  
1043 8042 A7V133/A7V133-C  
Mainboard  
1106 0000 VT82C686/A PCI to ISA Bridge  
1106 0686 VT82C686/A PCI to ISA Bridge  
1179 0001 Magnia Z310  
147b a702 KG7-Lite Mainboard  
0691 VT82C693A/694x [Apollo PRO133x]  
1019 0985 P6VXA Motherboard  
1179 0001 Magnia Z310  
1458 0691 VT82C691 Apollo Pro System Controller  
0693 VT82C693 [Apollo Pro Plus]  
0698 VT82C693A [Apollo Pro133 AGP]

0709 VX11 Standard Host Bridge  
070a VX11 PCI Express Root Port  
070b VX11 PCI Express Root Port  
070c VX11 PCI Express Root Port  
070d VX11 PCI Express Root Port  
070e VX11 PCI Express Root Port  
0926 VT82C926 [Amazon]  
1000 VT82C570MV  
1106 VT82C570MV  
1122 VX800/VX820 Chrome 9 HC3 Integrated Graphics  
1204 K8M800 Host Bridge  
1208 PT890 Host Bridge  
1238 K8T890 Host Bridge  
1258 PT880 Host Bridge  
1259 CN333/CN400/PM880 Host Bridge  
1269 KT880 Host Bridge  
1282 K8T800Pro Host Bridge  
1290 K8M890 Host Bridge  
1293 PM896 Host Bridge  
1296 P4M800 Host Bridge  
1308 PT894 Host Bridge  
1314 CN700/VN800/P4M800CE/Pro  
Host Bridge  
1324 CX700/VX700-Series Error Reporting  
1327 P4M890 Host Bridge  
1336 K8M890CE Host Bridge  
1340 PT900 Host Bridge  
1351 VT3351 Host Bridge  
1353 VX800/VX820 Error Reporting  
1364 CN896/VN896/P4M900 Host Bridge  
1409 VX855/VX875 Error Reporting  
1410 VX900 Series Error Reporting  
1571 VT82C576M/VT82C586  
1595 VT82C595/97 [Apollo VP2/97]  
1732 VT1732 [Envy24 II] PCI Multi-Channel Audio Controller  
2106 VIA Rhine Family Fast Ethernet Adapter (VT6105)  
2204 K8M800 Host Bridge  
2208 PT890 Host Bridge  
2238 K8T890 Host Bridge  
2258 PT880 Host Bridge  
2259 CN333/CN400/PM880 CPU Host Bridge  
2269 KT880 Host Bridge  
2282 K8T800Pro Host Bridge  
2290 K8M890 Host Bridge  
2293 PM896 Host Bridge  
2296 P4M800 Host Bridge  
2308 PT894 Host Bridge  
2314 CN700/VN800/P4M800CE/Pro Host Bridge

2324 CX700/VX700-Series Host Interface Control  
2327 P4M890 Host Bridge  
2336 K8M890CE Host Bridge  
2340 PT900 Host Bridge  
2351 VT3351 Host Bridge  
2353 VX800/VX820  
Host Bus Control  
2364 CN896/VN896/P4M900 Host Bridge  
2409 VX855/VX875 Host Bus Control  
2410 VX900 Series CPU Bus Controller  
287a VT8251 PCI to PCI Bridge  
287b VT8251 Host Bridge  
287c VT8251 PCIE Root Port  
287d VT8251 PCIE Root Port  
287e VT8237/8251 Ultra VLINK Controller  
3022 CLE266  
3038 VT82xx/62xx/VX700/8x0/900 UHCI USB 1.1 Controller  
0925 1234 onboard UHCI USB 1.1 Controller  
1019 0985 P6VXA Motherboard  
1019 0a81 L7VTA v1.0 Motherboard (KT400-8235)  
1043 8080 A7V333 motherboard  
1043 808c VT62xx USB1.1 4 port controller  
1043 80a1 A7V8X-X motherboard  
1043 80ed A7V600/K8V-X/A8V Deluxe motherboard  
1106 3038 USB 1.1 UHCI controller  
1179 0001 Magnia Z310  
1234 0925 MVP3 USB Controller  
1458 5004 GA-7VAX Mainboard  
1462 5901 KT6 Delta-FIS2R (MS-6590)  
1462 7020 K8T NEO 2 motherboard  
1462 7094 K8T Neo2-F V2.0  
1462 7120 KT4AV motherboard  
1462 7181 K8MM3-V mainboard  
147b 1407 KV8-MAX3 motherboard  
182d 201d CN-029 USB2.0  
4 port PCI Card  
# probably all K7VT2/4\*/6  
1849 3038 K7VT series Motherboards  
19da a179 ZBOX nano VD01  
1af4 1100 QEMU Virtual Machine  
3040 VT82C586B ACPI  
3043 VT86C100A [Rhine]  
10bd 0000 VT86C100A Fast Ethernet Adapter  
1106 0100 VT86C100A Fast Ethernet Adapter  
1186 1400 DFE-530TX PCI Fast Ethernet Adapter (rev. A)  
3044 VT6306/7/8 [Fire II(M)] IEEE 1394 OHCI Controller  
0010 0001 IEEE 1394 4port DCST 1394-3+1B  
1025 005a TravelMate 290

103c 2a20 Pavilion t3030.de Desktop PC  
103c 2a3b Media Center PC m7590n  
1043 808a A8V/A8N/P4P800/P5SD2 series motherboard  
1043 81fe Motherboard  
1458 1000 GA-7VT600-1394 Motherboard  
1462 207d K8NGM2 series motherboard  
1462 217d Aspire L250  
1462 590d KT6 Delta-FIS2R (MS-6590)  
1462 702d K8T NEO 2 motherboard  
1462 971d MS-6917  
153b 1146 Cameo DV Firewire controller  
3050 VT82C596 Power Management  
3051 VT82C596 Power Management  
3053 VT6105M [Rhine-III]  
1186 1404 DFE-530TX PCI Fast Ethernet  
Adapter (rev. D)  
3057 VT82C686 [Apollo Super ACPI]  
1019 0985 P6VXA Motherboard  
1019 0987 K7VZA Motherboard  
1043 8033 A7V Mainboard  
1043 803e A7V-E Mainboard  
1043 8040 A7M266 Mainboard  
1043 8042 A7V133/A7V133-C Mainboard  
1179 0001 Magnia Z310  
3058 VT82C686 AC97 Audio Controller  
0e11 0097 SoundMax Digital Integrated Audio  
0e11 b194 Soundmax integrated digital audio  
1019 0985 P6VXA Motherboard  
1019 0987 K7VZA Motherboard  
103c 1251 D9840-60001 [Brio BA410 Motherboard]  
1043 1106 A7V133/A7V133-C Mainboard  
1106 4511 Onboard Audio on EP7KXA  
1106 aa03 VT1612A AC'97 Audio Controller  
11d4 5348 AD1881A audio  
1458 7600 Onboard Audio  
1462 3091 MS-6309 Onboard Audio  
1462 3092 MS-6309 v2.x Mainboard (VIA VT1611A codec)  
1462 3300 MS-6330 Onboard Audio  
1462 3400 MS-6340 (VT8363) motherboard  
15dd 7609 Onboard Audio  
3059 VT8233/A/8235/8237 AC97 Audio Controller  
1019 0a81 L7VTA v1.0 Motherboard (KT400-8235)  
1019 1841 M811 (VT8367/VT8235/VT6103)  
[KT333] motherboard  
1019 1877 K8M800-M2 (V2.0) onboard audio  
1043 8095 A7V8X Motherboard (Realtek ALC650 codec)  
1043 80a1 A7V8X-X Motherboard  
1043 80b0 A7V600/K8V-X/K8V Deluxe motherboard (ADI AD1980 codec [SoundMAX])

1043 80f3 SK8V motherboard  
1043 810d P5VD1-X (AD1888 codec [SoundMax])  
1043 812a A8V Deluxe motherboard (Realtek ALC850 codec)  
10ec 8168 High Definition Audio  
1106 3059 L7VMM2 Motherboard  
1106 4161 K7VT2 motherboard  
1106 4170 PCPartner P4M800-8237R Motherboard  
1106 4552 Soyo KT-600 Dragon Plus (Realtek ALC 650)  
1297 c160 FX41 motherboard (Realtek ALC650 codec)  
1413 147b KV8 Pro motherboard onboard audio  
1458 a002 GA-7VAX Onboard Audio (Realtek ALC650)  
1462 0080 K8T NEO 2 motherboard  
1462 3800 KT266 onboard audio  
1462 5901 KT6 Delta-FIS2R (MS-6590)  
1462 7181 K8MM3-V mainboard  
147b 1407 KV8-MAX3 motherboard  
1695 300c Realtek ALC655 audio on EP-8KRA series mainboard  
16f3 4170 J7F2 motherboard  
1734  
1078 Amilo L7300T notebook  
1849 0850 ASRock 775Dual-880 Pro onboard audio (Realtek ALC850)  
1849 9739 P4VT8 Mainboard (C-Media CMI9739A codec)  
# probably all K7VT2/4\*/6  
1849 9761 K7VT series Motherboards  
4005 4710 MSI K7T266 Pro2-RU (MSI-6380 v2) onboard audio (Realtek/ALC 200/200P)  
a0a0 01b6 AK77-8XN onboard audio  
a0a0 0342 AK86-L motherboard  
3065 VT6102/VT6103 [Rhine-II]  
1043 80a1 A7V8X-X Motherboard  
1043 80ed A7V600-X Motherboard  
1106 0102 VT6102/6103 [Rhine II] Ethernet Controller  
1186 1400 DFE-530TX PCI Fast Ethernet Adapter (rev. A)  
1186 1401 DFE-530TX PCI Fast Ethernet Adapter (rev. B)  
1186 1402 DFE-530TX PCI Fast Ethernet Adapter (rev. B)  
13b9 1421 LD-10/100AL PCI Fast Ethernet Adapter (rev.B)  
1462 7061 MS-7061  
1462 7181 K8MM3-V mainboard  
147b 1c09 NV7 Motherboard  
1695 3005 VT6103  
# probably all K7VT2/4\*/6  
1849 3065 K7VT series Motherboards  
# This hosts more than just the Intel 537 codec, it also hosts PCTel (SIL33)  
and SmartLink (SIL34) codecs  
3068 AC'97 Modem Controller  
1462 309e MS-6309 Saturn Motherboard  
3074 VT8233 PCI to ISA Bridge  
1043 8052 VT8233A  
3091 VT8633 [Apollo Pro266]



3099 VT8366/A/7 [Apollo KT266/A/333]  
1019 1841 M811 (VT8367/VT8235/VT6103) [KT333] motherboard  
1043 8064 A7V266-E Mainboard  
1043 807f A7V333 Mainboard  
1849 3099 K7VT2 motherboard  
3101 VT8653 Host Bridge  
3102 VT8662 Host Bridge  
3103 VT8615 Host Bridge  
3104 USB 2.0 EHCI-Compliant Host-Controller  
0925 1234 onboard EHCI USB 2.0 Controller  
1019 0a81 L7VTA v1.0 Motherboard (KT400-8235)  
1043 808c A7V8X motherboard  
1043 80a1 A7V8X-X motherboard rev 1.01  
1043 80ed A7V600/K8V-X/A8V Deluxe motherboard  
1106 3104 USB 2.0 EHCI controller  
1297 f641 FX41 motherboard  
1458 5004 GA-7VAX Mainboard  
1462 5901 KT6 Delta-FIS2R (MS-6590)  
1462 7020 K8T NEO 2 motherboard  
1462 7094 K8T Neo2-F V2.0  
1462 7120 KT4AV motherboard  
1462 7181 K8MM3-V mainboard  
147b 1407 KV8-MAX3  
motherboard  
182d 201d CN-029 USB 2.0 4 port PCI Card  
# probably all K7VT2/4\*/6  
1849 3104 K7VT series Motherboards  
19da a179 ZBOX nano VD01  
3106 VT6105/VT6106S [Rhine-III]  
1106 0105 VT6106S [Rhine-III]  
1186 1403 DFE-530TX PCI Fast Ethernet Adapter (rev. C)  
1186 1405 DFE-520TX Fast Ethernet PCI Adapter  
1186 1406 DFE-530TX+ rev F2  
1186 1407 DFE-538TX  
3108 K8M800/K8N800/K8N800A [S3 UniChrome Pro]  
3109 VT8233C PCI to ISA Bridge  
3112 VT8361 [KLE133] Host Bridge  
3113 VPX/VPX2 PCI to PCI Bridge Controller  
3116 VT8375 [KM266/KL266] Host Bridge  
1297 f641 FX41 motherboard  
3118 CN400/PM800/PM880/PN800/PN880 [S3 UniChrome Pro]  
3119 VT6120/VT6121/VT6122 Gigabit Ethernet Adapter  
3122 VT8623 [Apollo CLE266] integrated CastleRock graphics  
3123 VT8623 [Apollo CLE266]  
3128 VT8753 [P4X266 AGP]  
3133 VT3133 Host Bridge  
3142 VT6651 WiFi Adapter, 802.11b  
3147 VT8233A ISA Bridge

1043 808c A7V333 motherboard  
3148 P4M266 Host Bridge  
3149 VIA VT6420 SATA  
RAID Controller  
1043 80ed A7V600/K8V Deluxe/K8V-X/A8V Deluxe motherboard  
1458 b003 GA-7VM400AM(F) Motherboard  
1462 5901 KT6 Delta-FIS2R (MS-6590)  
1462 7020 K8T Neo 2 Motherboard  
1462 7094 K8T Neo2-F V2.0  
1462 7181 K8MM3-V mainboard  
147b 1407 KV8-MAX3 motherboard  
147b 1408 KV7  
1849 3149 K7VT6 motherboard  
a0a0 04ad AK86-L motherboard  
3156 P/KN266 Host Bridge  
3157 CX700/VX700 [S3 UniChrome Pro]  
3164 VT6410 ATA133 RAID controller  
1043 80f4 P4P800 Mainboard Deluxe ATX  
1462 7028 915P/G Neo2  
3168 P4X333/P4X400/PT800 AGP Bridge  
1849 3168 P4VT8 Mainboard  
3177 VT8235 ISA Bridge  
1019 0a81 L7VTA v1.0 Motherboard (KT400-8235)  
1019 1841 M811 (VT8367/VT8235/VT6103) [KT333] motherboard  
1043 808c A7V8X motherboard  
1043 80a1 A7V8X-X motherboard  
1106 0000 KT4AV motherboard  
1297 f641 FX41 motherboard  
1458 5001 GA-7VAX Mainboard  
# probably all K7VT2/4\*/6  
1849 3177 K7VT series Motherboards  
3178 ProSavageDDR P4N333 Host Bridge  
3188  
VT8385 [K8T800 AGP] Host Bridge  
1043 80a3 K8V Deluxe/K8V-X motherboard  
147b 1407 KV8-MAX3 motherboard  
3189 VT8377 [KT400/KT600 AGP] Host Bridge  
1043 807f A7V8X motherboard  
1106 0000 KT4AV motherboard (KT400A)  
1458 5000 GA-7VAX Mainboard  
# probably all K7VT2/4\*/6  
1849 3189 K7VT series Motherboards  
31b0 VX11 Standard Host Bridge  
31b1 VX11 Standard Host Bridge  
31b2 VX11 DRAM Controller  
31b3 VX11 Power Management Controller  
31b4 VX11 I/O APIC  
31b5 VX11 Scratch Device

31b7 VX11 Standard Host Bridge  
31b8 VX11 PCI to PCI Bridge  
3204 K8M800 Host Bridge  
3205 VT8378 [KM400/A] Chipset Host Bridge  
1458 5000 GA-7VM400M Motherboard  
3208 PT890 Host Bridge  
3213 VPX/VPX2 PCI to PCI Bridge Controller  
3218 K8T800M Host Bridge  
3227 VT8237 ISA bridge [KT600/K8T800/K8T890/CN700 South]  
1043 80ed A7V600/K8V-X/A8V Deluxe motherboard  
1106 3227 VT8237 ISA bridge  
1458 5001 GA-7VT600 Motherboard  
147b 1407 KV8-MAX3 motherboard  
1849 3227 K7VT4 motherboard  
3230  
K8M890CE/K8N890CE [Chrome 9]  
3238 K8T890 Host Bridge  
3249 VT6421 IDE/SATA Controller  
1106 3249 VT6421 IDE/SATA Controller  
324a CX700/VX700 PCI to PCI Bridge  
324b CX700/VX700 Host Bridge  
324e CX700/VX700 Internal Module Bus  
3253 VT6655 WiFi Adapter, 802.11a/b/g  
3258 PT880 Host Bridge  
3259 CN333/CN400/PM880 Host Bridge  
3260 VIA Chrome9 HC IGP  
3269 KT880 Host Bridge  
3282 K8T800Pro Host Bridge  
3287 VT8251 PCI to ISA Bridge  
3288 VX900/VT8xxx High Definition Audio Controller  
19da a179 ZBOX VD01  
3290 K8M890 Host Bridge  
3296 P4M800 Host Bridge  
3324 CX700/VX700-Series DRAM Bus Control  
3327 P4M890 Host Bridge  
3336 K8M890CE Host Bridge  
3337 VT8237A PCI to ISA Bridge  
3340 PT900 Host Bridge  
3343 P4M890 [S3 UniChrome Pro]  
3344 CN700/P4M800 Pro/P4M800 CE/VN800 Graphics [S3 UniChrome Pro]  
3349 VT8251 AHCI/SATA 4-Port Controller  
3351 VT3351 Host Bridge  
3353 VX800/820 PCI to PCI Bridge  
3364 CN896/VN896/P4M900 Host Bridge  
3365 VT630x  
IEEE 1394 Host Controller [Fire II/M]  
3371 CN896/VN896/P4M900 [Chrome 9 HC]  
3372 VT8237S PCI to ISA Bridge

337a VT8237A PCI to PCI Bridge  
337b VT8237A Host Bridge  
3403 VT6315 Series Firewire Controller  
1043 8374 M5A88-V EVO  
1043 8384 P8P67 Deluxe Motherboard  
3409 VX855/VX875 DRAM Bus Control  
3410 VX900 Series DRAM Bus Control  
19da a179 ZBOX nano VD01  
3432 VL800/801 xHCI USB 3.0 Controller  
3456 VX11 Standard Host Bridge  
345b VX11 Miscellaneous Bus  
3483 VL805/806 xHCI USB 3.0 Controller  
3a01 VX11 Graphics [Chrome 645/640]  
4149 VIA VT6420 (ATA133) Controller  
4204 K8M800 Host Bridge  
4208 PT890 Host Bridge  
4238 K8T890 Host Bridge  
4258 PT880 Host Bridge  
4259 CN333/CN400/PM880 Host Bridge  
4269 KT880 Host Bridge  
4282 K8T800Pro Host Bridge  
4290 K8M890 Host Bridge  
4293 PM896 Host Bridge  
4296 P4M800 Host Bridge  
4308 PT894 Host Bridge  
4314 CN700/VN800/P4M800CE/Pro Host Bridge  
4324 CX700/VX700-Series Power Management and Testing Control  
4327  
P4M890 Host Bridge  
4336 K8M890CE Host Bridge  
4340 PT900 Host Bridge  
4351 VT3351 Host Bridge  
4353 VX800/VX820 Power Management Control  
4364 CN896/VN896/P4M900 Host Bridge  
4409 VX855/VX875 Power Management Control  
4410 VX900 Series Power Management and Chip Testing Control  
19da a179 ZBOX nano VD01  
5030 VT82C596 ACPI [Apollo PRO]  
5122 VX855/VX875 Chrome 9 HCM Integrated Graphics  
5208 PT890 I/O APIC Interrupt Controller  
5238 K8T890 I/O APIC Interrupt Controller  
5287 VT8251 Serial ATA Controller  
5290 K8M890 I/O APIC Interrupt Controller  
5308 PT894 I/O APIC Interrupt Controller  
5324 CX700M2/VX700/VX800/820-Series Serial ATA & EIDE-Controller  
5327 P4M890 I/O APIC Interrupt Controller  
5336 K8M890CE I/O APIC Interrupt Controller  
5340 PT900 I/O APIC Interrupt Controller

5351 VT3351 I/O APIC Interrupt Controller  
5353 VX800/VX820 APIC and Central Traffic Control  
5364 CN896/VN896/P4M900 I/O APIC Interrupt Controller  
5372 VT8237/8251 Serial ATA  
Controller  
5409 VX855/VX875 APIC and Central Traffic Control  
5410 VX900 Series APIC and Central Traffic Control  
6100 VT85C100A [Rhine II]  
6122 VN1000 Graphics [Chrome 520 IGP]  
6287 SATA RAID Controller  
6290 K8M890CE Host Bridge  
6327 P4M890 Security Device  
6353 VX800/VX820 Scratch Registers  
6364 CN896/VN896/P4M900 Security Device  
6409 VX855/VX875 Scratch Registers  
6410 VX900 Series Scratch Registers  
19da a179 ZBOX nano VD01  
7122 VX900 Graphics [Chrome9 HD]  
7204 K8M800 Host Bridge  
7205 KM400/KN400/P4M800 [S3 UniChrome]  
1458 d000 Gigabyte GA-7VM400(A)M(F) Motherboard  
1462 7061 MS-7061  
7208 PT890 Host Bridge  
7238 K8T890 Host Bridge  
7258 PT880 Host Bridge  
7259 CN333/CN400/PM880 Host Bridge  
7269 KT880 Host Bridge  
7282 K8T800Pro Host Bridge  
7290 K8M890 Host Bridge  
7293 PM896 Host Bridge  
7296 P4M800 Host Bridge  
7308 PT894 Host Bridge  
7314 CN700/VN800/P4M800CE/Pro Host Bridge  
7324 CX700/VX700-Series North-South Module Interface Control  
7327  
P4M890 Host Bridge  
7336 K8M890CE Host Bridge  
7340 PT900 Host Bridge  
7351 VT3351 Host Bridge  
7353 VX800/VX820 North-South Module Interface Control  
7364 CN896/VN896/P4M900 Host Bridge  
7409 VX855/VX875 North-South Module Interface Control  
7410 VX900 Series North-South Module Interface Control  
19da a179 ZBOX nano VD01  
8231 VT8231 [PCI-to-ISA Bridge]  
8235 VT8235 ACPI  
8305 VT8363/8365 [KT133/KM133 AGP]  
8324 CX700/VX700-Series Bus Control and Power Management

8353 VX800/VX820 Bus Control and Power Management  
8391 VT8371 [KX133 AGP]  
8400 MVP4  
8409 VX855/VX875 Bus Control and Power Management  
8410 VX900 Series Bus Control and Power Management  
19da a179 ZBOX VD01  
8500 KLE133/PLE133/PLE133T  
8501 VT8501 [Apollo MVP4 AGP]  
8596 VT82C596 [Apollo PRO AGP]  
8597 VT82C597 [Apollo VP3 AGP]  
8598 VT82C598/694x [Apollo MVP3/Pro133x AGP]  
1019 0985 P6VXA Motherboard  
8601 VT8601 [Apollo ProMedia AGP]  
8605 VT8605 [PM133 AGP]  
8691 VT82C691 [Apollo  
Pro]  
8693 VT82C693 [Apollo Pro Plus] PCI Bridge  
8a25 PL133/PL133T [S3 ProSavage]  
8a26 KL133/KL133A/KM133/KM133A [S3 ProSavage]  
8d01 PN133/PN133T [S3 Twister]  
8d04 KM266/P4M266/P4M266A/P4N266 [S3 ProSavageDDR]  
9001 VX900 Series Serial-ATA Controller  
9082 Standard AHCI 1.0 SATA Controller  
9140 HDMI Audio Device  
9201 USB3.0 Controller  
9380 Ncore Coprocessor for Centaur CNS  
9530 VX800/820/900 Series Secure Digital Memory Card Controller  
95d0 VX800/820/900 Series SDIO Host Controller  
a208 PT890 PCI to PCI Bridge Controller  
a238 K8T890 PCI to PCI Bridge Controller  
a327 P4M890 PCI to PCI Bridge Controller  
a353 VX8xx/900 Series South-North Module Interface Control  
a364 CN896/VN896/P4M900 PCI to PCI Bridge Controller  
a409 VX855/VX875/VX900 Series USB Device Controller  
a410 VX900 Series PCI Express Root Port 0  
b091 VT8633 [Apollo Pro266 AGP]  
b099 VT8366/A/7 [Apollo KT266/A/333 AGP]  
b101 VT8653 AGP Bridge  
b102 VT8362 AGP Bridge  
b103 VT8615 AGP Bridge  
b112  
VT8361 [KLE133] AGP Bridge  
b113 VPX/VPX2 I/O APIC Interrupt Controller  
b115 VT8363/8365 [KT133/KM133] PCI Bridge  
b168 VT8235 PCI Bridge  
b188 VT8237/8251 PCI bridge [K8M890/K8T800/K8T890 South]  
147b 1407 KV8-MAX3 motherboard  
b198 VT8237/CX700/VX700-Series PCI to PCI Bridge

b213 VPX/VPX2 I/O APIC Interrupt Controller  
b353 VX855/VX875/VX900 PCI to PCI Bridge  
b410 VX900 Series PCI Express Root Port 1  
b999 [K8T890 North / VT8237 South] PCI Bridge  
c208 PT890 PCI to PCI Bridge Controller  
c238 K8T890 PCI to PCI Bridge Controller  
c327 P4M890 PCI to PCI Bridge Controller  
c340 PT900 PCI to PCI Bridge Controller  
c353 VX800/820-Series PCI-Express Root (PCI-to-PCI Virtual Bridge)  
c364 CN896/VN896/P4M900 PCI to PCI Bridge Controller  
c409 VX855/VX875 EIDE Controller  
c410 VX900 Series PCI Express Root Port 2  
d104 VT8237R USB UDCI Controller  
d208 PT890 PCI to PCI Bridge Controller  
d213 VPX/VPX2 PCI to PCI Bridge Controller  
d238 K8T890 PCI to PCI Bridge  
Controller  
d340 PT900 PCI to PCI Bridge Controller  
d410 VX900 Series PCI Express Root Port 3  
e208 PT890 PCI to PCI Bridge Controller  
e238 K8T890 PCI to PCI Bridge Controller  
e340 PT900 PCI to PCI Bridge Controller  
e353 VX800/820-Series PCI-Express Root Port 0  
e410 VX900 Series PCI Express Physical Layer Electrical Sub-block  
f208 PT890 PCI to PCI Bridge Controller  
f238 K8T890 PCI to PCI Bridge Controller  
f340 PT900 PCI to PCI Bridge Controller  
f353 VX800/820-Series PCI-Express Root Port 1  
f410 VX900 Series PCI UART Port 0-3  
1107 Stratus Computers  
0576 VIA VT82C570MV [Apollo] (Wrong vendor ID!)  
1108 Proteon, Inc.  
0100 p1690plus\_AA  
0101 p1690plus\_AB  
0105 P1690Plus  
0108 P1690Plus  
0138 P1690Plus  
0139 P1690Plus  
013c P1690Plus  
013d P1690Plus  
1109 Cogent Data Technologies, Inc.  
1400 EM110TX [EX110TX]  
110a Siemens AG  
0002 Pirahna 2-port  
0005 Tulip controller, power management, switch extender  
0006 FSC PINC (I/O-APIC)  
0015 FSC Multiprocessor

Interrupt Controller  
001d FSC Copernicus Management Controller  
007b FSC Remote Service Controller, mailbox device  
007c FSC Remote Service Controller, shared memory device  
007d FSC Remote Service Controller, SMIC device  
2101 HST SAPHIR V Primary PCI (ISDN/PMx)  
# Superfastcom-PCI (Commtech, Inc.) or DSCC4 WAN Adapter  
2102 DSCC4 PEB/PEF 20534 DMA Supported Serial Communication Controller with 4 Channels  
2104 Eicon Diva 2.02 compatible passive ISDN card  
# S30807-Q5474  
3101 HiPath 4000 PCI card  
3141 SIMATIC NET CP 5611 / 5621  
3142 SIMATIC NET CP 5613 / 5614  
3143 SIMATIC NET CP 1613  
4021 SIMATIC NET CP 5512 (Profibus and MPI Cardbus Adapter)  
4029 SIMATIC NET CP 5613 A2  
110a 4029 SIMATIC NET CP 5613 A2  
110a c029 SIMATIC NET CP 5614 A2  
4035 SIMATIC NET CP 1613 A2  
4036 SIMATIC NET CP 1616  
4038 SIMATIC NET CP 1604  
4069 SIMATIC NET CP 5623  
110a 4069 SIMATIC NET CP 5623  
110a c069 SIMATIC NET CP 5624  
407c SIMATIC NET CP 5612  
407d SIMATIC NET  
CP 5613 A3  
407e SIMATIC NET CP 5622  
4083 SIMATIC NET CP 5614 A3  
4084 SIMATIC NET CP 1626  
4942 FPGA I-Bus Tracer for MBD  
6120 SZB6120  
110b Chromatic Research Inc.  
0001 Mpact Media Processor  
0004 Mpact 2  
110c Mini-Max Technology, Inc.  
110d Znyx Advanced Systems  
110e CPU Technology  
110f Ross Technology  
1110 Powerhouse Systems  
6037 Firepower Powerized SMP I/O ASIC  
6073 Firepower Powerized SMP I/O ASIC  
1111 Santa Cruz Operation  
# Also claimed to be RNS or Rockwell International, current PCISIG records list Osicom  
1112 Osicom Technologies Inc  
2200 FDDI Adapter  
2300 Fast Ethernet Adapter  
2340 4 Port Fast Ethernet Adapter



2400 ATM Adapter  
1113 Accton Technology Corporation  
1211 SMC2-1211TX  
103c 1207 EN-1207D Fast Ethernet Adapter  
1113 1211 EN-1207D Fast Ethernet Adapter  
1216 EN-1216 Ethernet Adapter  
1113 1216 EN1207F series PCI Fast Ethernet Adapter  
1113 2220 EN2220A Cardbus Fast Ethernet Adapter  
1113 2242 EN2242 10/100 Ethernet Mini-PCI Card  
111a  
1020 SpeedStream 1020 PCI 10/100 Ethernet Adaptor [EN-1207F-TX ?]  
1217 EN-1217 Ethernet Adapter  
5105 10Mbps Network card  
9211 EN-1207D Fast Ethernet Adapter  
1113 9211 EN-1207D Fast Ethernet Adapter  
9511 21x4x DEC-Tulip compatible Fast Ethernet  
d301 CPWNA100 (Philips wireless PCMCIA)  
ec02 SMC 1244TX v3  
ee23 SMCWPCIT-G 108Mbps Wireless PCI adapter  
1114 Atmel Corporation  
0506 at76c506 802.11b Wireless Network Adaptor  
1115 3D Labs  
1116 Data Translation  
0022 DT3001  
0023 DT3002  
0024 DT3003  
0025 DT3004  
0026 DT3005  
0027 DT3001-PGL  
0028 DT3003-PGL  
0051 DT322  
0060 DT340  
0069 DT332  
80c2 DT3162  
1117 Datacube, Inc  
9500 Max-1C SVGA card  
9501 Max-1C image processing  
1118 Berg Electronics  
1119 ICP Vortex Computersysteme GmbH  
0000 GDT 6000/6020/6050  
0001 GDT 6000B/6010  
0002 GDT 6110/6510  
0003 GDT 6120/6520  
0004 GDT 6530  
0005 GDT 6550  
0006 GDT 6117/6517  
0007 GDT 6127/6527  
0008 GDT 6537

0009 GDT 6557/6557-ECC  
000a GDT 6115/6515  
000b  
GDT 6125/6525  
000c GDT 6535  
000d GDT 6555/6555-ECC  
0100 GDT 6117RP/6517RP  
0101 GDT 6127RP/6527RP  
0102 GDT 6537RP  
0103 GDT 6557RP  
0104 GDT 6111RP/6511RP  
0105 GDT 6121RP/6521RP  
0110 GDT 6117RD/6517RD  
0111 GDT 6127RD/6527RD  
0112 GDT 6537RD  
0113 GDT 6557RD  
0114 GDT 6111RD/6511RD  
0115 GDT 6121RD/6521RD  
0118 GDT 6118RD/6518RD/6618RD  
0119 GDT 6128RD/6528RD/6628RD  
011a GDT 6538RD/6638RD  
011b GDT 6558RD/6658RD  
0120 GDT 6117RP2/6517RP2  
0121 GDT 6127RP2/6527RP2  
0122 GDT 6537RP2  
0123 GDT 6557RP2  
0124 GDT 6111RP2/6511RP2  
0125 GDT 6121RP2/6521RP2  
0136 GDT 6113RS/6513RS  
0137 GDT 6123RS/6523RS  
0138 GDT 6118RS/6518RS/6618RS  
0139 GDT 6128RS/6528RS/6628RS  
013a GDT 6538RS/6638RS  
013b GDT 6558RS/6658RS  
013c GDT 6533RS/6633RS  
013d GDT 6543RS/6643RS  
013e GDT 6553RS/6653RS  
013f GDT 6563RS/6663RS  
0166 GDT 7113RN/7513RN/7613RN  
0167 GDT 7123RN/7523RN/7623RN  
0168 GDT 7118RN/7518RN/7618RN  
0169 GDT 7128RN/7528RN/7628RN  
016a  
GDT 7538RN/7638RN  
016b GDT 7558RN/7658RN  
016c GDT 7533RN/7633RN  
016d GDT 7543RN/7643RN  
016e GDT 7553RN/7653RN

016f GDT 7563RN/7663RN  
01d6 GDT 4x13RZ  
01d7 GDT 4x23RZ  
01f6 GDT 8x13RZ  
01f7 GDT 8x23RZ  
01fc GDT 8x33RZ  
01fd GDT 8x43RZ  
01fe GDT 8x53RZ  
01ff GDT 8x63RZ  
0210 GDT 6519RD/6619RD  
0211 GDT 6529RD/6629RD  
0260 GDT 7519RN/7619RN  
0261 GDT 7529RN/7629RN  
02ff GDT MAXRP  
0300 GDT NEWRX  
0301 GDT NEWRX2  
111a Efficient Networks, Inc  
0000 155P-MF1 (FPGA)  
0002 155P-MF1 (ASIC)  
0003 ENI-25P ATM  
111a 0000 ENI-25p Miniport ATM Adapter  
0005 SpeedStream (LANAI)  
111a 0001 ENI-3010 ATM  
111a 0009 ENI-3060 ADSL (VPI=0)  
111a 0101 ENI-3010 ATM  
111a 0109 ENI-3060CO ADSL (VPI=0)  
111a 0809 ENI-3060 ADSL (VPI=0 or 8)  
111a 0909 ENI-3060CO ADSL (VPI=0 or 8)  
111a 0a09 ENI-3060 ADSL (VPI=<0..15>)  
0007 SpeedStream ADSL  
111a 1001 ENI-3061 ADSL [ASIC]  
1020 SpeedStream PCI 10/100 Network Card  
1203 SpeedStream 1023 Wireless PCI Adapter  
111b  
Teledyne Electronic Systems  
111c Tricord Systems Inc.  
0001 Powerbis Bridge  
# now owned by Microchip Technology  
111d Microsemi / PMC / IDT  
0001 IDT77201/77211 155Mbps ATM SAR Controller [NICStAR]  
0003 IDT77222/77252 155Mbps ATM MICRO ABR SAR Controller  
0004 IDT77V252 155Mbps ATM MICRO ABR SAR Controller  
0005 IDT77V222 155Mbps ATM MICRO ABR SAR Controller  
8018 PES12N3A 12-lane 3-Port PCI Express Switch  
801c PES24N3A PCI Express Switch  
8028 PES4T4 PCI Express Switch  
802b PES8T5A PCI Express Switch  
802c PES16T4 PCI Express Switch

802d PES16T7 PCI Express Switch  
802e PES24T6 PCI Express Switch  
802f PES32T8 PCI Express Switch  
8032 PES48T12 PCI Express Switch  
8034 PES16/22/34H16 PCI Express Switch  
8035 PES32H8 PCI Express Switch  
8036 PES48H12 PCI Express Switch  
8037 PES64H16 PCI Express Switch  
8039 PES3T3 PCI Express Switch  
803a PES4T4 PCI Express Switch  
803c PES5T5 PCI Express Switch  
803d PES6T5 PCI Express Switch  
8048 PES8NT2 PCI Express Switch  
8049  
PES8NT2 PCI Express Switch  
804a PES8NT2 PCI Express Internal NTB  
804b PES8NT2 PCI Express External NTB  
804c PES16NT2 PCI Express Switch  
804d PES16NT2 PCI Express Switch  
804e PES16NT2 PCI Express Internal NTB  
804f PES16NT2 PCI Express External NTB  
8058 PES12NT3 PCI Express Switch  
8059 PES12NT3 PCI Express Switch  
805a PES12NT3 PCI Express Internal NTB  
805b PES12NT3 PCI Express External NTB  
805c PES24NT3 PCI Express Switch  
805d PES24NT3 PCI Express Switch  
805e PES24NT3 PCI Express Internal NTB  
805f PES24NT3 PCI Express External NTB  
8060 PES16T4G2 PCI Express Gen2 Switch  
8061 PES12T3G2 PCI Express Gen2 Switch  
8068 PES6T6G2 PCI Express Gen2 Switch  
806a PES24T3G2 PCI Express Gen2 Switch  
14c1 000c 10G-PCIE2-8B2  
806c PES16T4A/4T4G2 PCI Express Gen2 Switch  
806e PES24T6G2 PCI Express Gen2 Switch  
806f HIO524G2 PCI Express Gen2 Switch  
8077 89HPES64H16G2 64-Lane 16-Port PCIe Gen2 System Interconnect Switch  
8088 PES32NT8BG2 PCI Express Switch  
1093  
752f PXIe-8383mc Device  
1093 7543 PXIe-8383mc System Host  
1093 755c PXIe-8364  
1093 755d PXIe-8374  
1093 75ff PXIe-8383mc DMA  
1093 7600 PXIe-8383mc DMA  
1093 7602 PXIe-8384  
# 32-lanes 24-ports Gen.2

808a 89HPES32NT24BG2 PCI Express Switch  
# 32-lanes 24-ports Gen.2  
808c 89HPES32NT24AG2 PCI Express Switch  
808e PES24NT24G2 PCI Express Switch  
808f 89HPES32NT8AG2 32-Lane 8-Port PCIe Gen2 System Interconnect Switch with Non-Transparent Bridging  
8090 89HPES16NT16G2 16-Lane 16-Port PCIe Gen2 System Interconnect Switch  
8092 89HPES12NT12G2 12-Lane 12-Port PCIe Gen2 System Interconnect Switch  
80cf F32P08xG3 [PCIe boot mode]  
80d2 F32P08xG3 NVMe controller  
111e Eldec  
111f Precision Digital Images  
4a47 Precision MX Video engine interface  
5243 Frame capture bus interface  
# formerly EMC Corporation  
1120 Dell EMC  
2306 Unity Fibre Channel Controller  
2501 Unity Ethernet Controller  
2505 Unity Fibre Channel Controller  
1121 Zilog  
1122 Multi-tech Systems,  
Inc.  
1123 Excellent Design, Inc.  
1124 Leutron Vision AG  
2581 Picport Monochrome  
1125 Eurocore  
1126 Vigra  
1127 FORE Systems Inc  
0200 ForeRunner PCA-200 ATM  
0210 PCA-200PC  
0250 ATM  
0300 ForeRunner PCA-200EPC ATM  
0310 ATM  
0400 ForeRunnerHE ATM Adapter  
1127 0400 ForeRunnerHE ATM  
1129 Firmworks  
112a Hermes Electronics Company, Ltd.  
# nee Linotype - Hell AG  
112b Heidelberger Druckmaschinen AG  
0001 SCU5  
112c Zenith Data Systems  
112d Ravicad  
112e Infomedia Microelectronics Inc.  
112f Dalsa Inc.  
0000 MVC IC-PCI  
0001 MVC IM-PCI Video frame grabber/processor  
0004 PCDig Digital Image Capture  
0008 PC-CamLink PCI framegrabber  
1130 Computervision

1131 Philips Semiconductors  
1561 USB 1.1 Host Controller  
1775 c200 C2K onboard USB 1.1 host controller  
1562 USB 2.0 Host Controller  
1775 c200 C2K onboard USB 2.0 host controller  
3400 SmartPCI56(UCB1500) 56K Modem  
5400 TriMedia TM1000/1100  
12ca 0000 BlueICE  
5402 TriMedia TM1300  
1244 0f00 Fritz!Card  
DSL  
15eb 1300 DT1300  
15eb 1302 DT1302  
15eb 1304 DT1304  
15eb 1305 DT1305  
15eb 1306 PMCDT1306  
15eb 1308 DT1308  
15eb 1331 DT1301 with SAA7121  
15eb 1337 DT1301 with SAA7127  
15eb 2d3d X3D  
15eb 7022 PTM1300  
5405 TriMedia TM1500  
1136 0005 LCP-1500  
5406 TriMedia TM1700  
540b PNX1005 Media Processor  
1131 0020 PNXLite PCI Demo Board  
7130 SAA7130 Video Broadcast Decoder  
0000 4016 Behold TV 401  
0000 4051 Behold TV 405 FM  
0000 5051 Behold TV 505 RDS  
0000 505b Behold TV 505 RDS  
102b 48d0 Matrox CronosPlus  
1048 226b ELSA EX-VISION 300TV  
107d 6655 WinFast DTV1000S  
1131 0000 SAA7130-based TV tuner card  
1131 2001 10MOONS PCI TV CAPTURE CARD  
1131 2005 Techcom (India) TV Tuner Card (SSD-TV-670)  
1458 9006 GT-PS700 DVB-S tuner  
1461 050c Nagase Sangyo TransGear 3000TV  
1461 10ff AVerMedia DVD EZMaker  
1461 2108 AVerMedia AverTV/305  
1461 2115 AVerMedia AverTV Studio 305  
153b 1152 Terratec Cinergy 200 TV  
185b c100  
Compro VideoMate TV PVR/FM  
185b c901 Videomate DVB-T200  
5168 0138 LifeView FlyVIDEO2000  
5ace 5010 Behold TV 501

5ace 5050 Behold TV 505 FM  
7133 SAA7131/SAA7133/SAA7135 Video Broadcast Decoder  
0000 4091 Beholder BeholdTV 409 FM  
0000 5071 Behold TV 507 RDS  
0000 507b Behold TV 507 RDS  
0000 5201 Behold TV Columbus  
0070 6701 WinTV HVR-1110  
1019 4cb5 Elitegroup ECS TVP3XP FM1236 Tuner Card (NTSC,FM)  
1043 0210 FlyTV mini Asus Digimatrix  
1043 4843 TV-FM 7133  
1043 4845 TV-FM 7135  
1043 4862 P7131 Dual  
1043 4876 My Cinema-P7131 Hybrid  
1131 0000 SAA713x-based TV tuner card  
1131 2001 Proteus Pro [philips reference design]  
1131 2018 Tiger reference design  
1131 4ee9 MonsterTV Mobile  
1131 7133 Pinnacle PCTV 301i  
11bd 002b PCTV Stereo  
11bd 002e PCTV 110i (saa7133)  
12ab 0800 PURPLE TV  
13c2 2804 Technotrend Budget T-3000 Hybrid  
1421 0335 Instant TV DVB-T Cardbus  
1421 1370 Instant TV (saa7135)  
1435 7330 VFG7330  
1435 7350  
VFG7350  
1458 9001 GC-PTV-TAF Hybrid TV card  
1458 9002 GT-PTV-TAF-RH DVB-T/Analog TV/FM tuner  
1458 9003 GT-PTV-AF-RH Analog TV/FM tuner  
1458 9004 GT-P8000 DVB-T/Analog TV/FM tuner  
1458 9005 GT-P6000 Analog TV/FM tuner  
1458 9008 GT-P5100 Analog TV tuner  
1461 1044 AVerTVHD MCE A180  
1461 4836 M10D Hybrid DVBT  
1461 861e M105 PAL/SECAM/NTSC/FM Tuner  
1461 a14b AVerTV Studio 509  
1461 a836 M115 DVB-T, PAL/SECAM/NTSC Tuner  
1461 f01d DVB-T Super 007  
1461 f31f Avermedia AVerTV GO 007 FM  
1461 f936 Hybrid+FM PCI (rev A16D)  
1462 6231 TV@nywhere Plus  
1489 0214 LifeView FlyTV Platinum FM  
14c0 1212 LifeView FlyTV Platinum Mini2  
153b 1160 Cinergy 250 PCI TV  
153b 1162 Terratec Cinergy 400 mobile  
17de 7256 PlusTV All In One PI610 card  
17de 7350 ATSC 110 Digital / Analog HDTV Tuner

17de 7352 ATSC 115 Digital / Analog HDTV Tuner  
185b c100 VideoMate TV  
185b c900 VideoMate T750  
5168 0306 LifeView FlyDVB-T DUO  
5168 0319 LifeView FlyDVB  
Trio  
5168 0502 LifeView FlyDVB-T Duo CardBus  
5168 0520 LifeView FlyDVB Trio CardBus  
5168 1502 LifeView FlyTV CardBus  
5168 2502 LifeView FlyDVB-T CardBus  
5168 2520 LifeView FlyDVB-S Duo CardBus  
5168 3502 LifeView FlyDVB-T Hybrid CardBus  
5168 3520 LifeView FlyDVB Trio N CardBus  
5ace 5030 Behold TV 503 FM  
5ace 5090 Behold TV 509 FM  
5ace 6090 Behold TV 609 FM  
5ace 6091 Behold TV 609 FM  
5ace 6092 Behold TV 609 RDS  
5ace 6093 Behold TV 609 RDS  
5ace 6190 Behold TV M6  
5ace 6191 Behold TV M63  
5ace 6193 Behold TV M6 Extra  
5ace 6290 Behold TV H6  
5ace 7090 Behold TV A7  
5ace 7150 Behold TV H75  
5ace 7151 Behold TV H75  
5ace 7190 Behold TV H7  
5ace 7191 Behold TV H7  
5ace 7290 Behold TV T7  
5ace 7591 Behold TV X7  
5ace 7595 Behold TV X7  
7134 SAA7134/SAA7135HL Video Broadcast Decoder  
0000 4036 Behold TV 403  
0000 4037 Behold TV 403 FM  
0000 4071 Behold TV 407 FM  
1019 4cb4 Elitegroup ECS TVP3XP FM1216 Tuner Card(PAL-BG,FM)  
1043  
0210 Digimatrix TV  
1043 4840 TV-FM 7134  
1043 4842 TV-FM 7134  
1131 0000 SAA713x-based TV tuner card  
1131 2004 EUROPA V3 reference design  
1131 4e85 SKNet Monster TV  
1131 6752 EMPRESS  
11bd 002b PCTV Stereo  
11bd 002d PCTV 300i DVB-T + PAL  
1461 2c00 AVerTV Hybrid+FM PCI  
1461 9715 AVerTV Studio 307



1461 a70a Avermedia AVerTV 307  
1461 a70b AverMedia M156 / Medion 2819  
1461 d6ee Cardbus TV/Radio (E500)  
1471 b7e9 AVerTV Cardbus plus  
153b 1142 Terratec Cinergy 400 TV  
153b 1143 Terratec Cinergy 600 TV  
153b 1158 Terratec Cinergy 600 TV MK3  
1540 9524 ProVideo PV952  
16be 0003 Medion 7134  
185b c200 Compro VideoMate Gold+ Pal  
185b c900 Videomate DVB-T300  
1894 a006 KNC One TV-Station DVR  
1894 fe01 KNC One TV-Station RDS / Typhoon TV Tuner RDS  
5168 0138 FLY TV PRIME 34FM  
5168 0300 FlyDVB-S  
5ace 5070 Behold TV 507 FM  
5ace 6070 Behold TV 607 FM  
5ace 6071 Behold TV 607 FM  
5ace 6072 Behold TV 607 RDS  
5ace 6073  
Behold TV 607 RDS  
7145 SAA7145  
7146 SAA7146  
110a 0000 Fujitsu/Siemens DVB-C card rev1.5  
110a ffff Fujitsu/Siemens DVB-C card rev1.5  
1124 2581 Leutron Vision PicPort  
1131 4f56 KNC1 DVB-S Budget  
1131 4f60 Fujitsu-Siemens Activy DVB-S Budget Rev AL  
1131 4f61 Activy DVB-S Budget Rev GR  
1131 5f61 Activy DVB-T Budget  
114b 2003 DVRaptor Video Edit/Capture Card  
1159 0040 MuTech M-Vision 500 (MV-500 rev. E)  
1159 0050 MuTech M-Vision 500 (MV-500 rev. F)  
11bd 0006 DV500 Overlay  
11bd 000a DV500 Overlay  
11bd 000f DV500 Overlay  
13c2 0000 Siemens/Technotrend/Hauppauge DVB card rev1.3 or rev1.5  
13c2 0001 Technotrend/Hauppauge DVB card rev1.3 or rev1.6  
13c2 0002 Technotrend/Hauppauge DVB card rev2.1  
13c2 0003 Technotrend/Hauppauge DVB card rev2.1  
13c2 0004 Technotrend/Hauppauge DVB card rev2.1  
13c2 0006 Technotrend/Hauppauge DVB card rev1.3 or rev1.6  
13c2 0008 Technotrend/Hauppauge DVB-T  
13c2 000a Octal/Technotrend DVB-C for iTV  
13c2  
000e Technotrend/Hauppauge DVB card rev2.3  
13c2 1003 Technotrend-Budget/Hauppauge WinTV-NOVA-S DVB card  
13c2 1004 Technotrend-Budget/Hauppauge WinTV-NOVA-C DVB card

13c2 1005 Technotrend-Budget/Hauppauge WinTV-NOVA-T DVB card  
13c2 100c Technotrend-Budget/Hauppauge WinTV-NOVA-CI DVB card  
13c2 100f Technotrend-Budget/Hauppauge WinTV-NOVA-CI DVB card  
13c2 1010 DVB C-1500  
13c2 1011 Technotrend-Budget/Hauppauge WinTV-NOVA-T DVB card  
13c2 1012 DVB T-1500  
13c2 1013 SATELCO Multimedia DVB  
13c2 1016 WinTV-NOVA-SE DVB card  
13c2 1018 DVB S-1401  
13c2 1019 S2-3200  
13c2 1102 Technotrend/Hauppauge DVB card rev2.1  
153b 1155 Cinergy 1200 DVB-S  
153b 1156 Cinergy 1200 DVB-C  
153b 1157 Cinergy 1200 DVB-T  
153b 1176 Cinergy 1200 DVB-C (MK3)  
1894 0020 KNC One DVB-C V1.0  
1894 0023 TV-Station DVB-C plus  
1894 0054 TV-Station DVB-S  
7160 SAA7160  
1458 9009 E8000 DVB-T/Analog TV/FM tuner  
1461 1455 AVerTV Hybrid Speedy PCI-E (H788)  
7162 SAA7162  
11bd  
0101 Pinnacle PCTV 7010iX TV Card  
7164 SAA7164  
0070 8800 WinTV HVR-2250  
0070 8810 WinTV HVR-2250  
0070 8851 WinTV HVR-2250  
0070 8853 WinTV HVR-2250  
0070 8880 WinTV HVR-2250  
0070 8891 WinTV HVR-2250  
0070 88a0 WinTV HVR-2250  
0070 88a1 WinTV HVR-2250  
0070 8900 WinTV HVR-2200  
0070 8901 WinTV HVR-2200  
0070 8940 WinTV HVR-2200 (submodel 89619)  
0070 8951 WinTV HVR-2200  
0070 8953 WinTV HVR-2200  
0070 8980 WinTV HVR-2200  
0070 8991 WinTV HVR-2200  
0070 8993 WinTV HVR-2200  
0070 89a0 WinTV HVR-2200  
0070 89a1 WinTV HVR-2200  
0070 f120 WinTV HVR-2205  
0070 f123 WinTV HVR-2215  
7231 SAA7231  
5ace 8000 Behold TV H8  
5ace 8001 Behold TV H8

5ace 8050 Behold TV H85  
5ace 8051 Behold TV H85  
5ace 8100 Behold TV A8  
5ace 8101 Behold TV A8  
5ace 8150 Behold TV A85  
5ace 8151 Behold TV A85  
5ace 8201 Behold TV T8  
9730 SAA9730 Integrated Multimedia and Peripheral Controller  
1131 0000 Integrated Multimedia and Peripheral  
Controller  
1132 Mitel Corp.  
1133 Dialogic Corporation  
7701 Eiconcard C90  
7711 Eiconcard C91  
7901 EiconCard S90  
7902 EiconCard S90  
7911 EiconCard S91  
7912 EiconCard S91  
7921 Eiconcard S92  
7941 EiconCard S94  
7942 EiconCard S94  
7943 EiconCard S94  
7944 EiconCard S94  
7945 Eiconcard S94  
7948 Eiconcard S94 64bit/66MHz  
9711 Eiconcard S91 V2  
9911 Eiconcard S91 V2  
9941 Eiconcard S94 V2  
9a41 Eiconcard S94 PCIe  
b921 EiconCard P92  
b922 EiconCard P92  
b923 EiconCard P92  
e001 Diva Pro 2.0 S/T  
e002 Diva 2.0 S/T PCI  
e003 Diva Pro 2.0 U  
e004 Diva 2.0 U PCI  
e005 Diva 2.01 S/T PCI  
e006 Diva CT S/T PCI  
e007 Diva CT U PCI  
e008 Diva CT Lite S/T PCI  
e009 Diva CT Lite U PCI  
e00a Diva ISDN+V.90 PCI  
e00b Diva ISDN PCI 2.02  
e00c Diva 2.02 PCI U  
e00d Diva Pro 3.0 PCI  
e00e Diva ISDN+CT S/T PCI Rev 2  
e010 Diva Server BRI-2M PCI  
110a 0021 Fujitsu Siemens ISDN S0

e011 Diva Server BRI S/T Rev 2  
e012 Diva Server 4BRI-8M PCI  
e013 4BRI  
1133  
1300 Diva V-4BRI-8 PCI v2  
1133 e013 Diva 4BRI-8 PCI v2  
e014 Diva Server PRI-30M PCI  
e015 Diva PRI PCI v2  
e016 Diva Server Voice 4BRI PCI  
e017 Diva Server Voice 4BRI Rev 2  
1133 e017 Diva Server Voice 4BRI-8M 2.0 PCI  
e018 BRI  
1133 1800 Diva V-BRI-2 PCI v2  
1133 e018 Diva BRI-2 PCI v2  
e019 Diva Server Voice PRI Rev 2  
1133 e019 Diva Server Voice PRI 2.0 PCI  
e01a Diva BRI-2FX PCI v2  
e01b Diva Server Voice BRI-2M 2.0 PCI  
1133 e01b Diva Server Voice BRI-2M 2.0 PCI  
e01c PRI  
1133 1c01 Diva PRI/E1/T1-8 PCI v3  
1133 1c02 Diva PRI/T1-24 PCI(e) v3  
1133 1c03 Diva PRI/E1-30 PCI(e) v3  
1133 1c04 Diva PRI/E1/T1-CTI PCI(e) v3  
1133 1c05 Diva V-PRI/T1-24 PCI(e) v3  
1133 1c06 Diva V-PRI/E1-30 PCI(e) v3  
1133 1c07 Diva Server PRI/E1/T1-8 Cornet NQ  
1133 1c08 Diva Server PRI/T1-24 Cornet NQ  
1133 1c09 Diva Server PRI/E1-30 Cornet NQ  
1133 1c0a Diva Server PRI/E1/T1 Cornet NQ  
1133 1c0b Diva Server V-PRI/T1-24 Cornet NQ  
1133 1c0c Diva Server V-PRI/E1-30  
Cornet NQ  
e01e 2PRI  
1133 1e01 Diva 2PRI/E1/T1-60 PCI v1  
1133 e01e Diva V-2PRI/E1/T1-60 PCI v1  
e020 4PRI  
1133 2001 Diva 4PRI/E1/T1-120 PCI v1  
1133 e020 Diva V-4PRI/E1/T1-120 PCI v1  
e022 Analog-2  
1133 2200 Diva V-Analog-2 PCI v1  
1133 e022 Diva Analog-2 PCI v1  
e024 Analog-4  
1133 2400 Diva V-Analog-4 PCI v1  
1133 e024 Diva Analog-4 PCI v1  
e028 Analog-8  
1133 2800 Diva V-Analog-8 PCI v1  
1133 e028 Diva Analog-8 PCI v1

e02a Diva IPM-300 PCI v1  
e02c Diva IPM-600 PCI v1  
e02e 4BRI  
1133 2e01 Diva V-4BRI-8 PCIe v2  
1133 e02e Diva 4BRI-8 PCIe v2  
e032 BRI  
1133 3201 Diva V-BRI-2 PCIe v2  
1133 e032 Diva BRI-2 PCIe v2  
e034 Diva BRI-CTI PCI v2  
1134 Mercury Computer Systems  
0001 Raceway Bridge  
0002 Dual PCI to RapidIO Bridge  
000b POET Serial RapidIO Bridge  
000d POET PSDMS Device  
1135 FUJIFILM Business Innovation Corp.  
0001 Printer controller  
1136 Momentum Data Systems  
0002 PCI-JTAG  
1137 Cisco Systems Inc  
0023 VIC 81 PCIe  
Upstream Port  
0040 VIC PCIe Upstream Port  
1137 004f VIC 1280 Dual 40Gb Mezzanine  
1137 0084 VIC 1240 Dual 40Gb MLOM  
1137 0085 VIC 1225 Dual 10Gb SFP+ PCIe  
1137 00cd VIC 1285 Dual 40Gb QSFP+ PCIe  
1137 00ce VIC 1225T Dual 10GBaseT PCIe  
1137 012a VIC M4308 Dual 40Gb  
1137 012c VIC 1340 Dual 40Gb MLOM  
1137 012e VIC 1227 Dual 10Gb SFP+ PCIe  
1137 0137 VIC 1380 Dual 40Gb Mezzanine  
1137 014d VIC 1385 Dual 40Gb PCIe  
0041 VIC PCIe Downstream Port  
0042 VIC Management Controller  
1137 0047 VIC P81E PCIe Management Controller  
1137 0085 VIC 1225 PCIe Management Controller  
1137 00cd VIC 1285 PCIe Management Controller  
1137 00ce VIC 1225T PCIe Management Controller  
1137 012e VIC 1227 PCIe Management Controller  
1137 014d VIC 1385 PCIe Management Controller  
1137 0217 VIC 1455 PCIe Management Controller  
1137 0218 VIC 1457 PCIe Management Controller  
0043 VIC Ethernet NIC  
1137 0047 VIC P81E PCIe Ethernet NIC  
1137 0048 VIC M81KR Mezzanine Ethernet  
NIC  
1137 004f VIC 1280 Mezzanine Ethernet NIC  
1137 0084 VIC 1240 MLOM Ethernet NIC

1137 0085 VIC 1225 PCIe Ethernet NIC  
1137 00cd VIC 1285 PCIe Ethernet NIC  
1137 00ce VIC 1225T PCIe Ethernet NIC  
1137 012a VIC M4308 Ethernet NIC  
1137 012c VIC 1340 MLOM Ethernet NIC  
1137 012e VIC 1227 PCIe Ethernet NIC  
1137 0137 VIC 1380 Mezzanine Ethernet NIC  
1137 014d VIC 1385 PCIe Ethernet NIC  
1137 015d VIC 1387 MLOM Ethernet NIC  
1137 0215 VIC 1440 Mezzanine Ethernet NIC  
1137 0216 VIC 1480 MLOM Ethernet NIC  
1137 0217 VIC 1455 PCIe Ethernet NIC  
1137 0218 VIC 1457 MLOM Ethernet NIC  
1137 0219 VIC 1485 PCIe Ethernet NIC  
1137 021a VIC 1487 MLOM Ethernet NIC  
1137 024a VIC 1495 PCIe Ethernet NIC  
1137 024b VIC 1497 MLOM Ethernet NIC  
0044 VIC Ethernet NIC Dynamic  
1137 0047 VIC P81E PCIe Ethernet NIC Dynamic  
1137 0048 VIC M81KR Mezzanine Ethernet NIC Dynamic  
1137 004f VIC 1280 Mezzanine Ethernet NIC Dynamic  
1137 0084 VIC 1240 MLOM Ethernet  
NIC Dynamic  
1137 0085 VIC 1225 PCIe Ethernet NIC Dynamic  
1137 00cd VIC 1285 PCIe Ethernet NIC Dynamic  
1137 00ce VIC 1225T PCIe Ethernet NIC Dynamic  
1137 012a VIC M4308 Ethernet NIC Dynamic  
1137 012c VIC 1340 MLOM Ethernet NIC Dynamic  
1137 012e VIC 1227 PCIe Ethernet NIC Dynamic  
1137 0137 VIC 1380 Mezzanine Ethernet NIC Dynamic  
1137 014d VIC 1385 PCIe Ethernet NIC Dynamic  
0045 VIC FCoE HBA  
1137 0047 VIC P81E PCIe FCoE HBA  
1137 0048 VIC M81KR Mezzanine FCoE HBA  
1137 004f VIC 1280 Mezzanine FCoE HBA  
1137 0084 VIC 1240 MLOM FCoE HBA  
1137 0085 VIC 1225 PCIe FCoE HBA  
1137 00cd VIC 1285 PCIe FCoE HBA  
1137 00ce VIC 1225T PCIe FCoE HBA  
1137 012a VIC M4308 FCoE HBA  
1137 012c VIC 1340 MLOM FCoE HBA  
1137 012e VIC 1227 PCIe FCoE HBA  
1137 0137 VIC 1380 Mezzanine FCoE HBA  
1137 014d VIC 1385 PCIe FCoE HBA  
0046 VIC SCSI Controller  
1137 012a VIC M4308 SCSI Controller  
004e VIC 82 PCIe Upstream Port  
0071 VIC SR-IOV VF

007a VIC  
1300 PCIe Upstream Port  
1137 012a VIC M4308 Dual 40Gb  
1137 012c VIC 1340 Dual 40Gb MLOM  
1137 0137 VIC 1380 Dual 40Gb Mezzanine  
1137 014d VIC 1385 Dual 40Gb PCIe  
00cf VIC Userspace NIC  
1137 004f VIC 1280 Mezzanine Userspace NIC  
1137 0084 VIC 1240 MLOM Userspace NIC  
1137 0085 VIC 1225 PCIe Userspace NIC  
1137 00cd VIC 1285 PCIe Userspace NIC  
1137 00ce VIC 1225T PCIe Userspace NIC  
1137 012a VIC M4308 Userspace NIC  
1137 012c VIC 1340 MLOM Userspace NIC  
1137 012e VIC 1227 PCIe Userspace NIC  
1137 0137 VIC 1380 Mezzanine Userspace NIC  
023e 1GigE I350 LOM  
1138 Ziatech Corporation  
8905 8905 [STD 32 Bridge]  
1139 Dynamic Pictures, Inc  
0001 VGA Compatible 3D Graphics  
113a FWB Inc  
113b Network Computing Devices  
113c Cyclone Microsystems, Inc.  
0000 PCI-9060 i960 Bridge  
0001 PCI-SDK [PCI i960 Evaluation Platform]  
0911 PCI-911 [i960Jx-based Intelligent I/O Controller]  
0912 PCI-912 [i960CF-based Intelligent I/O Controller]  
0913 PCI-913  
0914  
PCI-914 [I/O Controller w/ secondary PCI bus]  
113d Leading Edge Products Inc  
113e Sanyo Electric Co - Computer Engineering Dept  
113f Equinox Systems, Inc.  
0808 SST-64P Adapter  
1010 SST-128P Adapter  
80c0 SST-16P DB Adapter  
80c4 SST-16P RJ Adapter  
80c8 SST-16P Adapter  
8888 SST-4P Adapter  
9090 SST-8P Adapter  
1140 Intervice Inc  
1141 Crest Microsystem Inc  
1142 Alliance Semiconductor Corporation  
3210 AP6410  
6422 ProVideo 6422  
6424 ProVideo 6424  
6425 ProMotion AT25

643d ProMotion AT3D  
1143 NetPower, Inc  
1144 Cincinnati Milacron  
0001 Noservo controller  
1145 Workbit Corporation  
8007 NinjaSCSI-32 Workbit  
f007 NinjaSCSI-32 KME  
f010 NinjaSCSI-32 Workbit  
f012 NinjaSCSI-32 Logitech  
f013 NinjaSCSI-32 Logitech  
f015 NinjaSCSI-32 Melco  
f020 NinjaSCSI-32 Sony PCGA-DVD51  
f021 NinjaPATA-32 Delkin Cardbus UDMA  
f024 NinjaPATA-32 Delkin Cardbus UDMA  
f103 NinjaPATA-32 Delkin Cardbus UDMA  
1146 Force Computers  
1147 Interface Corp  
# Nee Schneider & Koch  
1148  
SysKonnnect  
4000 FDDI Adapter  
0e11 b03b Netelligent 100 FDDI DAS Fibre SC  
0e11 b03c Netelligent 100 FDDI SAS Fibre SC  
0e11 b03d Netelligent 100 FDDI DAS UTP  
0e11 b03e Netelligent 100 FDDI SAS UTP  
0e11 b03f Netelligent 100 FDDI SAS Fibre MIC  
1148 5521 FDDI SK-5521 (SK-NET FDDI-UP)  
1148 5522 FDDI SK-5522 (SK-NET FDDI-UP DAS)  
1148 5541 FDDI SK-5541 (SK-NET FDDI-FP)  
1148 5543 FDDI SK-5543 (SK-NET FDDI-LP)  
1148 5544 FDDI SK-5544 (SK-NET FDDI-LP DAS)  
1148 5821 FDDI SK-5821 (SK-NET FDDI-UP64)  
1148 5822 FDDI SK-5822 (SK-NET FDDI-UP64 DAS)  
1148 5841 FDDI SK-5841 (SK-NET FDDI-FP64)  
1148 5843 FDDI SK-5843 (SK-NET FDDI-LP64)  
1148 5844 FDDI SK-5844 (SK-NET FDDI-LP64 DAS)  
4200 Token Ring adapter  
4300 SK-9872 Gigabit Ethernet Server Adapter (SK-NET GE-ZX dual link)  
1148 9821 SK-9821 Gigabit Ethernet Server Adapter (SK-NET GE-T)  
1148 9822 SK-9822 Gigabit Ethernet Server Adapter (SK-NET GE-T dual link)  
1148 9841 SK-9841 Gigabit Ethernet Server  
Adapter (SK-NET GE-LX)  
1148 9842 SK-9842 Gigabit Ethernet Server Adapter (SK-NET GE-LX dual link)  
1148 9843 SK-9843 Gigabit Ethernet Server Adapter (SK-NET GE-SX)  
1148 9844 SK-9844 Gigabit Ethernet Server Adapter (SK-NET GE-SX dual link)  
1148 9861 SK-9861 Gigabit Ethernet Server Adapter (SK-NET GE-SX Volition)  
1148 9862 SK-9862 Gigabit Ethernet Server Adapter (SK-NET GE-SX Volition dual link)  
1148 9871 SK-9871 Gigabit Ethernet Server Adapter (SK-NET GE-ZX)



1148 9872 SK-9872 Gigabit Ethernet Server Adapter (SK-NET GE-ZX dual link)  
1259 2970 AT-2970SX Gigabit Ethernet Adapter  
1259 2971 AT-2970LX Gigabit Ethernet Adapter  
1259 2972 AT-2970TX Gigabit Ethernet Adapter  
1259 2973 AT-2971SX Gigabit Ethernet Adapter  
1259 2974 AT-2971T Gigabit Ethernet Adapter  
1259 2975 AT-2970SX/2SC Gigabit Ethernet Adapter  
1259 2976 AT-2970LX/2SC Gigabit Ethernet Adapter  
1259 2977 AT-2970TX/2TX Gigabit Ethernet Adapter  
4320 SK-98xx V2.0 Gigabit Ethernet Adapter  
[Marvell 88E8001]  
1148 0121 Marvell RDK-8001 Adapter  
1148 0221 Marvell RDK-8002 Adapter  
1148 0321 Marvell RDK-8003 Adapter  
1148 0421 Marvell RDK-8004 Adapter  
1148 0621 Marvell RDK-8006 Adapter  
1148 0721 Marvell RDK-8007 Adapter  
1148 0821 Marvell RDK-8008 Adapter  
1148 0921 Marvell RDK-8009 Adapter  
1148 1121 Marvell RDK-8011 Adapter  
1148 1221 Marvell RDK-8012 Adapter  
1148 3221 SK-9521 V2.0 10/100/1000Base-T Adapter  
1148 5021 SK-9821 V2.0 Gigabit Ethernet 10/100/1000Base-T Adapter  
1148 5041 SK-9841 V2.0 Gigabit Ethernet 1000Base-LX Adapter  
1148 5043 SK-9843 V2.0 Gigabit Ethernet 1000Base-SX Adapter  
1148 5051 SK-9851 V2.0 Gigabit Ethernet 1000Base-SX Adapter  
1148 5061 SK-9861 V2.0 Gigabit Ethernet 1000Base-SX Adapter  
1148 5071 SK-9871 V2.0 Gigabit Ethernet 1000Base-ZX Adapter  
1148 9521 SK-9521 10/100/1000Base-T Adapter  
1259 2916 AT-2916T  
4400 SK-9Dxx Gigabit Ethernet Adapter  
4500 SK-9Mxx Gigabit Ethernet Adapter  
9000 SK-9Sxx Gigabit  
Ethernet Server Adapter PCI-X [Marvell 88E8022]  
1148 2100 SK-9S21 10/100/1000Base-T Server Adapter, PCI-X, Copper RJ-45  
1148 2200 SK-9S22 10/100/1000Base-T Dual Port Server Adapter, PCI-X, 2 Copper RJ-45  
1148 2210 SK-9P22 10/100/1000 Base-T Dual Port PMC card  
1148 2220 TPMC-GBE-CO  
1148 8100 SK-9S81 1000Base-SX Server Adapter, PCI-X, Fiber SX/LC  
1148 8200 SK-9S82 1000Base-SX Dual Port Server Adapter, PCI-X, 2 Fiber SX/LC  
1148 8210 SK-9P82 1000 Base-SX Dual Port PMC card  
1148 8220 TPMC-GBE-FI  
1148 9100 SK-9S91 1000Base-LX Server Adapter, PCI-X, Fiber LX/LC  
1148 9200 SK-9S92 1000Base-LX Dual Port Server Adapter, PCI-X, 2 Fiber LX/LC  
1259 2973 AT-2971SX v2 Gigabit Adapter  
1259 2974 AT-2971T v2 Gigabit Adapter  
1259 2978 AT-2971LX Gigabit Adapter  
9843 [Fujitsu] Gigabit Ethernet

9e00 SK-9E21D 10/100/1000Base-T Adapter, Copper RJ-45  
1148 2100 SK-9E21 Server Adapter  
1148 21d0 SK-9E21D 10/100/1000Base-T Adapter  
1148 2200 SK-9E22 Server Adapter  
1148  
8100 SK-9E81 Server Adapter  
1148 8200 SK-9E82 Server Adapter  
1148 9100 SK-9E91 Server Adapter  
1148 9200 SK-9E92 Server Adapter  
9e01 SK-9E21M 10/100/1000Base-T Adapter  
1149 Win System Corporation  
114a VMIC  
5565 GE-IP PCI5565,PMC5565 Reflective Memory Node  
5579 VMIPCI-5579 (Reflective Memory Card)  
5587 VMIPCI-5587 (Reflective Memory Card)  
6504 VMIC PCI 7755 FPGA  
7587 VMIVME-7587  
114b Canopus Co., Ltd  
114c Annabooks  
114d IC Corporation  
114e Nikon Systems Inc  
114f Digi International  
0002 AccelePort EPC  
0003 RightSwitch SE-6  
0004 AccelePort Xem  
0005 AccelePort Xr  
0006 AccelePort Xr,C/X  
0009 AccelePort Xr/J  
000a AccelePort EPC/J  
000c DataFirePRIme T1 (1-port)  
000d SyncPort 2-Port (x.25/FR)  
0011 AccelePort 8r EIA-232 (IBM)  
0012 AccelePort 8r EIA-422  
0013 AccelePort Xr  
0014 AccelePort 8r EIA-422  
0015 AccelePort Xem  
0016 AccelePort EPC/X  
0017 AccelePort C/X  
001a DataFirePRIme E1 (1-port)  
001b AccelePort C/X (IBM)  
001c  
AccelePort Xr (SAIP)  
001d DataFire RAS T1/E1/PRI  
114f 0050 DataFire RAS E1 Adapter  
114f 0051 DataFire RAS Dual E1 Adapter  
114f 0052 DataFire RAS T1 Adapter  
114f 0053 DataFire RAS Dual T1 Adapter  
0023 AccelePort RAS

0024 DataFire RAS B4 ST/U  
114f 0030 DataFire RAS BRI U Adapter  
114f 0031 DataFire RAS BRI S/T Adapter  
0026 AccelePort 4r 920  
0027 AccelePort Xr 920  
0028 ClassicBoard 4  
0029 ClassicBoard 8  
0034 AccelePort 2r 920  
0035 DataFire DSP T1/E1/PRI cPCI  
0040 AccelePort Xp  
114f 0042 AccelePort 2p PCI  
114f 0043 AccelePort 4p PCI  
114f 0044 AccelePort 8p PCI  
114f 0045 AccelePort 16p PCI  
114f 004e AccelePort 32p PCI  
0042 AccelePort 2p  
0043 AccelePort 4p  
0044 AccelePort 8p  
0045 AccelePort 16p  
004e AccelePort 32p  
0070 Datafire Micro V IOM2 (Europe)  
0071 Datafire Micro V (Europe)  
0072 Datafire Micro V IOM2 (North America)  
0073 Datafire Micro V (North America)  
00b0 Digi Neo 4  
00b1 Digi Neo 8  
00c8 Digi Neo 2 DB9  
00c9  
Digi Neo 2 DB9 PRI  
00ca Digi Neo 2 RJ45  
00cb Digi Neo 2 RJ45 PRI  
00cc Digi Neo 1 422  
00cd Digi Neo 1 422 485  
00ce Digi Neo 2 422 485  
00d0 ClassicBoard 4 422  
00d1 ClassicBoard 8 422  
00f1 Digi Neo PCI-E 4 port  
00f4 Digi Neo 4 (IBM version)  
6001 Avastar  
1150 Thinking Machines Corp  
1151 JAE Electronics Inc.  
1152 Megatek  
1153 Land Win Electronic Corp  
1154 Melco Inc  
1155 Pine Technology Ltd  
1156 Periscope Engineering  
1157 Avsys Corporation  
1158 Voarx R & D Inc

3011 Tokenet/vg 1001/10m anylan  
9050 Lanfleet/Truevalue  
9051 Lanfleet/Truevalue  
1159 MuTech Corporation  
0001 MV-1000  
0002 MV-1500  
115a Harlequin Ltd  
115b Parallax Graphics  
115c Photron Ltd.  
115d Xircom  
0003 Cardbus Ethernet 10/100  
1014 0181 10/100 EtherJet Cardbus Adapter  
1014 1181 10/100 EtherJet Cardbus Adapter  
1014 8181 10/100 EtherJet Cardbus Adapter  
1014 9181 10/100 EtherJet Cardbus Adapter  
115d 0181 Cardbus Ethernet 10/100  
115d 0182 RealPort2 CardBus Ethernet 10/100  
(R2BE-100)  
115d 1181 Cardbus Ethernet 10/100  
1179 0181 Cardbus Ethernet 10/100  
8086 8181 EtherExpress PRO/100 Mobile CardBus 32 Adapter  
8086 9181 EtherExpress PRO/100 Mobile CardBus 32 Adapter  
0005 Cardbus Ethernet 10/100  
1014 0182 10/100 EtherJet Cardbus Adapter  
1014 1182 10/100 EtherJet Cardbus Adapter  
115d 0182 Cardbus Ethernet 10/100  
115d 1182 Cardbus Ethernet 10/100  
0007 Cardbus Ethernet 10/100  
1014 0182 10/100 EtherJet Cardbus Adapter  
1014 1182 10/100 EtherJet Cardbus Adapter  
115d 0182 Cardbus Ethernet 10/100  
115d 1182 Cardbus Ethernet 10/100  
000b Cardbus Ethernet 10/100  
1014 0183 10/100 EtherJet Cardbus Adapter  
115d 0183 Cardbus Ethernet 10/100  
000c Mini-PCI V.90 56k Modem  
000f Cardbus Ethernet 10/100  
1014 0183 10/100 EtherJet Cardbus Adapter  
115d 0183 Cardbus Ethernet 10/100  
00d4 Mini-PCI K56Flex Modem  
0101 Cardbus 56k modem  
115d 1081 Cardbus 56k Modem  
0103 Cardbus Ethernet + 56k Modem  
1014 9181 Cardbus 56k  
Modem  
1115 1181 Cardbus Ethernet 100 + 56k Modem  
115d 1181 CBEM56G-100 Ethernet + 56k Modem  
8086 9181 PRO/100 LAN + Modem56 CardBus

115e Peer Protocols Inc  
115f Maxtor Corporation  
1160 Megasoft Inc  
1161 PFU Limited  
1162 OA Laboratory Co Ltd  
1163 Rendition  
0001 Verite 1000  
2000 Verite V2000/V2100/V2200  
1092 2000 Stealth II S220  
1164 Advanced Peripherals Technologies  
1165 Imagraph Corporation  
0001 Motion TPEG Recorder/Player with audio  
# nee ServerWorks  
1166 Broadcom  
0000 CMIC-LE  
0005 CNB20-LE Host Bridge  
0006 CNB20HE Host Bridge  
0007 CNB20-LE Host Bridge  
0008 CNB20HE Host Bridge  
0009 CNB20LE Host Bridge  
0010 CIOB30  
0011 CMIC-HE  
0012 CMIC-WS Host Bridge (GC-LE chipset)  
0013 CNB20-HE Host Bridge  
0014 CMIC-LE Host Bridge (GC-LE chipset)  
0015 CMIC-GC Host Bridge  
0016 CMIC-GC Host Bridge  
0017 GCNB-LE Host Bridge  
0031 HT1100 HPX0 HT Host Bridge  
0036 BCM5785 [HT1000] PCI/PCI-X Bridge  
0101 CIOB-X2 PCI-X I/O Bridge  
0103 EPB PCI-Express  
to PCI-X Bridge  
0104 BCM5785 [HT1000] PCI/PCI-X Bridge  
0110 CIOB-E I/O Bridge with Gigabit Ethernet  
0130 BCM5780 [HT2000] PCI-X bridge  
0132 BCM5780 [HT2000] PCI-Express Bridge  
1166 0132 HT2000 PCI-Express bridge  
0140 HT2100 PCI-Express Bridge  
0141 HT2100 PCI-Express Bridge  
0142 HT2100 PCI-Express Bridge  
0144 HT2100 PCI-Express Bridge  
0200 OSB4 South Bridge  
0201 CSB5 South Bridge  
4c53 1080 CT8 mainboard  
0203 CSB6 South Bridge  
1734 1012 PRIMERGY RX/TX series  
0205 BCM5785 [HT1000] Legacy South Bridge

0211 OSB4 IDE Controller  
0212 CSB5 IDE Controller  
1028 014a PowerEdge 1750  
1028 810b PowerEdge 1650/2550  
4c53 1080 CT8 mainboard  
0213 CSB6 RAID/IDE Controller  
1028 4134 PowerEdge 600SC  
1028 c134 Poweredge SC600  
1734 1012 PRIMERGY RX/TX series onboard IDE  
0214 BCM5785 [HT1000] IDE  
1028 0205 PowerEdge 2970 HT1000 IDE  
0217 CSB6 IDE Controller  
1028 4134 Poweredge SC600  
021b HT1100 HD Audio  
0220 OSB4/CSB5 OHCI USB Controller  
4c53  
1080 CT8 mainboard  
0221 CSB6 OHCI USB Controller  
1734 1012 PRIMERGY RX/TX series onboard OHCI  
0223 BCM5785 [HT1000] USB  
1028 0205 PowerEdge 2970 HT1000 USB Controller  
1028 020b PowerEdge T605 HT1000 USB Controller  
0225 CSB5 LPC bridge  
0227 GCLE-2 Host Bridge  
1734 1012 PRIMERGY RX/TX series  
0230 CSB5 LPC bridge  
4c53 1080 CT8 mainboard  
0234 BCM5785 [HT1000] LPC  
1028 0205 PowerEdge 2970 HT1000 LPC  
1028 020b PowerEdge T605 HT1000 LPC  
0235 BCM5785 [HT1000] XIOAPIC0-2  
0238 BCM5785 [HT1000] WDTimer  
0240 K2 SATA  
0241 RAIDCore RC4000  
0242 RAIDCore BC4000  
024a BCM5785 [HT1000] SATA (Native SATA Mode)  
1028 020b PowerEdge T605 onboard SATA Controller  
# The device starts as 024A, and changes to 024B if set to PATA mode in BIOS  
024b BCM5785 [HT1000] SATA (PATA/IDE Mode)  
1028 0205 PowerEdge 2970 HT1000 SATA controller  
0406 HT1100 PCI-X Bridge  
0408 HT1100 Legacy Device  
040a HT1100 ISA-LPC Bridge  
1028 0223 PowerEdge R905 HT1100 ISA-LPC  
Bridge  
0410 HT1100 SATA Controller (Native SATA Mode)  
0411 HT1100 SATA Controller (PATA / IDE Mode)  
0412 HT1100 USB OHCI Controller

0414 HT1100 USB EHCI Controller  
0416 HT1100 USB EHCI Controller (with Debug Port)  
0420 HT1100 PCI-Express Bridge  
0421 HT1100 SAS/SATA Controller  
0422 HT1100 PCI-Express Bridge  
1167 Mutoh Industries Inc  
1168 Thine Electronics Inc  
1169 Centre for Development of Advanced Computing  
# nee Polaris Communications  
116a Luminex Software, Inc.  
6100 Bus/Tag Channel  
6800 Escon Channel  
7100 Bus/Tag Channel  
7800 Escon Channel  
116b Connectware Inc  
116c Intelligent Resources Integrated Systems  
116d Martin-Marietta  
116e Electronics for Imaging  
116f Workstation Technology  
1170 Inventec Corporation  
1171 Loughborough Sound Images Plc  
1172 Altera Corporation  
00a7 Stratix V  
0530 Stratix IV  
646c KT-500/KT-521 board  
1173 Adobe Systems, Inc  
1174 Bridgeport Machines  
1175 Mitron Computer Inc.  
1176 SBE Incorporated  
1177 Silicon Engineering  
1178  
Alfa, Inc.  
afa1 Fast Ethernet Adapter  
1179 Toshiba Corporation  
0102 Extended IDE Controller  
0103 EX-IDE Type-B  
010e PXP04 NVMe SSD  
010f XG3 NVMe SSD Controller  
0110 Cx5 NVMe SSD Controller  
1028 1ffb Express Flash NVMe 960G (RI) U.2 (CD5)  
1028 1ffc Express Flash NVMe 1.92T (RI) U.2 (CD5)  
1028 1ffd Express Flash NVMe 3.84T (RI) U.2 (CD5)  
1028 1ffe Express Flash NVMe 7.68T (RI) U.2 (CD5)  
1179 0001 KIOXIA CM5-R series SSD  
1179 0021 KIOXIA CD5 series SSD  
1d49 4039 Thinksystem U.2 CM5 NVMe SSD  
1d49 403a Thinksystem AIC CM5 NVMe SSD  
0113 BG3 x2 NVMe SSD Controller (DRAM-less)

1179 0001 Toshiba KBG30ZMS128G 128GB NVMe SSD  
0115 XG4 NVMe SSD Controller  
0116 XG5 NVMe SSD Controller  
1179 0001 XG5 NVMe SSD Controller  
011a XG6 NVMe SSD Controller  
0404 DVD Decoder card  
0406 Tecra Video Capture device  
0407 DVD Decoder card (Version 2)  
0601 CPU to PCI bridge  
1179 0001 Satellite Pro  
0602 PCI to ISA bridge  
0603 ToPIC95 PCI  
to CardBus Bridge for Notebooks  
0604 PCI-Docking Host bridge  
060a ToPIC95  
1179 0001 Satellite Pro  
060f ToPIC97  
1179 0001 Satellite 4010  
0617 ToPIC100 PCI to Cardbus Bridge with ZV Support  
0618 CPU to PCI and PCI to ISA bridge  
0701 FIR Port Type-O  
0803 TC6371AF SD Host Controller  
0804 TC6371AF SmartMedia Controller  
0805 SD TypA Controller  
0d01 FIR Port Type-DO  
1179 0001 FIR Port Type-DO  
9602 RS780/RS880 PCI to PCI bridge (int gfx)  
117a A-Trend Technology  
117b L G Electronics, Inc.  
117c ATTO Technology, Inc.  
002c ExpressSAS R380  
002d ExpressSAS R348  
0030 Ultra320 SCSI Host Adapter  
117c 8013 ExpressPCI UL4D  
117c 8014 ExpressPCI UL4S  
117c 8027 ExpressPCI UL5D  
117c 802f ExpressPCI UL5D Low Profile  
0033 SAS Adapter  
0041 ExpressSAS R30F  
0042 ExpressSAS 6Gb/s SAS/SATA HBA  
117c 0042 ExpressSAS H680  
117c 0043 ExpressSAS H608  
117c 0044 ExpressSAS H60F  
117c 0045 ExpressSAS H6F0  
117c 0046 ExpressSAS H644  
117c 004f ExpressSAS  
M608  
117c 0057 ExpressSAS M680



117c 0058 ExpressSAS M644  
117c 0059 ExpressSAS W608  
117c 005a ExpressSAS W680  
117c 005b ExpressSAS W644  
0049 ExpressSAS 6Gb SAS/SATA RAID Adapter  
117c 0049 ExpressSAS R680  
117c 004a ExpressSAS R608  
117c 004b ExpressSAS R60F  
117c 004c ExpressSAS R6F0  
117c 004d ExpressSAS R644  
117c 004e ExpressSAS R648  
0064 Celerity FC 16Gb/s Gen 5 Fibre Channel HBA  
117c 0063 Celerity FC-161E  
117c 0064 Celerity FC-162E  
117c 0065 Celerity FC-164E  
0094 Celerity FC 16/32Gb/s Gen 6 Fibre Channel HBA  
117c 0094 Celerity FC-162P  
117c 00a0 Celerity FC-161P  
117c 00a1 Celerity FC-164P  
117c 00a2 Celerity FC-321E  
117c 00a3 Celerity FC-322E  
117c 00ac Celerity FC-324E  
00bb Celerity FC 32/64Gb/s Gen 7 Fibre Channel HBA  
117c 00bc Celerity FC-321P  
117c 00bd Celerity FC-322P  
117c 00be Celerity FC-324P  
117c 00c9 Celerity FC-641E  
117c 00ca Celerity FC-642E  
00c5 ExpressNVM PCIe Gen4 Switch  
117c 00c6 ExpressNVM  
S48F PCIe Gen4  
117c 00c7 ExpressNVM S468 PCIe Gen4  
00e6 ExpressSAS GT 12Gb/s SAS/SATA HBA  
117c 00c0 ExpressSAS H1280 GT  
117c 00c1 ExpressSAS H1208 GT  
117c 00c2 ExpressSAS H1244 GT  
117c 00c3 ExpressSAS H12F0 GT  
117c 00c4 ExpressSAS H120F GT  
8013 ExpressPCI UL4D  
8014 ExpressPCI UL4S  
8027 ExpressPCI UL5D  
8070 ExpressSAS 12Gb/s SAS/SATA HBA  
117c 0070 ExpressSAS H1280  
117c 0071 ExpressSAS H1208  
117c 0080 ExpressSAS H1244  
8072 ExpressSAS 12Gb/s SAS/SATA HBA  
117c 0072 ExpressSAS H12F0  
117c 0073 ExpressSAS H120F

117c 0082 ExpressSAS H1288  
117d Becton & Dickinson  
117e T/R Systems  
117f Integrated Circuit Systems  
1180 Ricoh Co Ltd  
0465 RL5c465  
0466 RL5c466  
0475 RL5c475  
144d c006 vpr Matrix 170B4 CardBus bridge  
0476 RL5c476 II  
1014 0185 ThinkPad A/T/X Series  
1014 0555 ThinkPad X41  
1014 056c ThinkPad Z60t  
1028 014f Latitude X300 laptop  
1028 0188 Inspiron 6000 laptop  
103c 30c0 Compaq 6710b  
103c 30c1 Compaq 6910p  
1043  
1017 X58LE  
1043 1237 A6J-Q008  
1043 1967 V6800V  
1043 1987 A4K and Z81K notebooks, possibly others ( mid-2005 machines )  
104d 80df Vaio PCG-FX403  
104d 80e7 VAIO PCG-GR214EP/GR214MP/GR215MP/GR314MP/GR315MP  
104d 814e VAIO GRZ390Z  
10f7 8338 Panasonic CF-Y5 laptop  
144d c005 X10 Laptop  
144d c00c P30/P35 notebook  
14ef 0220 PCD-RP-220S  
17aa 201c ThinkPad X60/X60s  
17aa 20c4 ThinkPad T61/R61  
17aa 20c6 ThinkPad R61/T400  
0477 RL5c477  
0478 RL5c478  
1014 0184 ThinkPad A30p  
0511 R5C511  
0522 R5C522 IEEE 1394 Controller  
1014 01cf ThinkPad A30p  
1043 1967 V6800V  
0551 R5C551 IEEE 1394 Controller  
144d c006 vpr Matrix 170B4  
0552 R5C552 IEEE 1394 Controller  
1014 0511 ThinkPad A/T/X Series  
1028 014f Latitude X300 laptop  
1028 0188 Inspiron 6000 laptop  
1043 1237 A6J-Q008  
1043 1757 M2400N laptop  
144d c005 X10 Laptop

144d c00c P30/P35 notebook  
17aa 201e ThinkPad X60/X60s  
0554 R5C554  
0575 R5C575 SD Bus Host Adapter  
0576  
R5C576 SD Bus Host Adapter  
0592 R5C592 Memory Stick Bus Host Adapter  
1025 0121 Aspire 5920G  
1028 01d7 XPS M1210  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 1521 HP EliteBook 8540w  
103c 30b5 Presario V3242AU  
103c 30b7 Presario V6133CL  
103c 30cc Pavilion dv6700  
103c 30cf Pavilion dv95xx/96xx/97xx/98xx series  
1043 1017 X58LE  
1043 1237 A6J-Q008  
1043 1967 V6800V  
104d 9035 VAIO VGN-FW11ZRU  
144d c018 X20 IV  
17aa 20ca ThinkPad T61/T400  
0811 R5C811  
0822 R5C822 SD/SDIO/MMC/MS/MSPPro Host Adapter  
1014 0556 ThinkPad X40 / X41 / X60s / Z60t  
1014 0598 ThinkPad Z60m  
1025 0121 Aspire 5920G  
1028 0188 Inspiron 6000 laptop  
1028 01a2 Inspiron 9200  
1028 01d7 XPS M1210  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 03b5 Presario V3242AU  
103c 30b7 Presario V6133CL  
103c 30c1 Compaq 6910p  
103c 30cc Pavilion dv6700  
103c 30cf Pavilion dv9668eg Laptop  
1043 1017 X58LE  
1043 1237 A6J-Q008  
1043 1967 V6800V  
10f7  
8338 Panasonic CF-Y5 laptop  
144d c018 X20 IV  
17aa 201d ThinkPad X60/X60s  
17aa 20c7 ThinkPad T61  
17aa 20c8 ThinkPad T400/W500  
0832 R5C832 IEEE 1394 Controller  
1025 0121 Aspire 5920G

1028 01d7 XPS M1210  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
1028 024d Latitude E4300  
103c 30b5 Presario V3242AU  
103c 30b7 Presario V6133CL  
103c 30c1 Compaq 6910p  
103c 30cc Pavilion dv6700  
103c 30cf Pavilion dv9668eg Laptop  
17aa 20c5 ThinkPad R61  
17aa 20c7 ThinkPad R61  
0841 R5C841 CardBus/SD/SDIO/MMC/MS/MSPPro/xD/IEEE1394  
0843 R5C843 MMC Host Controller  
1025 0121 Aspire 5920G  
1028 01d7 XPS M1210  
1028 01f3 Inspiron 1420  
1028 01f5 Inspiron 1501  
1028 024f Latitude e6500  
103c 03b5 Presario V3242AU  
103c 1521 HP EliteBook 8540w  
103c 30b7 Presario V6133CL  
103c 30cf Pavilion dv9500/9600/9700 series  
1043 1017 X58LE  
1183 0843 Alienware Aurora m9700  
0852 xD-Picture Card Controller  
1025 0121 Aspire 5920G  
1028  
01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 30b5 Presario V3242AU  
103c 30b7 Presario V6133CL  
103c 30cc Pavilion dv6700  
103c 30cf Pavilion dv9668eg Laptop  
1043 1967 V6800V  
1180 0852 Pavilion 2410us  
1324 10cf P7120  
17aa 20cb ThinkPad T400  
e230 R5U2xx (R5U230 / R5U231 / R5U241) [Memory Stick Host Controller]  
e476 CardBus bridge  
1028 040a Latitude E6410  
1028 040b Latitude E6510  
e822 MMC/SD Host Controller  
1028 040a Latitude E6410  
1028 040b Latitude E6510  
17aa 21cf ThinkPad T520  
e823 PCIe SDXC/MMC Host Controller  
17aa 21cf ThinkPad T520  
e832 R5C832 PCIe IEEE 1394 Controller

1028 040a Latitude E6410  
1028 040b Latitude E6510  
17aa 21cf ThinkPad T520  
e852 PCIe xD-Picture Card Controller  
1181 Telmatics International  
1183 Fujikura Ltd  
1184 Forks Inc  
1185 Dataworld International Ltd  
1186 D-Link System Inc  
1002 DL10050 Sundance Ethernet  
1186 1002 DFE-550TX/FX  
1186 1012 DFE-580TX  
1025 AirPlus Xtreme G DWL-G650 Adapter  
1026  
AirXpert DWL-AG650 Wireless Cardbus Adapter  
1043 AirXpert DWL-AG650 Wireless Cardbus Adapter  
1300 RTL8139 Ethernet  
1186 1300 DFE-538TX 10/100 Ethernet Adapter  
1186 1301 DFE-530TX+ 10/100 Ethernet Adapter  
1186 1303 DFE-528TX 10/100 Fast Ethernet PCI Adapter  
1340 DFE-690TXD CardBus PC Card  
1540 DFE-680TX  
1541 DFE-680TXD CardBus PC Card  
1561 DRP-32TXD Cardbus PC Card  
3300 DWL-510 / DWL-610 802.11b [Realtek RTL8180L]  
1186 3300 DWL-610 Wireless Cardbus Adapter  
1186 3301 DWL-510 Wireless PCI Adapter  
3a10 AirXpert DWL-AG650 Wireless Cardbus Adapter(rev.B)  
3a11 AirXpert DWL-AG520 Wireless PCI Adapter(rev.B)  
4000 DL2000-based Gigabit Ethernet  
4001 DGE-550SX PCI-X Gigabit Ethernet Adapter  
4200 DFE-520TX Fast Ethernet PCI Adapter  
1186 1103 DFE-520TX Fast Ethernet PCI Adapter (rev. C1)  
4300 DGE-528T Gigabit Ethernet Adapter  
1186 4300 DGE-528T PCI Gigabit Ethernet Adapter  
# rev. B1; RealTek RTL8168E.  
1186 4b10 DGE-560T PCI Express (x1)  
Gigabit Ethernet Adapter  
4302 DGE-530T Gigabit Ethernet Adapter (rev.C1) [Realtek RTL8169]  
4b00 DGE-560T PCI Express Gigabit Ethernet Adapter  
4b01 DGE-530T Gigabit Ethernet Adapter (rev 11)  
4b02 DGE-560SX PCI Express Gigabit Ethernet Adapter  
4b03 DGE-550T Gigabit Ethernet Adapter V.B1  
4c00 Gigabit Ethernet Adapter  
1186 4c00 DGE-530T Gigabit Ethernet Adapter  
8400 D-Link DWL-650+ CardBus PC Card  
1187 Advanced Technology Laboratories, Inc.  
1188 Shima Seiki Manufacturing Ltd.

1189 Matsushita Electronics Co Ltd  
118a Hilevel Technology  
118b Hypertec Pty Limited  
118c Corollary, Inc  
0014 PCIB [C-bus II to PCI bus host bridge chip]  
1117 Intel 8-way XEON Profusion Chipset [Cache Coherency Filter]  
118d BitFlow Inc  
0001 Raptor-PCI framegrabber  
0012 Model 12 Road Runner Frame Grabber  
0014 Model 14 Road Runner Frame Grabber  
0024 Model 24 Road Runner Frame Grabber  
0044 Model 44 Road Runner Frame Grabber  
0112 Model 12 Road Runner Frame Grabber  
0114 Model 14 Road  
Runner Frame Grabber  
0124 Model 24 Road Runner Frame Grabber  
0144 Model 44 Road Runner Frame Grabber  
0212 Model 12 Road Runner Frame Grabber  
0214 Model 14 Road Runner Frame Grabber  
0224 Model 24 Road Runner Frame Grabber  
0244 Model 44 Road Runner Frame Grabber  
0312 Model 12 Road Runner Frame Grabber  
0314 Model 14 Road Runner Frame Grabber  
0324 Model 24 Road Runner Frame Grabber  
0344 Model 44 Road Runner Frame Grabber  
b04e Claxon CXP4 CoaXPress frame grabber  
118e Hermstedt GmbH  
118f Green Logic  
1190 Tripace  
c731 TP-910/920/940 PCI Ultra(Wide) SCSI Adapter  
1191 Artop Electronic Corp  
0003 SCSI Cache Host Adapter  
0004 ATP8400  
0005 ATP850UF  
0006 ATP860 NO-BIOS  
0007 ATP860  
0008 ATP865 NO-ROM  
0009 ATP865  
000a ATP867-A  
000b ATP867-B  
000d ATP8620  
000e ATP8620  
0011 ATP865-B  
1191 0011 ACARD AEC-6280  
8002 AEC6710 SCSI-2 Host Adapter  
8010 AEC6712UW SCSI  
8020 AEC6712U SCSI  
8030 AEC6712S SCSI

8040 AEC6712D SCSI  
8050 AEC6712SUW SCSI  
8060  
AEC6712 SCSI  
8080 AEC67160 SCSI  
8081 AEC67160S SCSI  
808a AEC67162 2-ch. LVD SCSI  
1192 Densan Company Ltd  
1193 Zeitnet Inc.  
0001 1221  
0002 1225  
1194 Toucan Technology  
1195 Ratoc System Inc  
1196 Hytec Electronics Ltd  
1197 Gage Applied Sciences, Inc.  
010c CompuScope 82G 8bit 2GS/s Analog Input Card  
1198 Lambda Systems Inc  
1199 Attachmate Corporation  
0101 Advanced ISCA/PCI Adapter  
119a Mind Share, Inc.  
119b Omega Micro Inc.  
1221 82C092G  
119c Information Technology Inst.  
119d Bug, Inc. Sapporo Japan  
119e Fujitsu Microelectronics Ltd.  
0001 FireStream 155  
0003 FireStream 50  
119f Bull HN Information Systems  
1081 BXI Host Channel Adapter  
# BXI stands for Bull eXascale Interconnect  
1101 BXI Host Channel Adapter v1.2  
# BXI stands for Bull eXascale Interconnect  
1121 BXI Host Channel Adapter v1.3  
11a0 Convex Computer Corporation  
11a1 Hamamatsu Photonics K.K.  
11a2 Sierra Research and Technology  
11a3 Deuretzbacher GmbH & Co. Eng. KG  
11a4 Barco Graphics  
NV  
11a5 Microunity Systems Eng. Inc  
11a6 Pure Data Ltd.  
11a7 Power Computing Corp.  
11a8 Systech Corp.  
11a9 InnoSys Inc.  
4240 AMCC S933Q Intelligent Serial Card  
11aa Actel  
# Nee Galileo Technology, Inc.  
11ab Marvell Technology Group Ltd.

0100 88F3700 [Armada 3700 Family] ARM SoC  
0110 88F60x0/88F70x0/88F80x0/CN913x ARM SoC  
0146 GT-64010/64010A System Controller  
0f53 88E6318 Link Street network controller  
11ab MV88SE614x SATA II PCI-E controller  
138f W8300 802.11 Adapter (rev 07)  
1fa6 Marvell W8300 802.11 Adapter  
1186 3b08 AirPlus G DWL-G630 Wireless Cardbus Adapter (rev.A1)  
1fa7 88W8310 and 88W8000G [Libertas] 802.11g client chipset  
1faa 88w8335 [Libertas] 802.11b/g Wireless  
1385 4e00 WG511v2 54 Mbps Wireless PC Card  
1385 6b00 WG311v3 802.11g Wireless PCI Adapter  
1737 0040 WPC54G v5 802.11g Wireless-G Notebook Adapter  
2211 88SB2211 PCI Express to PCI Bridge  
2a01 88W8335 [Libertas] 802.11b/g Wireless  
2a02 88W8361 [TopDog] 802.11n Wireless  
07d1  
3b02 DIR-615 rev. A1 Mini PCI Wireless Module  
1385 7c00 WN511T RangeMax Next 300 Mbps Wireless PC Card  
1385 7c01 WN511T RangeMax Next 300 Mbps Wireless Notebook Adapter  
1385 7e00 WN311T RangeMax Next 300 Mbps Wireless PCI Adapter  
1799 801b F5D8011 v2 802.11n N1 Wireless Notebook Card  
2a08 88W8362e [TopDog] 802.11a/b/g/n Wireless  
2a0a 88W8363 [TopDog] 802.11n Wireless  
2a0c 88W8363 [TopDog] 802.11n Wireless  
2a24 88W8363 [TopDog] 802.11n Wireless  
2a2b 88W8687 [TopDog] 802.11b/g Wireless  
2a30 88W8687 [TopDog] 802.11b/g Wireless  
2a40 88W8366 [TopDog] 802.11n Wireless  
2a41 88W8366 [TopDog] 802.11n Wireless  
2a42 88W8366 [TopDog] 802.11n Wireless  
2a43 88W8366 [TopDog] 802.11n Wireless  
2a55 88W8864 [Avastar] 802.11ac Wireless  
2b36 88W8764 [Avastar] 802.11n Wireless  
2b38 88W8897 [AVASTAR] 802.11ac Wireless  
2b40 88W8964 [Avastar] 802.11ac Wireless  
4101 OLPC Cafe Controller Secure Digital Controller  
4146 GT-64111 System Controller  
4320 88E8001  
Gigabit Ethernet Controller  
1019 0f38 Marvell 88E8001 Gigabit Ethernet Controller (ECS)  
1019 8001 Marvell 88E8001 Gigabit Ethernet Controller (ECS)  
1043 173c Marvell 88E8001 Gigabit Ethernet Controller (Asus)  
1043 811a Marvell 88E8001 Gigabit Ethernet Controller (Asus)  
105b 0c19 Marvell 88E8001 Gigabit Ethernet Controller (Foxconn)  
10b8 b452 EZ Card 1000 (SMC9452TXV.2)  
11ab 0121 Marvell RDK-8001  
11ab 0321 Marvell RDK-8003



11ab 1021 Marvell RDK-8010  
11ab 4320 Marvell Yukon Gigabit Ethernet 10/100/1000Base-T Controller (Asus)  
11ab 5021 Marvell Yukon Gigabit Ethernet 10/100/1000Base-T Controller (64 bit)  
11ab 9521 Marvell Yukon Gigabit Ethernet 10/100/1000Base-T Controller (32 bit)  
1458 e000 Marvell 88E8001 Gigabit Ethernet Controller (Gigabyte)  
147b 1406 Marvell 88E8001 Gigabit Ethernet Controller (Abit)  
15d4 0047 Marvell 88E8001 Gigabit Ethernet Controller (Iwill)  
1695 9025 Marvell 88E8001 Gigabit Ethernet Controller (Epox)  
17f2 1c03  
Marvell 88E8001 Gigabit Ethernet Controller (Albatron)  
270f 2803 Marvell 88E8001 Gigabit Ethernet Controller (Chaintech)  
4340 88E8021 PCI-X IPMI Gigabit Ethernet Controller  
4341 88E8022 PCI-X IPMI Gigabit Ethernet Controller  
4342 88E8061 PCI-E IPMI Gigabit Ethernet Controller  
4343 88E8062 PCI-E IPMI Gigabit Ethernet Controller  
4344 88E8021 PCI-X IPMI Gigabit Ethernet Controller  
4345 88E8022 PCI-X IPMI Gigabit Ethernet Controller  
4346 88E8061 PCI-E IPMI Gigabit Ethernet Controller  
4347 88E8062 PCI-E IPMI Gigabit Ethernet Controller  
4c53 10d0 Telum ASLP10 PrAMC Gigabit Ethernet  
4350 88E8035 PCI-E Fast Ethernet Controller  
1179 0001 Marvell 88E8035 Fast Ethernet Controller (Toshiba)  
11ab 3521 Marvell RDK-8035  
1854 000d Marvell 88E8035 Fast Ethernet Controller (LGE)  
1854 000e Marvell 88E8035 Fast Ethernet Controller (LGE)  
1854 000f Marvell 88E8035 Fast Ethernet Controller (LGE)  
1854 0011 Marvell 88E8035 Fast Ethernet Controller (LGE)  
1854 0012 Marvell  
88E8035 Fast Ethernet Controller (LGE)  
1854 0016 Marvell 88E8035 Fast Ethernet Controller (LGE)  
1854 0017 Marvell 88E8035 Fast Ethernet Controller (LGE)  
1854 0018 Marvell 88E8035 Fast Ethernet Controller (LGE)  
1854 0019 Marvell 88E8035 Fast Ethernet Controller (LGE)  
1854 001c Marvell 88E8035 Fast Ethernet Controller (LGE)  
1854 001e Marvell 88E8035 Fast Ethernet Controller (LGE)  
1854 0020 Marvell 88E8035 Fast Ethernet Controller (LGE)  
4351 88E8036 PCI-E Fast Ethernet Controller  
107b 4009 Marvell 88E8036 Fast Ethernet Controller (Wistron)  
10f7 8338 Marvell 88E8036 Fast Ethernet Controller (Panasonic)  
1179 0001 Marvell 88E8036 Fast Ethernet Controller (Toshiba)  
1179 ff00 Marvell 88E8036 Fast Ethernet Controller (Compal)  
1179 ff10 Marvell 88E8036 Fast Ethernet Controller (Inventec)  
11ab 3621 Marvell RDK-8036  
13d1 ac12 Abocom EFE3K - 10/100 Ethernet Expresscard  
161f 203d Marvell 88E8036 Fast Ethernet Controller (Arima)  
1854 000d Marvell  
88E8036 Fast Ethernet Controller (LGE)  
1854 000e Marvell 88E8036 Fast Ethernet Controller (LGE)

1854 000f Marvell 88E8036 Fast Ethernet Controller (LGE)  
1854 0011 Marvell 88E8036 Fast Ethernet Controller (LGE)  
1854 0012 Marvell 88E8036 Fast Ethernet Controller (LGE)  
1854 0016 Marvell 88E8036 Fast Ethernet Controller (LGE)  
1854 0017 Marvell 88E8036 Fast Ethernet Controller (LGE)  
1854 0018 Marvell 88E8036 Fast Ethernet Controller (LGE)  
1854 0019 Marvell 88E8036 Fast Ethernet Controller (LGE)  
1854 001c Marvell 88E8036 Fast Ethernet Controller (LGE)  
1854 001e Marvell 88E8036 Fast Ethernet Controller (LGE)  
1854 0020 Marvell 88E8036 Fast Ethernet Controller (LGE)  
4352 88E8038 PCI-E Fast Ethernet Controller  
4353 88E8039 PCI-E Fast Ethernet Controller  
104d 902d VAIO VGN-NR120E  
4354 88E8040 PCI-E Fast Ethernet Controller  
1028 022f Inspiron 1525  
144d c06a R730 Laptop  
144d c072 Notebook N150P  
4355 88E8040T PCI-E Fast Ethernet Controller  
1179  
ff50 Satellite P305D-S8995E  
4356 88EC033 PCI-E Fast Ethernet Controller  
4357 88E8042 PCI-E Fast Ethernet Controller  
435a 88E8048 PCI-E Fast Ethernet Controller  
4360 88E8052 PCI-E ASF Gigabit Ethernet Controller  
1043 8134 Marvell 88E8052 Gigabit Ethernet Controller (Asus)  
107b 4009 Marvell 88E8052 Gigabit Ethernet Controller (Wistron)  
11ab 5221 Marvell RDK-8052  
1458 e000 Marvell 88E8052 Gigabit Ethernet Controller (Gigabyte)  
1462 052c Marvell 88E8052 Gigabit Ethernet Controller (MSI)  
1849 8052 Marvell 88E8052 Gigabit Ethernet Controller (ASRock)  
a0a0 0509 Marvell 88E8052 Gigabit Ethernet Controller (Aopen)  
4361 88E8050 PCI-E ASF Gigabit Ethernet Controller  
107b 3015 Marvell 88E8050 Gigabit Ethernet Controller (Gateway)  
11ab 5021 Marvell 88E8050 Gigabit Ethernet Controller (Intel)  
8086 3063 D925XCVLK mainboard  
8086 3439 Marvell 88E8050 Gigabit Ethernet Controller (Intel)  
4362 88E8053 PCI-E Gigabit Ethernet Controller  
103c 2a0d Marvell 88E8053  
Gigabit Ethernet Controller (Asus)  
1043 8142 Marvell 88E8053 Gigabit Ethernet controller PCIe (Asus)  
109f 3197 Marvell 88E8053 Gigabit Ethernet Controller (Trigem)  
10f7 8338 Marvell 88E8053 Gigabit Ethernet Controller (Panasonic)  
10fd a430 Marvell 88E8053 Gigabit Ethernet Controller (SOYO)  
1179 0001 Marvell 88E8053 Gigabit Ethernet Controller (Toshiba)  
1179 ff00 Marvell 88E8053 Gigabit Ethernet Controller (Compal)  
1179 ff10 Marvell 88E8053 Gigabit Ethernet Controller (Inventec)  
11ab 5321 Marvell RDK-8053  
1297 c240 Marvell 88E8053 Gigabit Ethernet Controller (Shuttle)

1297 c241 Marvell 88E8053 Gigabit Ethernet Controller (Shuttle)  
1297 c242 Marvell 88E8053 Gigabit Ethernet Controller (Shuttle)  
1297 c243 Marvell 88E8053 Gigabit Ethernet Controller (Shuttle)  
1297 c244 Marvell 88E8053 Gigabit Ethernet Controller (Shuttle)  
13d1 ac11 EGE5K - Giga Ethernet Expresscard  
1458 e000 Marvell 88E8053 Gigabit Ethernet Controller (Gigabyte)  
1462 058c  
Marvell 88E8053 Gigabit Ethernet Controller (MSI)  
14c0 0012 Marvell 88E8053 Gigabit Ethernet Controller (Compal)  
1558 04a0 Marvell 88E8053 Gigabit Ethernet Controller (Clevo)  
15bd 1003 Marvell 88E8053 Gigabit Ethernet Controller (DFI)  
161f 203c Marvell 88E8053 Gigabit Ethernet Controller (Arima)  
161f 203d Marvell 88E8053 Gigabit Ethernet Controller (Arima)  
1695 9029 Marvell 88E8053 Gigabit Ethernet Controller (Epox)  
17f2 2c08 Marvell 88E8053 Gigabit Ethernet Controller (Albatron)  
17ff 0585 Marvell 88E8053 Gigabit Ethernet Controller (Quanta)  
1849 8053 Marvell 88E8053 Gigabit Ethernet Controller (ASRock)  
1854 000b Marvell 88E8053 Gigabit Ethernet Controller (LGE)  
1854 000c Marvell 88E8053 Gigabit Ethernet Controller (LGE)  
1854 0010 Marvell 88E8053 Gigabit Ethernet Controller (LGE)  
1854 0013 Marvell 88E8053 Gigabit Ethernet Controller (LGE)  
1854 0014 Marvell 88E8053 Gigabit Ethernet Controller (LGE)  
1854 0015 Marvell 88E8053 Gigabit Ethernet  
Controller (LGE)  
1854 001a Marvell 88E8053 Gigabit Ethernet Controller (LGE)  
1854 001b Marvell 88E8053 Gigabit Ethernet Controller (LGE)  
1854 001d Marvell 88E8053 Gigabit Ethernet Controller (LGE)  
1854 001f Marvell 88E8053 Gigabit Ethernet Controller (LGE)  
1854 0021 Marvell 88E8053 Gigabit Ethernet Controller (LGE)  
1854 0022 Marvell 88E8053 Gigabit Ethernet Controller (LGE)  
270f 2801 Marvell 88E8053 Gigabit Ethernet Controller (Chaintech)  
a0a0 0506 Marvell 88E8053 Gigabit Ethernet Controller (Aopen)  
4363 88E8055 PCI-E Gigabit Ethernet Controller  
4364 88E8056 PCI-E Gigabit Ethernet Controller  
1043 81f8 Motherboard  
11ba 00ba 8056 Gigabit Ethernet Controller  
4365 88E8070 based Ethernet Controller  
4366 88EC036 PCI-E Gigabit Ethernet Controller  
4367 88EC032 Ethernet Controller  
4368 88EC034 Ethernet Controller  
4369 88EC042 Ethernet Controller  
436a 88E8058 PCI-E Gigabit Ethernet Controller  
11ab 00ba Imac 8,1 Wired Ethernet Adapter  
436b 88E8071  
PCI-E Gigabit Ethernet Controller  
436c 88E8072 PCI-E Gigabit Ethernet Controller  
436d 88E8055 PCI-E Gigabit Ethernet Controller  
4370 88E8075 PCI-E Gigabit Ethernet Controller

4380 88E8057 PCI-E Gigabit Ethernet Controller  
# AVB = "Audio Video Bridging"  
4381 Yukon Optima 88E8059 [PCIe Gigabit Ethernet Controller with AVB]  
1259 2803 AT-2814FX  
1259 2804 AT-2874xx  
4611 GT-64115 System Controller  
4620 GT-64120/64120A/64121A System Controller  
4801 GT-48001  
5005 Belkin F5D5005 Gigabit Desktop Network PCI Card  
5040 MV88SX5040 4-port SATA I PCI-X Controller  
5041 MV88SX5041 4-port SATA I PCI-X Controller  
5080 MV88SX5080 8-port SATA I PCI-X Controller  
5081 MV88SX5081 8-port SATA I PCI-X Controller  
5181 88f5181 [Orion-1] ARM SoC  
5182 88f5182 [Orion-NAS] ARM SoC  
5281 88f5281 [Orion-2] ARM SoC  
6041 MV88SX6041 4-port SATA II PCI-X Controller  
6042 88SX6042 PCI-X 4-Port SATA-II  
6081 MV88SX6081 8-port SATA II PCI-X Controller  
6101 88SE6101/6102 single-port  
PATA133 interface  
1043 82e0 P5K PRO Motherboard  
6121 88SE6111/6121 SATA II / PATA Controller  
# 6111: 1 SATA port; 6121: 2 SATA ports  
11ab 6121 88SE6111/6121 1/2 port SATA II + 1 port PATA Controller  
6141 88SE614x SATA II PCI-E controller  
6145 88SE6145 SATA II PCI-E controller  
6180 88F6180 [Kirkwood] ARM SoC  
6192 88F6190/6192 [Kirkwood] ARM SoC  
6281 88F6281 [Kirkwood] ARM SoC  
# This device ID was used for earlier chips.  
6381 MV78xx0 [Discovery Innovation] ARM SoC  
6440 88SE63x0 x1, 88SE6440 x4 PCIe SAS/SATA 3Gb/s RAID controller  
6450 64560 System Controller  
6460 MV64360/64361/64362 System Controller  
6480 MV64460/64461/64462 System Controller  
1775 c200 C2K CompactPCI single board computer  
6485 MV64460/64461/64462 System Controller, Revision B  
6560 88F6560 [Avanta] ARM SoC  
6710 88F6710 [Armada 370] ARM SoC  
6820 88F6820 [Armada 385] ARM SoC  
6828 88F6828 [Armada 388] ARM SoC  
6920 88F6920 [Armada 390] ARM SoC  
7042 88SX7042 PCIe 4-port SATA-II controller  
16b8  
434b Tempo SATA E4P  
7810 MV78100 [Discovery Innovation] ARM SoC  
7820 MV78200 [Discovery Innovation] ARM SoC

7823 MV78230 [Armada XP] ARM SoC  
7846 MV78460 [Armada XP] ARM SoC  
d40f Bobcat3 Ethernet Switch  
f003 GT-64010 Primary Image Piranha Image Generator  
11ac Canon Information Systems Research Aust.  
11ad Lite-On Communications Inc  
0002 LNE100TX  
11ad 0002 LNE100TX  
11ad 0003 LNE100TX  
11ad f003 LNE100TX  
11ad ffff LNE100TX  
1385 f004 FA310/TX LAN 10/100 PCI Ethernet Adapter  
2646 f002 KNE110TX EtheRx Fast Ethernet  
c115 LNE100TX [Linksys EtherFast 10/100]  
11ad c001 LNE100TX [ver 2.0]  
2646 000b KNE111TX  
11ae Aztech System Ltd  
11af Avid Technology Inc.  
0001 Cinema  
ee40 Digidesign Audiomedia III  
11b0 V3 Semiconductor Inc.  
0002 V300PSC  
0292 V292PBC [Am29030/40 Bridge]  
0960 V96xPBC  
880a Deltacast Delta-HD-22  
c960 V96DPC  
11b1 Apricot Computers  
11b2 Eastman Kodak  
11b3 Barr Systems Inc.  
11b4 Leitch Technology International  
11b5  
Radstone Technology Plc  
11b6 United Video Corp  
11b7 Motorola  
11b8 XPoint Technologies, Inc  
0001 Quad PeerMaster  
11b9 Pathlight Technology Inc.  
c0ed SSA Controller  
11ba Videotron Corp  
11bb Pyramid Technology  
11bc Network Peripherals Inc  
0001 NP-PCI  
11bd Pinnacle Systems Inc.  
002e PCTV 40i  
0040 Royal TS Function 1  
11bd 0044 PCTV 2000i Dual DVB-T Pro PCI Tuner 1  
11bd 0045 PCTV Dual Sat Pro PCI 4000i Tuner 1  
0041 RoyalTS Function 2

11bd 0044 PCTV 2000i Dual DVB-T Pro PCI Tuner 2  
11bd 0045 PCTV Dual Sat Pro PCI 4000i Tuner 2  
0042 Royal TS Function 3  
11bd 0044 PCTV 2000i Dual DVB-T Pro PCI Common  
11bd 0045 PCTV Dual Sat Pro PCI 4000i Common  
0051 PCTV HD 800i  
bede AV/DV Studio Capture Card  
11be International Microcircuits Inc  
11bf Astrodesign, Inc.  
11c0 Hewlett Packard  
# nee Agere Systems nee Lucent Microelectronics  
11c1 LSI Corporation  
0440 56k WinModem  
1033 8015 LT WinModem 56k Data+Fax+Voice+Dsvd  
1033 8047 LT WinModem 56k Data+Fax+Voice+Dsvd  
1033  
804f LT WinModem 56k Data+Fax+Voice+Dsvd  
10cf 102c LB LT Modem V.90 56k  
10cf 104a BIBLO LT Modem 56k  
10cf 105f LB2 LT Modem V.90 56k  
1179 0001 Internal V.90 Modem  
11c1 0440 LT WinModem 56k Data+Fax+Voice+Dsvd  
122d 4101 MDP7800-U Modem  
122d 4102 MDP7800SP-U Modem  
13e0 0040 LT WinModem 56k Data+Fax+Voice+Dsvd  
13e0 0440 LT WinModem 56k Data+Fax+Voice+Dsvd  
13e0 0441 LT WinModem 56k Data+Fax+Voice+Dsvd  
13e0 0450 LT WinModem 56k Data+Fax+Voice+Dsvd  
13e0 f100 LT WinModem 56k Data+Fax+Voice+Dsvd  
13e0 f101 LT WinModem 56k Data+Fax+Voice+Dsvd  
144d 2101 LT56PV Modem  
149f 0440 LT WinModem 56k Data+Fax+Voice+Dsvd  
0441 56k WinModem  
1033 804d LT WinModem 56k Data+Fax  
1033 8065 LT WinModem 56k Data+Fax  
1092 0440 Supra 56i  
1179 0001 Internal V.90 Modem  
11c1 0440 LT WinModem 56k Data+Fax  
11c1 0441 LT WinModem 56k Data+Fax  
122d 4100 MDP7800-U Modem  
13e0 0040 LT WinModem 56k Data+Fax  
13e0 0100 LT WinModem 56k  
Data+Fax  
13e0 0410 LT WinModem 56k Data+Fax  
13e0 0420 TelePath Internet 56k WinModem  
13e0 0440 LT WinModem 56k Data+Fax  
13e0 0443 LT WinModem 56k Data+Fax  
13e0 f102 LT WinModem 56k Data+Fax

1416 9804 CommWave 56k Modem  
141d 0440 LT WinModem 56k Data+Fax  
144f 0441 Lucent 56k V.90 DF Modem  
144f 0449 Lucent 56k V.90 DF Modem  
144f 110d Lucent Win Modem  
1468 0441 Presario 56k V.90 DF Modem  
1668 0440 Lucent Win Modem  
0442 56k WinModem  
11c1 0440 LT WinModem 56k Data+Fax+Voice+VoiceView+Dsvd  
11c1 0442 LT WinModem 56k Data+Fax+Voice+VoiceView+Dsvd  
13e0 0412 LT WinModem 56k Data+Fax+Voice+VoiceView+Dsvd  
13e0 0442 LT WinModem 56k Data+Fax+Voice+VoiceView+Dsvd  
13fc 2471 LT WinModem 56k Data+Fax+Voice+VoiceView+Dsvd  
144d 2104 LT56PT Modem  
144f 1104 LT WinModem 56k Data+Fax+Voice+VoiceView+Dsvd  
149f 0440 LT WinModem 56k Data+Fax+Voice+VoiceView+Dsvd  
1668 0440 LT WinModem 56k Data+Fax+Voice+VoiceView+Dsvd  
0443 LT WinModem  
0444 LT WinModem  
0445  
LT WinModem  
8086 2203 PRO/100+ MiniPCI (probably an Ambit U98.003.C.00 combo card)  
8086 2204 PRO/100+ MiniPCI on Armada E500  
0446 LT WinModem  
0447 LT WinModem  
0448 WinModem 56k  
1014 0131 Lucent Win Modem  
1033 8066 LT WinModem 56k Data+Fax+Voice+Dsvd  
13e0 0030 56k Voice Modem  
13e0 0040 LT WinModem 56k Data+Fax+Voice+Dsvd  
# Actiontech eth+modem card as used by Dell &c.  
1668 2400 LT WinModem 56k (MiniPCI Ethernet+Modem)  
0449 L56xM+S [Mars-2] WinModem 56k  
0e11 b14d 56k V.90 Modem  
1014 018c ThinkPad 600X  
13e0 0020 LT WinModem 56k Data+Fax  
13e0 0041 TelePath Internet 56k WinModem  
1436 0440 Lucent Win Modem  
144f 0449 Lucent 56k V.90 DFi Modem  
1468 0410 IBM ThinkPad T23  
1468 0440 Lucent Win Modem  
1468 0449 Presario 56k V.90 DFi Modem  
044a F-1156IV WinModem (V90, 56KFlex)  
10cf 1072 LB Global LT Modem  
13e0 0012 LT WinModem 56k Data+Fax+Voice+VoiceView+Dsvd  
13e0 0042 LT WinModem 56k Data+Fax+Voice+VoiceView+Dsvd  
144f

1005 LT WinModem 56k Data+Fax+Voice+VoiceView+Dsvd  
044b LT WinModem  
044c LT WinModem  
044d LT WinModem  
044e LT WinModem  
044f V90 WildWire Modem  
0450 LT WinModem  
1033 80a8 Versa Note Vxi  
144f 4005 Magnia SG20  
1468 0450 Evo N600c  
0451 LT WinModem  
0452 LT WinModem  
0453 LT WinModem  
0454 LT WinModem  
0455 LT WinModem  
0456 LT WinModem  
0457 LT WinModem  
0458 LT WinModem  
0459 LT WinModem  
045a LT WinModem  
045c LT WinModem  
0461 V90 WildWire Modem  
0462 V90 WildWire Modem  
0480 Venus Modem (V90, 56KFlex)  
048c V.92 56K WinModem  
# InPorte Home Internal 56k Modem/fax/answering machine/SMS Features  
048f V.92 56k WinModem  
0620 Lucent V.92 Data/Fax Modem  
2600 StarPro26XX family (SP2601, SP2603, SP2612) DSP  
5400 OR3TP12 FPSC  
5656 Venus Modem  
5801 USB  
5802 USS-312 USB Controller  
5803 USS-344S USB Controller  
5811 FW322/323 [TrueFire] 1394a Controller  
103c 2a34 Pavilion a1677c  
103c 2a6f Asus IPIBL-LB Motherboard  
103c 2a9e Pavilion  
p6310f  
1043 8294 LSI FW322/323 IEEE 1394a FireWire Controller  
11bd 000e LSI FW323  
8086 524c D865PERL mainboard  
9005 0033 Adaptec AFW-2100 (HP) 2102900-R  
dead 0800 FireWire Host Bus Adapter  
5901 FW643 [TrueFire] PCIe 1394b Controller  
11c1 5900 FW643 [TrueFire] PCIe 1394b Controller  
1443 0643 FireBoard800-e V.2  
1546 0643 FWB-PCIE1X2x



5903 FW533 [TrueFire] PCIe 1394a Controller  
8110 T8110 H.100/H.110 TDM switch  
12d9 000c E1/T1 PMXc cPCI carrier card  
ab10 WL60010 Wireless LAN MAC  
ab11 WL60040 Multimode Wireless LAN MAC  
11c1 ab12 WaveLAN 11abg Cardbus card (Model 1102)  
11c1 ab13 WaveLAN 11abg MiniPCI card (Model 0512)  
11c1 ab15 WaveLAN 11abg Cardbus card (Model 1106)  
11c1 ab16 WaveLAN 11abg MiniPCI card (Model 0516)  
ab20 ORiNOCO PCI Adapter  
ab21 Agere Wireless PCI Adapter  
ab30 Hermes2 Mini-PCI WaveLAN a/b/g  
14cd 2012 Hermes2 Mini-PCI WaveLAN a/b/g  
ed00 ET-131x PCI-E Ethernet Controller  
ed01 ET-131x PCI-E Ethernet Controller  
11c2  
Sand Microelectronics  
11c3 NEC Corporation  
11c4 Document Technologies, Inc  
11c5 Shiva Corporation  
11c6 Dainippon Screen Mfg. Co. Ltd  
11c7 D.C.M. Data Systems  
11c8 Dolphin Interconnect Solutions AS  
0658 PSB32 SCI-Adapter D31x  
d665 PSB64 SCI-Adapter D32x  
d667 PSB66 SCI-Adapter D33x  
11c9 Magma  
0010 16-line serial port w/- DMA  
0011 4-line serial port w/- DMA  
11ca LSI Systems, Inc  
11cb Specialix Research Ltd.  
2000 PCI\_9050  
11cb 0200 SX  
11cb b008 I/O8+  
4000 SUPI\_1  
8000 T225  
11cc Michels & Kleberhoff Computer GmbH  
11cd HAL Computer Systems, Inc.  
11ce Netaccess  
11cf Pioneer Electronic Corporation  
11d0 Lockheed Martin Federal Systems-Manassas  
11d1 Auravision  
01f7 VxP524  
01f9 VxP951  
11d2 Intercom Inc.  
11d3 Trancell Systems Inc  
11d4 Analog Devices  
1535 Blackfin BF535 processor

1805 SM56 PCI modem  
11d5 Ikon Corporation  
0115 10115  
0117 10117  
11d6 Tekelec Telecom  
11d7 Trenton Technology, Inc.  
11d8 Image Technologies Development  
11d9 TEC Corporation  
11da  
Novell  
11db Sega Enterprises Ltd  
11dc Qestra Corporation  
11dd Crosfield Electronics Limited  
11de Zoran Corporation  
6017 miroVIDEO DC30  
6057 ZR36057PQC Video cutting chipset  
1031 7efe DC10 Plus  
1031 fc00 MiroVIDEO DC50, Motion JPEG Capture/CODEC Board  
12f8 8a02 Tekram Video Kit  
13ca 4231 JPEG/TV Card  
6120 ZR36120  
1328 f001 Cinemaster C DVD Decoder  
13c2 0000 MediaFocus Satellite TV Card  
1de1 9fff Video Kit C210  
11df New Wave PDG  
11e0 Cray Communications A/S  
11e1 GEC Plessey Semi Inc.  
11e2 Samsung Information Systems America  
11e3 Quicklogic Corporation  
0001 COM-ON-AIR Dosch&Amand DECT  
0560 QL5064 Companion Design Demo Board  
5030 PC Watchdog  
8417 QL5064 [QuickPCI] PCI v2.2 bridge for SMT417 Dual TMS320C6416T PMC Module  
11e4 Second Wave Inc  
11e5 IIX Consulting  
11e6 Mitsui-Zosen System Research  
11e7 Toshiba America, Elec. Company  
11e8 Digital Processing Systems Inc.  
11e9 Highwater Designs Ltd.  
11ea Elsag Bailey  
11eb Formation  
Inc.  
11ec Coreco Inc  
000d Oculus-F/64P  
1800 Cobra/C6  
11ed Mediamatics  
11ee Dome Imaging Systems Inc  
11ef Nicolet Technologies B.V.

11f0 Compu-Shack  
4231 FDDI  
4232 FASTline UTP Quattro  
4233 FASTline FO  
4234 FASTline UTP  
4235 FASTline-II UTP  
4236 FASTline-II FO  
4731 GIGAline  
11f1 Symbios Logic Inc  
11f2 Picture Tel Japan K.K.  
11f3 Keithley Metrabyte  
0011 KPCI-PIO24  
11f4 Kinetic Systems Corporation  
2915 CAMAC controller  
11f5 Computing Devices International  
11f6 Compex  
0112 ENet100VG4  
0113 FreedomLine 100  
1401 ReadyLink 2000  
2011 RL100-ATX 10/100  
11f6 2011 RL100-ATX  
2201 ReadyLink 100TX (Winbond W89C840)  
11f6 2011 ReadyLink 100TX  
9881 RL100TX Fast Ethernet  
11f7 Scientific Atlanta  
11f8 PMC-Sierra Inc.  
5220 BR522x [PMC-Sierra maxRAID SAS Controller]  
7364 PM7364 [FREEDM - 32 Frame Engine & Datalink Mgr]  
7375 PM7375 [LASAR-155 ATM SAR]  
7384 PM7384 [FREEDM - 84P672 Frm Engine & Datalink Mgr]  
8000 PM8000 [SPC - SAS Protocol Controller]  
8009  
PM8009 SPCve 8x6G  
8018 PM8018 Adaptec SAS Adaptor ASA-70165H PCIe Gen3 x8 6 Gbps 16-lane 4x SFF-8644  
8032 PM8032 Tachyon QE8  
117c 003a Celerity FC-81EN Fibre Channel Adapter  
117c 003b Celerity FC-82EN Fibre Channel Adapter  
117c 003c Celerity FC-84EN Fibre Channel Adapter  
117c 403b ThunderLink FC 1082 Fibre Channel Adapter  
8053 PM8053 SXP 12G 24-port SAS/SATA expander  
8054 PM8054 SXP 12G 36-port SAS/SATA expander  
8055 PM8055 SXP 12G 48-port SAS/SATA expander  
8056 PM8056 SXP 12G 68-port SAS/SATA expander  
8060 PM8060 SRCv 12G eight-port SAS/SATA RoC  
8063 PM8063 SRCv 12G 16-port SAS/SATA RoC  
8070 PM8070 Tachyon SPCv 12G eight-port SAS/SATA controller  
8071 PM8071 Tachyon SPCve 12G eight-port SAS/SATA controller  
8072 PM8072 Tachyon SPCv 12G 16-port SAS/SATA controller

8073 PM8073 Tachyon SPCve 12G 16-port SAS/SATA controller  
8531 PM8531 PFX 24xG3 PCIe Fanout Switch  
8532 PM8532 PFX 32xG3 PCIe Fanout Switch  
8533 PM8533 PFX 48xG3 PCIe Fanout  
Switch  
8534 PM8534 PFX 64xG3 PCIe Fanout Switch  
8535 PM8535 PFX 80xG3 PCIe Fanout Switch  
8536 PM8536 PFX 96xG3 PCIe Fanout Switch  
1bd4 0081 PM8536 PFX 96xG3 PCIe Fanout Switch  
8546 PM8546 B-FEIP PSX 96xG3 PCIe Storage Switch  
8562 PM8562 Switchtec PFX-L 32xG3 Fanout-Lite PCIe Gen3 Switch  
11f9 I-Cube Inc  
11fa Kasan Electronics Company, Ltd.  
11fb Datel Inc  
11fc Silicon Magic  
11fd High Street Consultants  
# nee Control, Inc.  
11fe Pepperl+Fuchs  
0001 RocketPort PCI 32-port w/external I/F  
0002 RocketPort PCI 8-port w/external I/F  
0003 RocketPort PCI 16-port w/external I/F  
0004 RocketPort PCI 4-port w/Quad Cable  
0005 RocketPort PCI 8-port w/Octa Cable  
0006 RocketPort PCI 8-port w/RJ11 connectors  
0007 RocketPort PCI 4-port w/RJ45 connectors  
0008 RocketPort PCI 8-port w/DB78 SNI connector (Siemens)  
0009 RocketPort PCI 16-port w/DB78 SNI connector (Siemens)  
000a RocketPort PCI Plus 4-port w/Quad Cable  
000b RocketPort PCI Plus 8-port w/Octa Cable  
000c RocketModem  
II 6-port  
000d RocketModem 4-port  
000e RocketPort PCI Plus 2-port RS-232 w/DB9 connectors  
000f RocketPort PCI Plus 2-port SMPTE w/DB9 connectors  
0040 RocketPort INFINITY 8-port w/Octa Cable RJ45  
0041 RocketPort INFINITY 32-port w/external I/F  
0042 RocketPort INFINITY 8-port w/external I/F  
0043 RocketPort INFINITY 16-port w/external I/F  
0044 RocketPort INFINITY 4-port w/Quad Cable DB  
0045 RocketPort INFINITY 8-port w/Octa Cable DB  
0046 RocketPort INFINITY 4-port w/external I/F  
0047 RocketPort INFINITY 4J (4-port) w/RJ45 connectors  
0048 RocketPort INFINITY 4J (4-port) w/RJ45 connectors  
004a RocketPort INFINITY Plus 4-port  
004b RocketPort INFINITY Plus 8-port  
004c RocketModem INFINITY III 8-port  
004d RocketModem INFINITY III 4-port  
004e RocketPort INFINITY Plus 2-port

004f RocketPort INFINITY 2-port SMPTE w/DB9 connectors  
0050 RocketPort INFINITY Plus 4-port RJ45  
0051 RocketPort INFINITY Plus 8-port RJ11  
0052 RocketPort INFINITY 8-port SMPTE  
w/DB9 Connectors  
0060 RocketPort EXPRESS 8-port w/Octa Cable  
0061 RocketPort EXPRESS 32-port w/external I/F  
0062 RocketPort EXPRESS 8-Port w/external I/F  
0063 RocketPort EXPRESS 16-port w/external I/F  
0064 RocketPort EXPRESS 4-port w/Quad Cable  
0065 RocketPort EXPRESS 8-port w/Octa Cable  
0066 RocketPort EXPRESS 4-port w/external I/F  
0067 RocketPort EXPRESS 4J (4-port) w/RJ45 connectors  
0068 RocketPort EXPRESS 8J (8-port) w/RJ11 connectors  
006f RocketPort EXPRESS SMPTE 2-port  
0072 RocketPort EXPRESS SMPTE 8-port w/external I/F  
0801 RocketPort uPCI 32-port w/external I/F  
0802 RocketPort uPCI 8-port w/external I/F  
0803 RocketPort uPCI 16-port w/external I/F  
0805 RocketPort uPCI 8-port w/Octa Cable  
080b RocketPort Plus uPCI 8-port w/Octa Cable  
080c RocketModem III 8-port  
080d RocketModem III 4-port  
080e RocketPort uPCI 2-port RS232 w/DB9 connectors  
080f RocketPort uPCI SMPTE 2-port  
0810 RocketPort Plus uPCI 4J (4-port) w/RJ45 connectors  
0811 RocketPort  
Plus uPCI 8J (8-port) w/RJ11 connectors  
0812 RocketPort Plus uPCI 422 8-port  
0813 RocketModem IV uPCI 8-port  
0814 RocketModem IV uPCI 4-port  
0903 RocketPort Compact PCI 16 port w/external I/F  
# 16954 UART  
8015 RocketPort 550 4-port  
8805 RocketPort uPCI 4-port w/Quad Cable  
880b RocketPort Plus uPCI 4-port w/Quad Cable  
8812 RocketPort Plus uPCI 4-port RS422 w/Quad Cable  
11ff Scion Corporation  
0003 AG-5  
1200 CSS Corporation  
1201 Vista Controls Corp  
1202 Network General Corp.  
4300 Gigabit Ethernet Adapter  
1202 9841 SK-9841 LX  
1202 9842 SK-9841 LX dual link  
1202 9843 SK-9843 SX  
1202 9844 SK-9843 SX dual link  
1203 Bayer Corporation, Agfa Division

1204 Lattice Semiconductor Corporation  
1965 SB6501 802.11ad Wireless Network Adapter  
1205 Array Corporation  
1206 Amdahl Corporation  
1208 Parsytec GmbH  
4853 HS-Link Device  
1209 SCI Systems Inc  
120a Synaptel  
120b Adaptive Solutions  
120c Technical Corp.  
120d Compression Labs, Inc.  
120e Cyclades  
Corporation  
0100 Cyclom-Y below first megabyte  
0101 Cyclom-Y above first megabyte  
0102 Cyclom-4Y below first megabyte  
0103 Cyclom-4Y above first megabyte  
0104 Cyclom-8Y below first megabyte  
0105 Cyclom-8Y above first megabyte  
0200 Cyclades-Z below first megabyte  
0201 Cyclades-Z above first megabyte  
0300 PC300/RSV or /X21 (2 ports)  
0301 PC300/RSV or /X21 (1 port)  
0310 PC300/TE (2 ports)  
0311 PC300/TE (1 port)  
0320 PC300/TE-M (2 ports)  
0321 PC300/TE-M (1 port)  
0400 PC400  
120f Essential Communications  
0001 Roadrunner serial HIPPI  
1210 Hyperparallel Technologies  
1211 Braintech Inc  
1213 Applied Intelligent Systems, Inc.  
1214 Performance Technologies, Inc.  
1215 Interware Co., Ltd  
1216 Purup Prepress A/S  
1217 O2 Micro, Inc.  
00f7 Firewire (IEEE 1394)  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
1179 ff50 Satellite P305D-S8995E  
10f7 1394 OHCI Compliant Host Controller  
11f7 OZ600 1394a-2000 Controller  
1028 04a3 Precision M4600  
13f7 1394  
OHCI Compliant Host Controller  
6729 OZ6729  
673a OZ6730  
6832 OZ6832/6833 CardBus Controller [Saturn]

6836 OZ6836/6860 CardBus Controller [Mercury]  
6872 OZ6812 CardBus Controller [Challenger]  
6925 OZ6922 CardBus Controller  
6933 OZ6933/711E1 CardBus/SmartCardBus Controller  
1025 1016 Travelmate 612 TX  
6972 OZ601/6912/711E0 CardBus/SmartCardBus Controller  
1014 020c ThinkPad R30  
1028 0152 Latitude D500  
1179 0001 Magnia Z310  
7110 OZ711Mx 4-in-1 MemoryCardBus Accelerator  
103c 088c NC8000 laptop  
103c 0890 NC6000 laptop  
1734 106c Amilo A1645  
7112 OZ711EC1/M1 SmartCardBus/MemoryCardBus Controller  
7113 OZ711EC1 SmartCardBus Controller  
1025 0035 TravelMate 660  
7114 OZ711M1/MC1 4-in-1 MemoryCardBus Controller  
7120 Integrated MMC/SD Controller  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
1179 ff50 Satellite P305D-S8995E  
7130 Integrated MS/xD Controller  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
1179 ff50 Satellite P305D-S8995E  
7134  
OZ711MP1/MS1 MemoryCardBus Controller  
7135 Cardbus bridge  
7136 OZ711SP1 Memory CardBus Controller  
71e2 OZ711E2 SmartCardBus Controller  
7212 OZ711M2 4-in-1 MemoryCardBus Controller  
7213 OZ6933E CardBus Controller  
7223 OZ711M3/MC3 4-in-1 MemoryCardBus Controller  
103c 088c NC8000 laptop  
103c 0890 NC6000 laptop  
10cf 11c4 Lifebook P5020D Laptop  
7233 OZ711MP3/MS3 4-in-1 MemoryCardBus Controller  
8120 Integrated MMC/SD Controller  
8130 Integrated MS/MSPRO/xD Controller  
8220 OZ600FJ1/OZ900FJ1 SD/MMC Card Reader Controller  
8221 OZ600FJ0/OZ900FJ0/OZ600FJS SD/MMC Card Reader Controller  
8320 OZ600RJ1/OZ900RJ1 SD/MMC Card Reader Controller  
1028 04a3 Precision M4600  
8321 OZ600RJ0/OZ900RJ0/OZ600RJS SD/MMC Card Reader Controller  
8330 OZ600 MS/xD Controller  
1028 04a3 Precision M4600  
8331 O2 Flash Memory Card  
8520 SD/MMC Card Reader Controller  
8621 SD/MMC Card Reader Controller  
17aa 5068 Thinkpad E480/E580

8760 FORESEE E2M2 NVMe SSD  
1218 Hybricon  
Corp.  
1219 First Virtual Corporation  
121a 3Dfx Interactive, Inc.  
0001 Voodoo  
0002 Voodoo 2  
0003 Voodoo Banshee  
1092 0003 Monster Fusion  
1092 4000 Monster Fusion  
1092 4002 Monster Fusion  
1092 4801 Monster Fusion AGP  
1092 4803 Monster Fusion AGP  
1092 8030 Monster Fusion  
1092 8035 Monster Fusion AGP  
10b0 0001 Dragon 4000  
1102 1017 3D Blaster Banshee PCI (CT6760)  
1102 1018 3D Blaster Banshee VE  
121a 0001 Voodoo Banshee AGP  
121a 0003 Voodoo Banshee AGP SGRAM  
121a 0004 Voodoo Banshee  
139c 0016 Raven  
139c 0017 Raven  
14af 0002 Maxi Gamer Phoenix  
0004 Voodoo Banshee [Velocity 100]  
0005 Voodoo 3  
121a 0004 Voodoo3 AGP  
121a 0030 Voodoo3 AGP  
121a 0031 Voodoo3 AGP  
121a 0034 Voodoo3 AGP  
121a 0036 Voodoo3 2000 PCI  
121a 0037 Voodoo3 AGP  
121a 0038 Voodoo3 AGP  
121a 003a Voodoo3 AGP  
121a 0044 Voodoo3  
121a 004b Velocity 100  
121a 004c Velocity 200  
121a 004d Voodoo3 AGP  
121a 004e Voodoo3 AGP  
121a 0051 Voodoo3  
AGP  
121a 0052 Voodoo3 AGP  
121a 0057 Voodoo3 3000 PCI  
121a 0060 Voodoo3 3500 TV (NTSC)  
121a 0061 Voodoo3 3500 TV (PAL)  
121a 0062 Voodoo3 3500 TV (SECAM)  
0009 Voodoo 4 / Voodoo 5  
121a 0003 Voodoo5 PCI 5500



121a 0009 Voodoo5 AGP 5500/6000  
0057 Voodoo 3/3000 [Avenger]  
121b Advanced Telecommunications Modules  
121c Nippon Texaco., Ltd  
121d LiPPERT ADLINK Technology GmbH  
121e CSPI  
0201 Myrinet 2000 Scalable Cluster Interconnect  
121f Arcus Technology, Inc.  
1220 Ariel Corporation  
1220 AMCC 5933 TMS320C80 DSP/Imaging board  
1221 Contec Co., Ltd  
9172 PO-64L(PCI)H [Isolated Digital Output Board for PCI]  
91a2 PO-32L(PCI)H [Isolated Digital Output Board for PCI]  
91c3 DA16-16(LPCI)L [Un-insulated highly precise analog output board for Low Profile PCI]  
b152 DIO-96D2-LPCI  
c103 ADA16-32/2(PCI)F [High-Speed Analog I/O Board for PCI]  
1222 Ancor Communications, Inc.  
1223 Artesyn Communication Products  
0003 PM/Link  
0004 PM/T1  
0005 PM/E1  
0008 PM/SLS  
0009  
BajaSpan Resource Target  
000a BajaSpan Section 0  
000b BajaSpan Section 1  
000c BajaSpan Section 2  
000d BajaSpan Section 3  
000e PM/PPC  
1224 Interactive Images  
1225 Power I/O, Inc.  
1227 EIZO Rugged Solutions  
0006 Raptor GFX 8P  
0023 Raptor GFX [I100T]  
0045 Raptor 4000-L [Linux version]  
004a Raptor 4000-LR-L [Linux version]  
1228 Norsk Elektro Optikk A/S  
1229 Data Kinesis Inc.  
122a Integrated Telecom  
122b LG Industrial Systems Co., Ltd  
122c Sican GmbH  
122d Aztech System Ltd  
1206 368DSP  
1400 Trident PCI288-Q3DII (NX)  
50dc 3328 Audio  
122d 0001 3328 Audio  
80da 3328 Audio  
122d 0001 3328 Audio

122e Xyratex  
7722 Napatech XL1  
7724 Napatech XL2/XA  
7729 Napatech XD  
122f Andrew Corporation  
1230 Fishcamp Engineering  
1231 Woodward McCoach, Inc.  
04e1 Desktop PCI Telephony 4  
05e1 Desktop PCI Telephony 5/6  
0d00 LightParser  
0d02 LightParser 2  
0d13 Desktop PCI L1/L3 Telephony  
1232 GPT Limited  
1233 Bus-Tech, Inc.  
# nee Risq Modular Systems,  
Inc.  
1235 SMART Modular Technologies  
1236 Sigma Designs Corporation  
0000 RealMagic64/GX  
6401 REALmagic 64/GX (SD 6425)  
1237 Alta Technology Corporation  
1238 Adtran  
1239 3DO Company  
123a Visicom Laboratories, Inc.  
123b Seeq Technology, Inc.  
123c Century Systems, Inc.  
123d Engineering Design Team, Inc.  
0000 EasyConnect 8/32  
0002 EasyConnect 8/64  
0003 EasyIO  
0047 PCIe4 CDa  
004b PCIe4 CDa 16  
009d VisionLink F1  
00a0 PCIe8g3 S5 (10G/40G)  
00a3 VisionLink F4  
00a9 VisionLink CLS  
00ab PCIe8g3 A5 10G  
00b5 PCIe8 RFX SDR  
123e Simutech, Inc.  
# nee C-Cube Microsystems / acquired by Magnum Semiconductor  
123f LSI Logic  
00e4 MPEG  
8120 DVxplora Codec  
10de 01e1 NVTV PAL  
10de 01e2 NVTV NTSC  
10de 01e3 NVTV PAL  
10de 0248 NVTV NTSC  
10de 0249 NVTV PAL

11bd 0006 DV500 E4  
11bd 000a DV500 E4  
11bd 000f DV500 E4  
1809 0016 Emuzed MAUI-III PCI PVR FM TV  
8888 Cinemaster C 3.0 DVD Decoder  
1002 0001 Cinemaster C 3.0 DVD Decoder  
1002 0002 Cinemaster  
C 3.0 DVD Decoder  
1328 0001 Cinemaster C 3.0 DVD Decoder  
1240 Marathon Technologies Corp.  
1241 DSC Communications  
# Formerly Jaycor Networks, Inc.  
1242 JNI Corporation  
1560 JNIC-1560 PCI-X Fibre Channel Controller  
1242 6562 FCX2-6562 Dual Channel PCI-X Fibre Channel Adapter  
1242 656a FCX-6562 PCI-X Fibre Channel Adapter  
4643 FCI-1063 Fibre Channel Adapter  
6562 FCX2-6562 Dual Channel PCI-X Fibre Channel Adapter  
656a FCX-6562 PCI-X Fibre Channel Adapter  
1243 Delphax  
# Audio-Visuelles Marketing und Computersysteme  
1244 AVM GmbH  
0700 B1 ISDN  
0800 C4 ISDN  
0a00 A1 ISDN [Fritz]  
1244 0a00 FRITZ!Card ISDN Controller  
0e00 Fritz!Card PCI v2.0 ISDN  
0e80 Fritz!Card PCI v2.1 ISDN  
1244 0e00 PSB 3100F (AVM KAFKA) [Fritz!Card PCI v2.1]  
1100 C2 ISDN  
1200 T1 ISDN  
2700 Fritz!Card DSL SL  
2900 Fritz!Card DSL v2.0  
1245 A.P.D., S.A.  
1246 Dipix Technologies, Inc.  
1247 Xylon Research, Inc.  
1248 Central Data Corporation  
1249 Samsung Electronics Co., Ltd.  
124a  
AEG Electrocom GmbH  
124b SBS/Greenspring Modular I/O  
0040 PCI-40A or cPCI-200 Quad IndustryPack carrier  
124b 9080 PCI9080 Bridge  
124c Solitron Technologies, Inc.  
124d Stallion Technologies, Inc.  
0000 EasyConnection 8/32  
0002 EasyConnection 8/64  
0003 EasyIO

0004 EasyConnection/RA  
124e Cylink  
124f Infortrend Technology, Inc.  
0041 IFT-2000 Series RAID Controller  
1250 Hitachi Microcomputer System Ltd  
1251 VLSI Solutions Oy  
1253 Guzik Technical Enterprises  
1254 Linear Systems Ltd.  
0065 DVB Master FD  
007c DVB Master Quad/o  
1255 Optibase Ltd  
1110 MPEG Forge  
1210 MPEG Fusion  
2110 VideoPlex  
2120 VideoPlex CC  
2130 VideoQuest  
1256 Perceptive Solutions, Inc.  
4201 PCI-2220I  
4401 PCI-2240I  
5201 PCI-2000  
1257 Vertex Networks, Inc.  
1258 Gilbarco, Inc.  
# nee Allied Telesyn International  
1259 Allied Telesis  
2560 AT-2560 Fast Ethernet Adapter (i82557B)  
2801 AT-2801FX (RTL-8139)  
a117 RTL81xx Fast Ethernet  
a11e RTL81xx Fast Ethernet  
a120 21x4x  
DEC-Tulip compatible 10/100 Ethernet  
125a ABB Power Systems  
125b Asix Electronics Corporation  
1400 AX88141 Fast Ethernet Controller  
1186 1100 AX8814X Based PCI Fast Ethernet Adapter  
9100 AX99100 PCIe to Multi I/O Controller  
a000 1000 Serial Port  
a000 2000 Parallel Port  
a000 6000 SPI  
a000 7000 Local Bus  
ea50 1c10 RXi2-BP  
125c Aurora Technologies, Inc.  
0101 Saturn 4520P  
0640 Aries 16000P  
125d ESS Technology  
0000 ES336H Fax Modem (Early Model)  
1948 ES1948 Maestro-1  
1968 ES1968 Maestro 2  
1028 0085 ES1968 Maestro-2 PCI

1033 8051 ES1968 Maestro-2 Audiodrive  
1969 ES1938/ES1946/ES1969 Solo-1 Audiodrive  
1014 0166 ES1969 SOLO-1 AudioDrive on IBM Aptiva Mainboard  
125d 8888 Solo-1 Audio Adapter  
125d 8898 ES1938S TTSOLO1-SL [TerraTec 128i PCI]  
153b 111b Terratec 128i PCI  
1978 ES1978 Maestro 2E  
0e11 b112 Armada M700/E500  
1033 803c ES1978 Maestro-2E Audiodrive  
1033 8058 ES1978 Maestro-2E Audiodrive  
1092 4000 Monster Sound MX400  
1179  
0001 ES1978 Maestro-2E Audiodrive  
1988 ES1988 Allegro-1  
0e11 0098 Evo N600c  
1092 4100 Sonic Impact S100  
125d 0431 Allegro AudioDrive  
125d 1988 ESS Allegro-1 Audiodrive  
125d 1998 Allegro AudioDrive  
125d 1999 Allegro-1 AudioDrive  
1989 ESS Modem  
125d 1989 ESS Modem  
1998 ES1983S Maestro-3i PCI Audio Accelerator  
1028 00b1 Latitude C600  
1028 00e5 Latitude C810  
1028 00e6 ES1983S Maestro-3i (Dell Inspiron 8100)  
1999 ES1983S Maestro-3i PCI Modem Accelerator  
199a ES1983S Maestro-3i PCI Audio Accelerator  
199b ES1983S Maestro-3i PCI Modem Accelerator  
2808 ES336H Fax Modem (Later Model)  
2838 ES2838/2839 SuperLink Modem  
2898 ES2898 Modem  
125d 0424 ES56-PI Data Fax Modem  
125d 0425 ES56T-PI Data Fax Modem  
125d 0426 ES56V-PI Data Fax Modem  
125d 0427 VW-PI Data Fax Modem  
125d 0428 ES56ST-PI Data Fax Modem  
125d 0429 ES56SV-PI Data Fax Modem  
147a c001 ES56-PI Data Fax Modem  
148d 1030 HCF WV-PI56 [ESS ES56-PI Data Fax Modem]  
14fe  
0428 ES56-PI Data Fax Modem  
14fe 0429 ES56-PI Data Fax Modem  
125e Specialvideo Engineering SRL  
125f Concurrent Technologies, Inc.  
# 4x serial ports, 2x printer ports  
2071 CC PMC/232  
# 4x serial ports, 2x printer ports

2084 CC PMC/23P  
# 4x serial ports, RS422  
2091 CC PMC/422  
1260 Intersil Corporation  
3872 ISL3872 [Prism 3]  
1468 0202 LAN-Express IEEE 802.11b Wireless LAN  
3873 ISL3874 [Prism 2.5]/ISL3872 [Prism 3]  
10cf 1169 MBH7WM01-8734 802.11b Wireless Mini PCI Card [ISL3874]  
1186 3501 DWL-520 Wireless PCI Adapter (rev A or B) [ISL3874]  
1186 3700 DWL-520 Wireless PCI Adapter (rev E1) [ISL3872]  
1385 4105 MA311 802.11b wireless adapter [ISL3874]  
1668 0414 HWP01170-01 802.11b PCI Wireless Adapter  
16a5 1601 AIR.mate PC-400 PCI Wireless LAN Adapter  
1737 3874 WMP11 v1 802.11b Wireless-B PCI Adapter [ISL3874]  
4033 7033 PCW200 802.11b Wireless PCI Adapter [ISL3874]  
8086 2510 M3AWEB Wireless 802.11b MiniPCI Adapter  
8086 2513 Wireless 802.11b  
MiniPCI Adapter  
3877 ISL3877 [Prism Indigo]  
3886 ISL3886 [Prism Javelin/Prism Xbow]  
17cf 0037 XG-901 and clones Wireless Adapter  
3890 ISL3890 [Prism GT/Prism Duette]/ISL3886 [Prism Javelin/Prism Xbow]  
10b8 2802 SMC2802W V1 Wireless PCI Adapter [ISL3890]  
10b8 2835 SMC2835W Wireless Cardbus Adapter  
10b8 a835 SMC2835W V2 Wireless Cardbus Adapter  
1113 4203 WN4201B  
1113 8201 T-Com T-Sinus 154pcicard Wireless PCI Adapter  
1113 b301 T-Sinus 154card Cardbus  
1113 ee03 SMC2802W V2 Wireless PCI Adapter [ISL3886]  
1113 ee08 SMC2835W V3 EU Wireless Cardbus Adapter  
1186 3202 DWL-G650 A1 Wireless Adapter  
1259 c104 CG-WLCB54GT Wireless Adapter  
1260 0000 WG511 v1 54 Mbps Wireless PC Card  
1385 4800 WG511 v2/v3 54 Mbps Wireless PC Card  
16a5 1605 ALLNET ALL0271 Wireless PCI Adapter  
17cf 0014 XG-600 and clones Wireless Adapter  
17cf 0020 XG-900 and clones Wireless Adapter  
187e 3403 G-110 802.11g Wireless Cardbus Adapter  
8130 HMP8130 NTSC/PAL Video Decoder  
8131  
HMP8131 NTSC/PAL Video Decoder  
# This is probably more likely a HW fault, but I am keeping it for now --mj  
ffff ISL3886IK  
1260 0000 Senao 3054MP+ (J) mini-PCI WLAN 802.11g adapter  
1261 Matsushita-Kotobuki Electronics Industries, Ltd.  
1262 ES Computer Company, Ltd.  
1263 Sonic Solutions  
1264 Aval Nagasaki Corporation

1265 Casio Computer Co., Ltd.  
1266 Microdyne Corporation  
0001 NE10/100 Adapter (i82557B)  
1910 NE2000Plus (RT8029) Ethernet Adapter  
1266 1910 NE2000Plus Ethernet Adapter  
1267 S. A. Telecommunications  
5352 PCR2101  
5a4b Telsat Turbo  
1268 Tektronix  
# nee Thomson-CSF/TTM  
1269 Thales  
# MBIM on top of MHI  
00b3 5G Data Card [Cinterion MV31-W]  
126a Lexmark International, Inc.  
126b Adax, Inc.  
126c Northern Telecom  
1211 10/100BaseTX [RTL81xx]  
126c 802.11b Wireless Ethernet Adapter  
126d Splash Technology, Inc.  
126e Sumitomo Metal Industries, Ltd.  
126f Silicon Motion, Inc.  
0501 SM501 VoyagerGX Rev. AA  
0510 SM501 VoyagerGX Rev. B  
0710  
SM710 LynxEM  
0712 SM712 LynxEM+  
0718 SM718 LynxSE+  
0720 SM720 Lynx3DM  
0730 SM731 Cougar3DR  
0750 SM750  
0768 SM768  
0810 SM810 LynxE  
0811 SM811 LynxE  
0820 SM820 Lynx3D  
0910 SM910  
2260 SM2260 NVMe SSD Controller  
2262 SM2262/SM2262EN SSD Controller  
2263 SM2263EN/SM2263XT (DRAM-less) NVMe SSD Controllers  
2269 SM2269XT (DRAM-less) NVMe SSD Controller  
8366 SM8366 NVMe SSD Controller [MonTitan]  
1270 Olympus Optical Co., Ltd.  
1271 GW Instruments  
1272 Telematics International  
1273 Hughes Network Systems  
0002 DirecPC  
1274 Ensoniq  
1171 ES1373 / Creative Labs CT5803 [AudioPCI]  
1371 ES1371/ES1373 / Creative Labs CT2518

0e11 0024 AudioPCI on Motherboard Compaq Deskpro  
0e11 b1a7 ES1371, ES1373 AudioPCI  
1033 80ac ES1371, ES1373 AudioPCI  
1042 1854 Tazer  
107b 8054 Tabor2  
1274 1371 Audio PCI 64V/128/5200 / Creative CT4810/CT5803/CT5806 [Sound Blaster PCI]  
1274 8001 CT4751 board  
1462 6470 ES1371, ES1373 AudioPCI On Motherboard MS-6147 1.1A  
1462  
6560 ES1371, ES1373 AudioPCI On Motherboard MS-6156 1.10  
1462 6630 ES1371, ES1373 AudioPCI On Motherboard MS-6163BX 1.0A  
1462 6631 ES1371, ES1373 AudioPCI On Motherboard MS-6163VIA 1.0A  
1462 6632 ES1371, ES1373 AudioPCI On Motherboard MS-6163BX 2.0A  
1462 6633 ES1371, ES1373 AudioPCI On Motherboard MS-6163VIA 2.0A  
1462 6820 ES1371, ES1373 AudioPCI On Motherboard MS-6182 1.00  
1462 6822 ES1371, ES1373 AudioPCI On Motherboard MS-6182 1.00A  
1462 6830 ES1371, ES1373 AudioPCI On Motherboard MS-6183 1.00  
1462 6880 ES1371, ES1373 AudioPCI On Motherboard MS-6188 1.00  
1462 6900 ES1371, ES1373 AudioPCI On Motherboard MS-6190 1.00  
1462 6910 ES1371, ES1373 AudioPCI On Motherboard MS-6191  
1462 6930 ES1371, ES1373 AudioPCI On Motherboard MS-6193  
1462 6990 ES1371, ES1373 AudioPCI On Motherboard MS-6199BX 2.0A  
1462 6991 ES1371, ES1373 AudioPCI On Motherboard MS-6199VIA 2.0A  
14a4 2077 ES1371, ES1373 AudioPCI On Motherboard KR639  
14a4 2105 ES1371, ES1373  
AudioPCI On Motherboard MR800  
14a4 2107 ES1371, ES1373 AudioPCI On Motherboard MR801  
14a4 2172 ES1371, ES1373 AudioPCI On Motherboard DR739  
1509 9902 ES1371, ES1373 AudioPCI On Motherboard KW11  
1509 9903 ES1371, ES1373 AudioPCI On Motherboard KW31  
1509 9904 ES1371, ES1373 AudioPCI On Motherboard KA11  
1509 9905 ES1371, ES1373 AudioPCI On Motherboard KC13  
152d 8801 ES1371, ES1373 AudioPCI On Motherboard CP810E  
152d 8802 ES1371, ES1373 AudioPCI On Motherboard CP810  
152d 8803 ES1371, ES1373 AudioPCI On Motherboard P3810E  
152d 8804 ES1371, ES1373 AudioPCI On Motherboard P3810-S  
152d 8805 ES1371, ES1373 AudioPCI On Motherboard P3820-S  
270f 2001 ES1371, ES1373 AudioPCI On Motherboard 6CTR  
270f 2200 ES1371, ES1373 AudioPCI On Motherboard 6WTX  
270f 3000 ES1371, ES1373 AudioPCI On Motherboard 6WSV  
270f 3100 ES1371, ES1373 AudioPCI On Motherboard 6WIV2  
270f 3102 ES1371, ES1373 AudioPCI On Motherboard 6WIV  
270f 7060 ES1371, ES1373 AudioPCI On Motherboard  
6ASA2  
8086 4249 ES1371, ES1373 AudioPCI On Motherboard BI440ZX  
8086 424c ES1371, ES1373 AudioPCI On Motherboard BL440ZX  
8086 425a ES1371, ES1373 AudioPCI On Motherboard BZ440ZX  
8086 4341 ES1371, ES1373 AudioPCI On Motherboard Cayman



8086 4343 ES1371, ES1373 AudioPCI On Motherboard Cape Cod  
8086 4541 D815EEA Motherboard  
8086 4649 ES1371, ES1373 AudioPCI On Motherboard Fire Island  
8086 464a ES1371, ES1373 AudioPCI On Motherboard FJ440ZX  
8086 4d4f ES1371, ES1373 AudioPCI On Motherboard Montreal  
8086 4f43 ES1371, ES1373 AudioPCI On Motherboard OC440LX  
8086 5243 ES1371, ES1373 AudioPCI On Motherboard RC440BX  
8086 5352 ES1371, ES1373 AudioPCI On Motherboard SunRiver  
8086 5643 ES1371, ES1373 AudioPCI On Motherboard Vancouver  
8086 5753 ES1371, ES1373 AudioPCI On Motherboard WS440BX  
5000 ES1370 [AudioPCI]  
5880 5880B / Creative Labs CT5880  
1274 2000 Creative CT4810 [Sound Blaster AudioPCI 128]  
1274 2003 Creative SoundBlaster AudioPCI 128  
1274  
5880 Creative CT4750 [Sound Blaster PCI 128]  
1274 8001 Creative CT4750 [Sound Blaster 16 PCI/PCI 128/4.1 Digital]  
1458 a000 5880 AudioPCI On Motherboard 6OXET  
1462 6880 5880 AudioPCI On Motherboard MS-6188 1.00  
270f 2001 5880 AudioPCI On Motherboard 6CTR  
270f 2200 5880 AudioPCI On Motherboard 6WTX  
270f 7040 5880 AudioPCI On Motherboard 6ATA4  
8001 CT5880 [AudioPCI]  
8002 5880A [AudioPCI]  
1275 Network Appliance Corporation  
1276 Switched Network Technologies, Inc.  
1277 Comstream  
1278 Transtech Parallel Systems Ltd.  
0701 TPE3/TM3 PowerPC Node  
0710 TPE5 PowerPC PCI board  
1100 PMC-FPGA02  
1101 TS-C43 card with 4 ADSP-TS101 processors  
1279 Transmeta Corporation  
0060 TM8000 Northbridge  
0061 TM8000 AGP bridge  
0295 Northbridge  
0395 LongRun Northbridge  
0396 SDRAM controller  
0397 BIOS scratchpad  
127a Rockwell International  
1002 HCF 56k Data/Fax Modem  
1092 094c SupraExpress 56i PRO [Diamond SUP2380]  
122d 4002 HPG / MDP3858-U  
122d 4005  
MDP3858-E  
122d 4007 MDP3858-A/-NZ  
122d 4012 MDP3858-SA  
122d 4017 MDP3858-W

122d 4018 MDP3858-W  
127a 1002 Rockwell 56K D/F HCF Modem  
1003 HCF 56k Data/Fax Modem  
0e11 b0bc 229-DF Zephyr  
0e11 b114 229-DF Cheetah  
1033 802b 229-DF  
13df 1003 PCI56RX Modem  
13e0 0117 IBM  
13e0 0147 IBM F-1156IV+/R3 Spain V.90 Modem  
13e0 0197 IBM  
13e0 01c7 IBM F-1156IV+/R3 WW V.90 Modem  
13e0 01f7 IBM  
1436 1003 IBM  
1436 1103 IBM 5614PM3G V.90 Modem  
1436 1602 Compaq 229-DF Ducati  
1004 HCF 56k Data/Fax/Voice Modem  
1048 1500 MicroLink 56k Modem  
10cf 1059 Fujitsu 229-DFRT  
1005 HCF 56k Data/Fax/Voice/Spkp (w/Handset) Modem  
1005 127a AOpen FM56-P  
1033 8029 229-DFSV  
1033 8054 Modem  
10cf 103c Fujitsu  
10cf 1055 Fujitsu 229-DFSV  
10cf 1056 Fujitsu 229-DFSV  
122d 4003 MDP3858SP-U  
122d 4006 Packard Bell MDP3858V-E  
122d 4008 MDP3858SP-A/SP-NZ  
122d 4009 MDP3858SP-E  
122d 4010 MDP3858V-U  
122d 4011 MDP3858SP-SA  
122d 4013 MDP3858V-A/V-NZ  
122d  
4015 MDP3858SP-W  
122d 4016 MDP3858V-W  
122d 4019 MDP3858V-SA  
13df 1005 PCI56RVP Modem  
13e0 0187 IBM  
13e0 01a7 IBM  
13e0 01b7 IBM DF-1156IV+/R3 Spain V.90 Modem  
13e0 01d7 IBM DF-1156IV+/R3 WW V.90 Modem  
1436 1005 IBM  
1436 1105 IBM  
1437 1105 IBM 5614PS3G V.90 Modem  
1022 HCF 56k Modem  
1436 1303 M3-5614PM3G V.90 Modem  
1023 HCF 56k Data/Fax Modem  
122d 4020 Packard Bell MDP3858-WE

122d 4023 MDP3858-UE  
13e0 0247 IBM F-1156IV+/R6 Spain V.90 Modem  
13e0 0297 IBM  
13e0 02c7 IBM F-1156IV+/R6 WW V.90 Modem  
1436 1203 IBM  
1436 1303 IBM  
1024 HCF 56k Data/Fax/Voice Modem  
1025 HCF 56k Data/Fax/Voice/Spkp (w/Handset) Modem  
10cf 106a Fujitsu 235-DFSV  
122d 4021 Packard Bell MDP3858V-WE  
122d 4022 MDP3858SP-WE  
122d 4024 MDP3858V-UE  
122d 4025 MDP3858SP-UE  
1026 HCF 56k PCI Speakerphone Modem  
1032 HCF 56k Modem  
1033 HCF 56k Modem  
1034 HCF 56k Modem  
1035 HCF 56k PCI Speakerphone Modem  
1036 HCF 56k Modem  
1085  
HCF 56k Volcano PCI Modem  
2004 HSF 56k Data/Fax/Voice/Spkp (w/Handset) Modem  
2005 HCF 56k Data/Fax Modem  
104d 8044 229-DFSV  
104d 8045 229-DFSV  
104d 8055 PBE/Aztech 235W-DFSV  
104d 8056 235-DFSV  
104d 805a Modem  
104d 805f Modem  
104d 8074 Modem  
2013 HSF 56k Data/Fax Modem  
1179 0001 Modem  
1179 ff00 Modem  
2014 HSF 56k Data/Fax/Voice Modem  
10cf 1057 Fujitsu Citicorp III  
122d 4050 MSP3880-U  
122d 4055 MSP3880-W  
2015 HSF 56k Data/Fax/Voice/Spkp (w/Handset) Modem  
10cf 1063 Fujitsu  
10cf 1064 Fujitsu  
1468 2015 Fujitsu  
2016 HSF 56k Data/Fax/Voice/Spkp Modem  
122d 4051 MSP3880V-W  
122d 4052 MSP3880SP-W  
122d 4054 MSP3880V-U  
122d 4056 MSP3880SP-U  
122d 4057 MSP3880SP-A  
4311 Riptide HSF 56k PCI Modem

127a 4311 Ring Modular? Riptide HSF RT HP Dom  
13e0 0210 HP-GVC  
4320 Riptide PCI Audio Controller  
1235 4320 Riptide PCI Audio Controller  
4321 Riptide HCF 56k PCI Modem  
1235 4321 Hewlett Packard DF  
1235 4324 Hewlett Packard  
DF  
13e0 0210 Hewlett Packard DF  
144d 2321 Riptide  
4322 Riptide PCI Game Controller  
1235 4322 Riptide PCI Game Controller  
8234 RapidFire 616X ATM155 Adapter  
108d 0022 RapidFire 616X ATM155 Adapter  
108d 0027 RapidFire 616X ATM155 Adapter  
127b Pixera Corporation  
127c Crosspoint Solutions, Inc.  
127d Vela Research  
127e Winnov, L.P.  
0010 Videum 1000 Plus  
127f Fujifilm  
1280 Photoscript Group Ltd.  
1281 Yokogawa Electric Corporation  
1282 Davicom Semiconductor, Inc.  
6585 DM562P V90 Modem  
9009 DM9009 Ethernet Controller  
9100 21x4x DEC-Tulip compatible 10/100 Ethernet  
9102 DM9102 Fast Ethernet Controller  
# Subsystem ID is main ID reversed.  
0291 8212 DM9102A (DM9102AE, SM9102AF) Ethernet 100/10 MBit  
9132 Ethernet 100/10 MBit  
1283 Integrated Technology Express, Inc.  
673a IT8330G  
8152 IT8152F/G Advanced RISC-to-PCI Companion Chip  
8211 ITE 8211F Single Channel UDMA 133  
1043 8138 P5GD1-VW Mainboard  
8212 IT8212 Dual channel ATA RAID controller  
1283  
0001 IT/ITE8212 Dual channel ATA RAID controller  
8213 IT8213 IDE Controller  
1458 b000 GA-EG45M-DS2H Mainboard  
8330 IT8330G  
8872 IT887xF PCI to ISA I/O chip with SMB, GPIO, Serial or Parallel Port  
8888 IT8888F/G PCI to ISA Bridge with SMB [Golden Gate]  
8889 IT8889F PCI to ISA Bridge  
8892 IT8892E PCIe to PCI Bridge  
8086 200d DH61CR motherboard  
8893 IT8893E PCIe to PCI Bridge

e886 IT8330G  
1284 Sahara Networks, Inc.  
1285 Platform Technologies, Inc.  
0100 AGOGO sound chip (aka ESS Maestro 1)  
1286 Mazet GmbH  
1287 M-Pact, Inc.  
001e LS220D DVD Decoder  
001f LS220C DVD Decoder  
1288 Timestep Corporation  
1289 AVC Technology, Inc.  
128a Asante Technologies, Inc.  
128b Transwitch Corporation  
128c Retix Corporation  
128d G2 Networks, Inc.  
0021 ATM155 Adapter  
128e Hoontech Corporation/Samho Multi Tech Ltd.  
0008 ST128 WSS/SB  
0009 ST128 SAM9407  
000a ST128 Game Port  
000b ST128 MPU Port  
000c ST128 Ctrl Port  
128f Tateno Dennou, Inc.  
1290 Sord Computer Corporation  
1291 NCS Computer Italia  
1292 Trittech Microelectronics Inc  
fc02 Pyramid3D TR25202  
1293 Media Reality Technology  
1294 Rhetorex, Inc.  
1295 Imagenation Corporation  
0800 PXR800  
1000 PXD1000  
1296 Kofax Image Products  
1297 Holco Enterprise Co, Ltd/Shuttle Computer  
9602 RS780/RS880 PCI to PCI bridge (int gfx)  
1298 Spellcaster Telecommunications Inc.  
1299 Knowledge Technology Lab.  
129a VMetro, inc.  
0615 PBT-615 PCI-X Bus Analyzer  
0715 cPCI Bus Analyzer  
1100 PMC-FPGA05  
1106 XMC-FPGA05F, PCI interface  
1107 XMC-FPGA05F, PCIe interface  
1108 XMC-FPGA05D, PCI interface  
1109 XMC-FPGA05D, PCIe interface  
129b Image Access  
129c Jaycor  
129d Compcore Multimedia, Inc.

129e Victor Company of Japan, Ltd.  
129f OEC Medical Systems, Inc.  
12a0 Allen-Bradley Company  
12a1 Simpact Associates, Inc.  
12a2 Newgen Systems Corporation  
12a3 Lucent Technologies  
8105 T8105 H100 Digital Switch  
12a4 NTT Innovative Devices Corporation  
12a5 Vision Dynamics Ltd.  
12a6 Scalable  
Networks, Inc.  
12a7 AMO GmbH  
12a8 News Datacom  
12a9 Xiotech Corporation  
12aa SDL Communications, Inc.  
12ab YUAN High-Tech Development Co., Ltd.  
0000 MPG160/Kuroutoshikou ITVC15-STVLP  
0002 AU8830 [Vortex2] Based Sound Card With A3D Support  
0003 T507 (DVB-T) TV tuner/capture device  
2300 Club-3D Zap TV2100  
3000 MPG-200C PCI DVD Decoder Card  
4789 MPC788 MiniPCI Hybrid TV Tuner  
fff3 MPG600/Kuroutoshikou ITVC16-STVLP  
ffff MPG600/Kuroutoshikou ITVC16-STVLP  
12ac Measurex Corporation  
12ad Multidata GmbH  
12ae Alteon Networks Inc.  
0001 AceNIC Gigabit Ethernet  
1014 0104 Gigabit Ethernet-SX PCI Adapter  
12ae 0001 Gigabit Ethernet-SX (Universal)  
0002 AceNIC Gigabit Ethernet (Copper)  
10a9 8002 Acenic Gigabit Ethernet  
12ae 0002 Gigabit Ethernet-T (3C986-T)  
00fa Farallon PN9100-T Gigabit Ethernet  
12af TDK USA Corp  
12b0 Jorge Scientific Corp  
12b1 GammaLink  
12b2 General Signal Networks  
12b3 Inter-Face Co Ltd  
12b4 FutureTel Inc  
12b5 Granite Systems Inc.  
12b6  
Natural Microsystems  
12b7 Cognex Corporation  
12b8 Korg  
# Nee US Robotics  
12b9 3Com Corp, Modem Division  
1006 WinModem

12b9 005c USR 56k Internal Voice WinModem (Model 3472)  
12b9 005e USR 56k Internal WinModem (Models 662975)  
12b9 0062 USR 56k Internal Voice WinModem (Model 662978)  
12b9 0068 USR 56k Internal Voice WinModem (Model 5690)  
12b9 007a USR 56k Internal Voice WinModem (Model 662974)  
12b9 007f USR 56k Internal WinModem (Models 5698, 5699)  
12b9 0080 USR 56k Internal WinModem (Models 2975, 3528)  
12b9 0081 USR 56k Internal Voice WinModem (Models 2974, 3529)  
12b9 0091 USR 56k Internal Voice WinModem (Model 2978)  
1007 USR 56k Internal WinModem  
12b9 00a3 USR 56k Internal WinModem (Model 3595)  
12b9 00c4 U.S. Robotics V.92 Voice Faxmodem (2884A/B/C)  
1008 56K FaxModem Model 5610  
12b9 00a2 USR 56k Internal FAX Modem (Model 2977)  
12b9 00aa USR 56k Internal Voice Modem (Model 2976)  
12b9 00ab USR 56k Internal Voice Modem (Model 5609)  
12b9  
00ac USR 56k Internal Voice Modem (Model 3298)  
12b9 00ad USR 56k Internal FAX Modem (Model 5610)  
12b9 00d3 USR 56K Internal V92 FAX Modem (Model 5610)  
12b9 baba USR 56K Internal Voice Modem 3CP3298-DEL (Model 5601) [Hawk]  
12ba BittWare, Inc.  
12bb Nippon Unisoft Corporation  
12bc Array Microsystems  
12bd Computerm Corp.  
12be Anchor Chips Inc.  
3041 AN3041Q CO-MEM  
3042 AN3042Q CO-MEM Lite  
12be 3042 Anchor Chips Lite Evaluation Board  
12bf Fujifilm Microdevices  
12c0 Infimed  
12c1 GMM Research Corp  
12c2 Mentec Limited  
12c3 Holtek Microelectronics Inc  
0058 PCI NE2K Ethernet  
5598 PCI NE2K Ethernet  
12c4 Connect Tech Inc  
0001 Blue HEAT/PCI 8 (RS232/CL/RJ11)  
0002 Blue HEAT/PCI 4 (RS232)  
0003 Blue HEAT/PCI 2 (RS232)  
0004 Blue HEAT/PCI 8 (UNIV, RS485)  
0005 Blue HEAT/PCI 4+4/6+2 (UNIV, RS232/485)  
0006 Blue HEAT/PCI 4 (OPTO, RS485)  
0007 Blue HEAT/PCI 2+2 (RS232/485)  
0008 Blue HEAT/PCI 2 (OPTO, Tx, RS485)  
0009 Blue HEAT/PCI 2+6 (RS232/485)  
000a

Blue HEAT/PCI 8 (Tx, RS485)  
000b Blue HEAT/PCI 4 (Tx, RS485)  
000c Blue HEAT/PCI 2 (20 MHz, RS485)  
000d Blue HEAT/PCI 2 PTM  
0100 NT960/PCI  
0201 cPCI Titan - 2 Port  
0202 cPCI Titan - 4 Port  
0300 CTI PCI UART 2 (RS232)  
0301 CTI PCI UART 4 (RS232)  
0302 CTI PCI UART 8 (RS232)  
0310 CTI PCI UART 1+1 (RS232/485)  
0311 CTI PCI UART 2+2 (RS232/485)  
0312 CTI PCI UART 4+4 (RS232/485)  
0320 CTI PCI UART 2  
0321 CTI PCI UART 4  
0322 CTI PCI UART 8  
0330 CTI PCI UART 2 (RS485)  
0331 CTI PCI UART 4 (RS485)  
0332 CTI PCI UART 8 (RS485)  
12c5 Picture Elements Incorporated  
007e Imaging/Scanning Subsystem Engine  
007f Imaging/Scanning Subsystem Engine  
0081 PCIVST [Grayscale Thresholding Engine]  
0085 Video Simulator/Sender  
0086 THR2 Multi-scale Thresholder  
12c6 Mitani Corporation  
12c7 Dialogic Corp  
# 12 Line, 6 port, CT-BUS/SC-BUS, loopstart FXO adaptor.  
0546 Springware D/120JCT-LS  
# 24 Channel, 1 Port, CT-BUS/SC-BUS, T1/PRI adaptor.  
0647 Springware D/240JCT-T1  
#  
4 Line, 4 port, CT-BUS/SC-BUS, loopstart FXO adaptor. Revision 01  
0676 Springware D/41JCT-LS  
# 48 Channel, 2 Port, CT-BUS/SC-BUS, T1/PRI adaptor.  
0685 Springware D/480JCT-2T1  
12c8 G Force Co, Ltd  
12c9 Gigi Operations  
12ca Integrated Computing Engines  
12cb Antex Electronics Corporation  
0027 SC4 (StudioCard)  
002e StudioCard 2000  
12cc Pluto Technologies International  
12cd Aims Lab  
12ce Netspeed Inc.  
12cf Prophet Systems, Inc.  
12d0 GDE Systems, Inc.  
12d1 PSITech



12d2 NVidia / SGS Thomson (Joint Venture)  
0008 NV1  
0009 DAC64  
0018 Riva128  
1048 0c10 VICTORY Erazor  
1048 0c15 VICTORY Erazor LT-8  
107b 8030 STB Velocity 128  
1092 0350 Viper V330  
1092 1092 Viper V330  
10b4 1b1b STB Velocity 128  
10b4 1b1d STB Velocity 128  
10b4 1b1e STB Velocity 128, PAL TV-Out  
10b4 1b20 STB Velocity 128 Sapphire  
10b4 1b21 STB Velocity 128  
10b4 1b22 STB Velocity 128 AGP, NTSC TV-Out  
10b4 1b23 STB Velocity 128 AGP, PAL TV-Out  
10b4 1b27 STB Velocity 128 DVD  
10b4  
1b88 MVP Pro 128  
10b4 222a STB Velocity 128 AGP  
10b4 2230 STB Velocity 128  
10b4 2232 STB Velocity 128  
10b4 2235 STB Velocity 128 AGP  
2a15 54a3 3DVision-SAGP / 3DexPlorer 3000  
0019 Riva128ZX  
0020 TNT  
0028 TNT2  
0029 UTNT2  
002c VTNT2  
00a0 ITNT2  
12d3 Vingmed Sound A/S  
12d4 Ulticom (Formerly DGM&S)  
0200 T1 Card  
12d5 Equator Technologies Inc  
0003 BSP16  
1000 BSP15  
12d6 Analogic Corp  
12d7 Biotronic SRL  
# acquired by Diodes Inc.  
12d8 Pericom Semiconductor  
01a7 7C21P100 2-port PCI-X to PCI-X Bridge  
# 3Port-3Lane PCI Express Switch GreenPacket Family  
0303 PCI Express Switch 3-3  
# PI7C9X20508GP 5Port-8Lane PCI Express Switch GreenPacket Family  
0508 PI7C9X20508GP PCI Express Switch 5Port-8Lane  
2304 PI7C9X2G304 EL/SL PCIe2 3-Port/4-Lane Packet Switch  
2308 PI7C9X2G308GP 3-Ports/8-lane PCIe 2.0 Switch  
2404 PI7C9X2G404 EL/SL PCIe2 4-Port/4-Lane Packet Switch

2608 PI7C9X2G608GP PCIe2 6-Port/8-Lane Packet Switch  
ea50 cc10 RXi2-BP  
400a PI7C9X442SL  
PCIe Bridge Port  
400c PI7C9X440SL PCIe Bridge Port  
400e PI7C9X440SL/PI7C9X442SL USB OHCI Controller  
400f PI7C9X440SL/PI7C9X442SL USB EHCI Controller  
71e2 PI7C7300A/PI7C7300D PCI-to-PCI Bridge  
71e3 PI7C7300A/PI7C7300D PCI-to-PCI Bridge (Secondary Bus 2)  
8140 PI7C8140A PCI-to-PCI Bridge  
8148 PI7C8148A/PI7C8148B PCI-to-PCI Bridge  
8150 PCI to PCI Bridge  
8152 PI7C8152A/PI7C8152B/PI7C8152BI PCI-to-PCI Bridge  
8154 PI7C8154A/PI7C8154B/PI7C8154BI PCI-to-PCI Bridge  
8619 PI7C9X2G1616PR PCIe2 16-Port/16-Lane Packet Switch  
b404 PI7C9X2G404 EV/SV PCIe2 4-Port/4-Lane Packet Switch  
e110 PI7C9X110 PCIe- to-PCI bridge  
1775 11cc CC11/CL11 CompactPCI Bridge  
e111 PI7C9X111SL PCIe-to-PCI Reversible Bridge  
e112 PI7C9X112SL PCIe-to-PCI Bridge  
e113 PI7C9X113SL/PI7C9X118SL PCIe-to-PCI Bridge  
e130 PCI Express to PCI-XPI7C9X130 PCI-X Bridge  
12d9 Aculab PLC  
0002 PCI Prosody  
0004 cPCI Prosody  
0005 Aculab E1/T1 PCI card  
1078 Prosody X class e1000 device  
12d9  
000d Prosody X PCI  
12d9 000e Prosody X cPCI  
12da True Time Inc.  
12db Annapolis Micro Systems, Inc  
12dc Symicron Computer Communication Ltd.  
12dd Management Graphics  
12de Rainbow Technologies  
0200 CryptoSwift CS200  
12df SBS Technologies Inc  
12e0 Chase Research  
0010 ST16C654 Quad UART  
0020 ST16C654 Quad UART  
0030 ST16C654 Quad UART  
12e1 Nintendo Co, Ltd  
12e2 Datum Inc. Bancomm-Timing Division  
12e3 Imation Corp - Medical Imaging Systems  
12e4 Brooktrout Technology Inc  
12e5 Apex Semiconductor Inc  
12e6 Cirel Systems  
12e7 Sunsgroup Corporation

12e8 Crisc Corp  
12e9 GE Spacenet  
12ea Zuken  
12eb Aureal Semiconductor  
0001 Vortex 1  
0000 0300 Terasound A3D PCI  
104d 8036 AU8820 Vortex Digital Audio Processor  
1092 2000 Sonic Impact A3D  
1092 2100 Sonic Impact A3D  
1092 2110 Sonic Impact A3D  
1092 2200 Sonic Impact A3D  
122d 1002 SC 338-A3D  
12eb 0001 AU8820 Vortex Digital Audio Processor  
5053 3355 Montego  
50b2 1111 XLerate  
0002 Vortex 2  
104d  
8049 AU8830 Vortex 3D Digital Audio Processor  
104d 807b AU8830 Vortex 3D Digital Audio Processor  
1092 3000 Monster Sound II  
1092 3001 Monster Sound II  
1092 3002 Monster Sound II  
1092 3003 Monster Sound II  
1092 3004 Monster Sound II  
12eb 0002 AU8830 Vortex 3D Digital Audio Processor  
12eb 0088 AU8830 Vortex 3D Digital Audio Processor  
144d 3510 AU8830 Vortex 3D Digital Audio Processor  
5053 3356 Montego II  
0003 AU8810 Vortex Digital Audio Processor  
104d 8049 AU8810 Vortex Digital Audio Processor  
104d 8077 AU8810 Vortex Digital Audio Processor  
109f 1000 AU8810 Vortex Digital Audio Processor  
12eb 0003 AU8810 Vortex Digital Audio Processor  
1462 6780 AU8810 Vortex Digital Audio Processor  
14a4 2073 AU8810 Vortex Digital Audio Processor  
14a4 2091 AU8810 Vortex Digital Audio Processor  
14a4 2104 AU8810 Vortex Digital Audio Processor  
14a4 2106 AU8810 Vortex Digital Audio Processor  
8803 Vortex 56k Software Modem  
12eb 8803 Vortex 56k Software  
Modem  
12ec 3A International, Inc.  
12ed Optivision Inc.  
12ee Orange Micro  
12ef Vienna Systems  
12f0 Pentek  
12f1 Sorenson Vision Inc  
12f2 Gammagraphx, Inc.

12f3 Radstone Technology  
12f4 Megatel  
12f5 Forks  
12f6 Dawson France  
12f7 Cognex  
12f8 Electronic Design GmbH  
0002 VideoMaker  
12f9 Four Fold Ltd  
12fb Spectrum Signal Processing  
0001 PMC-MAI  
00f5 F5 Dakar  
02ad PMC-2MAI  
2adc ePMC-2ADC  
3100 PRO-3100  
3500 PRO-3500  
4d4f Modena  
8120 ePMC-8120  
da62 Daytona C6201 PCI (Hurricane)  
db62 Ingliston XBIF  
dc62 Ingliston PLX9054  
dd62 Ingliston JTAG/ISP  
eddc ePMC-MSDDC  
fa01 ePMC-FPGA  
12fc Capital Equipment Corp  
12fd I2S  
12fe ESD Electronic System Design GmbH  
12ff Lexicon  
1300 Harman International Industries Inc  
1302 Computer Sciences Corp  
1303 Innovative Integration  
0030 X3-SDF 4-channel XMC acquisition board  
1304 Juniper Networks  
1305 Netphone, Inc  
1306 Duet Technologies  
# Nee ComputerBoards  
1307 Measurement Computing  
0001 PCI-DAS1602/16  
000b  
PCI-DIO48H  
000c PCI-PDISO8  
000d PCI-PDISO16  
000f PCI-DAS1200  
0010 PCI-DAS1602/12  
0014 PCI-DIO24H  
0015 PCI-DIO24H/CTR3  
0016 PCI-DIO48H/CTR15  
0017 PCI-DIO96H  
0018 PCI-CTR05

0019 PCI-DAS1200/JR  
001a PCI-DAS1001  
001b PCI-DAS1002  
001c PCI-DAS1602JR/16  
001d PCI-DAS6402/16  
001e PCI-DAS6402/12  
001f PCI-DAS16/M1  
0020 PCI-DDA02/12  
0021 PCI-DDA04/12  
0022 PCI-DDA08/12  
0023 PCI-DDA02/16  
0024 PCI-DDA04/16  
0025 PCI-DDA08/16  
0026 PCI-DAC04/12-HS  
0027 PCI-DAC04/16-HS  
0028 PCI-DIO24  
0029 PCI-DAS08  
002c PCI-INT32  
0033 PCI-DUAL-AC5  
0034 PCI-DAS-TC  
0035 PCI-DAS64/M1/16  
0036 PCI-DAS64/M2/16  
0037 PCI-DAS64/M3/16  
004b PCI-MDB64  
004c PCI-DAS1000  
004d PCI-QUAD04  
0052 PCI-DAS4020/12  
0053 PCIM-DDA06/16  
0054 PCI-DIO96  
0055 CPCI-DIO24H  
0056 PCIM-DAS1602/16  
0057 PCI-DAS3202/16  
0059 PCI-QUAD-AC5  
005a CPCI-DIO96H  
005b CPCI-DIO48H  
005d PCI-DAS6023  
005e PCI-DAS6025  
005f PCI-DAS6030  
0060 PCI-DAS6031  
0061 PCI-DAS6032  
0062  
PCI-DAS6033  
0063 PCI-DAS6034  
0064 PCI-DAS6035  
0065 PCI-DAS6040  
0066 PCI-DAS6052  
0067 PCI-DAS6070  
0068 PCI-DAS6071

006e PCI-CTR10  
006f PCI-DAS6036  
0070 PCI-DAC6702  
0071 PCI-DAC6703  
0074 PCI-CTR20HD  
0077 PCI-DIO24/LP  
0078 PCI-DAS6013  
0079 PCI-DAS6014  
007b PCIM-DAS16JR/16  
007e PCI-DIO24/S  
00a5 PCI-2511  
00a6 PCI-2513  
00a7 PCI-2515  
00a8 PCI-2517  
00be PCI-QUAD05  
00da PCIe-DIO96H  
00db PCIe-DIO24  
0115 PCIe-DAS1602/16  
1308 Jato Technologies Inc.  
0001 NetCelerator Adapter  
1308 0001 NetCelerator Adapter  
1309 AB Semiconductor Ltd  
130a Mitsubishi Electric Microcomputer  
130b Colorgraphic Communications Corp  
130c Ambex Technologies, Inc  
130d Accelerix Inc  
130e Yamatake-Honeywell Co. Ltd  
130f Advanet Inc  
1310 Gespac  
1311 Videoserver, Inc  
1312 Acuity Imaging, Inc  
1313 Yaskawa Electric Co.  
1315 Wavesat  
1316 Teradyne Inc  
1317 ADMtek  
0981 21x4x DEC-Tulip compatible 10/100 Ethernet  
0985 NC100 Network Everywhere Fast Ethernet 10/100  
1734  
100c Scenic N300 ADMtek AN983 10/100 Mbps PCI Adapter  
1985 21x4x DEC-Tulip compatible 10/100 Ethernet  
1385 511a FA511  
1395 2103 CB100-EZ (4-LED version)  
2850 HSP MicroModem 56  
5120 ADM5120 OpenGate System-on-Chip  
8201 ADM8211 802.11b Wireless Interface  
10b8 2635 SMC2635W v1 802.11b Wireless Cardbus Adapter  
1317 8201 SMC2635W v2 802.11b Wireless Cardbus Adapter  
8211 ADM8211 802.11b Wireless Interface

9511 21x4x DEC-Tulip compatible 10/100 Ethernet  
1318 Packet Engines Inc.  
0911 GNIC-II PCI Gigabit Ethernet [Hamachi]  
1319 Fortemedia, Inc  
0801 Xwave QS3000A [FM801]  
1319 1319 FM801 PCI Audio  
0802 Xwave QS3000A [FM801 game port]  
1319 1319 FM801 PCI Joystick  
1000 FM801 PCI Audio  
1001 FM801 PCI Joystick  
131a Finisar Corp.  
131c Nippon Electro-Sensory Devices Corp  
131d Sysmic, Inc.  
131e Xinex Networks Inc  
131f Siig Inc  
1000 CyberSerial (1-port) 16550  
1001 CyberSerial (1-port) 16650  
1002 CyberSerial (1-port) 16850  
1010 Duet 1S(16550)+1P  
1011  
Duet 1S(16650)+1P  
1012 Duet 1S(16850)+1P  
1020 CyberParallel (1-port)  
1021 CyberParallel (2-port)  
1030 CyberSerial (2-port) 16550  
1031 CyberSerial (2-port) 16650  
1032 CyberSerial (2-port) 16850  
1034 Trio 2S(16550)+1P  
1035 Trio 2S(16650)+1P  
1036 Trio 2S(16850)+1P  
1050 CyberSerial (4-port) 16550  
1051 CyberSerial (4-port) 16650  
1052 CyberSerial (4-port) 16850  
2000 CyberSerial (1-port) 16550  
2001 CyberSerial (1-port) 16650  
2002 CyberSerial (1-port) 16850  
2010 Duet 1S(16550)+1P  
2011 Duet 1S(16650)+1P  
2012 Duet 1S(16850)+1P  
2020 CyberParallel (1-port)  
2021 CyberParallel (2-port)  
2030 CyberSerial (2-port) 16550  
131f 2030 PCI Serial Card  
2031 CyberSerial (2-port) 16650  
2032 CyberSerial (2-port) 16850  
2040 Trio 1S(16550)+2P  
2041 Trio 1S(16650)+2P  
2042 Trio 1S(16850)+2P

2050 CyberSerial (4-port) 16550  
2051 CyberSerial (4-port) 16650  
2052 CyberSerial (4-port) 16850  
2060 Trio 2S(16550)+1P  
2061 Trio 2S(16650)+1P  
2062 Trio  
2S(16850)+1P  
2081 CyberSerial (8-port) ST16654  
1320 Crypto AG  
1321 Arcobel Graphics BV  
1322 MTT Co., Ltd  
1323 Dome Inc  
1324 Sphere Communications  
1325 Salix Technologies, Inc  
1326 Seachange international  
1327 Voss scientific  
1328 quadrant international  
1329 Productivity Enhancement  
132a Microcom Inc.  
132b Broadband Technologies  
132c Micrel Inc  
132d Integrated Silicon Solution, Inc.  
1330 MMC Networks  
1331 RadiSys Corporation  
0030 ENP-2611  
8200 82600 Host Bridge  
8201 82600 IDE  
8202 82600 USB  
8210 82600 PCI Bridge  
1332 Micro Memory  
5415 MM-5415CN PCI Memory Module with Battery Backup  
5425 MM-5425CN PCI 64/66 Memory Module with Battery Backup  
6140 MM-6140D  
1334 Redcreek Communications, Inc  
1335 Videomail, Inc  
1337 Third Planet Publishing  
1338 BT Electronics  
133a Vtel Corp  
133b Softcom Microsystems  
133c Holontech Corp  
133d SS Technologies  
133e Virtual Computer Corp  
133f SCM Microsystems  
1340 Atalla Corp  
1341 Kyoto Microcomputer Co  
1342 Promax  
Systems Inc  
1343 Phylon Communications Inc



# nee Crucial Technology  
1344 Micron Technology Inc  
5150 RealSSD P320h  
5151 RealSSD P320m  
5152 RealSSD P320s  
5153 RealSSD P325m  
5160 RealSSD P420h  
5161 RealSSD P420m  
5163 RealSSD P425m  
5180 9100 PRO NVMe SSD  
5181 9100 MAX NVMe SSD  
5188 7100 ECO NVMe SSD  
5189 7100 MAX NVMe SSD  
5190 9200 ECO NVMe SSD  
5191 9200 PRO NVMe SSD  
5192 9200 MAX NVMe SSD  
5196 9400 PRO NVMe SSD  
5197 9400 MAX NVMe SSD  
51a2 7300 PRO NVMe SSD  
1344 2000 960GB U.2  
1344 3000 1920GB U.2  
1344 4000 3480GB U.2  
1344 5000 7680GB U.2  
51a3 7300 MAX NVMe SSD  
1344 1100 400GB M.2  
1344 2000 800GB U.2  
1344 2100 800GB M.2  
1344 3000 1600GB U.2  
1344 4000 3200GB U.2  
1344 5000 6400GB U.2  
51b1 9300 PRO NVMe SSD  
1344 4000 3.84TB U.2  
1344 5000 7.68TB U.2  
1344 6000 15.36TB U.2  
51b2 9300 MAX NVMe SSD  
1344 4000 3.2TB U.2  
1344 5000 6.4 TB U.2  
1344 6000 12.8TB U.2  
51b7 7500 PRO NVMe SSD  
1028 22e7 DC NVMe 7500  
U.2 SED RI 15.36TB  
1028 22e8 DC NVMe 7500 U.2 SED RI 7.68TB  
1028 22e9 DC NVMe 7500 U.2 SED RI 3.84TB  
1028 22ea DC NVMe 7500 U.2 SED RI 1.92TB  
1028 22eb DC NVMe 7500 U.2 SED RI 960GB  
1028 22ec DC NVMe 7500 U.2 ISE RI 15.36TB  
1028 22ed DC NVMe 7500 U.2 ISE RI 7.68TB  
1028 22ee DC NVMe 7500 U.2 ISE RI 3.84TB

1028 22ef DC NVMe 7500 U.2 ISE RI 1.92TB  
1028 22f0 DC NVMe 7500 U.2 ISE RI 960GB  
51b8 7500 MAX NVMe SSD  
1028 22f1 DC NVMe 7500 U.2 ISE MU 12.8TB  
1028 22f2 DC NVMe 7500 U.2 ISE MU 6.4TB  
1028 22f3 DC NVMe 7500 U.2 ISE MU 3.2TB  
1028 22f4 DC NVMe 7500 U.2 ISE MU 1.6TB  
1028 22f5 DC NVMe 7500 U.2 ISE MU 800GB  
51b9 6500 ION NVMe SSD  
1028 22e6 Ent NVMe 6500 RI 30.72TB  
1028 22f6 Ent NVMe 6500 RI FIPS 30.72TB  
51c0 7400 PRO NVMe SSD  
1028 2162 EC NVMe OPAL 7400 RI M.2 480GB  
1028 2163 EC NVMe OPAL 7400 RI M.2 960GB  
1028 2164 EC NVMe ISE 7400 RI M.2 480GB  
1028 2165 EC NVMe ISE 7400 RI M.2 960GB  
1028 216c EC NVMe ISE 7400 RI M.2  
110 1.92TB  
1028 216d EC NVMe ISE 7400 RI M.2 110 3.84TB  
1028 216e EC NVMe OPAL 7400 RI M.2 110 1.92TB  
1028 216f EC NVMe OPAL 7400 RI M.2 110 3.84TB  
1028 2197 EC NVMe OPAL 7400 RI M.2 110 960GB  
1028 224d EC NVMe ISE 7400 RI M.2 110 960GB  
1344 1100 M.2 480GB  
1344 2000 U.3 960GB  
1344 2100 M.2 960GB  
1344 2600 E1.S 960GB  
1344 2b00 M.2 1920GB  
1344 2d00 E1.2 1920GB  
1344 3000 U.3 1920GB  
1344 3e00 M.2 3840GB  
1344 3f00 E1.S 3840GB  
1344 4000 U.3 3840GB  
1344 5000 U.3 7680GB  
51c1 7400 MAX NVMe SSD  
1028 216a EC NVMe ISE 7400 MU M.2 80 800GB  
1028 216b EC NVMe OPAL 7400 MU M.2 80 800GB  
1344 1100 M.2 400GB  
1344 2000 U.3 800GB  
1344 2100 M.2 800GB  
1344 2600 E1.S 800GB  
1344 2b00 M.2 1600GB  
1344 2d00 E1.S 1600GB  
1344 3000 U.3 1600GB  
1344 3e00 M.2 3200GB  
1344 3f00 E1.S 3200GB  
1344 4000 U.3 3200GB  
1344 5000 U.3 6400GB

51c3 7450 PRO NVMe SSD  
1028 226b EC NVMe FIPS 7450 RI M.2 110 960GB  
1028 226c EC NVMe ISE 7450  
RI M.2 80 480GB  
1028 226d EC NVMe ISE 7450 RI M.2 80 960GB  
1028 226e EC NVMe SED 7450 RI M.2 80 480GB  
1028 226f EC NVMe SED 7450 RI M.2 80 960GB  
1028 2270 EC NVMe FIPS 7450 RI M.2 80 480GB  
1028 2271 EC NVMe FIPS 7450 RI M.2 80 960GB  
1028 2273 EC NVMe ISE 7450 RI M.2 110 960GB  
1028 2274 EC NVMe ISE 7450 RI M.2 110 1920GB  
1028 2275 EC NVMe ISE 7450 RI M.2 110 3840GB  
1028 2278 DC NVMe ISE 7450 RI U.2 960GB  
1028 2279 DC NVMe ISE 7450 RI U.2 1.92TB  
1028 227a DC NVMe ISE 7450 RI U.2 3.84TB  
1028 227b DC NVMe ISE 7450 RI U.2 7.68TB  
1028 227c DC NVMe ISE 7450 RI U.2 15.36TB  
1028 227d DC NVMe SED 7450 RI U.2 960GB  
1028 227e DC NVMe SED 7450 RI U.2 1.92TB  
1028 227f DC NVMe SED 7450 RI U.2 3.84TB  
1028 2280 DC NVMe SED 7450 RI U.2 7.68TB  
1028 2281 DC NVMe SED 7450 RI U.2 15.36TB  
51c4 7450 MAX NVMe SSD  
1028 2272 EC NVMe ISE 7450 MU M.2 80 800GB  
1028 228b DC NVMe SED 7450 MU U.2 800GB  
1028 228c DC NVMe ISE 7450 MU U.2 800GB  
1028 228d  
DC NVMe SED 7450 MU U.2 1.6TB  
1028 228e DC NVMe ISE 7450 MU U.2 1.6TB  
1028 228f DC NVMe SED 7450 MU U.2 3.2TB  
1028 2290 DC NVMe ISE 7450 MU U.2 3.2TB  
1028 2291 DC NVMe SED 7450 MU U.2 6.4TB  
1028 2292 DC NVMe ISE 7450 MU U.2 6.4TB  
1028 2293 DC NVMe SED 7450 MU U.2 12.8TB  
1028 2294 DC NVMe ISE 7450 MU U.2 12.8TB  
1344 3000 U.3 1600GB [MTFDKCB1T6TFS/MTFDKCC1T6TFS]  
5404 2210 NVMe SSD [Cobain]  
5405 2300 NVMe SSD [Santana]  
5407 3400 NVMe SSD [Hendrix]  
5410 2200S NVMe SSD [Cassandra]  
5411 2450 NVMe SSD [HendrixV] (DRAM-less)  
5413 2400 NVMe SSD (DRAM-less)  
5414 3460 NVMe SSD  
5415 3500 NVMe SSD  
5416 2550 NVMe SSD (DRAM-less)  
6001 2100AI NVMe SSD [Nitro]  
1345 Arescom Inc  
1347 Odetics

1349 Sumitomo Electric Industries, Ltd.  
134a DTC Technology Corp.  
0001 Domex 536  
0002 Domex DMX3194UP SCSI Adapter  
134b ARK Research Corp.  
134c Chori Joho System Co. Ltd  
134d PCTel Inc  
2189 HSP56 MicroModem  
2486 2304WT V.92 MDC Modem  
7890 HSP MicroModem 56  
134d  
0001 PCT789 adapter  
7891 HSP MicroModem 56  
134d 0001 HSP MicroModem 56  
7892 HSP MicroModem 56  
7893 HSP MicroModem 56  
7894 HSP MicroModem 56  
7895 HSP MicroModem 56  
7896 HSP MicroModem 56  
7897 HSP MicroModem 56  
134e CSTI  
134f Algo System Co Ltd  
1350 Systec Co. Ltd  
1351 Sonix Inc  
# nee Vierling Communication SAS, nee Thales Idatys  
1353 dbecSet Technology  
0002 Proserver  
0003 PCI-FUT  
0004 PCI-S0  
0005 PCI-FUT-S0  
0006 OTDU-1U (FPGA Zynq-7000)  
0007 OTDU-EX  
1354 Dwave System Inc  
1355 Kratos Analytical Ltd  
1356 The Logical Co  
1359 Prisa Networks  
135a Brainboxes Ltd  
0841 UC-268 4 port RS-232 card  
0861 UC-257 2 port RS-232 + LPT card  
0862 UC-257 2 port RS-232 + LPT card  
0863 UC-257 2 port RS-232 + LPT card  
0881 UC-279 8 port RS-232 card  
08a1 UC-313 2 port RS-422/485 card  
08a2 UC-313 2 port RS-422/485 card  
08a3 UC-313 2 port RS-422/485 card  
08c1 UC-310 2 port RS-422/485 Opto Isolated card  
08e1 UC-302 2 port RS-232 card  
08e2 UC-302

2 port RS-232 card  
08e3 UC-302 2 port RS-232 card  
0901 UC-431 3 port RS-232 card  
0921 UC-420 3 + 1 port RS-232 card  
0981 UC-475 1 + 1 port RS-232 + LPT card  
0982 UC-475 1 + 1 port RS-232 + LPT card  
09a1 UC-607 2 port RS-232 card  
09a2 UC-607 2 port RS-232 card  
09a3 UC-607 2 port RS-232 card  
0a61 UC-324 1 port RS-422/485 card  
0a81 UC-357 1 port RS-232 + 1 port RS-422/485 card  
0a82 UC-357 1 port RS-232 + 1 port RS-422/485 card  
0a83 UC-357 1 port RS-232 + 1 port RS-422/485 card  
0aa1 UC-246 1 port RS-232 card  
0aa2 UC-246 1 port RS-232 card  
0ac1 UP-189 Powered 2 port RS-232 card  
0ac2 UP-189 Powered 2 port RS-232 card  
0ac3 UP-189 Powered 2 port RS-232 card  
0b01 UC-346 4 port RS-422/485 card  
0b02 UC-346 4 port RS-422/485 card  
0b21 UP-200 Powered 2 port RS-232 card  
0b22 UP-200 Powered 2 port RS-232 card  
0b23 UP-200 Powered 2 port RS-232 card  
0ba1 UC-101 1 + 1 port RS-232 card  
0bc1 UC-203 1 + 1 port RS-232 + LPT card  
0bc2 UC-203 1 + 1 port RS-232  
+ LPT card  
0be1 UC-146 LPT card  
0be2 UC-146 LPT card  
0c01 UP-869 Powered 2 port RS-232 card  
0c02 UP-869 Powered 2 port RS-232 card  
0c03 UP-869 Powered 2 port RS-232 card  
0c21 UP-880 Powered 2 port RS-232 card  
0c22 UP-880 Powered 2 port RS-232 card  
0c23 UP-880 Powered 2 port RS-232 card  
0c41 UC-368 4 port RS-422/485 Opto Isolated card  
0ca1 UC-253 2 port RS-232 card  
0d21 UC-260 4 port RS-232 card  
0d41 UC-836 4 port RS-232 card  
0d60 IS-100 1 port RS-232 card  
0d80 IS-200 2 port RS-232 card  
0da0 IS-300 1 port RS-232 + LPT card  
0dc0 IS-400 4 port RS-232 card  
0de0 IS-500 LPT card  
0e41 PX-279 8 port RS-232 card  
0e61 UC-414 3 + 1 port RS-232 + LPT card  
4000 PX-420 3 + 1 port RS-232 card  
4001 PX-431 3 port RS-232 card

4002 PX-820 Powered 3 + 1 port RS-232 card  
4003 PX-831 Powered 3 port RS-232 card  
4004 PX-235 1 port RS-232 card  
4005 PX-101 1 + 1 port RS-232 card  
4006 PX-257 1 + 1 port RS-232 + LPT card (Serial port)  
4007 PX-257 1 + 1 port  
RS-232 + LPT card (LPT port)  
4008 PX-835 Powered 1 port RS-232 card  
4009 PX-857 Powered 2 port RS-232 card  
400a PX-260 4 port RS-232 card  
400b PX-320 1 port RS-422/485 card  
400c PX-313 2 port RS-422/485 card  
400e PX-310 2 port RS-422/485 Opto Isolated card  
400f PX-346 4 port RS-422/485 card  
4010 PX-368 4 port RS-422/485 Opto Isolated card  
4011 PX-420 3 + 1 port RS-232 card  
4012 PX-431 3 port RS-232 card  
4013 PX-820 Powered 3 + 1 port RS-232 card  
4014 PX-831 Powered 3 port RS-232 card  
4015 PX-257 2 port RS-232 card  
4016 PX-235 1 port RS-232 card  
4017 PX-835 Powered 1 port RS-232 card  
4018 PX-857 Powered 2 port RS-232 card  
4019 PX-101 1 + 1 port RS-232 card  
401c PX-146 LPT card  
401d PX-475 1 port RS-232 + LPT card (Serial port)  
401e PX-803 Powered 1 + 1 port RS-232 card  
401f PX-475 1 port RS-232 + LPT card (LPT port)  
4027 IX-100 1 port RS-232 card  
4028 IX-200 2 port RS-232 card  
4029 IX-400 4 port RS-232 card  
402a IX-500 LPT card  
402c PX-263  
4 port RS-232 + LPT card  
4100 PX-272 4 + 1 port RS-232 + LPT card  
135b Giganet Inc  
135c Quatech Inc  
0010 QSC-100  
0020 DSC-100  
0030 DSC-200/300  
0040 QSC-200/300  
0050 ESC-100D  
0060 ESC-100M  
00f0 MPAC-100 Synchronous Serial Card (Zilog 85230)  
0120 QSCP-100  
0130 DSCP-100  
0140 QSCP-200/300  
0150 DSCP-200/300

0170 QSCLP-100  
0180 DSCLP-100  
0181 DSC-100  
0190 SSCLP-100  
01a0 QSCLP-200/300  
01b0 DSCLP-200/300  
01b1 DSC-200/300  
01c0 SSCLP-200/300  
01e0 ESC(LP)-100  
0258 DSPSX-200/300  
135d ABB Network Partner AB  
135e Sealevel Systems Inc  
5101 Route 56.PCI - Multi-Protocol Serial Interface (Zilog Z16C32)  
7101 Single Port RS-232/422/485/530  
7201 Dual Port RS-232/422/485 Interface  
7202 Dual Port RS-232 Interface  
7401 Four Port RS-232 Interface  
7402 Four Port RS-422/485 Interface  
7801 Eight Port RS-232 Interface  
7804 Eight Port RS-232/422/485 Interface  
8001 8001 Digital I/O Adapter  
135f I-Data International A-S  
1360 Meinberg Funkuhren  
0101  
PCI32 DCF77 Radio Clock  
0102 PCI509 DCF77 Radio Clock  
0103 PCI510 DCF77 Radio Clock  
0104 PCI511 DCF77 Radio Clock  
0105 PEX511 DCF77 Radio Clock (PCI Express)  
0106 PZF180PEX High Precision DCF77 Radio Clock (PCI Express)  
0201 GPS167PCI GPS Receiver  
0202 GPS168PCI GPS Receiver  
0203 GPS169PCI GPS Receiver  
0204 GPS170PCI GPS Receiver  
0205 GPS170PEX GPS Receiver (PCI Express)  
0206 GPS180PEX GPS Receiver (PCI Express)  
0207 GLN180PEX GPS/GLONASS receiver (PCI Express)  
0208 GPS180AMC GPS Receiver (PCI Express / MicroTCA / AdvancedMC)  
0209 GNS181PEX GPS/Galileo/GLONASS/BEIDOU receiver (PCI Express)  
0301 TCR510PCI IRIG Timecode Reader  
0302 TCR167PCI IRIG Timecode Reader  
0303 TCR511PCI IRIG Timecode Reader  
0304 TCR511PEX IRIG Timecode Reader (PCI Express)  
0305 TCR170PEX IRIG Timecode Reader (PCI Express)  
0306 TCR180PEX IRIG Timecode Reader (PCI Express)  
0501 PTP270PEX PTP/IEEE1588 slave card (PCI Express)  
0601 FRC511PEX Free Running Clock (PCI Express)  
1361

Soliton Systems K.K.  
1362 Fujifacom Corporation  
1363 Phoenix Technology Ltd  
1364 ATM Communications Inc  
1365 Hypercope GmbH  
1366 Teijin Seiki Co. Ltd  
1367 Hitachi Zosen Corporation  
1368 Skyware Corporation  
1369 Digigram  
136a High Soft Tech  
0004 HST Saphir VII mini PCI  
0007 HST Saphir III E MultiLink 4  
0008 HST Saphir III E MultiLink 8  
000a HST Saphir III E MultiLink 2  
136b Kawasaki Steel Corporation  
ff01 KL5A72002 Motion JPEG  
136c Adtek System Science Co Ltd  
136d Gigalabs Inc  
136f Applied Magic Inc  
1370 ATL Products  
1371 CNet Technology Inc  
434e GigaCard Network Adapter  
1371 434e N-Way PCI-Bus Giga-Card 1000/100/10Mbps(L)  
1373 Silicon Vision Inc  
1374 Silicom Ltd.  
0024 Silicom Dual port Giga Ethernet BGE Bypass Server Adapter  
0025 Silicom Quad port Giga Ethernet BGE Bypass Server Adapter  
0026 Silicom Dual port Fiber Giga Ethernet 546 Bypass Server Adapter  
0027 Silicom Dual port Fiber LX Giga Ethernet 546 Bypass Server Adapter  
0029  
Silicom Dual port Copper Giga Ethernet 546GB Bypass Server Adapter  
002a Silicom Dual port Fiber Giga Ethernet 546 TAP/Bypass Server Adapter  
002b Silicom Dual port Copper Fast Ethernet 546 TAP/Bypass Server Adapter (PXE2TBI)  
002c Silicom Quad port Copper Giga Ethernet 546GB Bypass Server Adapter (PXG4BPI)  
002d Silicom Quad port Fiber-SX Giga Ethernet 546GB Bypass Server Adapter (PXG4BPFI)  
002e Silicom Quad port Fiber-LX Giga Ethernet 546GB Bypass Server Adapter (PXG4BPFI-LX)  
002f Silicom Dual port Fiber-SX Giga Ethernet 546GB Low profile Bypass Server Adapter (PXG2BPFI)  
0030 Silicom Dual port Fiber-LX Giga Ethernet 546GB Low profile Bypass Server Adapter  
0031 Silicom Quad port Copper Giga Ethernet PCI-E Bypass Server Adapter  
0032 Silicom Dual port Copper Fast Ethernet 546 TAP/Bypass Server Adapter  
0034 Silicom Dual port Copper Giga Ethernet PCI-E BGE Bypass Server Adapter  
0035 Silicom Quad port Copper Giga Ethernet PCI-E BGE Bypass Server Adapter  
0036 Silicom Dual  
port Fiber Giga Ethernet PCI-E BGE Bypass Server Adapter  
0037 Silicom Dual port Copper Ethernet PCI-E Intel based Bypass Server Adapter  
0038 Silicom Quad port Copper Ethernet PCI-E Intel based Bypass Server Adapter  
0039 Silicom Dual port Fiber-SX Ethernet PCI-E Intel based Bypass Server Adapter  
003a Silicom Dual port Fiber-LX Ethernet PCI-E Intel based Bypass Server Adapter



003b Silicom Dual port Fiber Ethernet PMC Intel based Bypass Server Adapter (PMCX2BPFI)  
003c Silicom Dual port Copper Ethernet PCI-X BGE based Bypass Server Adapter (PXG2BPRB)  
003d 2-port Copper GBE Bypass with Cavium 1010 PCI-X  
003e Silicom Dual port Fiber Giga Ethernet PCI-E 571 TAP/Bypass Server Adapter (PEG2TBFI)  
003f Silicom Dual port Copper Giga Ethernet PCI-X 546 TAP/Bypass Server Adapter (PXG2TBI)  
0040 Silicom Quad port Fiber-SX Giga Ethernet 571 Bypass Server Adapter (PEG4BPFI)  
0042 4-port Copper GBE PMC-X Bypass  
0043 Silicom Quad port Fiber-SX Giga Ethernet 546 Bypass Server Adapter  
(PXG4BPFI)  
0045 Silicom 6 port Copper Giga Ethernet 546 Bypass Server Adapter (PXG6BPI)  
0046 4-port bypass PCI-E w disconnect low profile  
0047 Silicom Dual port Fiber-SX Giga Ethernet 571 Bypass Disconnect Server Adapter (PEG2BPFI)  
004a Silicom Quad port Fiber-LX Giga Ethernet 571 Bypass Server Adapter (PEG4BPFI-LX)  
004d Dual port Copper Giga Ethernet PCI-E Bypass Server Adapter  
0401 Gigabit Ethernet ExpressModule Bypass Server Adapter  
0420 Gigabit Ethernet ExpressModule Bypass Server Adapter  
0460 Gigabit Ethernet Express Module Bypass Server Adapter  
0461 Gigabit Ethernet ExpressModule Bypass Server Adapter  
0462 Gigabit Ethernet ExpressModule Bypass Server Adapter  
0470 Octal-port Copper Gigabit Ethernet Express Module Bypass Server Adapter  
0482 Dual-port Fiber (SR) 10 Gigabit Ethernet ExpressModule Bypass Server Adapter  
0483 Dual-port Fiber (LR) 10 Gigabit Ethernet ExpressModule Bypass Server Adapter  
1375 Argosystems Inc  
1376 LMC  
1377 Electronic Equipment  
Production & Distribution GmbH  
1378 Telemann Co. Ltd  
1379 Asahi Kasei Microsystems Co Ltd  
137a Mark of the Unicorn Inc  
0001 PCI-324 Audiowire Interface  
137b PPT Vision  
137c Iwatsu Electric Co Ltd  
137d Dynachip Corporation  
137e Patriot Scientific Corporation  
137f Japan Satellite Systems Inc  
1380 Sanritz Automation Co Ltd  
1381 Brains Co. Ltd  
1382 Marian - Electronic & Software  
0001 ARC88 audio recording card  
2008 Prodif 96 Pro sound system  
2048 Prodif Plus sound system  
2088 Marc 8 Midi sound system  
20c8 Marc A sound system  
4008 Marc 2 sound system  
4010 Marc 2 Pro sound system  
4048 Marc 4 MIDI sound system  
4088 Marc 4 Digi sound system  
4248 Marc X sound system

4424 TRACE D4 Sound System  
1383 Controlnet Inc  
1384 Reality Simulation Systems Inc  
1385 Netgear  
006b WA301 802.11b Wireless PCI Adapter  
4100 MA301 802.11b Wireless PCI Adapter  
4601 WAG511 802.11a/b/g Dual Band Wireless PC Card  
620a GA620 Gigabit Ethernet  
630a GA630 Gigabit Ethernet  
1386  
Video Domain Technologies  
1387 Systran Corp  
1388 Hitachi Information Technology Co Ltd  
1389 Applicom International  
0001 PCI1500PFB [Intelligent fieldbus adaptor]  
138a Fusion Micromedia Corp  
003d VFS491 Validity Sensor  
138b Tokimec Inc  
138c Silicon Reality  
138d Future Techno Designs pte Ltd  
138e Basler GmbH  
138f Patapsco Designs Inc  
1390 Concept Development Inc  
1391 Development Concepts Inc  
1392 Medialight Inc  
1393 Moxa Technologies Co Ltd  
0001 UC7000 Serial  
1020 CP-102 (2-port RS-232 PCI)  
1021 CP-102UL (2-port RS-232 Universal PCI)  
1022 CP-102U (2-port RS-232 Universal PCI)  
1023 CP-102UF  
1024 CP-102E (2-port RS-232 Smart PCI Express Serial Board)  
1025 CP-102EL (2-port RS-232 Smart PCI Express Serial Board)  
1040 Smartio C104H/PCI  
1041 CP104U (4-port RS-232 Universal PCI)  
1042 CP104JU (4-port RS-232 Universal PCI)  
1043 CP104EL (4-port RS-232 Smart PCI Express)  
1044 POS104UL (4-port RS-232 Universal PCI)  
1045 CP-104EL-A (4-port RS-232 PCI  
Express Serial Board)  
1080 CB108 (8-port RS-232 PC/104-plus Module)  
1140 CT-114 series  
1141 Industrio CP-114  
1142 CB114 (4-port RS-232/422/485 PC/104-plus Module)  
1143 CP-114UL (4-port RS-232/422/485 Smart Universal PCI Serial Board)  
1144 CP-114EL (4-port RS-232/422/485 Smart PCI Express Serial Board)  
1180 CP118U (8-port RS-232/422/485 Smart Universal PCI)  
1181 CP118EL (8-port RS-232/422/485 Smart PCI Express)

1182 CP-118EL-A (8-port RS-232/422/485 PCI Express Serial Board)  
1320 CP132 (2-port RS-422/485 PCI)  
1321 CP132U (2-Port RS-422/485 Universal PCI)  
1322 CP-132EL (2-port RS-422/485 Smart PCI Express Serial Board)  
1340 CP134U (4-Port RS-422/485 Universal PCI)  
1341 CB134I (4-port RS-422/485 PC/104-plus Module)  
1380 CP138U (8-port RS-232/422/485 Smart Universal PCI)  
1680 Smartio C168H/PCI  
1681 CP-168U V2 Smart Serial Board (8-port RS-232)  
1682 CP-168EL (8-port RS-232 Smart PCI Express)  
1683 CP-168EL-A (8-port RS-232 PCI Express Serial Board)  
2040  
Intellio CP-204J  
2180 Intellio C218 Turbo PCI  
3200 Intellio C320 Turbo PCI  
1394 Level One Communications  
0001 LXT1001 Gigabit Ethernet  
1186 4800 DGE-500SX  
1394 0001 NetCelerator Adapter  
1395 Ambicom Inc  
1396 Cipher Systems Inc  
1397 Cologne Chip Designs GmbH  
08b4 ISDN network Controller [HFC-4S]  
1397 08b4 HFC-4S [Cologne Chip HFC-4S Eval. Board]  
1397 b51a HFC-4S [Allo.com BRI card]  
1397 b520 HFC-4S [IOB4ST]  
1397 b540 HFC-4S [Swyx SX2 QuadBri]  
1397 b550 HFC-4S [Junghanns.NET quadBRI]  
1397 b556 HFC-4S [Junghanns.NET duoBRI]  
1397 b559 HFC-4S [Junghanns.NET duoBRI miniPCI]  
1397 b560 HFC-4S [BeroNet BN4S0]  
1397 b566 HFC-4S [BeroNet BN2S0]  
1397 b567 HFC-4S [BeroNet BN1S0 miniPCI]  
1397 b568 HFC-4S [BeroNet BN4S0 miniPCI]  
1397 b569 HFC-4S [BeroNet BN2S0 miniPCI]  
1397 b620 HFC-4S  
1397 b752 HFC-4S [Junghanns.NET quadBRI PCIe]  
1397 b761 HFC-4S [BeroNet BN2S0 PCIe]  
1397 b762 HFC-4S [BeroNet BN4S0 PCIe]  
1397 e884 HFC-4S [OpenVox  
B200P]  
1397 e888 HFC-4S [OpenVox B200P / B400P]  
16b8 ISDN network Controller [HFC-8S]  
1397 16b8 HFC-8S [Cologne Chip HFC-8S Eval. Board]  
1397 b521 HFC-8S [IOB4ST Recording]  
1397 b522 HFC-8S [IOB8ST]  
1397 b552 HFC-8S [Junghanns.NET octoBRI]  
1397 b55b HFC-8S [Junghanns.NET octoBRI]

1397 b562 HFC-8S [BeroNet BN8S0]  
1397 b56b HFC-8S [BeroNet BN8S0+]  
1397 b622 HFC-8S  
1397 e998 HFC-8S [OpenVox B800P]  
2bd0 ISDN network controller [HFC-PCI]  
0675 1704 ISDN Adapter (PCI Bus, D, C)  
0675 1708 ISDN Adapter (PCI Bus, D, C, ACPI)  
1397 2bd0 ISDN Board  
e4bf 1000 CI1-1-Harp  
30b1 ISDN network Controller [HFC-E1]  
1397 30b1 HFC-E1 [Cologne Chip HFC-E1 Eval. Board]  
1397 b523 HFC-E1 [IOB1E1]  
1397 b543 HFC-E1 [Swyx SX2 SinglePRI V2]  
1397 b544 HFC-E1 [Swyx SX2 DualPRI V2]  
1397 b553 HFC-E1 [Junghanns.NET singleE1]  
1397 b554 HFC-E1 [Junghanns.NET doubleE1]  
1397 b555 HFC-E1 [Junghanns.NET doubleE1 2.0]  
1397 b55a HFC-E1 [Junghanns.NET singleE1  
miniPCI]  
1397 b563 HFC-E1 [beroNet BN1E1]  
1397 b564 HFC-E1 [beroNet BN2E1]  
1397 b565 HFC-E1 [beroNet BN2E1+]  
1397 b56a HFC-E1 [beroNet BN1E1 miniPCI]  
b700 ISDN network controller PrimuX S0 [HFC-PCI]  
f001 GSM Network Controller [HFC-4GSM]  
1398 Clarion co. Ltd  
1399 Rios systems Co Ltd  
139a Alacritech Inc  
0001 Quad Port 10/100 Server Accelerator  
0003 Single Port 10/100 Server Accelerator  
0005 Single Port Gigabit Server Accelerator  
139b Mediasonic Multimedia Systems Ltd  
139c Quantum 3d Inc  
139d EPL limited  
139e Media4  
139f Aethra s.r.l.  
13a0 Crystal Group Inc  
13a1 Kawasaki Heavy Industries Ltd  
13a2 Ositech Communications Inc  
13a3 Hifn Inc.  
0005 7751 Security Processor  
0006 6500 Public Key Processor  
0007 7811 Security Processor  
0012 7951 Security Processor  
0014 78XX Security Processor  
0016 8065 Security Processor  
0017 8165 Security Processor  
0018 8154 Security Processor

001d 7956 Security Processor  
001f 7855 Security Processor  
0020  
7955 Security Processor  
0026 8155 Security Processor  
002e 9630 Compression Processor  
002f 9725 Compression and Security Processor  
13a3 1600 DR1600 Acceleration Card  
13a3 1605 DR1605 Acceleration Card  
13a3 1610 DR1610 Acceleration Card  
13a3 1615 DR1615 Acceleration Card  
13a3 1620 DR1620 Acceleration Card  
13a3 1625 DR1625 Acceleration Card  
0033 8201 Acceleration Processor  
13a3 0036 DX1710 Acceleration Card  
0034 8202 Acceleration Processor  
13a3 0036 DX1720 Acceleration Card  
0035 8203 Acceleration Processor  
13a3 0036 DX1730 Acceleration Card  
0037 8204 Acceleration Processor  
13a3 0036 DX1740 Acceleration Card  
9240 XR9240 Compression and Security Coprocessor [Panther II]  
13a3 9200 DX2040 Compression and Security Acceleration Card [Panther II]  
13a4 Rascom Inc  
13a5 Audio Digital Imaging Inc  
13a6 Videonics Inc  
13a7 Teles AG  
13a8 Exar Corp.  
0152 XR17C/D152 Dual PCI UART  
0154 XR17C154 Quad UART  
0158 XR17C158 Octal UART  
0252 XR17V252 Dual  
UART PCI controller  
0254 XR17V254 Quad UART PCI controller  
0258 XR17V258 Octal UART PCI controller  
0352 XR17V3521 Dual PCIe UART  
13a9 Siemens Medical Systems, Ultrasound Group  
13aa Broadband Networks Inc  
13ab Arcom Control Systems Ltd  
13ac Motion Media Technology Ltd  
13ad Nexus Inc  
13ae ALD Technology Ltd  
13af T.Square  
13b0 Maxspeed Corp  
13b1 Tamura corporation  
13b2 Techno Chips Co. Ltd  
13b3 Lanart Corporation  
13b4 Wellbean Co Inc

13b5 ARM  
13b6 Dlog GmbH  
13b7 Logic Devices Inc  
13b8 Nokia Telecommunications oy  
13b9 Elecom Co Ltd  
13ba Oxford Instruments  
13bb Sanyo Technosound Co Ltd  
13bc Bitran Corporation  
13bd Sharp corporation  
13be Miroku Jyoho Service Co. Ltd  
13bf Sharewave Inc  
13c0 Microgate Corporation  
0010 SyncLink Adapter v1  
0020 SyncLink SCC Adapter  
0030 SyncLink Multiport Adapter  
0070 SyncLink GT Adapter  
0080 SyncLink GT4 Adapter  
00a0 SyncLink GT2 Adapter  
0210 SyncLink Adapter v2  
13c1 3ware Inc  
1000 5xxx/6xxx-series PATA-RAID  
1001  
7xxx/8xxx-series PATA/SATA-RAID  
13c1 1001 7xxx/8xxx-series PATA/SATA-RAID  
1002 9xxx-series SATA-RAID  
1003 9550SX SATA-II RAID PCI-X  
1004 9650SE SATA-II RAID PCIe  
1005 9690SA SAS/SATA-II RAID PCIe  
1010 9750 SAS2/SATA-II RAID PCIe  
13c2 Technotrend Systemtechnik GmbH  
000e Technotrend/Hauppauge DVB card rev2.3  
1019 TTechnoTrend-budget DVB S2-3200  
13c3 Janz Computer AG  
13c4 Phase Metrics  
13c5 Alphi Technology Corp  
13c6 Condor Engineering Inc  
0520 CEI-520 A429 Card  
0620 CEI-620 A429 Card  
0820 CEI-820 A429 Card  
0830 CEI-830 A429 Card  
1004 P-SER Multi-channel PMC to RS-485/422/232 adapter  
13c7 Blue Chip Technology Ltd  
0adc PCI-ADC  
0b10 PCI-PIO  
0d10 PCI-DIO  
524c PCI-RLY  
5744 PCI-WDT  
13c8 Apptech Inc

13c9 Eaton Corporation  
13ca Iomega Corporation  
13cb Yano Electric Co Ltd  
13cc BARCO  
13cd Compatible Systems Corporation  
13ce Cocom A/S  
13cf Studio Audio & Video Ltd  
13d0 Techsan Electronics Co Ltd  
2103 B2C2 FlexCopII DVB chip / Technisat SkyStar2  
DVB card  
2104 B2C2 FlexCopIII DVB chip / Technisat SkyStar2 DVB card (rev 01)  
2200 B2C2 FlexCopIII DVB chip / Technisat SkyStar2 DVB card  
13d1 Abocom Systems Inc  
ab02 ADMtek Centaur-C rev 17 [D-Link DFE-680TX] CardBus Fast Ethernet Adapter  
ab03 21x4x DEC-Tulip compatible 10/100 Ethernet  
ab06 RTL8139 [FE2000VX] CardBus Fast Ethernet Attached Port Adapter  
ab08 21x4x DEC-Tulip compatible 10/100 Ethernet  
13d2 Shark Multimedia Inc  
13d4 Graphics Microsystems Inc  
13d5 Media 100 Inc  
13d6 K.I. Technology Co Ltd  
13d7 Toshiba Engineering Corporation  
13d8 Phobos corporation  
13d9 Apex PC Solutions Inc  
13da Intresource Systems pte Ltd  
13db Janich & Klass Computertechnik GmbH  
13dc Netboost Corporation  
13dd Multimedia Bundle Inc  
13de ABB Robotics Products AB  
13df E-Tech Inc  
0001 PCI56RVP Modem  
13df 0001 PCI56RVP Modem  
13e0 GVC Corporation  
13e1 Silicom Multimedia Systems Inc  
13e2 Dynamics Research Corporation  
13e3 Nest Inc  
13e4 Calculex Inc  
13e5 Telesoft Design  
Ltd  
13e6 Argosy research Inc  
13e7 NAC Incorporated  
13e8 Chip Express Corporation  
13e9 Intraserver Technology Inc  
13ea Dallas Semiconductor  
13eb Hauppauge Computer Works Inc  
13ec Zydacron Inc  
000a NPC-RC01 Remote control receiver  
13ed Raytheon E-Systems

13ee Hayes Microcomputer Products Inc  
13ef Coppercom Inc  
13f0 Sundance Technology Inc / IC Plus Corp  
0200 IC Plus IP100A Integrated 10/100 Ethernet MAC + PHY  
1043 8213 NX1001  
0201 ST201 Sundance Ethernet  
1021 TC902x Gigabit Ethernet  
1023 IP1000 Family Gigabit Ethernet  
1043 8180 NX1101  
13f1 Océ - Technologies B.V.  
13f2 Ford Microelectronics Inc  
13f3 Brocade Communications Systems, Inc.  
13f4 Troika Networks, Inc.  
1401 Zentai Fibre Channel Adapter  
13f5 Kansai Electric Co. Ltd  
13f6 C-Media Electronics Inc  
0011 CMI8738  
0100 CM8338A  
13f6 ffff CMI8338/C3DX PCI Audio Device  
0101 CM8338B  
13f6 0101 CMI8338-031 PCI Audio Device  
0111 CMI8738/CMI8768 PCI Audio  
1019 0970 P6STP-FL motherboard  
1043  
8035 CUSI-FX motherboard  
1043 8077 CMI8738 6-channel audio controller  
1043 80e2 CMI8738 6ch-MX  
13f6 0111 CMI8738/C3DX PCI Audio Device  
13f6 9761 Theatron Agrippa  
153b 1144 Aureon 5.1  
153b 1170 Aureon 7.1  
1681 a000 Gamesurround MUSE XL  
17ab 0604 PSC604 Dynamic Edge  
17ab 0605 PSC605 Sonic Edge  
17ab 7777 PSC605 Sonic Edge  
270f 1103 CT-7NJS Ultra motherboard  
270f f462 7N JL1 motherboard  
584d 3731 Digital X-Mystique  
584d 3741 X-Plosion 7.1  
584d 3751 X-Raider 7.1  
584d 3761 X-Mystique 7.1 LP  
584d 3771 X-Mystique 7.1 LP Value  
7284 8384 Striker 7.1  
0211 CM8738  
5011 CM8888 [Oxygen Express]  
13f6 5011 HDA Controller  
8788 CMI8788 [Oxygen HD Audio]  
1043 8269 Virtuoso 200 (Xonar D2)



1043 8275 Virtuoso 100 (Xonar DX)  
1043 82b7 Virtuoso 200 (Xonar D2X)  
1043 8314 Virtuoso 200 (Xonar HDAV1.3)  
1043 8327 Virtuoso 100 (Xonar DX)  
1043 834f Virtuoso 100 (Xonar D1)  
1043 835c Virtuoso 100 (Xonar Essence STX)  
1043 835d Virtuoso  
100 (Xonar ST)  
1043 835e Virtuoso 200 (Xonar HDAV1.3 Slim)  
1043 838e Virtuoso 66 (Xonar DS)  
1043 8428 Virtuoso 100 (Xonar Xense)  
1043 8467 CMI8786 (Xonar DG)  
1043 8521 CMI8786 (Xonar DGX)  
1043 8522 Xonar DSX  
1043 85f4 Virtuoso 100 (Xonar Essence STX II)  
13f6 8782 PCI 2.0 HD Audio  
13f6 ffff CMI8787-HG2PCI  
14c3 1710 HiFier Fantasia  
14c3 1711 HiFier Serenade  
14c3 1713 HiFier Serenade III  
1a58 0910 Barracuda AC-1  
415a 5431 X-Meridian 7.1  
5431 017a X-Meridian 7.1 2G  
584d 3781 HDA X-Purity 7.1 Platinum  
7284 9761 CLARO  
7284 9781 CLARO halo  
7284 9783 eCLARO  
7284 9787 CLARO II  
13f7 Wildfire Communications  
13f8 Ad Lib Multimedia Inc  
13f9 NTT Advanced Technology Corp.  
13fa Pentland Systems Ltd  
13fb Aydin Corp  
13fc Computer Peripherals International  
13fd Micro Science Inc  
13fe Advantech Co. Ltd  
0071 PCIE-1761H, 8-ch Relay and 8-ch Isolated Digital Input Card  
1240 PCI-1240 4-channel stepper motor controller card  
1600 PCI-16xx  
series PCI multiport serial board (function 0)  
# This board has two PCI functions, appears as two PCI devices  
1601 0002 PCI-1601 2-port unisolated RS-422/485  
# This board has two PCI functions, appears as two PCI devices  
1602 0002 PCI-1602 2-port isolated RS-422/485  
1612 0004 PCI-1612 4-port RS-232/422/485  
1603 PCI-1603 2-port isolated RS-232/current loop  
1604 PCI-1604 2-port RS-232  
1680 PCI-1680 Rev.A1 2-port CAN-bus with isolation protection

16ff PCI-16xx series PCI multiport serial board (function 1: RX/TX steering CPLD)  
1601 0000 PCI-1601 2-port unisolated RS-422/485 PCI communications card  
1602 0000 PCI-1602 2-port isolated RS-422/485  
1612 0000 PCI-1612 4-port RS-232/422/485  
1711 PCI-1711 16-channel data acquisition card 12-bit, 100kS/s  
1713 PCI-1713 32-channel isolated analog input card  
1733 PCI-1733 32-channel isolated digital input card  
1734 PCI-1734 32-channel isolated digital output card  
1752 PCI-1752 64-channel Isolated Digital Output  
Card  
1754 PCI-1754 64-channel Isolated Digital Input Card  
1756 PCI-1756 64-ch Isolated Digital I/O PCI Card  
a004 PCI-1612 4-port RS-232/422/485  
# FPGA bridge to two SJA1000  
c302 MIOe-3680 2-Port CAN-Bus MIOe Module with Isolation Protection  
13ff Silicon Spice Inc  
1400 Artx Inc  
1401 9432 TX  
1401 CR-Systems A/S  
1402 Meilhaus Electronic GmbH  
0630 ME-630  
0940 ME-94  
0950 ME-95  
0960 ME-96  
1000 ME-1000  
100a ME-1000  
100b ME-1000  
1400 ME-1400  
140a ME-1400A  
140b ME-1400B  
140c ME-1400C  
140d ME-1400D  
140e ME-1400E  
14ea ME-1400EA  
14eb ME-1400EB  
1604 ME-1600/4U  
1608 ME-1600/8U  
160c ME-1600/12U  
160f ME-1600/16U  
168f ME-1600/16U8I  
4610 ME-4610  
4650 ME-4650  
4660 ME-4660  
4661 ME-4660I  
4662 ME-4660  
4663 ME-4660I  
4670 ME-4670  
4671 ME-4670I

4672 ME-4670S  
4673 ME-4670IS  
4680 ME-4680  
4681 ME-4680I  
4682 ME-4680S  
4683 ME-4680IS  
6004 ME-6000/4  
6008 ME-6000/8  
600f ME-6000/16  
6014 ME-6000I/4  
6018 ME-6000I/8  
601f ME-6000I/16  
6034  
ME-6000ISLE/4  
6038 ME-6000ISLE/8  
603f ME-6000ISLE/16  
6044 ME-6000/4/DIO  
6048 ME-6000/8/DIO  
604f ME-6000/16/DIO  
6054 ME-6000I/4/DIO  
6058 ME-6000I/8/DIO  
605f ME-6000I/16/DIO  
6074 ME-6000ISLE/4/DIO  
6078 ME-6000ISLE/8/DIO  
607f ME-6000ISLE/16/DIO  
6104 ME-6100/4  
6108 ME-6100/8  
610f ME-6100/16  
6114 ME-6100I/4  
6118 ME-6100I/8  
611f ME-6100I/16  
6134 ME-6100ISLE/4  
6138 ME-6100ISLE/8  
613f ME-6100ISLE/16  
6144 ME-6100/4/DIO  
6148 ME-6100/8/DIO  
614f ME-6100/16/DIO  
6154 ME-6100I/4/DIO  
6158 ME-6100I/8/DIO  
615f ME-6100I/16/DIO  
6174 ME-6100ISLE/4/DIO  
6178 ME-6100ISLE/8/DIO  
617f ME-6100ISLE/16/DIO  
6259 ME-6200I/9/DIO  
6359 ME-6300I/9/DIO  
810a ME-8100A  
810b ME-8100B  
820a ME-8200A

820b ME-8200B  
1403 Ascor Inc  
1404 Fundamental Software Inc  
1405 Excalibur Systems Inc  
1406 Océ Printing Systems GmbH  
1407 Lava Computer mfg Inc  
0100 Lava Dual Serial  
0101 Lava Quattro A  
0102 Lava Quattro B  
0110 Lava DSerial-PCI Port A  
0111  
Lava DSerial-PCI Port B  
0120 Quattro-PCI A  
0121 Quattro-PCI B  
0180 Lava Octo A  
0181 Lava Octo B  
0200 Lava Port Plus  
0201 Lava Quad A  
0202 Lava Quad B  
0220 Lava Quattro PCI Ports A/B  
0221 Lava Quattro PCI Ports C/D  
0400 Lava 8255-PIO-PCI  
0500 Lava Single Serial  
0520 Lava RS422-SS-PCI  
0600 Lava Port 650  
8000 Lava Parallel  
8001 Dual parallel port controller A  
8002 Lava Dual Parallel port A  
8003 Lava Dual Parallel port B  
8800 BOCA Research IOPPAR  
1408 Aloka Co. Ltd  
1409 Timedia Technology Co Ltd  
7168 PCI2S550 (Dual 16550 UART)  
1409 0002 SER4036A3V (2x RS232 port)  
1409 4027 SER4027A (1x RS232 port)  
1409 4037 SER4037A(L) [SUNIX SUN1889] (2x RS232 port)  
# Single DC-37 connector  
1409 4056 SER4056A (4x RS232)  
1409 5027 SER4027D  
1409 5037 SER4037D (2x RS232 port)  
# Single DC-62 connector  
1409 5066 SER4066R (8x RS232)  
# 4x 8p8c connectors  
1409 6056 SER4056D (4x RS232 port)  
7268 SUN1888 (Dual IEEE1284 parallel port)  
1409 0103 PAR4008A  
1409

0104 PAR4018A  
140a DSP Research Inc  
# Formerly RAMiX, GE Fanuc, GE Intelligent Platforms  
140b Abaco Systems, Inc.  
140c Elmic Systems Inc  
140d Matsushita Electric Works Ltd  
140e Goepel Electronic GmbH  
140f Salient Systems Corp  
1410 Midas lab Inc  
1411 Ikos Systems Inc  
# Nee IC Ensemble Inc.  
1412 VIA Technologies Inc.  
1712 ICE1712 [Envy24] PCI Multi-Channel I/O Controller  
1412 1712 Hoontech ST Audio DSP 24  
1412 d630 M-Audio Delta 1010  
1412 d631 M-Audio Delta DiO  
1412 d632 M-Audio Delta 66  
1412 d633 M-Audio Delta 44  
1412 d634 M-Audio Delta Audiophile 2496  
1412 d635 M-Audio Delta TDIF  
1412 d637 M-Audio Delta RBUS  
1412 d638 M-Audio Delta 410  
1412 d63b M-Audio Delta 1010LT  
1412 d63c Digigram VX442  
1416 1712 Hoontech ST Audio DSP 24 Media 7.1  
153b 1115 EWS88 MT  
153b 1125 EWS88 MT (Master)  
153b 112b EWS88 D  
153b 112c EWS88 D (Master)  
153b 1130 EWX 24/96  
153b 1138 DMX 6fire 24/96  
153b 1151 PHASE88  
16ce 1040 Edirol  
DA-2496  
1724 VT1720/24 [Envy24PT/HT] PCI Multi-Channel Audio Controller  
10b0 0200 Hollywood@Home 7.1  
1412 1724 Albatron PX865PE 7.1  
1412 3630 M-Audio Revolution 7.1  
1412 3631 M-Audio Revolution 5.1  
1412 3632 M-Audio Audiophile 192  
153b 1145 Aureon 7.1 Space  
153b 1147 Aureon 5.1 Sky  
153b 1150 PHASE 22  
153b 1153 Aureon 7.1 Universe  
17ab 1906 PSC 724 [Ultimate Edge]  
270f f641 ZNF3-150  
270f f645 ZNF3-250  
3130 4154 MAYA 44 MKII

1413 Addonics  
1414 Microsoft Corporation  
0001 MN-120 (ADMtek Centaur-C based)  
0002 MN-130 (ADMtek Centaur-P based)  
# Virtual Video Card Device for Windows Remote Desktop (RDP)  
008c Basic Render Driver  
008e Basic Render Driver  
5353 Hyper-V virtual VGA  
5801 XMA Decoder (Xenon)  
5802 SATA Controller - CdRom (Xenon)  
5803 SATA Controller - Disk (Xenon)  
5804 OHCI Controller 0 (Xenon)  
5805 EHCI Controller 0 (Xenon)  
5806 OHCI Controller 1 (Xenon)  
5807 EHCI Controller 1 (Xenon)  
580a Fast Ethernet Adapter  
(Xenon)  
580b Secure Flash Controller (Xenon)  
580d System Management Controller (Xenon)  
5811 Xenos GPU (Xenon)  
1415 Oxford Semiconductor Ltd  
8401 OX9162 Mode 1 (8-bit bus)  
8403 OX9162 Mode 0 (parallel port)  
9500 OX16PCI954 (Quad 16950 UART) function 0 (Disabled)  
9501 OX16PCI954 (Quad 16950 UART) function 0 (Uart)  
12c4 0201 Titan/cPCI (2 port)  
12c4 0202 Titan/cPCI (4 port)  
12c4 0203 Titan/cPCI (8 port)  
12c4 0210 Titan/104-Plus (8 port, p1-4)  
131f 2050 CyberPro (4-port)  
# Model IO1085, Part No: JJ-P46012  
131f 2051 CyberSerial 4S Plus  
15ed 2000 MCCR Serial p0-3 of 8  
15ed 2001 MCCR Serial p0-3 of 16  
9505 OXuPCI952 (Dual 16C950 UART)  
950a EXSYS EX-41092 Dual 16950 Serial adapter  
950b OXCB950 Cardbus 16950 UART  
9510 OX16PCI954 (Quad 16950 UART) function 1 (Disabled)  
12c4 0200 Titan/cPCI (Unused)  
9511 OX16PCI954 (Quad 16950 UART) function 1 (8bit bus)  
12c4 0211 Titan/104-Plus (8 port, p5-8)  
15ed 2000 MCCR Serial p4-7 of 8  
15ed 2001  
MCCR Serial p4-15 of 16  
9512 OX16PCI954 (Quad 16950 UART) function 1 (32bit bus)  
9513 OX16PCI954 (Quad 16950 UART) function 1 (parallel port)  
9521 OX16PCI952 (Dual 16950 UART)  
9523 OX16PCI952 Integrated Parallel Port

# Multifunction device with 3 function bits in ID  
c000 OXPCIe840 Parallel Port  
c004 OXPCIe840 Parallel Port  
c006 OXPCIe840 GPIO  
# Multifunction device with reset straps and function bits in ID  
c100 OXPCIe952 Parallel Port  
c101 OXPCIe952 Legacy 950 UART  
c104 OXPCIe952 Parallel Port  
c105 OXPCIe952 Legacy 950 UART  
c106 OXPCIe952 GPIO  
c108 OXPCIe952 Parallel Port  
c109 OXPCIe952 Legacy 950 UART  
c10c OXPCIe952 Parallel Port  
c10d OXPCIe952 Legacy 950 UART  
c10e OXPCIe952 GPIO  
c110 OXPCIe952 Parallel Port  
c114 OXPCIe952 Parallel Port  
c118 OXPCIe952 Parallel Port  
c11b OXPCIe952 Native 950 UART  
c11c OXPCIe952 Parallel Port  
c11e OXPCIe952 GPIO  
c11f OXPCIe952 Native 950 UART  
c120 OXPCIe952 Legacy 950 UART  
c124 OXPCIe952 Legacy 950 UART  
c126  
OXPCIe952 GPIO  
c128 OXPCIe952 Legacy 950 UART  
c12c OXPCIe952 Legacy 950 UART  
c12e OXPCIe952 GPIO  
c134 OXPCIe952 GPIO  
c138 OXPCIe952 Native 950 UART  
c13c OXPCIe952 GPIO  
c13d OXPCIe952 Native 950 UART  
c140 OXPCIe952 Legacy 950 UART #1  
c141 OXPCIe952 Legacy 950 UART #2  
c144 OXPCIe952 Legacy 950 UART #1  
c145 OXPCIe952 Legacy 950 UART #2  
c146 OXPCIe952 GPIO  
c148 OXPCIe952 Legacy 950 UART #1  
c149 OXPCIe952 Legacy 950 UART #2  
c14c OXPCIe952 Legacy 950 UART #1  
c14d OXPCIe952 Legacy 950 UART #2  
c14e OXPCIe952 GPIO  
c154 OXPCIe952 GPIO  
c158 OXPCIe952 Dual Native 950 UART  
e4bf c504 CP4-SCAT Wireless Technologies Carrier Board  
e4bf d551 DU1-MUSTANG Dual-Port RS-485 Interface  
c15c OXPCIe952 GPIO

c15d OXPCIe952 Dual Native 950 UART  
# Multifunction device with 4 function bits in ID  
c204 OXPCIe954 GPIO  
c208 OXPCIe954 Quad Native 950 UART  
c20c OXPCIe954 GPIO  
c20d OXPCIe954 Quad Native 950 UART  
# Multifunction device with 4 function bits in ID  
c304 OXPCIe958 GPIO  
c308 OXPCIe958 Quad Native 950 UART  
c30c OXPCIe958 GPIO  
c30d OXPCIe958 Quad Native 950 UART  
# Multifunction device with 8 function bits in ID  
c530 OXPCIe200 Dual OHCI USB Controller (ULPI/R-ULPI)  
c531 OXPCIe200 Dual EHCI USB Controller (ULPI/R-ULPI)  
c534 OXPCIe200 Dual OHCI USB Controller (ULPI/R-ULPI)  
c535 OXPCIe200 Dual EHCI USB Controller (ULPI/R-ULPI)  
c536 OXPCIe200 GPIO  
c538 OXPCIe200 Dual OHCI USB Controller (ULPI/R-ULPI)  
c539 OXPCIe200 Dual EHCI USB Controller (ULPI/R-ULPI)  
c53b OXPCIe200 Native 950 UART  
c53c OXPCIe200 Dual OHCI USB Controller (ULPI/R-ULPI)  
c53d OXPCIe200 Dual EHCI USB Controller (ULPI/R-ULPI)  
c53e OXPCIe200 GPIO  
c53f OXPCIe200 Native 950 UART  
c540 OXPCIe200 Dual OHCI USB Controller (R-ULPI)  
c541 OXPCIe200 Dual EHCI USB Controller (R-ULPI)  
c544 OXPCIe200 Dual OHCI USB Controller (R-ULPI)  
c545 OXPCIe200 Dual EHCI USB Controller (R-ULPI)  
c546 OXPCIe200 GPIO  
c548 OXPCIe200 Dual OHCI USB Controller (R-ULPI)  
c549 OXPCIe200 Dual EHCI USB Controller (R-ULPI)  
c54b OXPCIe200 Native 950 UART  
c54c OXPCIe200 Dual OHCI USB Controller (R-ULPI)  
c54d OXPCIe200 Dual EHCI USB Controller (R-ULPI)  
c54e OXPCIe200 Dual GPIO  
c54f OXPCIe200 Native 950 UART  
c560 OXPCIe200 Dual OHCI USB Controller (ULPI/analog)  
c561 OXPCIe200 EHCI USB Controller (ULPI)  
c564 OXPCIe200 Dual OHCI USB Controller (ULPI/analog)  
c565 OXPCIe200 EHCI USB Controller (ULPI)  
c566 OXPCIe200 GPIO  
c568 OXPCIe200 Dual OHCI USB Controller (ULPI/analog)  
c569 OXPCIe200 EHCI USB Controller (ULPI)  
c56b OXPCIe200 Native 950 UART  
c56c OXPCIe200 Dual OHCI USB Controller (ULPI/analog)  
c56d OXPCIe200 EHCI USB Controller (ULPI)



c56e OXPCIe200 GPIO  
c56f OXPCIe200 Native 950 UART  
c570 OXPCIe200 Dual OHCI USB Controller (R-ULPI/analog)  
c571 OXPCIe200 EHCI USB Controller (R-ULPI)  
c574 OXPCIe200 Dual OHCI USB Controller (R-ULPI/analog)  
c575 OXPCIe200 EHCI USB Controller (R-ULPI)  
c576 OXPCIe200 GPIO  
c578  
OXPCIe200 Dual OHCI USB Controller (R-ULPI/analog)  
c579 OXPCIe200 EHCI USB Controller (R-ULPI)  
c57b OXPCIe200 Native 950 UART  
c57c OXPCIe200 Dual OHCI USB Controller (R-ULPI/analog)  
c57d OXPCIe200 EHCI USB Controller (R-ULPI)  
c57e OXPCIe200 GPIO  
c57f OXPCIe200 Native 950 UART  
c5a0 OXPCIe200 OHCI USB Controller (ULPI)  
c5a1 OXPCIe200 EHCI USB Controller (ULPI)  
c5a2 OXPCIe200 Programmable Memory Interface  
c5a4 OXPCIe200 OHCI USB Controller (ULPI)  
c5a5 OXPCIe200 EHCI USB Controller (ULPI)  
c5a6 OXPCIe200 Programmable Memory Interface & GPIO  
c5a8 OXPCIe200 OHCI USB Controller (ULPI)  
c5a9 OXPCIe200 EHCI USB Controller (ULPI)  
c5aa OXPCIe200 Programmable Memory Interface  
c5ab OXPCIe200 Native 950 UART  
c5ac OXPCIe200 OHCI USB Controller (ULPI)  
c5ad OXPCIe200 EHCI USB Controller (ULPI)  
c5ae OXPCIe200 Programmable Memory Interface & GPIO  
c5af OXPCIe200 Native 950 UART  
c5b0 OXPCIe200 OHCI USB Controller (R-ULPI)  
c5b1 OXPCIe200 EHCI USB Controller (R-ULPI)  
c5b2  
OXPCIe200 Programmable Memory Interface  
c5b4 OXPCIe200 OHCI USB Controller (R-ULPI)  
c5b5 OXPCIe200 EHCI USB Controller (R-ULPI)  
c5b6 OXPCIe200 Programmable Memory Interface & GPIO  
c5b8 OXPCIe200 OHCI USB Controller (R-ULPI)  
c5b9 OXPCIe200 EHCI USB Controller (R-ULPI)  
c5ba OXPCIe200 Programmable Memory Interface  
c5bb OXPCIe200 Native 950 UART  
c5bc OXPCIe200 OHCI USB Controller (R-ULPI)  
c5bd OXPCIe200 EHCI USB Controller (R-ULPI)  
c5be OXPCIe200 Programmable Memory Interface & GPIO  
c5bf OXPCIe200 Native 950 UART  
c5c0 OXPCIe200 OHCI USB Controller (analog)  
c5c2 OXPCIe200 Programmable Memory Interface  
c5c4 OXPCIe200 OHCI USB Controller (analog)  
c5c6 OXPCIe200 Programmable Memory Interface & GPIO

c5c8 OXPCIe200 OHCI USB Controller (analog)  
c5ca OXPCIe200 Programmable Memory Interface  
c5cb OXPCIe200 Native 950 UART  
c5cc OXPCIe200 OHCI USB Controller (analog)  
c5ce OXPCIe200 Programmable Memory Interface & GPIO  
c5cf OXPCIe200 Native 950 UART  
1416  
Multiwave Innovation pte Ltd  
1417 Convergenet Technologies Inc  
1418 Kyushu electronics systems Inc  
1419 Excel Switching Corp  
141a Apache Micro Peripherals Inc  
141b Zoom Telephonics Inc  
141d Digitan Systems Inc  
141e Fanuc Ltd  
141f Visiontech Ltd  
1420 Psion Dacom plc  
8002 Gold Card NetGlobal 56k+10/100Mb CardBus (Ethernet part)  
8003 Gold Card NetGlobal 56k+10/100Mb CardBus (Modem part)  
1421 Ads Technologies Inc  
1422 Ygrec Systems Co Ltd  
1423 Custom Technology Corp.  
1424 Videoserver Connections  
1425 Chelsio Communications Inc  
000b T210 Protocol Engine  
000c T204 Protocol Engine  
0022 10GbE Ethernet Adapter  
0030 T310 10GbE Single Port Adapter  
103c 705e PCIe 10GBase-SR [AD386A]  
0031 T320 10GbE Dual Port Adapter  
0032 T302 1GbE Dual Port Adapter  
0033 T304 1GbE Quad Port Adapter  
0034 B320 10GbE Dual Port Adapter  
0035 S310-CR 10GbE Single Port Adapter  
0036 S320-LP-CR 10GbE Dual Port Adapter  
0037 N320-G2-CR 10GbE Dual Port Adapter  
4001 T420-CR Unified  
Wire Ethernet Controller  
4002 T422-CR Unified Wire Ethernet Controller  
4003 T440-CR Unified Wire Ethernet Controller  
4004 T420-BCH Unified Wire Ethernet Controller  
4005 T440-BCH Unified Wire Ethernet Controller  
4006 T440-CH Unified Wire Ethernet Controller  
4007 T420-SO Unified Wire Ethernet Controller  
4008 T420-CX Unified Wire Ethernet Controller  
4009 T420-BT Unified Wire Ethernet Controller  
400a T404-BT Unified Wire Ethernet Controller  
400b B420-SR Unified Wire Ethernet Controller

400c B404-BT Unified Wire Ethernet Controller  
400d T480 Unified Wire Ethernet Controller  
400e T440-LP-CR Unified Wire Ethernet Controller  
400f T440 [Amsterdam] Unified Wire Ethernet Controller  
4080 T480-4080 T480 Unified Wire Ethernet Controller  
4081 T440F-4081 T440-FCoE Unified Wire Ethernet Controller  
4082 T420-4082 Unified Wire Ethernet Controller  
4083 T420X-4083 Unified Wire Ethernet Controller  
4084 T440-4084 Unified Wire Ethernet Controller  
4085 T420-4085 SFP+  
Unified Wire Ethernet Controller  
4086 T440-4086 10Gbase-T Unified Wire Ethernet Controller  
4087 T440T-4087 Unified Wire Ethernet Controller  
4088 T440-4088 Unified Wire Ethernet Controller  
4401 T420-CR Unified Wire Ethernet Controller  
4402 T422-CR Unified Wire Ethernet Controller  
4403 T440-CR Unified Wire Ethernet Controller  
4404 T420-BCH Unified Wire Ethernet Controller  
4405 T440-BCH Unified Wire Ethernet Controller  
4406 T440-CH Unified Wire Ethernet Controller  
4407 T420-SO Unified Wire Ethernet Controller  
4408 T420-CX Unified Wire Ethernet Controller  
4409 T420-BT Unified Wire Ethernet Controller  
440a T404-BT Unified Wire Ethernet Controller  
440b B420-SR Unified Wire Ethernet Controller  
440c B404-BT Unified Wire Ethernet Controller  
440d T480 Unified Wire Ethernet Controller  
440e T440-LP-CR Unified Wire Ethernet Controller  
440f T440 [Amsterdam] Unified Wire Ethernet Controller  
4480 T480-4080 T480 Unified Wire Ethernet Controller  
4481 T440F-4081  
T440-FCoE Unified Wire Ethernet Controller  
4482 T420-4082 Unified Wire Ethernet Controller  
4483 T420X-4083 Unified Wire Ethernet Controller  
4484 T440-4084 Unified Wire Ethernet Controller  
4485 T420-4085 SFP+ Unified Wire Ethernet Controller  
4486 T440-4086 10Gbase-T Unified Wire Ethernet Controller  
4487 T440T-4087 Unified Wire Ethernet Controller  
4488 T440-4088 Unified Wire Ethernet Controller  
4501 T420-CR Unified Wire Storage Controller  
4502 T422-CR Unified Wire Storage Controller  
4503 T440-CR Unified Wire Storage Controller  
4504 T420-BCH Unified Wire Storage Controller  
4505 T440-BCH Unified Wire Storage Controller  
4506 T440-CH Unified Wire Storage Controller  
4507 T420-SO Unified Wire Storage Controller  
4508 T420-CX Unified Wire Storage Controller  
4509 T420-BT Unified Wire Storage Controller

450a T404-BT Unified Wire Storage Controller  
450b B420-SR Unified Wire Storage Controller  
450c B404-BT Unified Wire Storage Controller  
450d T480 Unified Wire  
Storage Controller  
450e T440-LP-CR Unified Wire Storage Controller  
450f T440 [Amsterdam] Unified Wire Storage Controller  
4580 T480-4080 T480 Unified Wire Storage Controller  
4581 T440F-4081 T440-FCoE Unified Wire Storage Controller  
4582 T420-4082 Unified Wire Storage Controller  
4583 T420X-4083 Unified Wire Storage Controller  
4584 T440-4084 Unified Wire Storage Controller  
4585 T420-4085 SFP+ Unified Wire Storage Controller  
4586 T440-4086 10Gbase-T Unified Wire Storage Controller  
4587 T440T-4087 Unified Wire Storage Controller  
4588 T440-4088 Unified Wire Storage Controller  
4601 T420-CR Unified Wire Storage Controller  
4602 T422-CR Unified Wire Storage Controller  
4603 T440-CR Unified Wire Storage Controller  
4604 T420-BCH Unified Wire Storage Controller  
4605 T440-BCH Unified Wire Storage Controller  
4606 T440-CH Unified Wire Storage Controller  
4607 T420-SO Unified Wire Storage Controller  
4608 T420-CX Unified Wire Storage Controller  
4609 T420-BT Unified  
Wire Storage Controller  
460a T404-BT Unified Wire Storage Controller  
460b B420-SR Unified Wire Storage Controller  
460c B404-BT Unified Wire Storage Controller  
460d T480 Unified Wire Storage Controller  
460e T440-LP-CR Unified Wire Storage Controller  
460f T440 [Amsterdam] Unified Wire Storage Controller  
4680 T480-4080 T480 Unified Wire Storage Controller  
4681 T440F-4081 T440-FCoE Unified Wire Storage Controller  
4682 T420-4082 Unified Wire Storage Controller  
4683 T420X-4083 Unified Wire Storage Controller  
4684 T440-4084 Unified Wire Storage Controller  
4685 T420-4085 SFP+ Unified Wire Storage Controller  
4686 T440-4086 10Gbase-T Unified Wire Storage Controller  
4687 T440T-4087 Unified Wire Storage Controller  
4688 T440-4088 Unified Wire Storage Controller  
4701 T420-CR Unified Wire Ethernet Controller  
4702 T422-CR Unified Wire Ethernet Controller  
4703 T440-CR Unified Wire Ethernet Controller  
4704 T420-BCH Unified Wire Ethernet Controller  
4705 T440-BCH  
Unified Wire Ethernet Controller  
4706 T440-CH Unified Wire Ethernet Controller

4707 T420-SO Unified Wire Ethernet Controller  
4708 T420-CX Unified Wire Ethernet Controller  
4709 T420-BT Unified Wire Ethernet Controller  
470a T404-BT Unified Wire Ethernet Controller  
470b B420-SR Unified Wire Ethernet Controller  
470c B404-BT Unified Wire Ethernet Controller  
470d T480 Unified Wire Ethernet Controller  
470e T440-LP-CR Unified Wire Ethernet Controller  
470f T440 [Amsterdam] Unified Wire Ethernet Controller  
4780 T480-4080 T480 Unified Wire Ethernet Controller  
4781 T440F-4081 T440-FCoE Unified Wire Ethernet Controller  
4782 T420-4082 Unified Wire Ethernet Controller  
4783 T420X-4083 Unified Wire Ethernet Controller  
4784 T440-4084 Unified Wire Ethernet Controller  
4785 T420-4085 SFP+ Unified Wire Ethernet Controller  
4786 T440-4086 10Gbase-T Unified Wire Ethernet Controller  
4787 T440T-4087 Unified Wire Ethernet Controller  
4788 T440-4088 Unified Wire Ethernet Controller  
4801  
T420-CR Unified Wire Ethernet Controller [VF]  
4802 T422-CR Unified Wire Ethernet Controller [VF]  
4803 T440-CR Unified Wire Ethernet Controller [VF]  
4804 T420-BCH Unified Wire Ethernet Controller [VF]  
4805 T440-BCH Unified Wire Ethernet Controller [VF]  
4806 T440-CH Unified Wire Ethernet Controller [VF]  
4807 T420-SO Unified Wire Ethernet Controller [VF]  
4808 T420-CX Unified Wire Ethernet Controller [VF]  
4809 T420-BT Unified Wire Ethernet Controller [VF]  
480a T404-BT Unified Wire Ethernet Controller [VF]  
480b B420-SR Unified Wire Ethernet Controller [VF]  
480c B404-BT Unified Wire Ethernet Controller [VF]  
480d T480 Unified Wire Ethernet Controller [VF]  
480e T440-LP-CR Unified Wire Ethernet Controller [VF]  
480f T440 [Amsterdam] Unified Wire Ethernet Controller [VF]  
4880 T480-4080 T480 Unified Wire Ethernet Controller [VF]  
4881 T440F-4081 T440-FCoE Unified Wire Ethernet Controller [VF]  
4882 T420-4082 Unified Wire Ethernet Controller [VF]  
4883  
T420X-4083 Unified Wire Ethernet Controller [VF]  
4884 T440-4084 Unified Wire Ethernet Controller [VF]  
4885 T420-4085 SFP+ Unified Wire Ethernet Controller [VF]  
4886 T440-4086 10Gbase-T Unified Wire Ethernet Controller [VF]  
4887 T440T-4087 Unified Wire Ethernet Controller [VF]  
4888 T440-4088 Unified Wire Ethernet Controller [VF]  
5001 T520-CR Unified Wire Ethernet Controller  
193d 1001 510F-B  
5002 T522-CR Unified Wire Ethernet Controller  
5003 T540-CR Unified Wire Ethernet Controller

5004 T520-BCH Unified Wire Ethernet Controller  
5005 T540-BCH Unified Wire Ethernet Controller  
5006 T540-CH Unified Wire Ethernet Controller  
5007 T520-SO Unified Wire Ethernet Controller  
5008 T520-CX Unified Wire Ethernet Controller  
5009 T520-BT Unified Wire Ethernet Controller  
500a T504-BT Unified Wire Ethernet Controller  
500b B520-SR Unified Wire Ethernet Controller  
500c B504-BT Unified Wire Ethernet Controller  
500d T580-CR Unified Wire Ethernet Controller  
500e T540-LP-CR  
Unified Wire Ethernet Controller  
500f T540 [Amsterdam] Unified Wire Ethernet Controller  
5010 T580-LP-CR Unified Wire Ethernet Controller  
5011 T520-LL-CR Unified Wire Ethernet Controller  
5012 T560-CR Unified Wire Ethernet Controller  
5013 T580-CHR Unified Wire Ethernet Controller  
5014 T580-SO-CR Unified Wire Ethernet Controller  
5015 T502-BT Unified Wire Ethernet Controller  
5016 T580-OCP-SO Unified Wire Ethernet Controller  
5017 T520-OCP-SO Unified Wire Ethernet Controller  
5018 T540-BT Unified Wire Ethernet Controller  
5019 T540-LP-BT Unified Wire Ethernet Controller  
501a T540-SO-BT Unified Wire Ethernet Controller  
501b T540-SO-CR Unified Wire Ethernet Controller  
5080 T540-5080 Unified Wire Ethernet Controller  
5081 T540-5081 Unified Wire Ethernet Controller  
5082 T504-5082 Unified Wire Ethernet Controller  
5083 T540-5083 Unified Wire Ethernet Controller  
5084 T540-5084 Unified Wire Ethernet Controller  
5085 T580-5085 Unified Wire Ethernet Controller  
5086  
T580-5086 Unified Wire Ethernet Controller  
5087 T580-5087 Unified Wire Ethernet Controller  
5088 T570-5088 Unified Wire Ethernet Controller  
5089 T520-5089 Unified Wire Ethernet Controller  
5090 T540-5090 Unified Wire Ethernet Controller  
5091 T522-5091 Unified Wire Ethernet Controller  
5092 T520-5092 Unified Wire Ethernet Controller  
5093 T580-5093 Unified Wire Ethernet Controller  
5094 T540-5094 Unified Wire Ethernet Controller  
5095 T540-5095 Unified Wire Ethernet Controller  
5096 T580-5096 Unified Wire Ethernet Controller  
5097 T520-5097 Unified Wire Ethernet Controller  
5098 T580-5098 Unified Wire Ethernet Controller  
5099 T580-5099 Unified Wire Ethernet Controller  
509a T520-509A Unified Wire Ethernet Controller  
509b T540-509B Unified Wire Ethernet Controller

509c T520-509C Unified Wire Ethernet Controller  
509d T540-509D Unified Wire Ethernet Controller  
509e T520-509E Unified Wire Ethernet Controller  
509f T540-509F Unified Wire Ethernet Controller  
50a0  
T540-50A0 Unified Wire Ethernet Controller  
50a1 T540-50A1 Unified Wire Ethernet Controller  
50a2 T580-50A2 Unified Wire Ethernet Controller  
50a3 T580-50A3 Unified Wire Ethernet Controller  
50a4 T540-50A4 Unified Wire Ethernet Controller  
50a5 T522-50A5 Unified Wire Ethernet Controller  
50a6 T522-50A6 Unified Wire Ethernet Controller  
50a7 T580-50A7 Unified Wire Ethernet Controller  
50a8 T580-50A8 Unified Wire Ethernet Controller  
50a9 T580-50A9 Unified Wire Ethernet Controller  
50aa T580-50AA Unified Wire Ethernet Controller  
50ab T520-50AB Unified Wire Ethernet Controller  
50ac T540-50AC Unified Wire Ethernet Controller  
50ad T520-50AD Unified Wire Ethernet Controller  
50ae T540-50AE Unified Wire Ethernet Controller  
50af T580-50AF Unified Wire Ethernet Controller  
50b0 T520-50B0 Unified Wire Ethernet Controller  
5401 T520-CR Unified Wire Ethernet Controller  
5402 T522-CR Unified Wire Ethernet Controller  
5403 T540-CR Unified Wire Ethernet Controller  
5404  
T520-BCH Unified Wire Ethernet Controller  
5405 T540-BCH Unified Wire Ethernet Controller  
5406 T540-CH Unified Wire Ethernet Controller  
5407 T520-SO Unified Wire Ethernet Controller  
5408 T520-CX Unified Wire Ethernet Controller  
5409 T520-BT Unified Wire Ethernet Controller  
540a T504-BT Unified Wire Ethernet Controller  
540b B520-SR Unified Wire Ethernet Controller  
540c B504-BT Unified Wire Ethernet Controller  
540d T580-CR Unified Wire Ethernet Controller  
540e T540-LP-CR Unified Wire Ethernet Controller  
540f T540 [Amsterdam] Unified Wire Ethernet Controller  
5410 T580-LP-CR Unified Wire Ethernet Controller  
5411 T520-LL-CR Unified Wire Ethernet Controller  
5412 T560-CR Unified Wire Ethernet Controller  
5413 T580-CHR Unified Wire Ethernet Controller  
5414 T580-SO-CR Unified Wire Ethernet Controller  
5415 T502-BT Unified Wire Ethernet Controller  
5416 T580-OCP-SO Unified Wire Ethernet Controller  
5417 T520-OCP-SO Unified Wire Ethernet Controller  
5418 T540-BT

Unified Wire Ethernet Controller

5419 T540-LP-BT Unified Wire Ethernet Controller  
541a T540-SO-BT Unified Wire Ethernet Controller  
541b T540-SO-CR Unified Wire Ethernet Controller  
5480 T540-5080 Unified Wire Ethernet Controller  
5481 T540-5081 Unified Wire Ethernet Controller  
5482 T504-5082 Unified Wire Ethernet Controller  
5483 T540-5083 Unified Wire Ethernet Controller  
5484 T540-5084 Unified Wire Ethernet Controller  
5485 T580-5085 Unified Wire Ethernet Controller  
5486 T580-5086 Unified Wire Ethernet Controller  
5487 T580-5087 Unified Wire Ethernet Controller  
5488 T570-5088 Unified Wire Ethernet Controller  
5489 T520-5089 Unified Wire Ethernet Controller  
5490 T540-5090 Unified Wire Ethernet Controller  
5491 T522-5091 Unified Wire Ethernet Controller  
5492 T520-5092 Unified Wire Ethernet Controller  
5493 T580-5093 Unified Wire Ethernet Controller  
5494 T540-5094 Unified Wire Ethernet Controller  
5495 T540-5095 Unified Wire Ethernet Controller  
5496 T580-5096

Unified Wire Ethernet Controller

5497 T520-5097 Unified Wire Ethernet Controller  
5498 T580-5098 Unified Wire Ethernet Controller  
5499 T580-5099 Unified Wire Ethernet Controller  
549a T520-509A Unified Wire Ethernet Controller  
549b T540-509B Unified Wire Ethernet Controller  
549c T520-509C Unified Wire Ethernet Controller  
549d T540-509D Unified Wire Ethernet Controller  
549e T520-509E Unified Wire Ethernet Controller  
549f T540-509F Unified Wire Ethernet Controller  
54a0 T540-50A0 Unified Wire Ethernet Controller  
54a1 T540-50A1 Unified Wire Ethernet Controller  
54a2 T580-50A2 Unified Wire Ethernet Controller  
54a3 T580-50A3 Unified Wire Ethernet Controller  
54a4 T540-50A4 Unified Wire Ethernet Controller  
54a5 T522-50A5 Unified Wire Ethernet Controller  
54a6 T522-50A6 Unified Wire Ethernet Controller  
54a7 T580-50A7 Unified Wire Ethernet Controller  
54a8 T580-50A8 Unified Wire Ethernet Controller  
54a9 T580-50A9 Unified Wire Ethernet Controller  
54aa T580-50AA

Unified Wire Ethernet Controller

54ab T520-50AB Unified Wire Ethernet Controller  
54ac T540-50AC Unified Wire Ethernet Controller  
54ad T520-50AD Unified Wire Ethernet Controller  
54ae T540-50AE Unified Wire Ethernet Controller  
54af T580-50AF Unified Wire Ethernet Controller



54b0 T520-50B0 Unified Wire Ethernet Controller  
5501 T520-CR Unified Wire Storage Controller  
5502 T522-CR Unified Wire Storage Controller  
5503 T540-CR Unified Wire Storage Controller  
5504 T520-BCH Unified Wire Storage Controller  
5505 T540-BCH Unified Wire Storage Controller  
5506 T540-CH Unified Wire Storage Controller  
5507 T520-SO Unified Wire Storage Controller  
5508 T520-CX Unified Wire Storage Controller  
5509 T520-BT Unified Wire Storage Controller  
550a T504-BT Unified Wire Storage Controller  
550b B520-SR Unified Wire Storage Controller  
550c B504-BT Unified Wire Storage Controller  
550d T580-CR Unified Wire Storage Controller  
550e T540-LP-CR Unified Wire Storage Controller  
550f  
T540 [Amsterdam] Unified Wire Storage Controller  
5510 T580-LP-CR Unified Wire Storage Controller  
5511 T520-LL-CR Unified Wire Storage Controller  
5512 T560-CR Unified Wire Storage Controller  
5513 T580-CHR Unified Wire Storage Controller  
5514 T580-SO-CR Unified Wire Storage Controller  
5515 T502-BT Unified Wire Storage Controller  
5516 T580-OCP-SO Unified Wire Storage Controller  
5517 T520-OCP-SO Unified Wire Storage Controller  
5518 T540-BT Unified Wire Storage Controller  
5519 T540-LP-BT Unified Wire Storage Controller  
551a T540-SO-BT Unified Wire Storage Controller  
551b T540-SO-CR Unified Wire Storage Controller  
5580 T540-5080 Unified Wire Storage Controller  
5581 T540-5081 Unified Wire Storage Controller  
5582 T504-5082 Unified Wire Storage Controller  
5583 T540-5083 Unified Wire Storage Controller  
5584 T540-5084 Unified Wire Storage Controller  
5585 T580-5085 Unified Wire Storage Controller  
5586 T580-5086 Unified Wire Storage Controller  
5587 T580-5087  
Unified Wire Storage Controller  
5588 T570-5088 Unified Wire Storage Controller  
5589 T520-5089 Unified Wire Storage Controller  
5590 T540-5090 Unified Wire Storage Controller  
5591 T522-5091 Unified Wire Storage Controller  
5592 T520-5092 Unified Wire Storage Controller  
5593 T580-5093 Unified Wire Storage Controller  
5594 T540-5094 Unified Wire Storage Controller  
5595 T540-5095 Unified Wire Storage Controller  
5596 T580-5096 Unified Wire Storage Controller  
5597 T520-5097 Unified Wire Storage Controller

5598 T580-5098 Unified Wire Storage Controller  
5599 T580-5099 Unified Wire Storage Controller  
559a T520-509A Unified Wire Storage Controller  
559b T540-509B Unified Wire Storage Controller  
559c T520-509C Unified Wire Storage Controller  
559d T540-509D Unified Wire Storage Controller  
559e T520-509E Unified Wire Storage Controller  
559f T540-509F Unified Wire Storage Controller  
55a0 T540-50A0 Unified Wire Storage Controller  
55a1 T540-50A1 Unified Wire Storage  
Controller  
55a2 T580-50A2 Unified Wire Storage Controller  
55a3 T580-50A3 Unified Wire Storage Controller  
55a4 T540-50A4 Unified Wire Storage Controller  
55a5 T522-50A5 Unified Wire Storage Controller  
55a6 T522-50A6 Unified Wire Storage Controller  
55a7 T580-50A7 Unified Wire Storage Controller  
55a8 T580-50A8 Unified Wire Storage Controller  
55a9 T580-50A9 Unified Wire Storage Controller  
55aa T580-50AA Unified Wire Storage Controller  
55ab T520-50AB Unified Wire Storage Controller  
55ac T540-50AC Unified Wire Storage Controller  
55ad T520-50AD Unified Wire Storage Controller  
55ae T540-50AE Unified Wire Storage Controller  
55af T580-50AF Unified Wire Storage Controller  
55b0 T520-50B0 Unified Wire Storage Controller  
5601 T520-CR Unified Wire Storage Controller  
5602 T522-CR Unified Wire Storage Controller  
5603 T540-CR Unified Wire Storage Controller  
5604 T520-BCH Unified Wire Storage Controller  
5605 T540-BCH Unified Wire Storage Controller  
5606 T540-CH  
Unified Wire Storage Controller  
5607 T520-SO Unified Wire Storage Controller  
5608 T520-CX Unified Wire Storage Controller  
5609 T520-BT Unified Wire Storage Controller  
560a T504-BT Unified Wire Storage Controller  
560b B520-SR Unified Wire Storage Controller  
560c B504-BT Unified Wire Storage Controller  
560d T580-CR Unified Wire Storage Controller  
560e T540-LP-CR Unified Wire Storage Controller  
560f T540 [Amsterdam] Unified Wire Storage Controller  
5610 T580-LP-CR Unified Wire Storage Controller  
5611 T520-LL-CR Unified Wire Storage Controller  
5612 T560-CR Unified Wire Storage Controller  
5613 T580-CHR Unified Wire Storage Controller  
5614 T580-SO-CR Unified Wire Storage Controller  
5615 T502-BT Unified Wire Storage Controller

5616 T580-OCP-SO Unified Wire Storage Controller  
5617 T520-OCP-SO Unified Wire Storage Controller  
5618 T540-BT Unified Wire Storage Controller  
5619 T540-LP-BT Unified Wire Storage Controller  
561a T540-SO-BT Unified Wire Storage  
Controller  
561b T540-SO-CR Unified Wire Storage Controller  
5680 T540-5080 Unified Wire Storage Controller  
5681 T540-5081 Unified Wire Storage Controller  
5682 T504-5082 Unified Wire Storage Controller  
5683 T540-5083 Unified Wire Storage Controller  
5684 T540-5084 Unified Wire Storage Controller  
5685 T580-5085 Unified Wire Storage Controller  
5686 T580-5086 Unified Wire Storage Controller  
5687 T580-5087 Unified Wire Storage Controller  
5688 T570-5088 Unified Wire Storage Controller  
5689 T520-5089 Unified Wire Storage Controller  
5690 T540-5090 Unified Wire Storage Controller  
5691 T522-5091 Unified Wire Storage Controller  
5692 T520-5092 Unified Wire Storage Controller  
5693 T580-5093 Unified Wire Storage Controller  
5694 T540-5094 Unified Wire Storage Controller  
5695 T540-5095 Unified Wire Storage Controller  
5696 T580-5096 Unified Wire Storage Controller  
5697 T520-5097 Unified Wire Storage Controller  
5698 T580-5098 Unified Wire Storage Controller  
5699  
T580-5099 Unified Wire Storage Controller  
569a T520-509A Unified Wire Storage Controller  
569b T540-509B Unified Wire Storage Controller  
569c T520-509C Unified Wire Storage Controller  
569d T540-509D Unified Wire Storage Controller  
569e T520-509E Unified Wire Storage Controller  
569f T540-509F Unified Wire Storage Controller  
56a0 T540-50A0 Unified Wire Storage Controller  
56a1 T540-50A1 Unified Wire Storage Controller  
56a2 T580-50A2 Unified Wire Storage Controller  
56a3 T580-50A3 Unified Wire Storage Controller  
56a4 T540-50A4 Unified Wire Storage Controller  
56a5 T522-50A5 Unified Wire Storage Controller  
56a6 T522-50A6 Unified Wire Storage Controller  
56a7 T580-50A7 Unified Wire Storage Controller  
56a8 T580-50A8 Unified Wire Storage Controller  
56a9 T580-50A9 Unified Wire Storage Controller  
56aa T580-50AA Unified Wire Storage Controller  
56ab T520-50AB Unified Wire Storage Controller  
56ac T540-50AC Unified Wire Storage Controller  
56ad T520-50AD Unified Wire

## Storage Controller

56ae T540-50AE Unified Wire Storage Controller  
56af T580-50AF Unified Wire Storage Controller  
56b0 T520-50B0 Unified Wire Storage Controller  
5701 T520-CR Unified Wire Ethernet Controller  
5702 T522-CR Unified Wire Ethernet Controller  
5703 T540-CR Unified Wire Ethernet Controller  
5704 T520-BCH Unified Wire Ethernet Controller  
5705 T540-BCH Unified Wire Ethernet Controller  
5706 T540-CH Unified Wire Ethernet Controller  
5707 T520-SO Unified Wire Ethernet Controller  
5708 T520-CX Unified Wire Ethernet Controller  
5709 T520-BT Unified Wire Ethernet Controller  
570a T504-BT Unified Wire Ethernet Controller  
570b B520-SR Unified Wire Ethernet Controller  
570c B504-BT Unified Wire Ethernet Controller  
570d T580-CR Unified Wire Ethernet Controller  
570e T540-LP-CR Unified Wire Ethernet Controller  
570f T540 [Amsterdam] Unified Wire Ethernet Controller  
5710 T580-LP-CR Unified Wire Ethernet Controller  
5711 T520-LL-CR Unified Wire Ethernet Controller  
5712  
T560-CR Unified Wire Ethernet Controller  
5713 T580-CR Unified Wire Ethernet Controller  
5714 T580-SO-CR Unified Wire Ethernet Controller  
5715 T502-BT Unified Wire Ethernet Controller  
5780 T540-5080 Unified Wire Ethernet Controller  
5781 T540-5081 Unified Wire Ethernet Controller  
5782 T504-5082 Unified Wire Ethernet Controller  
5783 T540-5083 Unified Wire Ethernet Controller  
5784 T580-5084 Unified Wire Ethernet Controller  
5785 T580-5085 Unified Wire Ethernet Controller  
5786 T580-5086 Unified Wire Ethernet Controller  
5787 T580-5087 Unified Wire Ethernet Controller  
5788 T570-5088 Unified Wire Ethernet Controller  
5789 T520-5089 Unified Wire Ethernet Controller  
5790 T540-5090 Unified Wire Ethernet Controller  
5791 T522-5091 Unified Wire Ethernet Controller  
5792 T520-5092 Unified Wire Ethernet Controller  
5793 T580-5093 Unified Wire Ethernet Controller  
5794 T540-5094 Unified Wire Ethernet Controller  
5795 T540-5095 Unified Wire Ethernet Controller  
5796  
T580-5096 Unified Wire Ethernet Controller  
5797 T520-5097 Unified Wire Ethernet Controller  
5801 T520-CR Unified Wire Ethernet Controller [VF]  
5802 T522-CR Unified Wire Ethernet Controller [VF]  
5803 T540-CR Unified Wire Ethernet Controller [VF]

5804 T520-BCH Unified Wire Ethernet Controller [VF]  
5805 T540-BCH Unified Wire Ethernet Controller [VF]  
5806 T540-CH Unified Wire Ethernet Controller [VF]  
5807 T520-SO Unified Wire Ethernet Controller [VF]  
5808 T520-CX Unified Wire Ethernet Controller [VF]  
5809 T520-BT Unified Wire Ethernet Controller [VF]  
580a T504-BT Unified Wire Ethernet Controller [VF]  
580b B520-SR Unified Wire Ethernet Controller [VF]  
580c B504-BT Unified Wire Ethernet Controller [VF]  
580d T580-CR Unified Wire Ethernet Controller [VF]  
580e T540-LP-CR Unified Wire Ethernet Controller [VF]  
580f T540 [Amsterdam] Unified Wire Ethernet Controller [VF]  
5810 T580-LP-CR Unified Wire Ethernet Controller [VF]  
5811 T520-LL-CR Unified Wire Ethernet  
Controller [VF]  
5812 T560-CR Unified Wire Ethernet Controller [VF]  
5813 T580-CHR Unified Wire Ethernet Controller [VF]  
5814 T580-SO-CR Unified Wire Ethernet Controller [VF]  
5815 T502-BT Unified Wire Ethernet Controller [VF]  
5816 T580-OCP-SO Unified Wire Ethernet Controller [VF]  
5817 T520-OCP-SO Unified Wire Ethernet Controller [VF]  
5818 T540-BT Unified Wire Ethernet Controller [VF]  
5819 T540-LP-BT Unified Wire Ethernet Controller [VF]  
581a T540-SO-BT Unified Wire Ethernet Controller [VF]  
581b T540-SO-CR Unified Wire Ethernet Controller [VF]  
5880 T540-5080 Unified Wire Ethernet Controller [VF]  
5881 T540-5081 Unified Wire Ethernet Controller [VF]  
5882 T504-5082 Unified Wire Ethernet Controller [VF]  
5883 T540-5083 Unified Wire Ethernet Controller [VF]  
5884 T540-5084 Unified Wire Ethernet Controller [VF]  
5885 T580-5085 Unified Wire Ethernet Controller [VF]  
5886 T580-5086 Unified Wire Ethernet Controller [VF]  
5887 T580-5087 Unified Wire Ethernet Controller  
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5888 T570-5088 Unified Wire Ethernet Controller [VF]  
5889 T520-5089 Unified Wire Ethernet Controller [VF]  
5890 T540-5090 Unified Wire Ethernet Controller [VF]  
5891 T522-5091 Unified Wire Ethernet Controller [VF]  
5892 T520-5092 Unified Wire Ethernet Controller [VF]  
5893 T580-5093 Unified Wire Ethernet Controller [VF]  
5894 T540-5094 Unified Wire Ethernet Controller [VF]  
5895 T540-5095 Unified Wire Ethernet Controller [VF]  
5896 T580-5096 Unified Wire Ethernet Controller [VF]  
5897 T520-5097 Unified Wire Ethernet Controller [VF]  
5898 T580-5098 Unified Wire Ethernet Controller [VF]  
5899 T580-5099 Unified Wire Ethernet Controller [VF]  
589a T520-509A Unified Wire Ethernet Controller [VF]  
589b T540-509B Unified Wire Ethernet Controller [VF]

589c T520-509C Unified Wire Ethernet Controller [VF]  
589d T540-509D Unified Wire Ethernet Controller [VF]  
589e T520-509E Unified Wire Ethernet Controller [VF]  
589f T540-509F Unified Wire Ethernet Controller [VF]  
58a0  
T540-50A0 Unified Wire Ethernet Controller [VF]  
58a1 T540-50A1 Unified Wire Ethernet Controller [VF]  
58a2 T580-50A2 Unified Wire Ethernet Controller [VF]  
58a3 T580-50A3 Unified Wire Ethernet Controller [VF]  
58a4 T540-50A4 Unified Wire Ethernet Controller [VF]  
58a5 T522-50A5 Unified Wire Ethernet Controller [VF]  
58a6 T522-50A6 Unified Wire Ethernet Controller [VF]  
58a7 T580-50A7 Unified Wire Ethernet Controller [VF]  
58a8 T580-50A8 Unified Wire Ethernet Controller [VF]  
58a9 T580-50A9 Unified Wire Ethernet Controller [VF]  
58aa T580-50AA Unified Wire Ethernet Controller [VF]  
58ab T520-50AB Unified Wire Ethernet Controller [VF]  
58ac T540-50AC Unified Wire Ethernet Controller [VF]  
58ad T520-50AD Unified Wire Ethernet Controller [VF]  
58ae T540-50AE Unified Wire Ethernet Controller [VF]  
58af T580-50AF Unified Wire Ethernet Controller [VF]  
58b0 T520-50B0 Unified Wire Ethernet Controller [VF]  
6001 T6225-CR Unified Wire Ethernet Controller  
6002 T6225-SO-CR  
Unified Wire Ethernet Controller  
6003 T6425-CR Unified Wire Ethernet Controller  
6004 T6425-SO-CR Unified Wire Ethernet Controller  
6005 T6225-OCP-SO Unified Wire Ethernet Controller  
6006 T62100-OCP-SO Unified Wire Ethernet Controller  
6007 T62100-LP-CR Unified Wire Ethernet Controller  
6008 T62100-SO-CR Unified Wire Ethernet Controller  
6009 T6210-BT Unified Wire Ethernet Controller  
600d T62100-CR Unified Wire Ethernet Controller  
6011 T6225-LL-CR Unified Wire Ethernet Controller  
6014 T61100-OCP-SO Unified Wire Ethernet Controller  
6015 T6201-BT Unified Wire Ethernet Controller  
6080 T6225-6080 Unified Wire Ethernet Controller  
6081 T62100-6081 Unified Wire Ethernet Controller  
6082 T6225-6082 Unified Wire Ethernet Controller  
6083 T62100-6083 Unified Wire Ethernet Controller  
6084 T64100-6084 Unified Wire Ethernet Controller  
6085 T6240-6085 Unified Wire Ethernet Controller  
6086 T6225-6086 Unified Wire Ethernet Controller  
6087 T6225-6087 Unified Wire Ethernet  
Controller  
6088 T62100-6088 Unified Wire Ethernet Controller  
6089 T62100-6089 Unified Wire Ethernet Controller  
608a T62100-608a Unified Wire Ethernet Controller

6092 T62100-KR Unified Wire Ethernet Controller  
01de fff9 Gimlet Baseboard

6401 T6225-CR Unified Wire Ethernet Controller

6402 T6225-SO-CR Unified Wire Ethernet Controller

6403 T6425-CR Unified Wire Ethernet Controller

6404 T6425-SO-CR Unified Wire Ethernet Controller

6405 T6225-OCP-SO Unified Wire Ethernet Controller

6406 T62100-OCP-SO Unified Wire Ethernet Controller

6407 T62100-LP-CR Unified Wire Ethernet Controller

6408 T62100-SO-CR Unified Wire Ethernet Controller

6409 T6210-BT Unified Wire Ethernet Controller

640d T62100-CR Unified Wire Ethernet Controller

6411 T6225-LL-CR Unified Wire Ethernet Controller

6414 T61100-OCP-SO Unified Wire Ethernet Controller

6415 T6201-BT Unified Wire Ethernet Controller

6480 T6225-6080 Unified Wire Ethernet Controller

6481 T62100-6081 Unified  
Wire Ethernet Controller

6482 T6225-6082 Unified Wire Ethernet Controller

6483 T62100-6083 Unified Wire Ethernet Controller

6484 T64100-6084 Unified Wire Ethernet Controller

6485 T6240-6085 Unified Wire Ethernet Controller

6486 T6225-6086 Unified Wire Ethernet Controller

6487 T6225-6087 Unified Wire Ethernet Controller

6488 T62100-6088 Unified Wire Ethernet Controller

6489 T62100-6089 Unified Wire Ethernet Controller

648a T62100-608a Unified Wire Ethernet Controller

6492 T62100-KR Unified Wire Ethernet Controller  
01de fff9 Gimlet Baseboard

6501 T6225-CR Unified Wire Storage Controller

6502 T6225-SO-CR Unified Wire Storage Controller

6503 T6425-CR Unified Wire Storage Controller

6504 T6425-SO-CR Unified Wire Storage Controller

6505 T6225-OCP-SO Unified Wire Storage Controller

6506 T62100-OCP-SO Unified Wire Storage Controller

6507 T62100-LP-CR Unified Wire Storage Controller

6508 T62100-SO-CR Unified Wire Storage Controller

6509 T6210-BT Unified  
Wire Storage Controller

650d T62100-CR Unified Wire Storage Controller

6511 T6225-LL-CR Unified Wire Storage Controller

6514 T61100-OCP-SO Unified Wire Storage Controller

6515 T6201-BT Unified Wire Storage Controller

6580 T6225-6080 Unified Wire Storage Controller

6581 T62100-6081 Unified Wire Storage Controller

6582 T6225-6082 Unified Wire Storage Controller

6583 T62100-6083 Unified Wire Storage Controller

6584 T64100-6084 Unified Wire Storage Controller

6585 T6240-6085 Unified Wire Storage Controller  
6586 T6225-6086 Unified Wire Storage Controller  
6587 T6225-6087 Unified Wire Storage Controller  
6588 T62100-6088 Unified Wire Storage Controller  
6589 T62100-6089 Unified Wire Storage Controller  
658a T62100-608a Unified Wire Storage Controller  
6592 T62100-KR Unified Wire Storage Controller  
6601 T6225-CR Unified Wire Storage Controller  
6602 T6225-SO-CR Unified Wire Storage Controller  
6603 T6425-CR Unified Wire Storage Controller  
6604 T6425-SO-CR Unified  
Wire Storage Controller  
6605 T6225-OCP-SO Unified Wire Storage Controller  
6606 T62100-OCP-SO Unified Wire Storage Controller  
6607 T62100-LP-CR Unified Wire Storage Controller  
6608 T62100-SO-CR Unified Wire Storage Controller  
6609 T6210-BT Unified Wire Storage Controller  
660d T62100-CR Unified Wire Storage Controller  
6611 T6225-LL-CR Unified Wire Storage Controller  
6614 T61100-OCP-SO Unified Wire Storage Controller  
6615 T6201-BT Unified Wire Storage Controller  
6680 T6225-6080 Unified Wire Storage Controller  
6681 T62100-6081 Unified Wire Storage Controller  
6682 T6225-6082 Unified Wire Storage Controller  
6683 T62100-6083 Unified Wire Storage Controller  
6684 T64100-6084 Unified Wire Storage Controller  
6685 T6240-6085 Unified Wire Storage Controller  
6686 T6225-6086 Unified Wire Storage Controller  
6687 T6225-6087 Unified Wire Storage Controller  
6688 T62100-6088 Unified Wire Storage Controller  
6689 T62100-6089 Unified Wire Storage Controller  
668a T62100-608a  
Unified Wire Storage Controller  
6692 T62100-KR Unified Wire Storage Controller  
6801 T6225-CR Unified Wire Ethernet Controller [VF]  
6802 T6225-SO-CR Unified Wire Ethernet Controller [VF]  
6803 T6425-CR Unified Wire Ethernet Controller [VF]  
6804 T6425-SO-CR Unified Wire Ethernet Controller [VF]  
6805 T6225-OCP-SO Unified Wire Ethernet Controller [VF]  
6806 T62100-OCP-SO Unified Wire Ethernet Controller [VF]  
6807 T62100-LP-CR Unified Wire Ethernet Controller [VF]  
6808 T62100-SO-CR Unified Wire Ethernet Controller [VF]  
6809 T6210-BT Unified Wire Ethernet Controller [VF]  
680d T62100-CR Unified Wire Ethernet Controller [VF]  
6811 T6225-LL-CR Unified Wire Ethernet Controller [VF]  
6814 T61100-OCP-SO Unified Wire Ethernet Controller [VF]  
6815 T6201-BT Unified Wire Ethernet Controller [VF]  
6880 T6225-6080 Unified Wire Ethernet Controller [VF]



6881 T62100-6081 Unified Wire Ethernet Controller [VF]  
6882 T6225-6082 Unified Wire Ethernet Controller [VF]  
6883  
T62100-6083 Unified Wire Ethernet Controller [VF]  
6884 T64100-6084 Unified Wire Ethernet Controller [VF]  
6885 T6240-6085 Unified Wire Ethernet Controller [VF]  
6886 T6225-6086 Unified Wire Ethernet Controller [VF]  
6887 T6225-6087 Unified Wire Ethernet Controller [VF]  
6888 T62100-6088 Unified Wire Ethernet Controller [VF]  
6889 T62100-6089 Unified Wire Ethernet Controller [VF]  
688a T62100-608a Unified Wire Ethernet Controller [VF]  
a000 PE10K Unified Wire Ethernet Controller  
1426 Storage Technology Corp.  
1427 Better On-Line Solutions  
1428 Edec Co Ltd  
1429 Unex Technology Corp.  
142a Kingmax Technology Inc  
142b Radiolan  
142c Minton Optic Industry Co Ltd  
142d Pix stream Inc  
142e Vitec Multimedia  
4020 VM2-2 [Video Maker 2] MPEG1/2 Encoder  
4337 VM2-2-C7 [Video Maker 2 rev. C7] MPEG1/2 Encoder  
142f Radicom Research Inc  
1430 ITT Aerospace/Communications Division  
1431 Gilat Satellite Networks  
1432 Edimax Computer Co.  
9130 RTL81xx Fast Ethernet  
1433 Eltec Elektronik  
GmbH  
# Nee Real Time Devices US Inc.  
1435 RTD Embedded Technologies, Inc.  
4520 PCI4520  
6020 SPM6020  
6030 SPM6030  
6420 SPM186420  
6430 SPM176430  
6431 SPM176431  
7520 DM7520  
7540 SDM7540  
7820 DM7820  
1436 CIS Technology Inc  
1437 Nissin Inc Co  
1438 Atmel-dream  
1439 Outsource Engineering & Mfg. Inc  
143a Stargate Solutions Inc  
143b Canon Research Center, America  
143c Amlogic Inc

143d Tamarack Microelectronics Inc  
143e Jones Futurex Inc  
143f Lightwell Co Ltd - Zax Division  
1440 ALGOL Corp.  
1441 AGIE Ltd  
1442 Phoenix Contact GmbH & Co.  
1443 Unibrain S.A.  
1444 TRW  
1445 Logical DO Ltd  
1446 Graphin Co Ltd  
1447 AIM GmbH  
1448 Alesis Studio Electronics  
1449 TUT Systems Inc  
144a Adlink Technology  
6208 PCI-6208V  
7250 PCI-7250  
7296 PCI-7296  
7432 PCI-7432  
7433 PCI-7433  
7434 PCI-7434  
7841 PCI-7841  
8133 PCI-8133  
8164 PCI-8164  
8554 PCI-8554  
9111 PCI-9111  
9113 PCI-9113  
9114 PCI-9114  
# 2-16 MB SRAM, 4x UART, I2C, misc I/O  
a001 ADi-BSEC  
#  
nee Loronix Information Systems Inc.  
144b Verint Systems Inc.  
144c Catalina Research Inc  
144d Samsung Electronics Co Ltd  
1600 S4LN053X01 AHCI SSD Controller(Apple slot)  
9602 RS780/RS880 PCI to PCI bridge (int gfx)  
a544 Exynos 8890 PCIe Root Complex  
a575 Exynos 7420 PCIe Root Complex  
a5e3 Exynos 5433 PCIe Root Complex  
a800 XP941 PCIe SSD  
a801 S4LN058A01[SSUBX] AHCI SSD Controller (Apple slot)  
a802 NVMe SSD Controller SM951/PM951  
144d a801 PM963 2.5" NVMe PCIe SSD  
a804 NVMe SSD Controller SM961/PM961/SM963  
144d a801 SM963 2.5" NVMe PCIe SSD  
a806 NVMe SSD SM0032L  
a808 NVMe SSD Controller SM981/PM981/PM983  
144d a801 SSD 970 EVO/PRO

1d49 403b Thinksystem U.2 PM983 NVMe SSD  
a809 NVMe SSD Controller 980 (DRAM-less)  
a80a NVMe SSD Controller PM9A1/PM9A3/980PRO  
0128 215a DC NVMe PM9A3 RI U.2 960GB  
0128 215b DC NVMe PM9A3 RI U.2 1.92TB  
0128 215c DC NVMe PM9A3 RI U.2 3.84TB  
0128 215d DC NVMe PM9A3 RI U.2 7.68TB  
0128 2166 DC NVMe PM9A3 RI 110M.2  
960GB  
0128 2167 DC NVMe PM9A3 RI 110M.2 1.92TB  
0128 2168 DC NVMe PM9A3 RI 80M.2 480GB  
0128 2169 DC NVMe PM9A3 RI 80M.2 960GB  
1028 215a DC NVMe PM9A3 RI U.2 960GB  
1028 215b DC NVMe PM9A3 RI U.2 1.92TB  
1028 215c DC NVMe PM9A3 RI U.2 3.84TB  
1028 2166 DC NVMe PM9A3 RI 110M.2 960GB  
1028 2167 DC NVMe PM9A3 RI 110M.2 1.92TB  
1028 2168 DC NVMe PM9A3 RI 80M.2 480GB  
1028 2169 DC NVMe PM9A3 RI 80M.2 960GB  
1028 2276 DC NVMe PM9A3 RI 110M.2 960GB  
1028 2277 DC NVMe PM9A3 RI 110M.2 1.92TB  
1028 512d DC NVMe PM9A3 RI U.2 7.68TB  
144d a801 SSD 980 PRO  
144d a813 General DC NVMe PM9A3  
# Actually 88SS1322 according to techpowerup  
a80b NVMe SSD Controller PM9B1 (DRAM-less)  
a80c NVMe SSD Controller S4LV008[Pascal]  
a80d NVMe SSD Controller PM9C1a  
a820 NVMe SSD Controller 171X  
1028 1f95 Express Flash NVMe XS1715 SSD 400GB  
1028 1f96 Express Flash NVMe XS1715 SSD 800GB  
1028 1f97 Express Flash NVMe XS1715 SSD 1600GB  
1028 1fa4 Express Flash NVMe SM1715  
3.2TB SFF  
1028 1fa6 Express Flash NVMe SM1715 3.2TB AIC  
1028 1fba Express Flash NVMe SM1715 800GB SFF  
1028 1fbb Express Flash NVMe SM1715 1.6TB SFF  
1028 1fbc Express Flash NVMe SM1715 1.6TB AIC  
a821 NVMe SSD Controller 172X  
1028 1fb7 Express Flash NVMe PM1725 3.2TB SFF  
1028 1fb8 Express Flash NVMe PM1725 3.2TB AIC  
1028 1fb9 Express Flash NVMe PM1725 6.4TB AIC  
1028 1fc1 Express Flash NVMe PM1725 800GB SFF  
1028 1fc2 Express Flash NVMe PM1725 1.6TB SFF  
1028 1fc4 Express Flash NVMe PM1725 1.6TB AIC  
a822 NVMe SSD Controller 172Xa/172Xb  
1014 0621 PCIe3 1.6TB NVMe Flash Adapter II x8  
1014 0622 PCIe3 3.2TB NVMe Flash Adapter II x8

1014 0629 PCIe3 6.4TB NVMe Flash Adapter II x8  
1014 064a PCIe3 1.6TB NVMe Flash Adapter III x8  
1014 064b PCIe3 3.2TB NVMe Flash Adapter III x8  
1014 064c PCIe3 6.4TB NVMe Flash Adapter III x8  
1028 1fd9 Express Flash PM1725a 800GB SFF  
1028 1fda Express Flash PM1725a 1.6TB SFF  
1028 1fdb Express Flash PM1725a  
3.2TB SFF  
1028 1fdc Express Flash PM1725a 6.4TB SFF  
1028 1fdd Express Flash PM1725a 1.6TB AIC  
1028 1fde Express Flash PM1725a 3.2TB AIC  
1028 1fdf Express Flash PM1725a 6.4TB AIC  
1028 1ff3 Express Flash PM1725b 1.6TB SFF  
1028 1ff4 Express Flash PM1725b 3.2TB SFF  
1028 1ff5 Express Flash PM1725b 6.4TB SFF  
1028 1ff6 Express Flash PM1725b 12.8TB SFF  
1028 1ff7 Express Flash PM1725b 1.6TB AIC  
1028 1ff8 Express Flash PM1725b 3.2TB AIC  
1028 1ff9 Express Flash PM1725b 6.4TB AIC  
1028 1ffa Express Flash PM1725b 12.8TB AIC  
a824 NVMe SSD Controller PM173X  
1028 2040 EMC PowerEdge Express Flash Ent NVMe AGN MU U.2 Gen4 1.6TB  
1028 2041 EMC PowerEdge Express Flash Ent NVMe AGN MU U.2 Gen4 3.2TB  
1028 2042 EMC PowerEdge Express Flash Ent NVMe AGN MU U.2 Gen4 6.4TB  
1028 2043 EMC PowerEdge Express Flash Ent NVMe AGN MU U.2 Gen4 12.8TB  
1028 2044 EMC PowerEdge Express Flash Ent NVMe AGN MU AIC Gen4 1.6TB  
1028 2045 EMC PowerEdge Express Flash Ent NVMe  
AGN MU AIC Gen4 3.2TB  
1028 2046 EMC PowerEdge Express Flash Ent NVMe AGN MU AIC Gen4 6.4TB  
1028 2070 EMC PowerEdge Express Flash Ent NVMe AGN RI U.2 Gen4 1.92TB  
1028 2071 EMC PowerEdge Express Flash Ent NVMe AGN RI U.2 Gen4 3.84TB  
1028 2072 EMC PowerEdge Express Flash Ent NVMe AGN RI U.2 Gen4 7.68TB  
1028 2073 EMC PowerEdge Express Flash Ent NVMe AGN RI U.2 Gen4 15.36TB  
1028 2074 EMC PowerEdge Express Flash Ent NVMe AGN RI AIC Gen4 1.92TB  
1028 2075 EMC PowerEdge Express Flash Ent NVMe AGN RI AIC Gen4 3.84TB  
1028 2076 EMC PowerEdge Express Flash Ent NVMe AGN RI AIC Gen4 7.68TB  
1028 2090 EMC PowerEdge Express Flash Ent NVMe AGN SED MU U.2 Gen4 1.6TB  
1028 2091 EMC PowerEdge Express Flash Ent NVMe AGN SED MU U.2 Gen4 3.2TB  
1028 2092 EMC PowerEdge Express Flash Ent NVMe AGN SED MU U.2 Gen4 6.4TB  
1028 2093 EMC PowerEdge Express Flash Ent NVMe AGN SED MU U.2 Gen4 12.8TB  
1028 2094 EMC PowerEdge Express Flash Ent NVMe AGN SED MU AIC Gen4 1.6TB  
1028 2095  
EMC PowerEdge Express Flash Ent NVMe AGN SED MU AIC Gen4 3.2TB  
1028 2096 EMC PowerEdge Express Flash Ent NVMe AGN SED MU AIC Gen4 6.4TB  
1028 2097 EMC PowerEdge Express Flash Ent NVMe AGN SED RI U.2 Gen4 1.92TB  
1028 2098 EMC PowerEdge Express Flash Ent NVMe AGN SED RI U.2 Gen4 3.84TB  
1028 2099 EMC PowerEdge Express Flash Ent NVMe AGN SED RI U.2 Gen4 7.68TB  
1028 2118 Ent NVMe v2 AGN FIPS MU U.2 1.6TB

1028 2119 Ent NVMe v2 AGN MU U.2 1.6TB  
1028 2120 Ent NVMe v2 AGN FIPS MU U.2 3.2T  
1028 2121 Ent NVMe v2 AGN MU U.2 3.2TB  
1028 2122 Ent NVMe v2 AGN FIPS MU U.2 6.4TB  
1028 2123 Ent NVMe v2 AGN MU U.2 6.4TB  
1028 2124 Ent NVMe v2 AGN FIPS MU U.2 6.4TB  
1028 2125 Ent NVMe v2 AGN MU U.2 12.8TB  
1028 2126 Ent NVMe v2 AGN FIPS RI U.2 1.92TB  
1028 2127 Ent NVMe v2 AGN RI U.2 1.92TB  
1028 2128 Ent NVMe v2 AGN FIPS RI U.2 3.84TB  
1028 2129 Ent NVMe v2 AGN RI U.2 3.84TB  
1028 2130 Ent NVMe v2 AGN FIPS RI U.2 7.68TB  
1028 2131 Ent NVMe v2 AGN RI U.2 7.68TB  
1028  
2132 Ent NVMe v2 AGN FIPS RI U.2 15.36TB  
1028 2133 Ent NVMe v2 AGN RI U.2 15.36TB  
a825 NVMe SSD Controller PM173Xa  
1028 2178 Ent NVMe FIPS PM1733a RI 1.92TB  
1028 2179 Ent NVMe PM1733a RI 1.92TB  
1028 217a Ent NVMe FIPS PM1733a RI 3.84TB  
1028 217b Ent NVMe PM1733a RI 3.84TB  
1028 217c Ent NVMe FIPS PM1733a RI 7.68TB  
1028 217d Ent NVMe PM1733a RI 7.68TB  
1028 217e Ent NVMe FIPS PM1733a RI 15.36TB  
1028 217f Ent NVMe PM1733a RI 15.36TB  
1028 2180 Ent NVMe FIPS PM1735a MU 1.6TB  
1028 2181 Ent NVMe PM1735a MU 1.6TB  
1028 2182 Ent NVMe FIPS PM1735a MU 3.2TB  
1028 2183 Ent NVMe PM1735a MU 3.2TB  
1028 2184 Ent NVMe FIPS PM1735a MU 6.4TB  
1028 2185 Ent NVMe PM1735a MU 6.4TB  
1028 2186 Ent NVMe FIPS PM1735a MU 12.8TB  
1028 2187 Ent NVMe PM1735a MU 12.8TB  
1028 226a Ent NVMe FIPS PM1733a RI 30.72TB  
a826 NVMe SSD Controller PM174X  
1028 2214 NVMe PM1743 RI E3.S 1.92TB  
1028 2216 NVMe PM1743 RI E3.S 3.84TB  
1028 2218 NVMe PM1743 RI E3.S 7.68TB  
1028  
221a NVMe PM1743 RI E3.S 15.36TB  
1028 221c NVMe PM1745 MU E3.S 1.6TB  
1028 221e NVMe PM1745 MU E3.S 3.2TB  
1028 2220 NVMe PM1745 MU E3.S 6.4TB  
1028 2222 NVMe PM1745 MU E3.S 12.8TB  
1028 224e NVMe FIPS PM1743 RI U.2 1.92TB  
1028 224f NVMe PM1743 RI U.2 1.92TB  
1028 2250 NVMe FIPS PM1743 RI U.2 3.84TB  
1028 2251 NVMe PM1743 RI U.2 3.84TB

1028 2252 NVMe FIPS PM1743 RI U.2 7.68TB  
1028 2253 NVMe PM1743 RI U.2 7.68TB  
1028 2254 NVMe FIPS PM1743 RI U.2 15.36TB  
1028 2255 NVMe PM1743 RI U.2 15.36TB  
1028 2258 NVMe FIPS PM1745 MU U.2 1.6TB  
1028 2259 NVMe PM1745 MU U.2 1.6TB  
1028 225a NVMe FIPS PM1745 MU U.2 3.2TB  
1028 225b NVMe PM1745 MU U.2 3.2TB  
1028 225c NVMe FIPS PM1745 MU U.2 6.4TB  
1028 225d NVMe PM1745 MU U.2 6.4TB  
1028 225e NVMe FIPS PM1745 MU U.2 12.8TB  
1028 225f NVMe PM1745 MU U.2 12.8TB  
a900 NVMe SSD Controller PM9DXa  
ecec Exynos 8895 PCIe Root Complex  
144e OLITEC  
144f Askey Computer Corp.  
1450 Octave Communications  
Ind.  
1451 SP3D Chip Design GmbH  
1453 MYCOM Inc  
1454 Altiga Networks  
1455 Logic Plus Plus Inc  
1456 Advanced Hardware Architectures  
1457 Nuera Communications Inc  
1458 Gigabyte Technology Co., Ltd  
1002 Aorus Radeon RX6900XT Xtreme Waterforce WB 16G  
22e8 Ellesmere [Radeon RX 480]  
3483 USB 3.0 Controller (VIA VL80x-based xHCI Controller)  
1459 DOOIN Electronics  
145a Escalate Networks Inc  
145b PRAIM SRL  
145c Cryptek  
145d Gallant Computer Inc  
145e Aashima Technology B.V.  
145f Baldor Electric Company  
0001 NextMove PCI  
1460 DYNARC INC  
1461 Avermedia Technologies Inc  
a3ce M179  
a3cf M179  
a836 M115 DVB-T, PAL/SECAM/NTSC Tuner  
e836 M115S Hybrid Analog/DVB PAL/SECAM/NTSC Tuner  
f436 AVerTV Hybrid+FM  
1462 Micro-Star International Co., Ltd. [MSI]  
3483 MSI USB 3.0 (VIA VL80x-based xHCI USB Controller)  
7c56 Realtek Ethernet controller RTL8111H  
aaf0 Radeon RX 580 Gaming X 8G  
1463 Fast Corporation

1464 Interactive Circuits & Systems Ltd  
1465 GN NETTEST Telecom DIV.  
1466  
Designpro Inc.  
1467 DIGICOM SPA  
1468 AMBIT Microsystem Corp.  
1469 Cleveland Motion Controls  
# formerly IFR.  
146a Aeroflex  
# 1.5 GHz to 3.0 GHz x 1Hz  
3010 3010 RF Synthesizer  
3a11 3011A PXI RF Synthesizer  
146b Parascan Technologies Ltd  
146c Ruby Tech Corp.  
1430 FE-1430TX Fast Ethernet PCI Adapter  
146d Tachyon, INC.  
146e Williams Electronics Games, Inc.  
146f Multi Dimensional Consulting Inc  
1470 Bay Networks  
1471 Integrated Telecom Express Inc  
1472 DAIKIN Industries, Ltd  
1473 ZAPEX Technologies Inc  
1474 Doug Carson & Associates  
1475 PICAZO Communications  
1476 MORTARA Instrument Inc  
1477 Net Insight  
1478 DIATREND Corporation  
1479 TORAY Industries Inc  
147a FORMOSA Industrial Computing  
147b ABIT Computer Corp.  
1084 IP35 [Dark Raider]  
147c AWARE, Inc.  
147d Interworks Computer Products  
147e Matsushita Graphic Communication Systems, Inc.  
147f NIHON UNISYS, Ltd.  
1480 SCII Telecom  
1481 BIOPAC Systems Inc  
1482 ISYTEC - Integrierte Systemtechnik GmbH  
0001  
PCI-16 Host Interface for ITC-16  
1483 LABWAY Corporation  
1484 Logic Corporation  
1485 ERMA - Electronic GmbH  
1486 L3 Communications Telemetry & Instrumentation  
1487 MARQUETTE Medical Systems  
1489 KYE Systems Corporation  
148a OPTO  
148b INNOMEDIALOGIC Inc.

148c Tul Corporation / PowerColor  
2391 Radeon RX 590 [Red Devil]  
2398 AXRX 5700 XT 8GBD6-3DHE/OC [PowerColor Red Devil Radeon RX 5700 XT]  
148d DIGICOM Systems, Inc.  
1003 HCF 56k Data/Fax Modem  
148e OSI Plus Corporation  
148f Plant Equipment, Inc.  
1490 Stone Microsystems PTY Ltd.  
1491 ZEAL Corporation  
1492 Time Logic Corporation  
1493 MAKER Communications  
1494 WINTOP Technology, Inc.  
1495 TOKAI Communications Industry Co. Ltd  
1496 JOYTECH Computer Co., Ltd.  
1497 SMA Regelsysteme GmbH  
1497 SMA Technologie AG  
1498 TEWS Technologies GmbH  
0330 TPMC816 2 Channel CAN bus controller.  
035d TPMC861 4-Channel Isolated Serial Interface RS422/RS485  
0385 TPMC901 Extended CAN bus with 2/4/6 CAN controller  
21cc  
TCP460 CompactPCI 16 Channel Serial Interface RS232/RS422  
21cd TCP461 CompactPCI 8 Channel Serial Interface RS232/RS422  
3064 TPCI100 (2 Slot IndustryPack PCI Carrier)  
30c8 TPCI200 4 Slot IndustryPack PCI Carrier  
70c8 TPCE200 4 Slot IndustryPack PCIe Carrier  
9177 TXMC375 8 channel RS232/RS422/RS485 programmable serial interface  
1499 EMTEC CO., Ltd  
149a ANDOR Technology Ltd  
149b SEIKO Instruments Inc  
149c OVISLINK Corp.  
149d NEWTEK Inc  
0001 Video Toaster for PC  
149e Mapletree Networks Inc.  
149f LECTRON Co Ltd  
14a0 SOFTING GmbH  
14a1 Systembase Co Ltd  
4d02 SB16C1052PCI [Multi-2/PCIe RS232]  
14a2 Millennium Engineering Inc  
14a3 Maverick Networks  
14a4 Lite-On Technology Corporation  
2100 CA1-8D128 NVMe SSD  
2200 CX2-8B256, CX2-8B512 NVMe SSD  
22a0 EP2-KB960 NVMe SSD  
22f1 M8Pe Series NVMe SSD  
2300 CA3-8D256, CA3-8D512 NVMe SSD  
23f1 M9PeG, M9PeGN, M9PeY NVMe SSD  
2f00 CAZ-82512 NVMe SSD



3500 CA5-8D512 NVMe SSD  
# Wrong vendor ID used  
4318 Broadcom BCM4318  
[AirForce One 54g] 802.11g WLAN Controller  
5100 CB1-SD256, CB1-SD512 NVMe SSD  
9100 CL1-3D256, CL1-8D512 NVMe SSD (DRAM-less)  
14a5 XIONICS Document Technologies Inc  
14a6 INOVA Computers GmbH & Co KG  
14a7 MYTHOS Systems Inc  
14a8 FEATRON Technologies Corporation  
14a9 HIVERTEC Inc  
14aa Advanced MOS Technology Inc  
# nee Mentor Graphics Corp.  
14ab Siemens Industry Software Inc.  
14ac Novaweb Technologies Inc  
14ad Time Space Radio AB  
14ae CTI, Inc  
14af Guillemot Corporation  
7102 3D Prophet II MX  
14b0 BST Communication Technology Ltd  
14b1 Nextcom K.K.  
14b2 ENNOVATE Networks Inc  
14b3 XPEED Inc  
0000 DSL NIC  
14b4 PHILIPS Business Electronics B.V.  
14b5 Creamware GmbH  
0200 Scope  
0300 Pulsar  
0400 PulsarSRB  
0600 Pulsar2  
0800 DSP-Board  
0900 DSP-Board  
0a00 DSP-Board  
0b00 DSP-Board  
14b6 Quantum Data Corp.  
14b7 PROXIM Inc  
0001 Symphony 4110  
14b8 Techsoft Technology Co Ltd  
14b9 Cisco Aironet Wireless Communications  
0001 PC4800  
0340 PC4800  
0350 350 series  
802.11b Wireless LAN Adapter  
4500 PC4500  
4800 Cisco Aironet 340 802.11b Wireless LAN Adapter/Aironet PC4800  
a504 Cisco Aironet Wireless 802.11b  
a505 Cisco Aironet CB20a 802.11a Wireless LAN Adapter  
a506 Cisco Aironet Mini PCI b/g

14ba INTERNIX Inc.  
# ARCNET interface card based on SMSC COM20022 chip and manufactured for SMSC Japan  
0600 ARC-PCI/22  
14bb SEMTECH Corporation  
14bc Globespan Semiconductor Inc.  
d002 Pulsar [PCI ADSL Card]  
d00f Pulsar [PCI ADSL Card]  
14bd CARDIO Control N.V.  
14be L3 Communications  
14bf SPIDER Communications Inc.  
14c0 COMPAL Electronics Inc  
1201 X550 10Gb 2P RJ45 OCP Mezz  
# now owned by CSP, Inc.  
14c1 MYRICOM Inc.  
0008 Myri-10G Dual-Protocol NIC  
14c1 0008 10G-PCIE-8A  
14c1 0009 10G-PCIE-8A (MSI-X firmware)  
14c1 000a 10G-PCIE-8B  
8043 Myrinet 2000 Scalable Cluster Interconnect  
103c 1240 Myrinet M2L-PCI64/2-3.0 LANai 7.4 (HP OEM)  
14c2 DTK Computer  
14c3 MEDIATEK Corp.  
0608 MT7921K (RZ608) Wi-Fi 6E 80MHz  
0616 MT7922 802.11ax  
PCI Express Wireless Network Adapter  
7603 MT7603E 802.11bgn PCI Express Wireless Network Adapter  
7612 MT7612E 802.11ac PCI Express Wireless Network Adapter  
7615 MT7615E 802.11ac PCI Express Wireless Network Adapter  
7630 MT7630e 802.11bgn Wireless Network Adapter  
7650 MT7650 802.11ac  
# MT7612E too?  
7662 MT7662E 802.11ac PCI Express Wireless Network Adapter  
7915 MT7915E 802.11ax PCI Express Wireless Network Adapter  
7916 MT7905D/MT7975  
# WiFi 6E capable  
7922 MT7922 802.11ax PCI Express Wireless Network Adapter  
1a3b 5300 ASUS PCE-AXE59BT  
7961 MT7921 802.11ax PCI Express Wireless Network Adapter  
8650 MT7650 Bluetooth  
14c4 IWASAKI Information Systems Co Ltd  
14c5 Automation Products AB  
14c6 Data Race Inc  
14c7 Modular Technology Holdings Ltd  
14c8 Turbocomm Tech. Inc.  
14c9 ODIN Telesystems Inc  
14ca PE Logic Corp.  
14cb Billionton Systems Inc  
14cc NAKAYO Telecommunications Inc

14cd Universal Global Scientific Industrial Co.,Ltd  
0001 USI-1514-1GbaseT  
[OCP1]  
0002 USI-4227-SFP [OCP2]  
0003 USI-X557-10GbaseT [OCP3]  
14ce Whistle Communications  
14cf TEK Microsystems Inc.  
14d0 Ericsson Axe R & D  
14d1 Computer Hi-Tech Co Ltd  
14d2 Titan Electronics Inc  
8001 VScom 010L 1 port parallel adaptor  
8002 VScom 020L 2 port parallel adaptor  
8010 VScom 100L 1 port serial adaptor  
8011 VScom 110L 1 port serial and 1 port parallel adaptor  
8020 VScom 200L 1 or 2 port serial adaptor  
8021 VScom 210L 2 port serial and 1 port parallel adaptor  
8028 VScom 200I/200I-SI 2-port serial adapter  
8040 VScom 400L 4 port serial adaptor  
8043 VScom 430L 4-port serial and 3-port parallel adapter  
8048 VScom 400I 4-port serial adapter  
8080 VScom 800L 8 port serial adaptor  
8088 VScom 800I 8-port serial adapter  
a000 VScom 010H 1 port parallel adaptor  
a001 VScom 100H 1 port serial adaptor  
a003 VScom 400H 4 port serial adaptor  
a004 VScom 400HF1 4 port serial adaptor  
a005 VScom 200H 2 port serial adaptor  
a007 VScom PCI800EH (PCIe) 8-port  
serial adapter Port 1-4  
a008 VScom PCI800EH (PCIe) 8-port serial adapter Port 5-8  
a009 VScom PCI400EH (PCIe) 4-port serial adapter  
e001 VScom 010HV2 1 port parallel adaptor  
e010 VScom 100HV2 1 port serial adaptor  
e020 VScom 200HV2 2 port serial adaptor  
14d3 CIRTECH (UK) Ltd  
0002 DTL-T14000 Rev. 1 [PS2 TOOL CD/DVD Emulator]  
0003 DTL-T14000 Rev. 2 [PS2 TOOL CD/DVD Emulator]  
0004 DTL-T14000 Rev. 3 [PS2 TOOL CD/DVD Emulator]  
14d4 Panacom Technology Corp  
14d5 Nitsuko Corporation  
14d6 Accusys Inc  
6101 ACS-61xxx, PCIe to SAS/SATA RAID HBA  
6201 ACS-62xxx, External PCIe to SAS/SATA RAID controller  
14d7 Hirakawa Hewtech Corp  
14d8 HOPF Elektronik GmbH  
# Formerly SiPackets, Inc., formerly API NetWorks, Inc., formerly Alpha Processor, Inc.  
14d9 Alliance Semiconductor Corporation  
0010 AP1011/SP1011 HyperTransport-PCI Bridge [Sturgeon]

9000 AS90L10204/10208 HyperTransport to PCI-X Bridge  
14da National Aerospace Laboratories  
14db AFAVLAB Technology Inc  
2120 TK9902  
2182  
AFAVLAB Technology Inc. 8-port serial card  
14dc Amplicon Liveline Ltd  
0000 PCI230  
0001 PCI242  
0002 PCI244  
0003 PCI247  
0004 PCI248  
0005 PCI249  
0006 PCI260  
0007 PCI224  
0008 PCI234  
0009 PCI236  
000a PCI272  
000b PCI215  
14dd Boulder Design Labs Inc  
14de Applied Integration Corporation  
14df ASIC Communications Corp  
14e1 INVERTEX  
14e2 INFOLIBRIA  
14e3 AMTELCO  
14e4 Broadcom Inc. and subsidiaries  
0576 BCM43224 802.11a/b/g/n  
0800 Sentry5 Chipcommon I/O Controller  
0804 Sentry5 PCI Bridge  
0805 Sentry5 MIPS32 CPU  
0806 Sentry5 Ethernet Controller  
080b Sentry5 Crypto Accelerator  
080f Sentry5 DDR/SDR RAM Controller  
0811 Sentry5 External Interface Core  
0816 BCM3302 Sentry5 MIPS32 CPU  
1570 720p FaceTime HD Camera  
1600 NetXtreme BCM5752 Gigabit Ethernet PCI Express  
1028 01c1 Precision 490  
1028 01c2 Latitude D620  
103c 3015 PCIe LAN on Motherboard  
107b 5048 E4500 Onboard  
1259 2705 AT-2711FX  
1601 NetXtreme BCM5752M Gigabit Ethernet  
PCI Express  
1604 BCM5745X NetXtreme-E Ethernet Partition  
1605 BCM5745X NetXtreme-E RDMA Partition  
1606 BCM5745X NetXtreme-E RDMA Virtual Function  
1609 BCM5745X NetXtreme-E Ethernet Virtual Function

1612 BCM70012 Video Decoder [Crystal HD]  
1614 BCM57454 NetXtreme-E 10Gb/25Gb/40Gb/50Gb/100Gb Ethernet  
14e4 d140 NetXtreme-E Quad-port 10GBASE-T Ethernet PCIe Adapter (BCM957454-P410SDBT)  
14e4 d340 NetXtreme-E Quad-port 10GBASE-T Ethernet OCP 3.0 Adapter (BCM957454-N410SDBT)  
1615 BCM70015 Video Decoder [Crystal HD]  
1639 NetXtreme II BCM5709 Gigabit Ethernet  
1028 0235 PowerEdge R710 BCM5709 Gigabit Ethernet  
1028 0236 PowerEdge R610 BCM5709 Gigabit Ethernet  
1028 0237 PowerEdge T610 BCM5709 Gigabit Ethernet  
103c 7055 NC382i Integrated Multi-port PCI Express Gigabit Server Adapter  
103c 7059 NC382T PCIe Dual Port Multifunction Gigabit Server Adapter  
10a9 8027 Quad port Gigabit Ethernet Controller  
163a NetXtreme II BCM5709S Gigabit Ethernet  
1028 027b PowerEdge  
M805 Broadcom NetXtreme II BCM5709S  
1028 029c PowerEdge M710 BCM5709S Gigabit Ethernet  
103c 171d NC382m Dual Port 1GbE Multifunction BL-c Adapter  
103c 7056 NC382i Integrated Quad Port PCI Express Gigabit Server Adapter  
1259 2984 AT-2973SX  
163b NetXtreme II BCM5716 Gigabit Ethernet  
1028 028c PowerEdge R410 BCM5716 Gigabit Ethernet  
1028 028d PowerEdge T410 BCM5716 Gigabit Ethernet  
1028 02f1 PowerEdge R510 BCM5716 Gigabit Ethernet  
163c NetXtreme II BCM5716S Gigabit Ethernet  
163d NetXtreme II BCM57811 10-Gigabit Ethernet  
1043 858a PEB-10G/57811-1S  
163e NetXtreme II BCM57811 10 Gigabit Ethernet Multi Function  
163f NetXtreme II BCM57811 10-Gigabit Ethernet Virtual Function  
1641 NetXtreme BCM57787 Gigabit Ethernet PCIe  
1642 NetXtreme BCM57764 Gigabit Ethernet PCIe  
1643 NetXtreme BCM5725 Gigabit Ethernet PCIe  
1644 NetXtreme BCM5700 Gigabit Ethernet  
1014 0277 Broadcom Vigil B5700 1000Base-T  
1028 00d1 Broadcom BCM5700  
1028 0106 Broadcom  
BCM5700  
1028 0109 Broadcom BCM5700 1000Base-T  
1028 010a Broadcom BCM5700 1000BaseTX  
10b7 1000 3C996-T 1000Base-T  
10b7 1001 3C996B-T 1000Base-T  
10b7 1002 3C996C-T 1000Base-T  
10b7 1003 3C997-T 1000Base-T Dual Port  
10b7 1004 3C996-SX 1000Base-SX  
10b7 1005 3C997-SX 1000Base-SX Dual Port  
10b7 1008 3C942 Gigabit LOM (31X31)  
14e4 0002 NetXtreme 1000Base-SX  
14e4 0003 NetXtreme 1000Base-SX  
14e4 0004 NetXtreme 1000Base-T

14e4 1028 NetXtreme 1000BaseTX  
14e4 1644 BCM5700 1000Base-T  
1645 NetXtreme BCM5701 Gigabit Ethernet  
0e11 007c NC7770 Gigabit Server Adapter (PCI-X, 10/100/1000-T)  
0e11 007d NC6770 Gigabit Server Adapter (PCI-X, 1000-SX)  
0e11 0085 NC7780 Gigabit Server Adapter (embedded, WOL)  
0e11 0099 NC7780 Gigabit Server Adapter (embedded, WOL)  
0e11 009a NC7770 Gigabit Server Adapter (PCI-X, 10/100/1000-T)  
0e11 00c1 NC6770 Gigabit Server Adapter (PCI-X, 1000-SX)  
1028 0121 Broadcom BCM5701 1000Base-T  
103c 128a BCM5701 1000Base-T  
(HP, OEM 3COM)  
103c 128b 1000Base-SX (PCI) [A7073A]  
103c 12a4 Core Lan 1000Base-T  
103c 12c1 IOX Core Lan 1000Base-T [A7109AX]  
103c 1300 Core LAN/SCSI Combo [A6794A]  
10a9 8010 IO9/IO10 Gigabit Ethernet (Copper)  
10a9 8011 Gigabit Ethernet (Copper)  
10a9 8012 Gigabit Ethernet (Fiber)  
10b7 1004 3C996-SX 1000Base-SX  
10b7 1006 3C996B-T 1000Base-T  
10b7 1007 3C1000-T 1000Base-T  
10b7 1008 3C940-BR01 1000Base-T  
14e4 0001 BCM5701 1000Base-T  
14e4 0005 BCM5701 1000Base-T  
14e4 0006 BCM5701 1000Base-T  
14e4 0007 BCM5701 1000Base-SX  
14e4 0008 BCM5701 1000Base-T  
14e4 1645 NetXtreme BCM5701 Gigabit Ethernet  
14e4 8008 BCM5701 1000Base-T  
1646 NetXtreme BCM5702 Gigabit Ethernet  
0e11 00bb NC7760 1000BaseTX  
1028 0126 Broadcom BCM5702 1000BaseTX  
14e4 8009 BCM5702 1000BaseTX  
1647 NetXtreme BCM5703 Gigabit Ethernet  
0e11 0099 NC7780 1000BaseTX  
0e11 009a NC7770 1000BaseTX  
10a9 8010 IO9 Gigabit Ethernet (Copper)  
14e4 0009 BCM5703 1000BaseTX  
14e4  
000a BCM5703 1000BaseSX  
14e4 000b BCM5703 1000BaseTX  
14e4 8009 BCM5703 1000BaseTX  
14e4 800a BCM5703 1000BaseTX  
1648 NetXtreme BCM5704 Gigabit Ethernet  
0e11 00cf NC7772 Gigabit Server Adapter (PCI-X, 10,100,1000-T)  
0e11 00d0 NC7782 Gigabit Server Adapter (PCI-X, 10,100,1000-T)  
0e11 00d1 NC7783 Gigabit Server Adapter (PCI-X, 10,100,1000-T)

1028 014a PowerEdge 1750  
1028 0170 PowerEdge 6850 Broadcom NetXtreme BCM5704  
103c 310f NC7782 Gigabit Server Adapter (PCI-X, 10,100,1000-T)  
10a9 8013 Dual Port Gigabit Ethernet (PCI-X,Copper)  
10a9 8018 Dual Port Gigabit Ethernet (A330)  
10a9 801a Dual Port Gigabit Ethernet (IA-blade)  
10a9 801b Quad Port Gigabit Ethernet (PCI-E,Copper)  
10b7 2000 3C998-T Dual Port 10/100/1000 PCI-X  
10b7 3000 3C999-T Quad Port 10/100/1000 PCI-X  
1166 1648 NetXtreme CIOB-E 1000Base-T  
1734 100b PRIMERGY RX/TX series onboard LAN  
1649 NetXtreme BCM5704S\_2 Gigabit Ethernet  
164a NetXtreme II BCM5706 Gigabit Ethernet  
103c  
1709 NC371i Integrated PCI-X Multifunction Gigabit Server Adapter  
103c 3070 NC380T PCI Express Dual Port Multifunction Gigabit Server Adapter  
103c 3101 NC370T Multifunction Gigabit Server Adapter  
103c 3106 NC370i Multifunction Gigabit Server Adapter  
164c NetXtreme II BCM5708 Gigabit Ethernet  
1028 01f0 PowerEdge R900 Broadcom NetXtreme II BCM5708  
1028 0205 PowerEdge 2970 Broadcom NetXtreme II BCM5708  
1028 020b PowerEdge T605 Broadcom NetXtreme II BCM5708  
1028 0221 PowerEdge R805 Broadcom NetXtreme II BCM5708  
1028 0223 PowerEdge R905 Broadcom NetXtreme II BCM5708  
1028 1f12 PowerEdge R805/R905 Broadcom NetXtreme II BCM5708  
103c 7037 NC373T PCI Express Multifunction Gigabit Server Adapter  
103c 7038 NC373i Integrated Multifunction Gigabit Server Adapter  
103c 7045 NC374m PCI Express Dual Port Multifunction Gigabit Server Adapter  
164d NetXtreme BCM5702FE Gigabit Ethernet  
164e NetXtreme II BCM57710 10-Gigabit PCIe [Everest]  
103c 171c NC532m  
Dual Port 10GbE Multifunction BL-C Adapter  
103c 7058 NC532i Dual Port 10GbE Multifunction BL-C Adapter  
164f NetXtreme II BCM57711 10-Gigabit PCIe  
1650 NetXtreme II BCM57711E 10-Gigabit PCIe  
103c 171c NC532m Dual Port 10GbE Multifunction BL-C Adapter  
103c 7058 NC532i Dual Port 10GbE Multifunction BL-C Adapter  
1653 NetXtreme BCM5705 Gigabit Ethernet  
0e11 00e3 NC7761 Gigabit Server Adapter  
1734 1073 Primergy Econel 200 D2020 mainboard  
1654 NetXtreme BCM5705\_2 Gigabit Ethernet  
0e11 00e3 NC7761 Gigabit Server Adapter  
103c 3100 NC1020 ProLiant Gigabit Server Adapter 32 PCI  
103c 3226 NC150T 4-port Gigabit Combo Switch & Adapter  
1655 NetXtreme BCM5717 Gigabit Ethernet PCIe  
1656 NetXtreme BCM5718 Gigabit Ethernet PCIe  
1657 NetXtreme BCM5719 Gigabit Ethernet PCIe  
1014 0420 FC 5260/5899 4-port 1 GbE Adapter for Power

103c 169d Ethernet 1Gb 4-port 331FLR Adapter  
103c 22be Ethernet 1Gb 4-port 331i Adapter  
103c 3383 Ethernet 1Gb 4-port 331T Adapter  
14e4  
1904 4-port 1Gb Ethernet Adapter  
14e4 1909 Broadcom NetXtreme 5719 Quad Port Gigabit NIC  
14e4 d166 BCM95719-P41 4x1GBT Ethernet NIC  
14e4 d366 BCM95719-N41 4x1GBT Ethernet NIC  
193d 1025 NIC-ETH330T-LP-4P  
# NIC-ETH330T-3S-4P 4xGE 1000Base-T for OCP3.0  
193d 1086 NIC-ETH330T-3S-4P  
1659 NetXtreme BCM5721 Gigabit Ethernet PCI Express  
1014 02c6 eServer xSeries server mainboard  
1028 01e6 PowerEdge 860  
1028 023c PowerEdge R200 Broadcom NetXtreme BCM5721  
103c 170b NC320m PCI Express Dual Port Gigabit Server Adapter  
103c 7031 NC320T PCIe Gigabit Server Adapter  
103c 7032 NC320i PCIe Gigabit Server Adapter  
1734 1061 PRIMERGY RX/TX S2 series onboard LAN  
165a NetXtreme BCM5722 Gigabit Ethernet PCI Express  
# Dual NIC server  
1014 0378 System x3350 (Machine type 4192)  
1028 020f PowerEdge R300 Broadcom NetXtreme 5722  
1028 0210 PowerEdge T300 Broadcom NetXtreme 5722  
1028 0225 PowerEdge T105 Broadcom NetXtreme 5722  
103c 7051 NC105i PCIe Gigabit  
Server Adapter  
103c 7052 NC105T PCIe Gigabit Server Adapter  
165b NetXtreme BCM5723 Gigabit Ethernet PCIe  
103c 705d NC107i Integrated PCI Express Gigabit Server Adapter  
165c NetXtreme BCM5724 Gigabit Ethernet PCIe  
165d NetXtreme BCM5705M Gigabit Ethernet  
1028 865d Latitude D400  
14e4 165d Dell Latitude D600  
165e NetXtreme BCM5705M\_2 Gigabit Ethernet  
103c 088c NC8000 laptop  
103c 0890 NC6000 laptop  
103c 099c NX6110/NC6120  
10cf 1279 LifeBook E8010D  
165f NetXtreme BCM5720 Gigabit Ethernet PCIe  
1028 04f7 PowerEdge R320 server  
1028 08fd PowerEdge R6515/R7515 LOM  
1028 08ff PowerEdge Rx5xx LOM Board  
1028 0900 PowerEdge C6525 LOM  
# Dell 5720 LOM  
1028 0917 PowerEdge C6520 LOM  
103c 1786 NC332T Adapter  
103c 193d NC332i Adapter



103c 2133 NC332i Adapter  
103c 22e8 NC332i Adapter  
103c 22eb NC332i Adapter  
15d9 165f H12SSL-i  
1662 NetXtreme II BCM57712 10 Gigabit Ethernet  
1663 NetXtreme II BCM57712 10 Gigabit Ethernet Multi Function  
1665  
NetXtreme BCM5717 Gigabit Ethernet PCIe  
1668 NetXtreme BCM5714 Gigabit Ethernet  
103c 7039 NC324i PCIe Dual Port Gigabit Server Adapter  
1669 NetXtreme 5714S Gigabit Ethernet  
166a NetXtreme BCM5780 Gigabit Ethernet  
103c 7035 NC325i Integrated Dual port PCIe Express Gigabit Server Adapter  
166b NetXtreme BCM5780S Gigabit Ethernet  
166e 570x 10/100 Integrated Controller  
166f NetXtreme II BCM57712 10 Gigabit Ethernet Virtual Function  
1672 NetXtreme BCM5754M Gigabit Ethernet PCI Express  
1673 NetXtreme BCM5755M Gigabit Ethernet PCI Express  
1674 NetXtreme BCM5756ME Gigabit Ethernet PCI Express  
1677 NetXtreme BCM5751 Gigabit Ethernet PCI Express  
1028 0176 Dimension XPS Gen 4  
1028 0177 Dimension 8400  
1028 0179 Optiplex GX280  
1028 0182 Latitude D610  
1028 0187 Precision M70  
1028 01a3 Latitude X1  
1028 01a8 Precision 380  
1028 01ad OptiPlex GX620  
103c 3006 DC7100 SFF(DX878AV)  
1462 028c 915P/G Neo2  
1734 105d Scenic W620  
1678 NetXtreme  
BCM5715 Gigabit Ethernet  
103c 703e NC326i PCIe Dual Port Gigabit Server Adapter  
1679 NetXtreme BCM5715S Gigabit Ethernet  
103c 1707 NC326m PCIe Dual Port Adapter  
103c 170c NC325m PCIe Quad Port Adapter  
103c 703c NC326i PCIe Dual Port Gigabit Server Adapter  
167a NetXtreme BCM5754 Gigabit Ethernet PCI Express  
1028 01da OptiPlex 745  
1028 01de Precision 390  
1028 01df PowerEdge SC440  
1028 0214 Precision T3400  
1028 021e Precision T5400  
167b NetXtreme BCM5755 Gigabit Ethernet PCI Express  
103c 280a DC5750 Microtower  
167d NetXtreme BCM5751M Gigabit Ethernet PCI Express  
1014 0577 ThinkPad X41 / Z60t

103c 0934 nx8220  
103c 0940 Compaq nw8240 Mobile Workstation  
103c 0944 Compaq nc6220 Notebook PC  
17aa 2081 ThinkPad R60e  
167e NetXtreme BCM5751F Fast Ethernet PCI Express  
167f NetLink BCM5787F Fast Ethernet PCI Express  
1680 NetXtreme BCM5761e Gigabit Ethernet PCIe  
1681 NetXtreme BCM5761 Gigabit Ethernet PCIe  
# Integrated on the motherboard  
1028  
0433 OptiPlex 580  
1682 NetXtreme BCM57762 Gigabit Ethernet PCIe  
106b 00f6 Thunderbolt to Gigabit Ethernet Adapter  
1683 NetXtreme BCM57767 Gigabit Ethernet PCIe  
1684 NetXtreme BCM5764M Gigabit Ethernet PCIe  
1685 NetXtreme II BCM57500S Gigabit Ethernet  
1686 NetXtreme BCM57766 Gigabit Ethernet PCIe  
1687 NetXtreme BCM5762 Gigabit Ethernet PCIe  
1688 NetXtreme BCM5761 10/100/1000BASE-T Ethernet  
1259 2708 AT-2712 FX  
# The Broadcom 57800 device has two 1Gig ports and two 10Gig ports. The subsystem information can be used to differentiate.  
168a NetXtreme II BCM57800 1/10 Gigabit Ethernet  
# SFP+ ports  
1014 0493 PCIe2 LP 4-Port (10Gb+1GbE) SR+RJ45 Adapter (FC EN0T; CCIN 2CC3)  
# RJ-45 ports  
1014 0494 PCIe2 LP 4-Port (10Gb+1GbE) SR+RJ45 Adapter (FC EN0T; CCIN 2CC3)  
1028 1f5c BCM57800 10-Gigabit Ethernet  
1028 1f5d BCM57800 10-Gigabit Ethernet  
1028 1f67 BCM57800 1-Gigabit Ethernet  
1028 1f68 BCM57800 1-Gigabit Ethernet  
168d NetXtreme II BCM57840 10/20  
Gigabit Ethernet  
168e NetXtreme II BCM57810 10 Gigabit Ethernet  
1014 0492 PCIe2 2-port 10 GbE BaseT RJ45 Adapter (FC EN0W; CCIN 2CC4)  
103c 1798 Flex-10 10Gb 2-port 530FLB Adapter [Meru]  
103c 17a5 Flex-10 10Gb 2-port 530M Adapter  
103c 18d3 Ethernet 10Gb 2-port 530T Adapter  
103c 1930 FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter  
103c 1931 StoreFabric CN1100R Dual Port Converged Network Adapter  
103c 1932 FlexFabric 10Gb 2-port 534FLB Adapter  
103c 1933 FlexFabric 10Gb 2-port 534M Adapter  
103c 193a FlexFabric 10Gb 2-port 533FLR-T Adapter  
103c 3382 Ethernet 10Gb 2-port 530FLR-SFP+ Adapter  
103c 339d Ethernet 10Gb 2-port 530SFP+ Adapter  
193d 1003 530F-B  
193d 1006 530F-L  
193d 100f NIC-ETH522i-Mb-2x10G

4c52 9812 LREC9812AF Dual-port 10Gb Ethernet Server Adapter  
1690 NetXtreme BCM57760 Gigabit Ethernet PCIe  
1691 NetLink BCM57788 Gigabit Ethernet PCIe  
1028 04aa XPS 8300  
1692 NetLink BCM57780 Gigabit Ethernet PCIe  
1025 033d Aspire 7740G  
1693  
NetLink BCM5787M Gigabit Ethernet PCI Express  
1025 0121 Aspire 5920G  
103c 30c0 6710b  
17aa 20d5 ThinkPad R61  
1694 NetLink BCM57790 Gigabit Ethernet PCIe  
1696 NetXtreme BCM5782 Gigabit Ethernet  
103c 12bc d530 CMT (DG746A)  
14e4 000d NetXtreme BCM5782 1000Base-T  
1698 NetLink BCM5784M Gigabit Ethernet PCIe  
1699 NetLink BCM5785 Gigabit Ethernet  
169a NetLink BCM5786 Gigabit Ethernet PCI Express  
169b NetLink BCM5787 Gigabit Ethernet PCI Express  
169c NetXtreme BCM5788 Gigabit Ethernet  
103c 308b MX6125  
103c 30a1 NC2400  
144d c018 X20  
1462 590c KT6 Delta-FIS2R (MS-6590)  
169d NetLink BCM5789 Gigabit Ethernet PCI Express  
16a0 NetLink BCM5785 Fast Ethernet  
16a1 BCM57840 NetXtreme II 10 Gigabit Ethernet  
1043 866e PEB-10G/57840-2T 10GBase-T Network Adapter  
193d 100b NIC-ETH521i-Mb-4x10G  
4c52 9814 LREC9814AF Quad-port 10Gb Ethernet Server Adapter  
16a2 BCM57840 NetXtreme II 10/20-Gigabit Ethernet  
103c 1916 FlexFabric 20Gb 2-port 630FLB Adapter  
103c  
1917 FlexFabric 20Gb 2-port 630M Adapter  
103c 2231 3820C 10/20Gb Converged Network Adapter  
103c 22fa FlexFabric 10Gb 2-port 536FLB Adapter  
16a3 NetXtreme BCM57786 Gigabit Ethernet PCIe  
16a4 BCM57840 NetXtreme II Ethernet Multi Function  
103c 1916 NPAR 20Gb 2-port 630FLB Adapter  
103c 1917 NPAR 20Gb 2-port 630M Adapter  
103c 2231 3820C 10/20Gb Converged Network Adapter (NPAR 1.5)  
103c 22fa FlexFabric 10Gb 2-port 536FLB Adapter (NPAR 1.5)  
# The Broadcom 57800 device has two 1Gig ports and two 10Gig ports. The subsystem information can be used to differentiate.  
16a5 NetXtreme II BCM57800 1/10 Gigabit Ethernet Multi Function  
1028 1f5c NetXtreme II BCM57800 10-Gigabit Ethernet Multi Function  
1028 1f5d NetXtreme II BCM57800 10-Gigabit Ethernet Multi Function  
1028 1f67 NetXtreme II BCM57800 1-Gigabit Ethernet Multi Function

1028 1f68 NetXtreme II BCM57800 1-Gigabit Ethernet Multi Function  
 16a6 NetXtreme BCM5702X Gigabit Ethernet  
 0e11 00bb NC7760  
 Gigabit Server Adapter (PCI-X, 10/100/1000-T)  
 1028 0126 BCM5702 1000Base-T  
 14e4 000c BCM5702 1000Base-T  
 14e4 8009 BCM5702 1000Base-T  
 16a7 NetXtreme BCM5703X Gigabit Ethernet  
 0e11 00ca NC7771 Gigabit Server Adapter (PCI-X, 10,100,1000-T)  
 0e11 00cb NC7781 Gigabit Server Adapter (PCI-X, 10,100,1000-T)  
 1014 026f eServer xSeries server mainboard  
 14e4 0009 NetXtreme BCM5703 1000Base-T  
 14e4 000a NetXtreme BCM5703 1000Base-SX  
 14e4 000b NetXtreme BCM5703 1000Base-T  
 14e4 800a NetXtreme BCM5703 1000Base-T  
 16a8 NetXtreme BCM5704S Gigabit Ethernet  
 103c 132b PCI-X 1000Mbps Dual-port Built-in  
 10a9 8014 Dual Port Gigabit Ethernet (PCI-X,Fiber)  
 10a9 801c Quad Port Gigabit Ethernet (PCI-E,Fiber)  
 10b7 2001 3C998-SX Dual Port 1000-SX PCI-X  
 # The Broadcom 57800 device has two 1Gig ports and two 10Gig ports. The subsystem information can be used to differentiate.  
 16a9 NetXtreme II BCM57800 1/10 Gigabit Ethernet Virtual Function  
 1028 1f5c NetXtreme II BCM57800  
 10-Gigabit Ethernet Virtual Function  
 1028 1f5d NetXtreme II BCM57800 10-Gigabit Ethernet Virtual Function  
 1028 1f67 NetXtreme II BCM57800 1-Gigabit Ethernet Virtual Function  
 1028 1f68 NetXtreme II BCM57800 1-Gigabit Ethernet Virtual Function  
 16aa NetXtreme II BCM5706S Gigabit Ethernet  
 103c 3102 NC370F Multifunction Gigabit Server Adapter  
 103c 310c NC370i Multifunction Gigabit Server Adapter  
 16ab NetXtreme II BCM57840 10/20 Gigabit Ethernet Multi Function  
 16ac NetXtreme II BCM5708S Gigabit Ethernet  
 1014 0304 NetXtreme II BCM5708S Gigabit Ethernet  
 1028 01bb PowerEdge 1955 Broadcom NetXtreme II BCM5708S  
 1028 020c PowerEdge M605 Broadcom NetXtreme II BCM5708S  
 103c 1706 NC373m Multifunction Gigabit Server Adapter  
 103c 7038 NC373i PCI Express Multifunction Gigabit Server Adapter  
 103c 703b NC373i Integrated Multifunction Gigabit Server Adapter  
 103c 703d NC373F PCI Express Multifunction Gigabit Server Adapter  
 16ad NetXtreme II BCM57840 10/20 Gigabit  
 Ethernet Virtual Function  
 103c 1916 FlexFabric 20Gb 2-port 630FLB Adapter  
 103c 1917 FlexFabric 20Gb 2-port 630M Adapter  
 103c 2231 3820C 10/20Gb Converged Network Adapter (SR-IOV VF)  
 103c 22fa FlexFabric 10Gb 2-port 536FLB Adapter (SR-IOV VF)  
 16ae NetXtreme II BCM57810 10 Gigabit Ethernet Multi Function  
 103c 1798 NPAR 10Gb 2-port 530FLB Adapter

103c 17a5 NPAR 10Gb 2-port 530M Adapter  
103c 18d3 NPAR 10Gb 2-port 530T Adapter  
103c 1930 NPAR 10Gb 2-port 534FLR-SFP+ Adapter  
103c 1931 NPAR CN1100R Dual Port Converged Network Adapter  
103c 1932 NPAR 10Gb 2-port 534FLB Adapter  
103c 1933 NPAR 10Gb 2-port 534M Adapter  
103c 193a NPAR 10Gb 2-port 533FLR-T Adapter  
103c 3382 NPAR 10Gb 2-port 530FLR-SFP+ Adapter  
103c 339d NPAR 10Gb 2-port 530SFP+ Adapter  
16af NetXtreme II BCM57810 10 Gigabit Ethernet Virtual Function  
103c 1798 Flex-10 10Gb 2-port 530FLB Adapter  
103c 17a5 Flex-10 10Gb 2-port 530M Adapter  
103c 18d3 Ethernet 10Gb 2-port 530T Adapter  
103c  
1930 FlexFabric 10Gb 2-port 534FLR-SFP+ Adapter  
103c 1931 StoreFabric CN1100R Dual Port Converged Network Adapter  
103c 1932 FlexFabric 10Gb 2-port 534FLB Adapter  
103c 1933 FlexFabric 10Gb 2-port 534M Adapter  
103c 193a FlexFabric 10Gb 2-port 533FLR-T Adapter  
103c 3382 Ethernet 10Gb 2-port 530FLR-SFP+ Adapter  
103c 339d Ethernet 10Gb 2-port 530SFP+ Adapter  
16b0 NetXtreme BCM57761 Gigabit Ethernet PCIe  
16b1 NetLink BCM57781 Gigabit Ethernet PCIe  
1849 96b1 Z77 Extreme4 motherboard  
16b2 NetLink BCM57791 Gigabit Ethernet PCIe  
16b3 NetXtreme BCM57786 Gigabit Ethernet PCIe  
16b4 NetXtreme BCM57765 Gigabit Ethernet PCIe  
16b5 NetLink BCM57785 Gigabit Ethernet PCIe  
16b6 NetLink BCM57795 Gigabit Ethernet PCIe  
16b7 NetXtreme BCM57782 Gigabit Ethernet PCIe  
16bc BCM57765/57785 SDXC/MMC Card Reader  
16be BCM57765/57785 MS Card Reader  
16bf BCM57765/57785 xD-Picture Card Reader  
16c1 NetXtreme-E RDMA Virtual Function  
16c6 NetXtreme BCM5702A3 Gigabit Ethernet  
10b7  
1100 3C1000B-T 10/100/1000 PCI  
14e4 000c BCM5702 1000Base-T  
14e4 8009 BCM5702 1000Base-T  
16c7 NetXtreme BCM5703 Gigabit Ethernet  
0e11 00ca NC7771 Gigabit Server Adapter (PCI-X, 10,100,1000-T)  
0e11 00cb NC7781 Gigabit Server Adapter (PCI-X, 10,100,1000-T)  
103c 12c3 Combo FC/GigE-SX [A9782A]  
103c 12ca Combo FC/GigE-T [A9784A]  
103c 1321 Core I/O LAN/SCSI Combo [AB314A]  
14e4 0009 NetXtreme BCM5703 1000Base-T  
14e4 000a NetXtreme BCM5703 1000Base-SX  
16c8 BCM57301 NetXtreme-C 10Gb Ethernet Controller

16c9 BCM57302 NetXtreme-C 10Gb/25Gb Ethernet Controller  
16ca BCM57304 NetXtreme-C 10Gb/25Gb/40Gb/50Gb Ethernet Controller  
16cb NetXtreme-C Ethernet Virtual Function  
16cc BCM57417 NetXtreme-E Ethernet Partition  
16ce BCM57311 NetXtreme-C 10Gb RDMA Ethernet Controller  
16cf BCM57312 NetXtreme-C 10Gb/25Gb RDMA Ethernet Controller  
16d0 BCM57402 NetXtreme-E 10Gb Ethernet Controller  
16d1 BCM57404 NetXtreme-E 10Gb/25Gb Ethernet Controller  
16d2  
BCM57406 NetXtreme-E 10GBASE-T Ethernet Controller  
16d3 NetXtreme-E Ethernet Virtual Function  
16d4 BCM57402 NetXtreme-E Ethernet Partition  
16d5 BCM57407 NetXtreme-E 10GBase-T Ethernet Controller  
16d6 BCM57412 NetXtreme-E 10Gb RDMA Ethernet Controller  
117c 00cd FastFrame N4S2 Dual-port 10Gb Ethernet Adapter  
14e4 1202 BCM957412M4122C OCP 1x25G Type1 wRoCE  
14e4 4120 NetXtreme E-Series Advanced Dual-port 10Gb SFP+ Ethernet Network Daughter Card  
14e4 4126 NetXtreme-E Dual-port 10G SFP+ Ethernet OCP 3.0 Adapter (BCM957412N4120C)  
152d 8b20 BCM57412 NetXtreme-E 10Gb RDMA Ethernet Controller  
152d 8b22 BCM57412 NetXtreme-E 25Gb RDMA Ethernet Controller  
# NIC-ETH531F-LP-2P BCM57412 2 x 10G SFP+ Ethernet PCIe Card  
193d 1024 NIC-ETH531F-LP-2P  
# NIC-ETH531F-3S-2P 2x10GbE SFP+ Adapter for OCP3.0  
193d 1087 NIC-ETH531F-3S-2P  
16d7 BCM57414 NetXtreme-E 10Gb/25Gb RDMA Ethernet Controller  
117c 00cc FastFrame N422 Dual-port 25Gb Ethernet Adapter  
14e4 1402 BCM957414A4142CC  
10Gb/25Gb Ethernet PCIe  
14e4 1404 BCM957414M4142C OCP 2x25G Type1 wRoCE  
14e4 4140 NetXtreme E-Series Advanced Dual-port 25Gb SFP28 Network Daughter Card  
# BCM957414M4143C  
14e4 4143 NetXtreme-E Single-port 40Gb/50Gb Ethernet OCP 2.0 Adapter (BCM957414M4143C)  
14e4 4146 NetXtreme-E Dual-port 25G SFP28 Ethernet OCP 3.0 Adapter (BCM957414N4140C)  
1590 020e Ethernet 25Gb 2-port 631SFP28 Adapter  
1590 0211 Ethernet 25Gb 2-port 631FLR-SFP28 Adapter  
# NIC-ETH630F-LP-2P SFP28 2x25GbE PCIe Network Adapter  
193d 1033 NIC-ETH630F-LP-2P  
1bd4 008e ENFB2251-SP2  
1bd4 008f ENPB2251-SP2  
# VSE-225-31S Dual-port 10Gb/25Gb Ethernet PCIe  
1eec 0101 VSE-225-31S Dual-port 10Gb/25Gb Ethernet PCIe  
16d8 BCM57416 NetXtreme-E Dual-Media 10G RDMA Ethernet Controller  
1028 1feb NetXtreme-E 10Gb SFP+ Adapter  
117c 00ce FastFrame N4T2 Dual-port 10GBASE-T Ethernet Adapter  
14e4 4163 NetXtreme-E Dual-port 10GBASE-T Ethernet OCP 2.0 Adapter (BCM957416M4163C)  
14e4 4166 NetXtreme-E  
Dual-port 10GBASE-T Ethernet OCP 3.0 Adapter (BCM957416N4160C)  
14e4 d140 BCM957416-P410 4x10GBT Ethernet NIC

14e4 d340 BCM957416-N410 4x10GBT Ethernet NIC  
1590 020c Ethernet 10Gb 2-port 535T Adapter  
1590 0212 Ethernet 10Gb 2-port 535FLR-T Adapter  
16d9 BCM57417 NetXtreme-E 10GBASE-T RDMA Ethernet Controller  
108e 4866 Dual Port 10GBase-T Ethernet Controller  
16dc NetXtreme-E Ethernet Virtual Function  
16dd NetLink BCM5781 Gigabit Ethernet PCI Express  
16de BCM57412 NetXtreme-E Ethernet Partition  
16df BCM57314 NetXtreme-C 10Gb/25Gb/40Gb/50Gb RDMA Ethernet Controller  
16e1 NetXtreme-C Ethernet Virtual Function  
16e2 BCM57417 NetXtreme-E 10Gb/25Gb RDMA Ethernet Controller  
108e 4866 Dual Port 10Gb/25Gb SFP28 Ethernet Controller  
16e3 BCM57416 NetXtreme-E 10Gb RDMA Ethernet Controller  
16e5 NetXtreme-C RDMA Virtual Function  
16e7 BCM57404 NetXtreme-E Ethernet Partition  
16e8 BCM57406 NetXtreme-E Ethernet Partition  
16e9 BCM57407 NetXtreme-E 25Gb Ethernet Controller  
16eb  
BCM57412 NetXtreme-E RDMA Partition  
16ec BCM57414 NetXtreme-E Ethernet Partition  
16ed BCM57414 NetXtreme-E RDMA Partition  
16ee BCM57416 NetXtreme-E Ethernet Partition  
16ef BCM57416 NetXtreme-E RDMA Partition  
16f1 BCM57452 NetXtreme-E 10Gb/25Gb/40Gb/50Gb Ethernet  
16f3 NetXtreme BCM5727 Gigabit Ethernet PCIe  
16f7 NetXtreme BCM5753 Gigabit Ethernet PCI Express  
16fd NetXtreme BCM5753M Gigabit Ethernet PCI Express  
103c 309f Compaq nx9420 Notebook  
103c 30a3 Compaq nw8440  
16fe NetXtreme BCM5753F Fast Ethernet PCI Express  
170c BCM4401-B0 100Base-TX  
1028 0188 Inspiron 6000 laptop  
1028 018d Inspiron 700m/710m  
1028 0196 Inspiron 5160  
1028 01af Inspiron 6400  
1028 01cd Inspiron 9400 Laptop  
1028 01d7 XPS M1210  
1028 01d8 Inspiron E1405  
103c 099c NX6110/NC6120  
103c 30a2 NX7300 laptop  
14e4 170c HP Compaq 6720t Mobile Thin Client  
170d NetXtreme BCM5901 100Base-TX  
1014 0545 ThinkPad R40e  
170e NetXtreme BCM5901 100Base-TX  
1712  
NetLink BCM5906 Fast Ethernet PCI Express  
1713 NetLink BCM5906M Fast Ethernet PCI Express  
1028 01f3 Inspiron 1420

1028 0209 XPS M1330  
103c 30c0 Compaq 6710b  
17aa 3a23 IdeaPad S10e  
1750 BCM57508 NetXtreme-E 10Gb/25Gb/40Gb/50Gb/100Gb/200Gb Ethernet  
117c 00cf FastFrame N412 Dual-port 100Gb Ethernet Adapter  
14e4 2100 NetXtreme-E Dual-port 100G QSFP56 Ethernet PCIe4.0 x16 Adapter (BCM957508-P2100G)  
14e4 5208 NetXtreme-E Dual-port 100G QSFP56 Ethernet OCP 3.0 Adapter (BCM957508-N2100G)  
14e4 520a NetXtreme-E Dual-port 100G DSFP Ethernet OCP 3.0 Adapter (BCM957508-N2100GD)  
14e4 d124 NetXtreme-E P2100D BCM57508 2x100G QSFP PCIE  
14e4 d324 NetXtreme-E N2100D BCM57508 2x100G QSFP OCP3.0 Ethernet  
14e4 df24 NetXtreme-E NGM2100D BCM57508 2x100G KR Mezz Ethernet  
1751 BCM57504 NetXtreme-E 10Gb/25Gb/40Gb/50Gb/100Gb/200Gb Ethernet  
1028 09d4 PowerEdge XR11/XR12 LOM  
1028 0b1b PowerEdge XR5610 LOM  
14e4 4250 NetXtreme-E Quad-port 25G SFP28 Ethernet PCIe4.0 x16  
Adapter (BCM957504-P425G)  
14e4 5045 NetXtreme-E BCM57504 4x25G OCP3.0  
14e4 5100 NetXtreme-E Single-port 100G QSFP56 Ethernet OCP 3.0 Adapter (BCM957504-N1100G)  
14e4 5105 NetXtreme-E Single-port 100G DSFP Ethernet OCP 3.0 Adapter (BCM957504-N1100GD)  
14e4 5250 NetXtreme-E BCM57504 4x25G KR Mezz  
14e4 5425 NetXtreme-E Quad-port 25G SFP28 Ethernet OCP 3.0 Adapter (BCM957504-N425G)  
14e4 d142 NetXtreme-E P425D BCM57504 4x25G SFP28 PCIE  
1752 BCM57502 NetXtreme-E 10Gb/25Gb/40Gb/50Gb Ethernet  
1760 BCM57608 10Gb/25Gb/50Gb/100Gb/200Gb/400Gb Ethernet  
14e4 d125 BCM57608 2x200G PCIe Ethernet NIC  
1800 BCM57502 NetXtreme-E Ethernet Partition  
1801 BCM57504 NetXtreme-E Ethernet Partition  
1802 BCM57508 NetXtreme-E Ethernet Partition  
14e4 df24 BCM57508 NetXtreme-E NGM2100D 2x100G KR Mezz Ethernet Partition  
1803 BCM57502 NetXtreme-E RDMA Partition  
1804 BCM57504 NetXtreme-E RDMA Partition  
1805 BCM57508 NetXtreme-E RDMA Partition  
14e4 df24 NetXtreme-E NGM2100D BCM57508  
2x100G KR Mezz RDMA Partition  
1806 BCM5750X NetXtreme-E Ethernet Virtual Function  
14e4 df24 BCM57508 NetXtreme-E NGM2100D 2x100G KR Mezz Ethernet Virtual Function  
1807 BCM5750X NetXtreme-E RDMA Virtual Function  
14e4 df24 BCM57508 NetXtreme-E NGM2100D 2x100G KR Mezz RDMA Virtual Function  
1808 BCM5750X NetXtreme-E Ethernet Virtual Function  
14e4 df24 BCM57508 NetXtreme-E NGM2100D 2x100G KR Mezz Ethernet Virtual Function  
1809 BCM5750X NetXtreme-E RDMA Virtual Function  
14e4 df24 BCM57508 NetXtreme-E NGM2100D 2x100G KR Mezz RDMA Virtual Function  
2711 BCM2711 PCIe Bridge  
2712 BCM2712 PCIe Bridge  
3352 BCM3352  
3360 BCM3360  
4210 BCM4210 iLine10 HomePNA 2.0  
4211 BCM4211 iLine10 HomePNA 2.0 + V.90 56k modem



4212 BCM4212 v.90 56k modem  
4220 802-11b/g Wireless PCI controller, packaged as a Linksys WPC54G ver 1.2 PCMCIA card  
4222 NetXtreme BCM5753M Gigabit Ethernet PCI Express  
4301 BCM4301 802.11b Wireless LAN Controller  
1028 0407 TrueMobile 1180 Onboard  
WLAN  
1043 0120 WL-103b Wireless LAN PC Card  
16a5 1602 B-300 802.11b Wireless CardBus Adapter  
1737 4301 WMP11 v2.7 802.11b Wireless-B PCI Adapter  
4305 BCM4307 V.90 56k Modem  
4306 BCM4306 802.11bg Wireless LAN controller  
4307 BCM4306 802.11bg Wireless LAN Controller  
4310 BCM4310 Chipcommon I/OController  
4311 BCM4311 802.11b/g WLAN  
1028 0007 Wireless 1390 WLAN Mini-Card  
1028 0008 Wireless 1390 WLAN ExpressCard  
103c 1363 BCM4311 802.11b/g Wireless LAN Controller  
103c 1364 BCM4311 802.11b/g Wireless LAN Controller  
103c 1365 BCM4311 802.11b/g Wireless LAN Controller  
103c 1374 BCM4311 802.11b/g Wireless LAN Controller  
103c 1375 BCM4311 802.11b/g Wireless LAN Controller  
103c 1376 BCM4311 802.11b/g Wireless LAN Controller  
103c 1377 BCM4311 802.11b/g Wireless LAN Controller  
103c 137f BCM4322 802.11a/b/g/n Wireless LAN Controller  
103c 1380 BCM4322 802.11a/b/g/n Wireless LAN Controller  
14e4 4311 BCM94311MCG  
4312 BCM4311 802.11a/b/g  
1028 0007  
Wireless 1490 Dual Band WLAN Mini-Card  
1028 0008 Wireless 1490 Dual Band WLAN ExpressCard  
103c 135a Broadcom 802.11a/b/g WLAN  
103c 135f Broadcom 802.11a/b/g WLAN  
103c 1360 Broadcom 802.11a/b/g WLAN  
103c 1361 Broadcom 802.11a/b/g WLAN  
103c 1362 Broadcom 802.11a/b/g WLAN  
103c 1370 Broadcom 802.11a/b/g WLAN  
103c 1371 Broadcom 802.11a/b/g WLAN  
103c 1372 Broadcom 802.11a/b/g WLAN  
103c 1373 Broadcom 802.11a/b/g WLAN  
103c 30b5 Presario V3242AU  
106b 0089 AirPort Extreme  
1371 103c Broadcom 802.11 Multiband-netwerkadapter(6715s)  
4313 BCM4311 802.11a  
4315 BCM4312 802.11b/g LP-PHY  
1028 000b Wireless 1395 WLAN Mini-Card  
1028 000c Wireless 1397 WLAN Mini-Card  
103c 137c BCM4312 802.11b/g Wireless LAN Controller  
103c 137d BCM4312 802.11b/g Wireless LAN Controller

103c 1507 U98Z049.00 Wireless Mini PCIe Card  
105b e003 T77H030.00 Wireless Mini PCIe Card  
105b e01b T77H106.00 Wireless Half-size Mini PCIe Card  
4318 BCM4318 [AirForce One  
54g] 802.11g Wireless LAN Controller  
1028 0005 Wireless 1370 WLAN Mini-PCI Card  
1028 0006 Wireless 1370 WLAN PC Card  
103c 1355 Broadcom 802.11b/g WLAN  
103c 1356 Broadcom 802.11b/g WLAN  
103c 1357 Broadcom 802.11b/g WLAN  
1043 100f WL-138G v2 / WL-138gE / WL-100gE  
1043 120f A6U notebook embedded card  
1154 0355 Buffalo WLI2-PCI-G54S High Speed Mode Wireless Adapter  
1468 0311 Aspire 3022WLMi, 5024WLMi, 5020  
1468 0312 TravelMate 2410  
14e4 0449 Gateway 7510GX  
16ec 0119 U.S.Robotics Wireless MAXg PC Card  
1737 0042 WMP54GS v1.1 802.11g Wireless-G PCI Adapter with SpeedBooster  
1737 0048 WPC54G v3 802.11g Wireless-G Notebook Adapter  
1737 0049 WPC54GS v2 802.11g Wireless-G Notebook Adapter with SpeedBooster  
1799 7000 F5D7000 v4000 Wireless G Desktop Card  
1799 7001 F5D7001 v2000 Wireless G Plus Desktop Card  
1799 7010 F5D7010 v4000 Wireless G Notebook Card  
1799 7011 F5D7011 v2000 High-Speed Mode Wireless G Notebook Card  
4319 BCM4318 [AirForce  
54g] 802.11a/b/g PCI Express Transceiver  
1028 0005 Wireless 1470 Dual Band WLAN Mini-PCI Card  
1028 0006 Wireless 1470 Dual Band WLAN PC Card  
103c 1358 Broadcom 802.11a/b/g WLAN  
103c 1359 Broadcom 802.11a/b/g WLAN  
103c 135a Broadcom 802.11a/b/g WLAN  
4320 BCM4306 802.11b/g Wireless LAN Controller  
1028 0001 TrueMobile 1300 WLAN Mini-PCI Card  
1028 0002 TrueMobile 1300 WLAN PC Card  
1028 0003 Wireless 1350 WLAN Mini-PCI Card  
1028 0004 Wireless 1350 WLAN PC Card  
103c 12f4 Broadcom 802.11b/g WLAN  
103c 12f8 Broadcom 802.11b/g WLAN  
103c 12fa Broadcom 802.11b/g WLAN  
103c 12fb Broadcom 802.11b/g WLAN  
1043 100f WL-100G  
1057 7025 WN825G  
106b 004e AirPort Extreme  
1154 0330 Buffalo WLI2-PCI-G54S High Speed Mode Wireless Desktop Adapter  
144f 7050 eMachines M6805 802.11g Built-in Wireless  
144f 7051 Sonnet Aria Extreme PCI  
1737 0013 WMP54G v1 802.11g PCI Adapter  
1737 0014 WMP54G v2 802.11g PCI Adapter

1737 0015 WMP54GS v1.0 802.11g Wireless-G  
PCI Adapter with SpeedBooster  
1737 4320 WPC54G v1 / WPC54GS v1 802.11g Wireless-G Notebook Adapter  
1799 7000 F5D7000 v1000 Wireless G Desktop Card  
1799 7001 F5D7001 v1000 Wireless G Plus Desktop Card  
1799 7010 F5D7010 v1000 Wireless G Notebook Card  
1799 7011 F5D7011 v1000 High-Speed Mode Wireless G Notebook Card  
185f 1220 TravelMate 290E WLAN Mini-PCI Card  
4321 BCM4321 802.11a Wireless Network Controller  
4322 BCM4322 802.11bgn Wireless Network Controller  
4324 BCM4309 802.11abg Wireless Network Controller  
1028 0001 Truemobile 1400  
1028 0002 TrueMobile 1400 Dual Band WLAN PC Card  
1028 0003 Truemobile 1450 MiniPCI  
1028 0004 Wireless 1450 Dual Band WLAN PC Card  
103c 12f9 Broadcom 802.11a/b/g WLAN  
103c 12fc Broadcom 802.11a/b/g WLAN  
4325 BCM4306 802.11bg Wireless Network Controller  
1414 0003 Wireless Notebook Adapter MN-720  
1414 0004 Wireless PCI Adapter MN-730  
4326 BCM4307 Chipcommon I/O Controller?  
4328 BCM4321 802.11a/b/g/n  
1028  
0009 Wireless 1500 Draft 802.11n WLAN Mini-Card  
1028 000a Wireless 1500 Draft 802.11n WLAN Mini-card  
103c 1366 BCM4321 802.11a/b/g/n Wireless LAN Controller  
103c 1367 BCM4321 802.11a/b/g/n Wireless LAN Controller  
103c 1368 BCM4321 802.11a/b/g/n Wireless LAN Controller  
103c 1369 BCM4321 802.11a/b/g/n Wireless LAN Controller  
106b 0087 AirPort Extreme  
106b 0088 AirPort Extreme  
106b 008b AirPort Extreme  
106b 008c AirPort Extreme  
106b 0090 AirPort Extreme  
14e4 4328 BCM4328 802.11a/b/g/n  
1737 0066 WPC600N v1 802.11a/b/g/n Wireless-N CardBus Adapter  
1737 0068 WEC600N v1 802.11a/b/g/n Wireless-N ExpressCard  
4329 BCM4321 802.11b/g/n  
1385 7b00 WN511B RangeMax NEXT Wireless Notebook Adapter  
1385 7d00 WN311B RangeMax Next 270 Mbps Wireless PCI Adapter  
1737 0058 WPC300N v1 Wireless-N Notebook Adapter  
432a BCM4321 802.11an Wireless Network Controller  
432b BCM4322 802.11a/b/g/n Wireless LAN Controller  
1028 000d Wireless 1510 Wireless-N WLAN  
Mini-Card  
106b 008d AirPort Extreme  
106b 008e AirPort Extreme  
432c BCM4322 802.11b/g/n

1799 d311 Dynex DX-NNBX 802.11n WLAN Cardbus Card  
432d BCM4322 802.11an Wireless Network Controller  
4331 BCM4331 802.11a/b/g/n  
106b 00d6 AirPort Extreme  
106b 00e4 AirPort Extreme  
106b 00ef AirPort Extreme  
106b 00f4 AirPort Extreme  
106b 00f5 AirPort Extreme  
106b 010e AirPort Extreme  
106b 010f AirPort Extreme  
4333 Serial (EDGE/GPRS modem part of Option GT Combo Edge)  
4344 EDGE/GPRS data and 802.11b/g combo cardbus [GC89]  
4350 BCM43222 Wireless Network Adapter  
4351 BCM43222 802.11abgn Wireless Network Adapter  
4353 BCM43224 802.11a/b/g/n  
1028 000e Wireless 1520 Half-size Mini PCIe Card  
103c 1509 WMIB-275N Half-size Mini PCIe Card  
106b 0093 AirPort Extreme  
106b 00d1 AirPort Extreme  
106b 00e9 AirPort Extreme  
14e4 04d8 Pegatron UPWL6024  
4357 BCM43225 802.11b/g/n  
105b e021 T77H103.00 Wireless Half-size Mini PCIe Card  
4358 BCM43227 802.11b/g/n  
4359  
BCM43228 802.11a/b/g/n  
1028 0011 Wireless 1530 Half-size Mini PCIe Card  
103c 182c BCM943228HM4L 802.11a/b/g/n 2x2 Wi-Fi Adapter  
4360 BCM4360 802.11ac Wireless Network Adapter  
4365 BCM43142 802.11b/g/n  
1028 0016 Wireless 1704 802.11n + BT 4.0  
43a0 BCM4360 802.11ac Dual Band Wireless Network Adapter  
43a1 BCM4360 802.11ac 2,4G Wireless Network Adapter  
43a2 BCM4360 802.11ac 5G Wireless Network Adapter  
43a3 BCM4350 802.11ac Wireless Network Adapter  
# Manufactured by Foxconn for Lenovo  
17aa 075a 00JT494  
43a9 BCM43217 802.11b/g/n  
43aa BCM43131 802.11b/g/n  
43ae BCM43162 802.11ac Wireless Network Adapter  
43b1 BCM4352 802.11ac Dual Band Wireless Network Adapter  
1043 85ba PCE-AC56 Dual-Band Wireless PCI-E Adapter  
43ba BCM43602 802.11ac Wireless LAN SoC  
43bb BCM43602 802.11ac Wireless LAN SoC  
43bc BCM43602 802.11ac Wireless LAN SoC  
43d3 BCM43567 802.11ac Wireless Network Adapter  
43d9 BCM43570 802.11ac Wireless Network Adapter  
43dc BCM4355

802.11ac Wireless LAN SoC  
43df BCM4354 802.11ac Wireless LAN SoC  
43e9 BCM4358 802.11ac Wireless LAN SoC  
43ec BCM4356 802.11ac Wireless Network Adapter  
4401 BCM4401 100Base-T  
1025 0035 TravelMate 660  
1025 0064 Extensa 3000 series laptop  
1028 8127 Dimension 2400  
103c 08b0 tc1100 tablet  
1043 80a8 A7V8X motherboard  
4402 BCM4402 Integrated 10/100BaseT  
4403 BCM4402 V.90 56k Modem  
4410 BCM4413 iLine32 HomePNA 2.0  
4411 BCM4413 V.90 56k modem  
4412 BCM4412 10/100BaseT  
4415 BCM4359 802.11ac Dual-Band Wireless Network Controller  
441f BCM4361 802.11ac Dual-Band Wireless Network Controller  
4420 BCM4361 802.11ac 2.4 GHz Wireless Network Controller  
4421 BCM4361 802.11ac 5 GHz Wireless Network Controller  
4425 BCM4378 802.11ax Dual Band Wireless Network Adapter  
4430 BCM44xx CardBus iLine32 HomePNA 2.0  
4432 BCM4432 CardBus 10/100BaseT  
4433 BCM4387 802.11ax Dual Band Wireless LAN Controller  
4464 BCM4364 802.11ac Wireless Network Adapter  
# brcmfmac reports  
it as BCM4377/4 but macOS drivers call it BCM4377b  
4488 BCM4377b Wireless Network Adapter  
449d BCM43752 802.11ax Dual Band Wireless LAN Controller  
4610 BCM4610 Sentry5 PCI to SB Bridge  
4611 BCM4610 Sentry5 iLine32 HomePNA 1.0  
4612 BCM4610 Sentry5 V.90 56k Modem  
4613 BCM4610 Sentry5 Ethernet Controller  
4614 BCM4610 Sentry5 External Interface  
4615 BCM4610 Sentry5 USB Controller  
4704 BCM4704 PCI to SB Bridge  
4705 BCM4704 Sentry5 802.11b Wireless LAN Controller  
4706 BCM4704 Sentry5 Ethernet Controller  
4707 BCM4704 Sentry5 USB Controller  
4708 BCM4704 Crypto Accelerator  
4710 BCM4710 Sentry5 PCI to SB Bridge  
4711 BCM47xx Sentry5 iLine32 HomePNA 2.0  
4712 BCM47xx V.92 56k modem  
4713 Sentry5 Ethernet Controller  
4714 BCM47xx Sentry5 External Interface  
4715 BCM47xx Sentry5 USB / Ethernet Controller  
4716 BCM47xx Sentry5 USB Host Controller  
4717 BCM47xx Sentry5 USB Device Controller  
4718 Sentry5 Crypto Accelerator

4719 BCM47xx/53xx RoboSwitch Core  
4720  
BCM4712 MIPS CPU  
4727 BCM4313 802.11bgn Wireless Network Adapter  
1028 0010 Inspiron M5010 / XPS 8300  
5365 BCM5365P Sentry5 Host Bridge  
5600 BCM5600 StrataSwitch 24+2 Ethernet Switch Controller  
5605 BCM5605 StrataSwitch 24+2 Ethernet Switch Controller  
5615 BCM5615 StrataSwitch 24+2 Ethernet Switch Controller  
5625 BCM5625 StrataSwitch 24+2 Ethernet Switch Controller  
5645 BCM5645 StrataSwitch 24+2 Ethernet Switch Controller  
5670 BCM5670 8-Port 10GE Ethernet Switch Fabric  
5680 BCM5680 G-Switch 8 Port Gigabit Ethernet Switch Controller  
5690 BCM5690 12-port Multi-Layer Gigabit Ethernet Switch  
5691 BCM5691 GE/10GE 8+2 Gigabit Ethernet Switch Controller  
5692 BCM5692 12-port Multi-Layer Gigabit Ethernet Switch  
5695 BCM5695 12-port + HiGig Multi-Layer Gigabit Ethernet Switch  
5698 BCM5698 12-port Multi-Layer Gigabit Ethernet Switch  
5820 BCM5820 Crypto Accelerator  
5821 BCM5821 Crypto Accelerator  
5822 BCM5822 Crypto Accelerator  
5823 BCM5823 Crypto Accelerator  
5824  
BCM5824 Crypto Accelerator  
5840 BCM5840 Crypto Accelerator  
5841 BCM5841 Crypto Accelerator  
5850 BCM5850 Crypto Accelerator  
5e87 Valkyrie offload engine  
5e88 Viper Offload Engine  
# Bluetooth PCI function of the BRCM4378 Wireless Network Adapter  
5f69 BRCM4378 Bluetooth Controller  
# Bluetooth PCI function of the BRCM4387 Wireless Network Adapter  
5f71 BRCM4387 Bluetooth Controller  
# Bluetooth PCI function of the BRCM4377 Wireless Network Adapter  
5fa0 BRCM4377 Bluetooth Controller  
8602 BCM7400/BCM7405 Serial ATA Controller  
9026 CN99xx [ThunderX2] Integrated USB 3.0 xHCI Host Controller  
9027 CN99xx [ThunderX2] Integrated AHCI/SATA 3 Host Controller  
a8d8 BCM43224/5 Wireless Network Adapter  
aa52 BCM43602 802.11ac Wireless LAN SoC  
b080 BCM56080 Firelight2 Switch ASIC  
b302 BCM56302 StrataXGS 24x1GE 2x10GE Switch Controller  
b334 BCM56334 StrataXGS 24x1GE 4x10GE Switch Controller  
b370 BCM56370 Switch ASIC  
b371 BCM56371 Switch ASIC  
b372 BCM56372 Switch  
ASIC  
b375 BCM56375 Switch ASIC

b376 BCM56376 Switch ASIC  
b377 BCM56377 Switch ASIC  
b379 Broadcom BCM56379 Switch ASIC  
b470 BCM56470 SWITCH ASIC  
b471 BCM56471 SWITCH ASIC  
b472 BCM56472 SWITCH ASIC  
b800 BCM56800 StrataXGS 10GE Switch Controller  
b842 BCM56842 Trident 10GE Switch Controller  
b850 BCM56850 Switch ASIC [Trident2]  
b880 BCM56880 Switch ASIC  
b960 BCM56960 Switch ASIC [Tomahawk]  
b990 BCM56990 Switch ASIC [Tomahawk4]  
# Switch ASIC  
b991 Tomahawk4  
b992 BCM56992 [Tomahawk4]  
b993 BCM56993 Switch ASIC [Tomahawk4]  
b995 BCM56995 Switch ASIC [Tomahawk4]  
b996 BCM56996 106G Switch ASIC [Tomahawk4G]  
b998 BCM56998 106G Switch ASIC [Tomahawk4GT]  
b999 BCM56999 106G Switch ASIC [Tomahawk4D]  
c909 BCM78909 Switch ASIC  
d802 BCM58802 Stingray 50Gb Ethernet SoC  
14e4 8021 Stingray Dual-Port 25Gb Ethernet PCIe SmartNIC w16GB DRAM (Part No BCM958802A8046C)  
14e4 8023 PS410T-H04 NetXtreme-S 4x10G 10GBaseT PCIe SmartNIC  
14e4 8024 Stingray Dual-Port  
25Gb Ethernet PCIe SmartNIC w4GB DRAM (Part No BCM958802A8044C)  
14e4 8028 Stingray Dual-Port 25Gb Ethernet PCIe SmartNIC w8GB DRAM (Part No BCM958802A8048C)  
1bb0 0021 HPE SimpliVity Accelerator  
d804 BCM58804 Stingray 100Gb Ethernet SoC  
f800 BCM78800 Switch ASIC [Trident5-X12]  
f900 BCM78900 Switch ASIC [Tomahawk5]  
f902 BCM78902 Switch ASIC [Tomahawk5T]  
f903 BCM78903 Switch ASIC [Tomahawk5]  
f905 BCM78905 Switch ASIC [Tomahawk5+]  
f910 BCM78910 Switch ASIC [Tomahawk6]  
f914 BCM78914 Switch ASIC [Tomahawk6]  
f917 BCM78917 Switch ASIC [Tomahawk6]  
14e5 Pixelfusion Ltd  
14e6 SHINING Technology Inc  
14e7 3CX  
14e8 RAYCER Inc  
14e9 GARNETS System CO Ltd  
14ea Planex Communications, Inc  
ab06 FNW-3603-TX CardBus Fast Ethernet  
ab07 RTL81xx RealTek Ethernet  
ab08 FNW-3602-TX CardBus Fast Ethernet  
14eb SEIKO EPSON Corp  
# nee ACQIRIS

14ec Agilent Technologies  
0000 Aciris Digitizer (malformed ID)  
14ed DATAKINETICS Ltd  
14ee MASPRO KENKOH Corp  
14ef CARRY Computer ENG. CO  
Ltd  
14f0 CANON RESEACH CENTRE FRANCE  
14f1 Conexant Systems, Inc.  
1002 HCF 56k Modem  
1003 HCF 56k Modem  
1004 HCF 56k Modem  
1005 HCF 56k Modem  
1006 HCF 56k Modem  
1022 HCF 56k Modem  
1023 HCF 56k Modem  
1024 HCF 56k Modem  
1025 HCF 56k Modem  
1026 HCF 56k Modem  
1032 HCF 56k Modem  
1033 HCF 56k Data/Fax Modem  
1033 8077 NEC  
122d 4027 Dell Zeus - MDP3880-W(B) Data Fax Modem  
122d 4030 Dell Mercury - MDP3880-U(B) Data Fax Modem  
122d 4034 Dell Thor - MDP3880-W(U) Data Fax Modem  
13e0 020d Dell Copper  
13e0 020e Dell Silver  
13e0 0261 IBM  
13e0 0290 Compaq Goldwing  
13e0 02a0 IBM  
13e0 02b0 IBM  
13e0 02c0 Compaq Scooter  
13e0 02d0 IBM  
144f 1500 IBM P85-DF (1)  
144f 1501 IBM P85-DF (2)  
144f 150a IBM P85-DF (3)  
144f 150b IBM P85-DF Low Profile (1)  
144f 1510 IBM P85-DF Low Profile (2)  
1034 HCF 56k Data/Fax/Voice Modem  
1035 HCF 56k Data/Fax/Voice/Spkp (w/Handset) Modem  
10cf 1098 Fujitsu P85-DFSV  
1036 HCF 56k Data/Fax/Voice/Spkp  
Modem  
104d 8067 HCF 56k Modem  
122d 4029 MDP3880SP-W  
122d 4031 MDP3880SP-U  
13e0 0209 Dell Titanium  
13e0 020a Dell Graphite  
13e0 0260 Gateway Red Owl



13e0 0270 Gateway White Horse  
1052 HCF 56k Data/Fax Modem (Worldwide)  
1053 HCF 56k Data/Fax Modem (Worldwide)  
1054 HCF 56k Data/Fax/Voice Modem (Worldwide)  
1055 HCF 56k Data/Fax/Voice/Spkp (w/Handset) Modem (Worldwide)  
1056 HCF 56k Data/Fax/Voice/Spkp Modem (Worldwide)  
122d 4035 MDP3900V-W  
1057 HCF 56k Data/Fax/Voice/Spkp Modem (Worldwide)  
1059 HCF 56k Data/Fax/Voice Modem (Worldwide)  
1063 HCF 56k Data/Fax Modem  
1064 HCF 56k Data/Fax/Voice Modem  
1065 HCF 56k Data/Fax/Voice/Spkp (w/Handset) Modem  
1066 HCF 56k Data/Fax/Voice/Spkp Modem  
122d 4033 Dell Athena - MDP3900V-U  
1085 HCF V90 56k Data/Fax/Voice/Spkp PCI Modem  
10b6 CX06834-11 HCF V.92 56k Data/Fax/Voice/Spkp Modem  
1433 HCF 56k Data/Fax Modem  
1434 HCF 56k Data/Fax/Voice Modem  
1435 HCF 56k Data/Fax/Voice/Spkp (w/Handset) Modem  
1436  
HCF 56k Data/Fax Modem  
1453 HCF 56k Data/Fax Modem  
13e0 0240 IBM  
13e0 0250 IBM  
144f 1502 IBM P95-DF (1)  
144f 1503 IBM P95-DF (2)  
1454 HCF 56k Data/Fax/Voice Modem  
1455 HCF 56k Data/Fax/Voice/Spkp (w/Handset) Modem  
1456 HCF 56k Data/Fax/Voice/Spkp Modem  
122d 4035 Dell Europa - MDP3900V-W  
122d 4302 Dell MP3930V-W(C) MiniPCI  
1610 ADSL AccessRunner PCI Arbitration Device  
1611 AccessRunner PCI ADSL Interface Device  
1620 AccessRunner V2 PCI ADSL Arbitration Device  
1621 AccessRunner V2 PCI ADSL Interface Device  
1622 AccessRunner V2 PCI ADSL Yukon WAN Adapter  
1803 HCF 56k Modem  
0e11 0023 623-LAN Grizzly  
0e11 0043 623-LAN Yogi  
1811 MiniPCI Network Adapter  
1815 HCF 56k Modem  
0e11 0022 Grizzly  
0e11 0042 Yogi  
# Integrated in CX86111/CX86113 processors  
1830 CX861xx Integrated Host Bridge  
2003 HSF 56k Data/Fax Modem  
2004 HSF 56k Data/Fax/Voice Modem  
2005 HSF 56k Data/Fax/Voice/Spkp (w/Handset) Modem

2006 HSF 56k Data/Fax/Voice/Spkp  
Modem  
2013 HSF 56k Data/Fax Modem  
0e11 b195 Bear  
0e11 b196 Seminole 1  
0e11 b1be Seminole 2  
1025 8013 Acer  
1033 809d NEC  
1033 80bc NEC  
155d 6793 HP  
155d 8850 E Machines  
2014 HSF 56k Data/Fax/Voice Modem  
2015 HSF 56k Data/Fax/Voice/Spkp (w/Handset) Modem  
2016 HSF 56k Data/Fax/Voice/Spkp Modem  
2043 HSF 56k Data/Fax Modem (WorldW SmartDAA)  
2044 HSF 56k Data/Fax/Voice Modem (WorldW SmartDAA)  
2045 HSF 56k Data/Fax/Voice/Spkp (w/Handset) Modem (WorldW SmartDAA)  
14f1 2045 Generic SoftK56  
2046 HSF 56k Data/Fax/Voice/Spkp Modem (WorldW SmartDAA)  
2063 HSF 56k Data/Fax Modem (SmartDAA)  
2064 HSF 56k Data/Fax/Voice Modem (SmartDAA)  
2065 HSF 56k Data/Fax/Voice/Spkp (w/Handset) Modem (SmartDAA)  
2066 HSF 56k Data/Fax/Voice/Spkp Modem (SmartDAA)  
2093 HSF 56k Modem  
155d 2f07 Legend  
2143 HSF 56k Data/Fax/Cell Modem (Mob WorldW SmartDAA)  
2144 HSF 56k Data/Fax/Voice/Cell Modem (Mob WorldW SmartDAA)  
2145 HSF 56k Data/Fax/Voice/Spkp (w/HS)/Cell Modem  
(Mob WorldW SmartDAA)  
2146 HSF 56k Data/Fax/Voice/Spkp/Cell Modem (Mob WorldW SmartDAA)  
2163 HSF 56k Data/Fax/Cell Modem (Mob SmartDAA)  
2164 HSF 56k Data/Fax/Voice/Cell Modem (Mob SmartDAA)  
2165 HSF 56k Data/Fax/Voice/Spkp (w/HS)/Cell Modem (Mob SmartDAA)  
2166 HSF 56k Data/Fax/Voice/Spkp/Cell Modem (Mob SmartDAA)  
2343 HSF 56k Data/Fax CardBus Modem (Mob WorldW SmartDAA)  
2344 HSF 56k Data/Fax/Voice CardBus Modem (Mob WorldW SmartDAA)  
2345 HSF 56k Data/Fax/Voice/Spkp (w/HS) CardBus Modem (Mob WorldW SmartDAA)  
2346 HSF 56k Data/Fax/Voice/Spkp CardBus Modem (Mob WorldW SmartDAA)  
2363 HSF 56k Data/Fax CardBus Modem (Mob SmartDAA)  
2364 HSF 56k Data/Fax/Voice CardBus Modem (Mob SmartDAA)  
2365 HSF 56k Data/Fax/Voice/Spkp (w/HS) CardBus Modem (Mob SmartDAA)  
2366 HSF 56k Data/Fax/Voice/Spkp CardBus Modem (Mob SmartDAA)  
2443 HSF 56k Data/Fax Modem (Mob WorldW SmartDAA)  
104d 8075 Modem  
104d 8083 Modem  
104d 8097 Modem  
2444 HSF 56k Data/Fax/Voice Modem (Mob

WorldW SmartDAA)  
2445 HSF 56k Data/Fax/Voice/Spkp (w/HS) Modem (Mob WorldW SmartDAA)  
2446 HSF 56k Data/Fax/Voice/Spkp Modem (Mob WorldW SmartDAA)  
2463 HSF 56k Data/Fax Modem (Mob SmartDAA)  
2464 HSF 56k Data/Fax/Voice Modem (Mob SmartDAA)  
2465 HSF 56k Data/Fax/Voice/Spkp (w/HS) Modem (Mob SmartDAA)  
2466 HSF 56k Data/Fax/Voice/Spkp Modem (Mob SmartDAA)  
2702 HSF i modem RD01-D270  
1028 8d88 SmartHSFi V92 56K PCI Modem  
2f00 HSF 56k HSF i Modem  
13e0 8d84 IBM HSF i V.90  
13e0 8d85 Compaq Stinger  
14f1 2004 Dynalink 56PMi  
2f02 HSF 56k HSF i Data/Fax  
2f11 HSF 56k HSF i Modem  
2f20 HSF 56k Data/Fax Modem  
14f1 200c Soft Data Fax Modem with SmartCP  
14f1 200f Dimension 3000  
2f30 SoftV92 SpeakerPhone SoftRing Modem with SmartSP  
14f1 2014 Devolo MikroLink 56K Modem PCI  
2f50 Conexant SoftK56 Data/Fax Modem  
510f Conexant CX 20751/20752  
5b7a CX23418 Single-Chip MPEG-2 Encoder with Integrated Analog Video/Broadcast Audio Decoder  
0070 7444 WinTV HVR-1600  
107d  
6f34 WinFast DVR3100 H  
5854 3343 GoTVView PCI DVD3 Hybrid  
8200 CX25850  
8234 RS8234 ATM SAR Controller [ServiceSAR Plus]  
8800 CX23880/1/2/3 PCI Video and Audio Decoder  
0070 2801 Hauppauge WinTV 28xxx (Roslyn) models  
0070 3400 WinTV 34604  
0070 3401 Hauppauge WinTV 34xxx models  
0070 6902 WinTV HVR-4000-HD  
0070 7801 WinTV HVR-1800 MCE  
0070 9001 Nova-T DVB-T  
0070 9002 Nova-T DVB-T Model 909  
0070 9200 Nova-SE2 DVB-S  
0070 9202 Nova-S-Plus DVB-S  
0070 9402 WinTV-HVR1100 DVB-T/Hybrid  
0070 9600 WinTV 88x Video  
0070 9802 WinTV-HVR1100 DVB-T/Hybrid (Low Profile)  
1002 00f8 ATI TV Wonder Pro  
1002 00f9 ATI TV Wonder  
1002 a101 HDTV Wonder  
1043 4823 PVR-416  
107d 6611 Winfast TV 2000XP Expert  
107d 6613 Leadtek Winfast 2000XP Expert

107d 6620 Leadtek Winfast DV2000  
107d 663c Leadtek PVR 2000  
107d 665f WinFast DTV1000-T  
10fc d003 IODATA GV-VCP3/PCI  
10fc d035 IODATA GV/BCTV7E  
1421 0334 Instant TV DVB-T PCI  
1461 000a AVerTV  
303 (M126)  
1461 000b AverTV Studio 303 (M126)  
1461 8011 UltraTV Media Center PCI 550  
1462 8606 MSI TV-@nywhere Master  
14c7 0107 GDI Black Gold  
14f1 0187 Conexant DVB-T reference design  
14f1 0342 Digital-Logic MICROSPACE Entertainment Center (MEC)  
153b 1166 Cinergy 1400 DVB-T  
1540 2580 Provideo PV259  
1554 4811 PixelView  
1554 4813 Club 3D ZAP1000 MCE Edition  
17de 08a1 KWorld/VStream XPert DVB-T with cx22702  
17de 08a6 KWorld/VStream XPert DVB-T  
17de 08b2 KWorld DVB-S 100  
17de a8a6 digitalnow DNTV Live! DVB-T  
1805 0111 PICOLO Jet-X Video  
1805 0112 PICOLO Jet-X Video  
1805 0113 PICOLO Jet-X Video  
1805 0114 PICOLO Jet-X Video  
1822 0025 digitalnow DNTV Live! DVB-T Pro  
185b e000 VideoMate X500  
18ac d500 FusionHDTV 5 Gold  
18ac d810 FusionHDTV 3 Gold-Q  
18ac d820 FusionHDTV 3 Gold-T  
18ac db00 FusionHDTV DVB-T1  
18ac db11 FusionHDTV DVB-T Plus  
18ac db50 FusionHDTV DVB-T Dual Digital  
5654 2388 GoTView PCI Hybrid TV Tuner  
Card  
7063 3000 pcHDTV HD3000 HDTV  
7063 5500 pcHDTV HD-5500  
8801 CX23880/1/2/3 PCI Video and Audio Decoder [Audio Port]  
0070 2801 Hauppauge WinTV 28xxx (Roslyn) models  
185b e000 VideoMate X500  
5654 2388 GoTView PCI Hybrid Audio AVStream Device  
7063 5500 pcHDTV HD-5500  
8802 CX23880/1/2/3 PCI Video and Audio Decoder [MPEG Port]  
0070 2801 Hauppauge WinTV 28xxx (Roslyn) models  
0070 6902 WinTV HVR-4000-HD  
0070 9002 Nova-T DVB-T Model 909  
0070 9402 WinTV-HVR1100 DVB-T/Hybrid

0070 9600 WinTV 88x MPEG Encoder  
1043 4823 PVR-416  
107d 663c Leadtek PVR 2000  
107d 665f WinFast DTV1000-T  
14f1 0187 Conexant DVB-T reference design  
17de 08a1 XPert DVB-T PCI BDA DVBT 23880 Transport Stream Capture  
17de 08a6 KWorld/VStream XPert DVB-T  
1805 0111 PICOLO Jet-X Jpeg  
1805 0112 PICOLO Jet-X Jpeg  
1805 0113 PICOLO Jet-X Jpeg  
1805 0114 PICOLO Jet-X Jpeg  
18ac d500 DVICO FusionHDTV5 Gold  
18ac d810 DVICO FusionHDTV3 Gold-Q  
18ac d820 DVICO  
FusionHDTV3 Gold-T  
18ac db00 DVICO FusionHDTV DVB-T1  
18ac db10 DVICO FusionHDTV DVB-T Plus  
5654 2388 GoTView PCI Hybrid TS Capture Device  
7063 3000 pcHDTV HD3000 HDTV  
7063 5500 pcHDTV HD-5500  
8804 CX23880/1/2/3 PCI Video and Audio Decoder [IR Port]  
0070 6902 WinTV HVR-4000-HD  
0070 9002 Nova-T DVB-T Model 909  
0070 9402 WinTV-HVR1100 DVB-T/Hybrid  
1805 0111 PICOLO Jet-X Control  
1805 0112 PICOLO Jet-X Control  
1805 0113 PICOLO Jet-X Control  
1805 0114 PICOLO Jet-X Control  
7063 5500 pcHDTV HD-5500  
8811 CX23880/1/2/3 PCI Video and Audio Decoder [Audio Port]  
0070 3400 WinTV 34604  
0070 3401 Hauppauge WinTV 34xxx models  
0070 6902 WinTV HVR-4000-HD  
0070 9402 WinTV-HVR1100 DVB-T/Hybrid  
0070 9600 WinTV 88x Audio  
1462 8606 MSI TV-@nywhere Master  
18ac d500 DVICO FusionHDTV5 Gold  
18ac d810 DVICO FusionHDTV3 Gold-Q  
18ac d820 DVICO FusionHDTV3 Gold-T  
18ac db00 DVICO FusionHDTV DVB-T1  
5654 2388 GoTView PCI Hybrid Audio Capture Device  
8852  
CX23885 PCI Video and Audio Decoder  
0070 8010 WinTV HVR-1400 ExpressCard  
0070 f038 WinTV HVR-5525  
107d 6f22 WinFast PxTV1200  
12ab d585 PE988J Hybrid ATSC/QAM PCI-E AVS Video Capture (SoftEncoder)  
13c2 3013 TT-budget CT2-4500 CI

1461 c039 AVerTV Hybrid Express (A577)  
153b 117e Cinergy T PCIe Dual  
18ac db78 FusionHDTV DVB-T Dual Express  
4254 0950 S950  
4254 0952 S952  
4254 0982 T982  
4254 9580 T9580  
4254 980c T980C  
8880 CX23887/8 PCIe Broadcast Audio and Video Decoder with 3D Comb  
0070 2259 WinTV HVR-1250  
0070 6a18 WinTV-quadHD  
0070 c108 WinTV-HVR-4400-HD model 1278  
1461 3100 CE310B SD PCIe Video Capture Card  
5654 2389 GoTVView X5 DVD Hybrid PCI-E  
5654 2390 GoTVView X5 3D HYBRID PCI-E  
14f2 MOBILITY Electronics  
0120 EV1000 bridge  
0121 EV1000 Parallel port  
0122 EV1000 Serial port  
0123 EV1000 Keyboard controller  
0124 EV1000 Mouse controller  
14f3 BroadLogic  
2030 2030 DVB-S Satellite Receiver  
2035 2035 DVB-S Satellite  
Receiver  
2050 2050 DVB-T Terrestrial (Cable) Receiver  
2060 2060 ATSC Terrestrial (Cable) Receiver  
14f4 TOKYO Electronic Industry CO Ltd  
14f5 SOPAC Ltd  
14f6 COYOTE Technologies LLC  
14f7 WOLF Technology Inc  
14f8 AUDIOCODES Inc  
2077 TP-240 dual span E1 VoIP PCI card  
14f9 AG COMMUNICATIONS  
14fa WANDEL & GOLTERMANN  
14fb TRANSAS MARINE (UK) Ltd  
14fc Quadrics Ltd  
0000 QsNet Elan3 Network Adapter  
0001 QsNetII Elan4 Network Adapter  
0002 QsNetIII Elan5 Network Adapter  
14fd JAPAN Computer Industry Inc  
14fe ARCHTEK TELECOM Corp  
14ff TWINHEAD INTERNATIONAL Corp  
1500 DELTA Electronics, Inc  
1360 RTL81xx RealTek Ethernet  
1501 BANKSOFT CANADA Ltd  
1502 MITSUBISHI ELECTRIC LOGISTICS SUPPORT Co Ltd  
1503 KAWASAKI LSI USA Inc

1504 KAISER Electronics  
1505 ITA INGENIEURBURO FUR TESTAUFGABEN GmbH  
1506 CHAMELEON Systems Inc  
# Should be HTEC Ltd, but there are no known HTEC chips and 1507 is already used by mistake by Motorola (see vendor ID 1057).  
1507 Motorola ?? / HTEC  
0001  
MPC105 [Eagle]  
0002 MPC106 [Grackle]  
0003 MPC8240 [Kahlua]  
0100 MC145575 [HFC-PCI]  
0431 KTI829c 100VG  
4801 Raven  
4802 Falcon  
4803 Hawk  
4806 CPX8216  
1508 HONDA CONNECTORS/MHOTRONICS Inc  
1509 FIRST INTERNATIONAL Computer Inc  
150a FORVUS RESEARCH Inc  
150b YAMASHITA Systems Corp  
150c KYOPAL CO Ltd  
150d WARPSPPED Inc  
150e C-PORT Corp  
150f INTEC GmbH  
1510 BEHAVIOR TECH Computer Corp  
1511 CENTILLIUM Technology Corp  
1512 ROSUN Technologies Inc  
1513 Raychem  
1514 TFL LAN Inc  
1515 Advent design  
1516 MYSON Technology Inc  
0800 MTD-8xx 100/10M Ethernet PCI Adapter  
0803 SURECOM EP-320X-S 100/10M Ethernet PCI Adapter  
1320 10bd SURECOM EP-320X-S 100/10M Ethernet PCI Adapter  
0891 MTD-8xx 100/10M Ethernet PCI Adapter  
1517 ECHOTEK Corp  
# old ID, now 1059  
1518 Kontron  
1519 TELEFON AKTIEBOLAGET LM Ericsson  
151a Globetek  
1002 PCI-1002  
1004 PCI-1004  
1008 PCI-1008  
151b COMBOX Ltd  
151c DIGITAL AUDIO LABS Inc  
0003 Prodif T 2496  
4000 Prodif 88  
151d

Fujitsu Computer Products Of America  
151e MATRIX Corp  
151f TOPIC SEMICONDUCTOR Corp  
0000 TP560 Data/Fax/Voice 56k modem  
1520 CHAPLET System Inc  
1521 BELL Corp  
1522 MainPine Ltd  
0100 PCI <-> IOBus Bridge  
1522 0200 RockForceDUO 2 Port V.92/V.44 Data/Fax/Voice Modem  
1522 0300 RockForceQUATRO 4 Port V.92/V.44 Data/Fax/Voice Modem  
1522 0400 RockForceDUO+ 2 Port V.92/V.44 Data/Fax/Voice Modem  
1522 0500 RockForceQUATRO+ 4 Port V.92/V.44 Data/Fax/Voice Modem  
1522 0600 RockForce+ 2 Port V.90 Data/Fax/Voice Modem  
1522 0700 RockForce+ 4 Port V.90 Data/Fax/Voice Modem  
1522 0800 RockForceOCTO+ 8 Port V.92/V.44 Data/Fax/Voice Modem  
1522 0c00 RockForceDUO+ 2 Port V.92/V.44 Data, V.34 Super-G3 Fax, Voice Modem  
1522 0d00 RockForceQUATRO+ 4 Port V.92/V.44 Data, V.34 Super-G3 Fax, Voice Modem  
1522 1d00 RockForceOCTO+ 8 Port V.92/V.44 Data, V.34 Super-G3 Fax, Voice Modem  
1522 2000 RockForceD1 1 Port V.90 Data Modem  
1522 2100 RockForceF1 1 Port V.34 Super-G3 Fax  
Modem  
1522 2200 RockForceD2 2 Port V.90 Data Modem  
1522 2300 RockForceF2 2 Port V.34 Super-G3 Fax Modem  
1522 2400 RockForceD4 4 Port V.90 Data Modem  
1522 2500 RockForceF4 4 Port V.34 Super-G3 Fax Modem  
1522 2600 RockForceD8 8 Port V.90 Data Modem  
1522 2700 RockForceF8 8 Port V.34 Super-G3 Fax Modem  
1522 3000 IQ Express D1 - 1 Port V.92 Data Modem  
1522 3100 IQ Express F1 - 1 Port V.34 Super-G3 Fax Modem  
1522 3200 IQ Express D2 - 2 Port V.92 Data Modem  
1522 3300 IQ Express F2 - 2 Port V.34 Super-G3 Fax Modem  
1522 3400 IQ Express D4 - 4 Port V.92 Data Modem  
1522 3500 IQ Express F4 - 4 Port V.34 Super-G3 Fax Modem  
1522 3c00 IQ Express D8 - 8 Port V.92 Data Modem  
1522 3d00 IQ Express F8 - 8 Port V.34 Super-G3 Fax Modem  
4000 PCI Express UART  
1522 4001 IQ Express 1-port V.34 Super-G3 Fax  
1522 4002 IQ Express 2-port V.34 Super-G3 Fax  
1522 4004 IQ Express 4-port V.34 Super-G3 Fax  
1522 4008 IQ Express 8-port V.34 Super-G3 Fax  
1522 4100  
IQ Express SideBand  
1523 MUSIC Semiconductors  
1524 ENE Technology Inc  
0510 CB710 Memory Card Reader Controller  
103c 006a NX9500  
0520 FLASH memory: ENE Technology Inc:  
0530 ENE PCI Memory Stick Card Reader Controller



0550 ENE PCI Secure Digital Card Reader Controller  
0551 SD/MMC Card Reader Controller  
0610 PCI Smart Card Reader Controller  
0720 Memory Stick Card Reader Controller  
0730 ENE PCI Memory Stick Card Reader Controller  
0750 ENE PCI SmartMedia / xD Card Reader Controller  
0751 ENE PCI Secure Digital / MMC Card Reader Controller  
1211 CB1211 Cardbus Controller  
1225 CB1225 Cardbus Controller  
1410 CB1410 Cardbus Controller  
1025 003c CL50 motherboard  
1025 005a TravelMate 290  
103c 30d5 530 Laptop  
1411 CB-710/2/4 Cardbus Controller  
103c 006a NX9500  
1412 CB-712/4 Cardbus Controller  
1420 CB1420 Cardbus Controller  
1421 CB-720/2/4 Cardbus Controller  
1422 CB-722/4 Cardbus Controller  
1525 IMPACT Technologies  
1526 ISS, Inc  
1527 SOLECTRON  
1528  
ACKSYS  
# nee American Microsystems Inc  
1529 ON Semiconductor  
152a QUICKTURN DESIGN Systems  
152b FLYTECH Technology CO Ltd  
152c MACRAIGOR Systems LLC  
152d QUANTA Computer Inc  
152e MELEC Inc  
152f PHILIPS - CRYPTO  
1530 ACQIS Technology Inc  
1531 CHRYON Corp  
1532 ECHELON Corp  
0020 LonWorks PCLTA-20 PCI LonTalk Adapter  
1533 BALTIMORE  
1534 ROAD Corp  
1535 EVERGREEN Technologies Inc  
1536 ACTIS Computer  
1537 DATALEX COMMUNICATIONS  
1538 ARALION Inc  
0303 ARS106S Ultra ATA 133/100/66 Host Controller  
1539 ATELIER INFORMATIQUES et ELECTRONIQUE ETUDES S.A.  
153a ONO SOKKI  
153b TERRATEC Electronic GmbH  
1144 Aureon 5.1  
# Terratec seems to use several IDs for the same card.

1147 Aureon 5.1 Sky  
1158 Philips Semiconductors SAA7134 (rev 01) [Terratec Cinergy 600 TV]  
153c ANTAL Electronic  
153d FILANET Corp  
153e TECHWELL Inc  
153f MIPS Technologies, Inc.  
0001 SOC-it 101 System Controller  
1540 PROVIDEO MULTIMEDIA Co Ltd  
1541 MACHONE Communications  
# nee VIVID Technology Inc.  
1542  
Concurrent Real-Time  
9260 RCIM-II Real-Time Clock & Interrupt Module  
9271 RCIM-III Real-Time Clock & Interrupt Module (PCIe)  
9272 Pulse Width Modulator Card  
9273 RCIM-IV Real-Time Clock & Interrupt Module (PCIe)  
9277 5 Volt Delta Sigma Converter Card  
9278 10 Volt Delta Sigma Converter Card  
9287 Analog Output Card  
9290 FPGA Card  
9300 Universal Exhaust Gas Oxygen Sensor Simulator  
9310 Digital Programmable Resistor  
9320 Arria 10 FPGA Card  
9350 Analog Input Card  
1543 SILICON Laboratories  
3052 Intel 537 [Winmodem]  
4c22 Si3036 MC'97 DAA  
1544 DCM DATA Systems  
1545 VISIONTEK  
1546 IOI Technology Corp  
1547 MITUTOYO Corp  
1548 JET PROPULSION Laboratory  
1549 INTERCONNECT Systems Solutions  
154a MAX Technologies Inc  
154b COMPUTEX Co Ltd  
154c VISUAL Technology Inc  
154d PAN INTERNATIONAL Industrial Corp  
154e SERVOTEST Ltd  
154f STRATABEAM Technology  
1550 OPEN NETWORK Co Ltd  
1551 SMART Electronic DEVELOPMENT GmBH  
1552 RACAL AIRTECH Ltd  
1553 CHICONY Electronics  
Co Ltd  
1554 PROLINK Microsystems Corp  
1555 GESYTEC GmBH  
1556 PLDA  
1100 PCI Express Core Reference Design

110f PCI Express Core Reference Design Virtual Function  
1110 XpressRich Reference Design  
1111 XpressRich-AXI Ref Design  
1112 QuickPCIe  
1113 XpressSwitch  
1114 Inspector  
1115 XpressLINK Ref Design  
1116 XpressLINK-SOC Ref Design  
be00 PCI Express Bridge  
1557 MEDIASTAR Co Ltd  
1558 CLEVO/KAPOK Computer  
9602 RS780/RS880 PCI to PCI bridge (int gfx)  
1559 SI LOGIC Ltd  
155a INNOMEDIA Inc  
155b PROTAC INTERNATIONAL Corp  
155c Cemax-Icon Inc  
155d Mac System Co Ltd  
155e LP Elektronik GmbH  
155f Perle Systems Ltd  
1560 Terayon Communications Systems  
1561 Viewgraphics Inc  
1562 Symbol Technologies  
1563 A-Trend Technology Co Ltd  
1564 Yamakatsu Electronics Industry Co Ltd  
1565 Biostar Microtech Int'l Corp  
1566 Ardent Technologies Inc  
1567 Jungsoft  
1568 DDK Electronics Inc  
1569 Palit Microsystems Inc.  
156a Avtec Systems  
156b 2wire Inc  
156c Vidac Electronics  
GmbH  
156d Alpha-Top Corp  
156e Alfa Inc  
156f M-Systems Flash Disk Pioneers Ltd  
1570 Teledyne Lecroy  
1571 Contemporary Controls  
a001 CCSI PCI20-485 ARCnet  
a002 CCSI PCI20-485D ARCnet  
a003 CCSI PCI20-485X ARCnet  
a004 CCSI PCI20-CXB ARCnet  
a005 CCSI PCI20-CXS ARCnet  
a006 CCSI PCI20-FOG-SMA ARCnet  
a007 CCSI PCI20-FOG-ST ARCnet  
a008 CCSI PCI20-TB5 ARCnet  
a009 CCSI PCI20-5-485 5Mbit ARCnet  
a00a CCSI PCI20-5-485D 5Mbit ARCnet

a00b CCSI PCI20-5-485X 5Mbit ARCnet  
a00c CCSI PCI20-5-FOG-ST 5Mbit ARCnet  
a00d CCSI PCI20-5-FOG-SMA 5Mbit ARCnet  
a201 CCSI PCI22-485 10Mbit ARCnet  
a202 CCSI PCI22-485D 10Mbit ARCnet  
a203 CCSI PCI22-485X 10Mbit ARCnet  
a204 CCSI PCI22-CHB 10Mbit ARCnet  
a205 CCSI PCI22-FOG\_ST 10Mbit ARCnet  
a206 CCSI PCI22-THB 10Mbit ARCnet  
1572 Otis Elevator Company  
1573 Lattice - Vantis  
1574 Fairchild Semiconductor  
1575 Voltaire Advanced Data Security Ltd  
1576 Viewcast COM  
1578 HITTT  
4d34 VPMK4 [Video Processor Mk IV]  
5615 VPMK3 [Video  
Processor Mk III]  
1579 Dual Technology Corp  
157a Japan Electronics Ind Inc  
157b Star Multimedia Corp  
157c Eurosoft (UK)  
8001 Fix2000 PCI Y2K Compliance Card  
157d Gemflex Networks  
157e Transition Networks  
157f PX Instruments Technology Ltd  
1580 Primex Aerospace Co  
1581 SEH Computertechnik GmbH  
1582 Cytec Corp  
1583 Inet Technologies Inc  
1584 Uniwill Computer Corp  
1585 Logitron  
1586 Lancast Inc  
1587 Konica Corp  
1588 Solidum Systems Corp  
1589 Atlantek Microsystems Pty Ltd  
0008 Leutron Vision PicPortExpress CL  
0009 Leutron Vision PicPortExpress CL Stereo  
158a Digalog Systems Inc  
158b Allied Data Technologies  
158c Hitachi Semiconductor & Devices Sales Co Ltd  
158d Point Multimedia Systems  
158e Lara Technology Inc  
158f Ditect Coop  
# formerly 3PAR Inc.  
1590 Hewlett Packard Enterprise  
0001 Eagle Cluster Manager  
0002 Osprey Cluster Manager

0003 Harrier Cluster Manager  
0371 Cassini 2 [Slingshot 400Gb]  
0372 Cassini 2 [Slingshot 400Gb] SR-IOV VF  
a01d FC044X  
Fibre Channel HBA  
1591 ARN  
1592 Syba Tech Ltd  
0781 Multi-IO Card  
0782 Parallel Port Card 2xEPP  
0783 Multi-IO Card  
0785 Multi-IO Card  
0786 Multi-IO Card  
0787 Multi-IO Card  
0788 Multi-IO Card  
078a Multi-IO Card  
1593 Bops Inc  
1594 Netgame Ltd  
1595 Diva Systems Corp  
1596 Folsom Research Inc  
1597 Memec Design Services  
1598 Granite Microsystems  
1599 Delta Electronics Inc  
159a General Instrument  
159b Faraday Technology Corp  
4321 StorLink SL3516 (Gemini) Host Bridge  
159c Stratus Computer Systems  
159d Ningbo Harrison Electronics Co Ltd  
159e A-Max Technology Co Ltd  
159f Galea Network Security  
15a0 Compumaster SRL  
15a1 Geocast Network Systems  
15a2 Catalyst Enterprises Inc  
0001 TA700 PCI Bus Analyzer/Exerciser  
15a3 Italtel  
15a4 X-Net OY  
15a5 Toyota Macs Inc  
15a6 Sunlight Ultrasound Technologies Ltd  
15a7 SSE Telecom Inc  
15a8 Shanghai Communications Technologies Center  
15aa Moreton Bay  
15ab Bluesteel Networks Inc  
15ac North Atlantic Instruments  
6893  
3U OpenVPX Multi-function I/O Board [Model 68C3]  
15ad VMware  
0405 SVGA II Adapter  
0710 SVGA Adapter  
0720 VMXNET Ethernet Controller

0740 Virtual Machine Communication Interface  
0770 USB2 EHCI Controller  
0774 USB1.1 UHCI Controller  
0778 USB3 xHCI 0.96 Controller  
0779 USB3 xHCI 1.0 Controller  
0790 PCI bridge  
07a0 PCI Express Root Port  
07b0 VMXNET3 Ethernet Controller  
07c0 PVSCSI SCSI Controller  
07e0 SATA AHCI controller  
07f0 NVMe SSD Controller  
0801 Virtual Machine Interface  
  15ad 0800 Hypervisor ROM Interface  
0820 Paravirtual RDMA controller  
1977 HD Audio Controller  
15ae Amersham Pharmacia Biotech  
15b0 Zoltrix International Ltd  
15b1 Source Technology Inc  
15b2 Mosaid Technologies Inc  
# now NVIDIA  
15b3 Mellanox Technologies  
0191 MT25408 [ConnectX IB Flash Recovery]  
01f6 MT27500 Family [ConnectX-3 Flash Recovery]  
01f8 MT27520 Family [ConnectX-3 Pro Flash Recovery]  
01ff MT27600 Family [Connect-IB Flash Recovery]  
0209 MT27700 Family [ConnectX-4  
Flash Recovery]  
020b MT27710 Family [ConnectX-4 Lx Flash Recovery]  
020d MT28800 Family [ConnectX-5 Flash Recovery]  
020f MT28908A0 Family [ConnectX-6 Flash Recovery]  
0210 MT28908A0 Family [ConnectX-6 Secure Flash Recovery]  
0211 MT416842 Family [BlueField SoC Flash Recovery]  
0212 MT2892 Family [ConnectX-6 Dx Flash Recovery]  
0213 MT2892 Family [ConnectX-6 Dx Secure Flash Recovery]  
0214 MT42822 Family [BlueField-2 SoC Flash Recovery]  
0215 MT42822 Family [BlueField-2 Secure Flash Recovery]  
0216 MT2894 Family [ConnectX-6 Lx Flash Recovery]  
0217 MT2894 Family [ConnectX-6 Lx Secure Flash Recovery]  
0218 MT2910 Family [ConnectX-7 Flash Recovery]  
0219 MT2910 Family [ConnectX-7 Secure Flash Recovery]  
021a MT43162 Family [BlueField-3 Lx SoC Flash Recovery]  
021b MT43162 Family [BlueField-3 Lx Secure Flash Recovery]  
021c MT43244 Family [BlueField-3 SoC Flash Recovery]  
021d MT43244 Family [BlueField-3 Secure Flash Recovery]  
021e CX8 Family [ConnectX-8 Flash  
Recovery]  
021f CX8 Family [ConnectX-8 Secure Flash Recovery]  
0220 BF4 Family Flash Recovery [BlueField-4 SoC Flash Recovery]

0221 BF4 Family Secure Flash Recovery [BlueField-4 Secure Flash Recovery]  
0222 CX8 PCIe Switch Family [ConnectX-8 PCIe Switch Flash Recovery]  
0223 CX8 PCIe Switch Family [ConnectX-8 PCIe Switch Secure Flash Recovery-RMA]  
0224 CX9 Family [ConnectX-9 Flash Recovery]  
0225 CX9 Family [ConnectX-9 Secure Flash Recovery-RMA]  
024e MT53100 [Spectrum-2, Flash recovery mode]  
024f MT53100 [Spectrum-2, Secure Flash recovery mode]  
0250 Spectrum-3, Flash recovery mode  
0251 Spectrum-3, Secure Flash recovery mode  
0252 Amos chiplet  
0253 Amos GearBox Manager  
0254 Spectrum-4, Flash recovery mode  
0255 Spectrum-4 RMA  
0256 Abir GearBox  
0257 Quantum-2 in Flash Recovery Mode  
0258 Quantum-2 RMA  
0259 Abir Chiplet  
025b Quantum-3 in Flash Recovery Mode  
025c Quantum-3 RMA  
025d Quantum-3CPO in Flash Recovery Mode  
025e Quantum-3CPO RMA  
0262 MT27710  
[ConnectX-4 Lx Programmable] EN  
0263 MT27710 [ConnectX-4 Lx Programmable Virtual Function] EN  
0264 Innova-2 Flex Burn image  
0270 Spectrum-4L, Flash recovery mode  
0271 Spectrum-4L, RMA  
0274 Spectrum-4C, Flash recovery mode  
0275 Spectrum-4C RMA  
0277 Spectrum-4TOR RMA  
0281 NPS-600 Flash Recovery  
0282 ArcusE Flash recovery  
0283 ArcusE RMA  
0284 Sagitta  
0285 Sagitta RMA  
0286 LibraE Flash Recovery  
0287 LibraE RMA  
1002 MT25400 Family [ConnectX-2 Virtual Function]  
1003 MT27500 Family [ConnectX-3]  
1014 04b5 PCIe3 40GbE RoCE Converged Host Bus Adapter for Power  
103c 1777 InfiniBand FDR/EN 10/40Gb Dual Port 544FLR-QSFP Adapter (Rev Cx)  
103c 17c9 Infiniband QDR/Ethernet 10Gb 2-port 544i Adapter  
103c 18ce InfiniBand QDR/EN 10Gb Dual Port 544M Adapter  
103c 18cf InfiniBand FDR/EN 10/40Gb Dual Port 544M Adapter  
103c 18d6 InfiniBand FDR/EN 10/40Gb Dual Port 544QSFP Adapter  
15b3 0025 ConnectX-3 IB QDR Dual Port Mezzanine Card  
15b3 0026 ConnectX-3

## IB FDR Dual Port Mezzanine Card

- 15b3 0028 ConnectX-3 VPI Dual QSFP+ Port QDR Infiniband 40Gb/s or 10Gb Ethernet
- 15b3 0055 ConnectX-3 10 GbE Single Port SFP+ Adapter
- 15b3 0059 ConnectX-3 VPI IB FDR/40 GbE Single Port QSFP+ Mezzanine Card
- 15b3 0064 ConnectX-3 EN 10/40 GbE Single Port QSFP+ Adapter (MCX313A-BCBT)
- 15b3 0065 ConnectX-3 VPI IB FDR/40 GbE Dual Port QSFP+ Adapter
- 15b3 0066 ConnectX-3 IB FDR10 Dual Port Mezzanine Card
- 15b3 0067 ConnectX-3 VPI IB FDR/40 GbE Single Port QSFP+ Adapter
- 15b3 0071 ConnectX-3 VPI IB FDR/40 GbE Dual Port QSFP+ Mezzanine Card
- 15b3 0078 ConnectX-3 10 GbE Dual Port KR Mezzanine Card
- 15b3 0079 ConnectX-3 40 GbE Dual Port QSFP+ Adapter
- 15b3 0080 ConnectX-3 10 GbE Dual Port SFP+ Adapter
- 1004 MT27500/MT27520 Family [ConnectX-3/ConnectX-3 Pro Virtual Function]
- 1005 MT27510 Family
- 1006 MT27511 Family
- 1007 MT27520 Family [ConnectX-3 Pro]
- 1014 04eb 2-Port 10GbE NIC and RoCE SR PCIe3
- 103c 22f3 InfiniBand FDR/Ethernet  
10Gb/40Gb 2-port 544+QSFP Adapter
- 103c 22f4 InfiniBand FDR/Ethernet 10Gb/40Gb 2-port 544+FLR-QSFP Adapter
- 103c 801f Ethernet 10G 2-port 546SFP+ Adapter
- 117c 0090 FastFrame NQ41
- 117c 0091 FastFrame NQ42
- 117c 0092 FastFrame NQ11
- 117c 0093 FastFrame NQ12
- 15b3 0006 Mellanox Technologies ConnectX-3 Pro Stand-up dual-port 40GbE MCX314A-BCCT
- 15b3 000c ConnectX-3 Pro 10 GbE Dual Port SFP+ Adapter revision A1
- 15b3 0078 ConnectX-3 Pro 10 GbE Dual Port KR Mezzanine Card
- 15b3 0079 ConnectX-3 Pro 40 GbE Dual Port QSFP+ Adapter
- 15b3 0080 ConnectX-3 Pro 10 GbE Dual Port SFP+ Adapter
- 193d 1002 520F-B
- 1009 MT27530 Family
- 100a MT27531 Family
- 100b MT27540 Family
- 100c MT27541 Family
- 100d MT27550 Family
- 100e MT27551 Family
- 100f MT27560 Family
- 1010 MT27561 Family
- 1011 MT27600 [Connect-IB]
- 1012 MT27600 Family [Connect-IB Virtual Function]
- 1013 MT27700 Family [ConnectX-4]
- 1014 04f7 PCIe3 2-port 100 GbE (NIC and RoCE) QSFP28 Adapter for Power  
15b3
- 0003 Mellanox Technologies ConnectX-4 Stand-up single-port 40GbE MCX413A-BCAT
- 15b3 0005 Mellanox Technologies ConnectX-4 Stand-up single-port 40GbE MCX415A-BCAT
- 15b3 0006 MCX416A-BCAT, ConnectX-4 EN, 40/56GbE 2P, PCIe3.0 x16
- 15b3 0007 ConnectX-4 EN network interface card, 40/56GbE dual-port QSFP28, PCIe3.0 x16, tall bracket



15b3 0008 ConnectX-4 Stand-up dual-port 100GbE MCX416A-CCAT  
15b3 0033 ConnectX-4 VPI IB EDR/100 GbE Single Port QSFP28 Adapter  
15b3 0034 ConnectX-4 VPI IB EDR/100 GbE Dual Port QSFP28 Adapter  
15b3 0050 ConnectX-4 100 GbE Dual Port QSFP28 Adapter  
1014 MT27700 Family [ConnectX-4 Virtual Function]  
1015 MT27710 Family [ConnectX-4 Lx]  
15b3 0001 ConnectX-4 Lx EN network interface card, 25GbE single-port SFP28, PCIe3.0 x8, tall bracket, ROHS  
R6

15b3 0003 Stand-up ConnectX-4 Lx EN, 25GbE dual-port SFP28, PCIe3.0 x8, MCX4121A-ACAT  
15b3 0004 ConnectX-4 Lx Stand-up dual-port 10GbE MCX4121A-XCAT  
15b3 0005 Mellanox Technologies ConnectX-4 Lx  
Stand-up single-port 40GbE MCX4131A-BCAT  
15b3 0020 MCX4411A-ACQN, ConnectX-4 Lx EN OCP, 1x25Gb  
15b3 0021 MCX4421A-ACQN ConnectX-4 Lx EN OCP,2x25G  
15b3 0025 ConnectX-4 Lx 25 GbE Dual Port SFP28 rNDC  
193d 100a 620F-B

# NIC-ETH540F-LP-2P SFP+ Ethernet Card

193d 1023 NIC-ETH540F-LP-2P  
193d 1031 NIC-ETH640i-Mb-2x25G

# NIC-ETH640F-3S-2P OCP3.0 Card

193d 1083 NIC-ETH640F-3S-2P

# NIC-ETH540F-3S-2P OCP3.0 2x10G Card

193d 1084 NIC-ETH540F-3S-2P

1016 MT27710 Family [ConnectX-4 Lx Virtual Function]

1017 MT27800 Family [ConnectX-5]

15b3 0006 ConnectX-5 EN network interface card, 100GbE single-port QSFP28, PCIe3.0 x16, tall bracket;

MCX515A-CCAT

15b3 0007 Mellanox ConnectX-5 MCX516A-CCAT

15b3 0020 ConnectX-5 EN network interface card, 10/25GbE dual-port SFP28, PCIe3.0 x8, tall bracket ;

MCX512A-ACAT

15b3 0068 ConnectX-5 EN network interface card for OCP2.0, Type 1, with host management, 25GbE dual-port SFP28, PCIe3.0 x8, no bracket Halogen free ; MCX542B-ACAN

193d

1051 NIC-IB1040i-Mb-2P

1018 MT27800 Family [ConnectX-5 Virtual Function]

1019 MT28800 Family [ConnectX-5 Ex]

1014 0617 PCIe4 x16 2-Port EDR IB-only ConnectX-5 CAPI Capable Adapter [IBM EC64]

1014 0635 PCIe4 2-port 100 GbE RoCE x16 adapter [IBM EC66]

15b3 0008 ConnectX-5 Ex EN network interface card, 100GbE dual-port QSFP28, PCIe4.0 x16, tall bracket;

MCX516A-CDAT

15b3 0125 Tencent ConnectX-5 EN Ex network interface card for OCP 3.0, with host management, 50GbE Dual-port QSFP28, PCIe4.0 x16, Thumbscrew (pull-tab) bracket

15b3 0126 PCIe4 x16 2-port EDR 100GbE ConnectX-5 CAPI Capable adapter [IBM AJP1]

101a MT28800 Family [ConnectX-5 Ex Virtual Function]

101b MT28908 Family [ConnectX-6]

101c MT28908 Family [ConnectX-6 Virtual Function]

101d MT2892 Family [ConnectX-6 Dx]

101e ConnectX Family mlx5Gen Virtual Function

101f MT2894 Family [ConnectX-6 Lx]  
193d 1035 NIC-ETH641F-LP-2P SFP28 2x25GbE PCIe Network Adapter  
1020 MT28860  
1021 MT2910 Family  
[ConnectX-7]  
1023 CX8 Family [ConnectX-8]  
1024 CX8 PCIe Switch Family [ConnectX-8 PCIe Switch]  
1025 CX9 Family [ConnectX-9]  
1974 MT28800 Family [ConnectX-5 PCIe Bridge]  
1975 MT416842 Family [BlueField SoC PCIe Bridge]  
1976 MT28908 Family [ConnectX-6 PCIe Bridge]  
1977 MT2892 Family [ConnectX-6 Dx PCIe Bridge]  
1978 MT42822 Family [BlueField-2 SoC PCIe Bridge]  
1979 MT2910 Family [ConnectX-7 PCIe Bridge]  
197a MT43162 Family [BlueField-3 Lx SoC PCIe Bridge]  
197b MT43244 Family [BlueField-3 SoC PCIe Bridge]  
197c ConnectX/BlueField Family mlx5Gen PCIe Bridge [PCIe Bridge]  
197d CX8 Family [ConnectX-8 PCIe Bridge]  
197e CX9 Family [ConnectX-9 PCIe Bridge]  
2020 MT2892 Family [ConnectX-6 Dx Emulated PCIe Bridge]  
2021 MT42822 Family [BlueField-2 SoC Emulated PCIe Bridge]  
2023 MT2910 Family [ConnectX-7 Emulated PCIe Bridge]  
2024 MT43244 Family [BlueField-3 SoC Emulated PCIe Bridge]  
2025 ConnectX/BlueField Family mlx5Gen Emulated PCIe Bridge [Emulated PCIe Bridge]  
4117  
MT27712A0-FDCF-AE  
1bd4 0039 SN10XMP2P25  
1bd4 003a 25G SFP28 SP EO251FM9 Adapter  
1bd4 004d SN10XMP2P25,YZPC-01191-101  
5274 MT21108 InfiniBridge  
5a44 MT23108 InfiniHost  
5a45 MT23108 [Infinihost HCA Flash Recovery]  
5a46 MT23108 PCI Bridge  
5e8c MT24204 [InfiniHost III Lx HCA]  
5e8d MT25204 [InfiniHost III Lx HCA Flash Recovery]  
6001 NVMe SNAP Controller  
6274 MT25204 [InfiniHost III Lx HCA]  
6278 MT25208 InfiniHost III Ex (Tavor compatibility mode)  
6279 MT25208 [InfiniHost III Ex HCA Flash Recovery]  
6282 MT25208 [InfiniHost III Ex]  
6340 MT25408A0-FCC-SI ConnectX, Dual Port 10Gb/s InfiniBand / 10GigE Adapter IC with PCIe 2.0 x8 2.5GT/s  
Interface  
634a MT25408A0-FCC-DI ConnectX, Dual Port 20Gb/s InfiniBand / 10GigE Adapter IC with PCIe 2.0 x8  
2.5GT/s Interface  
1014 1014 4X InfiniBand DDR Expansion Card (CFFh) for IBM BladeCenter  
6368 MT25448 [ConnectX EN 10GigE, PCIe 2.0 2.5GT/s]  
6372 MT25458 ConnectX EN 10GBASE-T PCIe 2.5 GT/s  
6732 MT25408A0-FCC-GI

ConnectX, Dual Port 20Gb/s InfiniBand / 10GigE Adapter IC with PCIe 2.0 x8 5.0GT/s Interface  
673c MT25408A0-FCC-QI ConnectX, Dual Port 40Gb/s InfiniBand / 10GigE Adapter IC with PCIe 2.0 x8  
5.0GT/s Interface

1014 0415 PCIe2 2-port 4X InfiniBand QDR Adapter for Power  
1014 0487 GX++ 1-port 4X IB QDR Adapter for Power 795  
103c 1782 4X QDR InfiniBand Mezzanine HCA for c-Class BladeSystem  
15b3 0021 HP InfiniBand 4X QDR CX-2 PCI-e G2 Dual Port HCA  
6746 MT26438 [ConnectX VPI PCIe 2.0 5GT/s - IB QDR / 10GigE Virtualization+]  
103c 1781 NC543i 1-port 4x QDR IB/Flex-10 10Gb Adapter  
103c 3349 NC543i 2-port 4xQDR IB/10Gb Adapter  
6750 MT26448 [ConnectX EN 10GigE, PCIe 2.0 5GT/s]  
1014 0416 PCIe2 2-Port 10GbE RoCE SFP+ Adapter  
1014 0461 PCIe2 2-Port 10GbE RoCE SR Adapter  
15b3 0018 HP 10 GbE PCI-e G2 Dual-Port NIC (rev C1)

# FC EC26

15b3 6572 IBM Flex System EN4132 2-port 10Gb RoCE Adapter  
675a MT26458 ConnectX EN 10GBASE-T PCIe Gen2 5.0 GT/s  
6764 MT26468  
[ConnectX EN 10GigE, PCIe 2.0 5GT/s Virtualization+]  
103c 3313 NC542m Dual Port Flex-10 10GbE BLc Adapter  
676e MT26478 [ConnectX EN 40GigE, PCIe 2.0 5GT/s]  
6778 MT26488 [ConnectX VPI PCIe 2.0 5GT/s - IB DDR / 10GigE Virtualization+]  
7101 NPS-400 configuration and management interface  
7102 NPS-400 network interface PF  
7103 NPS-400 network interface VF  
7121 NPS-600 configuration and management interface  
7122 NPS-600 network interface PF  
7123 NPS-600 network interface VF  
8200 Innova-2 Flex Shell Logic  
a2d0 MT416842 BlueField SoC Crypto enabled  
a2d1 MT416842 BlueField SoC Crypto disabled  
a2d2 MT416842 BlueField integrated ConnectX-5 network controller  
a2d3 MT416842 BlueField multicore SoC family VF  
a2d4 MT42822 BlueField-2 SoC Crypto enabled  
a2d5 MT42822 BlueField-2 SoC Crypto disabled  
a2d6 MT42822 BlueField-2 integrated ConnectX-6 Dx network controller  
a2d7 MT43162 BlueField-3 Lx SoC Crypto enabled  
a2d8 MT43162 BlueField-3 Lx SoC Crypto disabled  
a2d9  
MT43162 BlueField-3 Lx integrated ConnectX-7 network controller  
a2da MT43244 BlueField-3 SoC Crypto enabled  
a2db MT43244 BlueField-3 SoC Crypto disabled  
a2dc MT43244 BlueField-3 integrated ConnectX-7 network controller  
a2dd BF4 Family Crypto enabled [BlueField-4 SoC Crypto enabled]  
a2de BF4 Family Crypto disabled [BlueField-4 SoC Crypto disabled]  
a2df BF4 Family integrated network controller [BlueField-4 integrated network controller]  
b200 ArcusE  
b201 LibraE

c2d1 BlueField DPU Family Auxiliary Communication Channel [BlueField Family]  
c2d2 MT416842 BlueField SoC management interfac  
c2d3 MT42822 BlueField-2 SoC Management Interface  
c2d4 MT43162 BlueField-3 Lx SoC Management Interface  
c2d5 MT43244 BlueField-3 SoC Management Interface  
c2d6 BF4 Family Management Interface [BlueField-4 SoC Management Interface]  
# SwitchX-2, 40GbE switch  
c738 MT51136  
c739 MT51136 GW  
c838 MT52236  
c839 MT52236 router  
caf1 ConnectX-4 CAPI Function  
# Spectrum, 100GbE Switch  
cb84  
MT52100  
cf08 Switch-IB2  
cf6c MT53100 [Spectrum-2]  
cf70 Spectrum-3  
cf80 Spectrum-4  
cf82 Spectrum-4L  
cf84 Spectrum-4C  
d2f0 Quantum HDR (200Gbps) switch  
d2f2 Quantum-2 NDR (400Gbps) switch  
d2f4 Quantum-3  
d2f6 Quantum-3CPO  
15b4 CCI/TRIAD  
15b5 Cimetrics Inc  
15b6 Texas Memory Systems Inc  
0001 XP15 DSP Accelerator  
0002 XP30 DSP Accelerator  
0003 XP00 Data Acquisition Device  
0004 XP35 DSP Accelerator  
0007 XP100 DSP Accelerator [XP100-T0]  
0008 XP100 DSP Accelerator [XP100-T1]  
0009 XP100 DSP Accelerator [XP100-E0]  
000a XP100 DSP Accelerator [XP100-E1]  
000e XP100 DSP Accelerator [XP100-0]  
000f XP100 DSP Accelerator [XP100-1]  
0010 XP100 DSP Accelerator [XP100-P0]  
0011 XP100 DSP Accelerator [XP100-P1]  
0012 XP100 DSP Accelerator [XP100-P2]  
0013 XP100 DSP Accelerator [XP100-P3]  
0014 RamSan Flash SSD  
0015 ZBox  
15b7 Sandisk Corp  
2001 Skyhawk Series NVME SSD  
5001 WD Black NVMe SSD  
5002 SanDisk Extreme Pro / WD Black 2018/SN750/PC SN720

## NVMe SSD

5003 WD Blue SN500 / PC SN520 x2 M.2 2280 NVMe SSD  
5004 PC SN520 x2 M.2 2230 NVMe SSD  
5005 PC SN520 x2 M.2 2242 NVMe SSD  
5006 SanDisk Extreme Pro / WD Black SN750 / PC SN730 / Red SN700 NVMe SSD  
5007 IX SN530 NVMe SSD (DRAM-less)  
5008 PC SN530 NVMe SSD (DRAM-less)  
5009 SanDisk Ultra 3D / WD Blue SN550 NVMe SSD  
15b7 5009 WD Blue SN550 NVMe SSD  
500b PC SN530 NVMe SSD  
1414 500b Xbox Series X  
500d WD Ultrastar DC SN340 NVMe SSD  
5011 WD PC SN810 / Black SN850 NVMe SSD  
5014 WD PC SN540 / Green SN350 NVMe SSD 1 TB (DRAM-less)  
5015 PC SN740 NVMe SSD (DRAM-less)  
5016 WD PC SN740 NVMe SSD 512GB (DRAM-less)  
5017 WD Black SN770 / PC SN740 256GB / PC SN560 (DRAM-less) NVMe SSD  
5019 WD Green SN350 240GB (DRAM-less) / SN560E NVMe SSD  
501a SanDisk Ultra 3D / WD Blue SN570 NVMe SSD (DRAM-less)  
501d WD Blue SN550 NVMe SSD 2TB (DRAM-less)  
501e PC SN735 / WD\_BLACK SN750 SE NVMe SSD (DRAM-less)  
501f WD PC SN735 NVMe SSD 512GB (DRAM-less)  
5025 WD Blue  
SN570 NVMe SSD 2TB  
5026 WD PC SN735 NVMe SSD 1TB (DRAM-less)  
5028 WD CH SN560 NVMe SSD  
5030 WD Black SN850X NVMe SSD  
5034 WD PC SN5000S M.2 2230 NVMe SSD (DRAM-less)  
5036 WD PC SN5000S M.2 2280 NVMe SSD (DRAM-less)  
5041 WD Blue SN580 NVMe SSD (DRAM-less)  
5042 WD Black SN770M NVMe SSD (DRAM-less)  
15b8 ADDI-DATA GmbH  
1001 APCI1516 SP controller (16 digi outputs)  
1003 APCI1032 SP controller (32 digi inputs w/ opto coupler)  
1004 APCI2032 SP controller (32 digi outputs)  
1005 APCI2200 SP controller (8/16 digi outputs (relay))  
1006 APCI1564 SP controller (32 digi ins, 32 digi outs)  
100a APCI1696 SP controller (96 TTL I/Os)  
3001 APCI3501 SP controller (analog output board)  
300f APCI3600 Noise and vibration measurement board  
7001 APCI7420 2-port Serial Controller  
7002 APCI7300 Serial Controller  
15b9 Maestro Digital Communications  
15ba Impacct Technology Corp  
15bb Portwell Inc  
15bc Agilent Technologies  
0100 HPFC-5600 Tachyon DX2+ FC  
0103 QX4 PCI Express

quad 4-gigabit Fibre Channel controller  
0105 Celerity FC-44XS/FC-42XS/FC-41XS/FC-44ES/FC-42ES/FC-41ES  
117c 0022 Celerity FC-42XS Fibre Channel Adapter  
117c 0025 Celerity FC-44ES Fibre Channel Adapter  
117c 0026 Celerity FC-42ES Fibre Channel Adapter  
0500 Infiniium Memory Controller Interface  
0501 Infiniium Acquisition System Interface  
0507 Infiniium Acquisition System (80000 series)  
0508 Infiniium Acquisition Support  
0b01 82350B PCI GPIB  
1100 E8001-66442 PCI Express CIC  
1218 82351A PCI Express GPIB  
12d6 82350C PCI GPIB  
12d7 82351B PCI Express GPIB  
2922 64 Bit, 133MHz PCI-X Exerciser & Protocol Checker  
2928 64 Bit, 66MHz PCI Exerciser & Analyzer  
2929 64 Bit, 133MHz PCI-X Analyzer & Exerciser  
15bd DFI Inc  
15be Sola Electronics  
15bf High Tech Computer Corp (HTC)  
15c0 BVM Ltd  
15c1 Quantel  
15c2 Newer Technology Inc  
15c3 Taiwan Mycomp Co Ltd  
15c4 EVSX Inc  
15c5 Procomp Informatics Ltd  
8010 1394b - 1394 Firewire 3-Port Host Adapter Card  
15c6 Technical  
University of Budapest  
15c7 Tateyama System Laboratory Co Ltd  
0349 Tateyama C-PCI PLC/NC card Rev.01A  
15c8 Penta Media Co Ltd  
15c9 Serome Technology Inc  
15ca Bitboys OY  
15cb AG Electronics Ltd  
15cc Hotrail Inc  
15cd Dreamtech Co Ltd  
15ce Genrad Inc  
15cf Hilscher Gesellschaft für Systemautomation mbH  
0000 CIFS PCI/PCIe  
15d1 Infineon Technologies AG  
15d2 FIC (First International Computer Inc)  
15d3 NDS Technologies Israel Ltd  
15d4 Iwill Corp  
15d5 Tatung Co  
15d6 Entridia Corp  
15d7 Rockwell-Collins Inc  
15d8 Cybernetics Technology Co Ltd

15d9 Super Micro Computer Inc  
1b64 SCC-B8SB80-B1  
1b9d Supermicro AOC-S3816L-L16IR  
1c6e Supermicro AOC-SLG4-2H8M2  
15da Cyberfirm Inc  
15db Applied Computing Systems Inc  
15dc Litronic Inc  
0001 Argus 300 PCI Cryptography Module  
15dd Sigmatel Inc  
15de Malleable Technologies Inc  
15df Infinilink Corp  
15e0 Cacheflow Inc  
15e1 Voice Technologies Group Inc  
15e2 Quicknet Technologies Inc  
0500 PhoneJack-PCI  
15e3 Networth Technologies  
Inc  
15e4 VSN Systemen BV  
15e5 Valley technologies Inc  
15e6 Agere Inc  
15e7 Get Engineering Corp  
15e8 National Datacomm Corp  
0130 Wireless PCI Card  
0131 NCP130A2 Wireless NIC  
15e9 Pacific Digital Corp  
1841 ADMA-100 DiscStaQ ATA Controller  
15ea Tokyo Denshi Sekei K.K.  
15eb DResearch Digital Media Systems GmbH  
15ec Beckhoff GmbH  
3101 FC3101 Profibus DP 1 Channel PCI  
5102 FC5102  
15ed Macrolink Inc  
15ee In Win Development Inc  
15ef Intelligent Paradigm Inc  
15f0 B-Tree Systems Inc  
15f1 Times N Systems Inc  
15f2 Diagnostic Instruments Inc  
15f3 Digitmedia Corp  
15f4 Valuesoft  
15f5 Power Micro Research  
15f6 Extreme Packet Device Inc  
15f7 Banctec  
15f8 Koga Electronics Co  
15f9 Zenith Electronics Corp  
15fa J.P. Axzam Corp  
15fb Zilog Inc  
15fc Techsan Electronics Co Ltd  
15fd N-CUBED.NET

15fe Kinpo Electronics Inc  
15ff Fastpoint Technologies Inc  
1600 Northrop Grumman - Canada Ltd  
1601 Tenta Technology  
1602 Prosys-tec Inc  
1603 Nokia Wireless Communications  
1604  
    Central System Research Co Ltd  
1605 Pairgain Technologies  
1606 Europop AG  
1607 Lava Semiconductor Manufacturing Inc  
1608 Automated Wagering International  
1609 Scimetric Instruments Inc  
1612 Telesynergy Research Inc.  
1618 Stone Ridge Technology  
0001 RDX 11  
0002 HFT-01  
0400 FarSync T2P (2 port X.21/V.35/V.24)  
0440 FarSync T4P (4 port X.21/V.35/V.24)  
0610 FarSync T1U (1 port X.21/V.35/V.24)  
0620 FarSync T2U (2 port X.21/V.35/V.24)  
0640 FarSync T4U (4 port X.21/V.35/V.24)  
1610 FarSync TE1 (T1,E1)  
2610 FarSync DSL-S1 (SHDSL)  
3640 FarSync T4E (4-port X.21/V.35/V.24)  
4620 FarSync T2Ue PCI Express (2-port X.21/V.35/V.24)  
4640 FarSync T4Ue PCI Express (4-port X.21/V.35/V.24)  
1619 FarSite Communications Ltd  
0400 FarSync T2P (2 port X.21/V.35/V.24)  
0440 FarSync T4P (4 port X.21/V.35/V.24)  
0610 FarSync T1U (1 port X.21/V.35/V.24)  
0620 FarSync T2U (2 port X.21/V.35/V.24)  
0640 FarSync T4U (4 port X.21/V.35/V.24)  
1610 FarSync TE1 (T1,E1)  
1612 FarSync  
TE1 PCI Express (T1,E1)  
2610 FarSync DSL-S1 (SHDSL)  
3640 FarSync T4E (4-port X.21/V.35/V.24)  
4620 FarSync T2Ue PCI Express (2-port X.21/V.35/V.24)  
4640 FarSync T4Ue PCI Express (4-port X.21/V.35/V.24)  
5621 FarSync T2Ee PCI Express (2 port X.21/V.35/V.24)  
5641 FarSync T4Ee PCI Express (4 port X.21/V.35/V.24)  
6620 FarSync T2U-PMC PCI Express (2 port X.21/V.35/V.24)  
161f Rioworks  
1621 Lynx Studio Technology, Inc.  
0020 LynxTWO-A  
0021 LynxTWO-B  
0022 LynxTWO-C



0023 Lynx L22  
0024 Lynx AES16  
0025 Lynx AES16-SRC  
0028 Lynx AES16e  
1626 TDK Semiconductor Corp.  
8410 RTL81xx Fast Ethernet  
1629 Kongsberg Spacotec AS  
1003 Format synchronizer v3.0  
1006 Format synchronizer, model 10500  
1007 Format synchronizer, model 21000  
2002 Fast Universal Data Output  
3100 IO31000 Frame Synchronizer and I/O  
3200 IO32000 Frame Synchronizer and I/O  
4002 High Rate Demodulator  
5001 High Rate FEC  
6001 High Rate Demodulator and FEC  
1631 Packard Bell B.V.  
1638 Standard  
Microsystems Corp [SMC]  
1100 SMC2602W EZConnect / Addtron AWA-100 / Eumitcom PCI WL11000  
163c Smart Link Ltd.  
3052 SmartLink SmartPCI562 56K Modem  
5449 SmartPCI561 Modem  
1641 MKNet Corp.  
1642 Bitland(ShenZhen) Information Technology Co., Ltd.  
# nee Brocade Communications Systems, Inc.  
1657 Cavium QLogic  
0013 425/825/42B/82B 4Gbps/8Gbps PCIe dual port FC HBA  
103c 1742 82B 8Gbps dual port FC HBA  
103c 1744 42B 4Gbps dual port FC HBA  
1657 0014 425/825 4Gbps/8Gbps PCIe dual port FC HBA  
0014 1010/1020/1007/1741 10Gbps CNA  
1657 0014 1010/1020/1007/1741 10Gbps CNA - FCOE  
1657 0015 1010/1020/1007/1741 10Gbps CNA - LL  
0017 415/815/41B/81B 4Gbps/8Gbps PCIe single port FC HBA  
103c 1741 41B 4Gbps single port FC HBA  
103c 1743 81B 8Gbps single port FC HBA  
1657 0014 415/815 4Gbps/8Gbps single port PCIe FC HBA  
0021 804 8Gbps FC HBA for HP Bladesystem c-class  
0022 BR-1860 Fabric Adapter  
1657 0022 10Gbps CNA - FCOE  
1657 0023 10Gbps CNA - LL  
1657 0024  
16Gbps FC HBA  
# Mezz card for IBM  
0023 1867/1869 16Gbps FC HBA  
# Same Device\_ID used for 410 (1port) and 420 (2 port) HBAs.  
0646 400 4Gbps PCIe FC HBA

165a Epix Inc  
c100 PIXCI(R) CL1 Camera Link Video Capture Board [custom QL5232]  
d200 PIXCI(R) D2X Digital Video Capture Board [custom QL5232]  
d300 PIXCI(R) D3X Digital Video Capture Board [custom QL5232]  
eb01 PIXCI(R) EB1 PCI Camera Link Video Capture Board

# Gidel Reconfigurable Computing

165c Gidel Ltd.  
5361 PROCStarII60-1  
5362 PROCStarII60-2  
5364 PROCStarII60-4  
5435 ProcSparkII  
5661 ProcE60  
56e1 ProcE180  
5911 ProcStarIII110-1  
5912 ProcStarIII110-2  
5913 ProcStarIII110-3  
5914 ProcStarIII110-4  
5921 ProcStarIII150-1  
5922 ProcStarIII150-2  
5923 ProcStarIII150-3  
5924 ProcStarIII150-4  
5931 ProcStarIII260-1  
5932 ProcStarIII260-2  
5933 ProcStarIII260-3  
5934 ProcStarIII260-4  
5941 ProcStarIII340-1  
5942 ProcStarIII340-2  
5943 ProcStarIII340-3  
5944 ProcStarIII340-4  
5a01 ProceIII80  
5a11  
ProceIII110  
5a21 ProceIII150  
5a31 ProceIII260  
5a41 ProceIII340  
5b51 ProceIV360  
5b61 ProceIV530  
5b71 ProceIV820  
5c01 ProcStarIV80-1  
5c02 ProcStarIV80-2  
5c03 ProcStarIV80-3  
5c04 ProcStarIV80-4  
5c11 ProcStarIV110-1  
5c12 ProcStarIV110-2  
5c13 ProcStarIV110-3  
5c14 ProcStarIV110-4  
5c51 ProcStarIV360-1  
5c52 ProcStarIV360-2

5c53 ProcStarIV360-3  
5c54 ProcStarIV360-4  
5c61 ProcStarIV530-1  
5c62 ProcStarIV530-2  
5c63 ProcStarIV530-3  
5c64 ProcStarIV530-4  
5c71 ProcStarIV820-1  
5c72 ProcStarIV820-2  
5c73 ProcStarIV820-3  
5c74 ProcStarIV820-4  
5d01 Proc10480  
5d11 Proc104110  
5f01 ProceV\_A3  
5f11 ProceV\_A7  
5f21 ProceV\_AB  
5f31 ProceV\_D5  
5f41 ProceV\_D8  
6732 Proc6M  
6832 Proc12M  
7101 Proc10a\_27  
7111 Proc10a\_48  
7121 Proc10a\_66  
7141 Proc10a\_115  
7181 Proc10a\_27S  
7191 Proc10a\_48S  
71a1 Proc10a\_66S  
71b1 Proc10A  
72b1 HawkEye  
73b1 Proc10s  
165d Hsing Tech. Enterprise Co., Ltd.  
165f Linux Media Labs, LLC  
1020 LMLM4 MPEG-4 encoder  
1661  
Worldspace Corp.  
1665 EDAX Inc  
# P/N 4035.006.19720  
1973 DPP-II FR2 Board  
# P/N 4035.065.20000  
2000 SG-IIP Board  
1668 Actiontec Electronics Inc  
0100 Mini-PCI bridge  
# Formerly SiByte, Inc.  
166d Broadcom Corporation  
0001 SiByte BCM1125/1125H/1250 System-on-a-Chip PCI  
0002 SiByte BCM1125H/1250 System-on-a-Chip HyperTransport  
0012 SiByte BCM1280/BCM1480 System-on-a-Chip PCI-X  
0014 Sabyte BCM1280/BCM1480 System-on-a-Chip HyperTransport  
1677 B&R Industrial Automation GmbH

104e 5LS172.6 B&R Dual CAN Interface Card  
12d7 5LS172.61 B&R Dual CAN Interface Card  
20ad 5ACPCI.MFIO-K01 Profibus DP / K-Feldbus / COM  
1678 NetEffect  
0100 NE020 10Gb Accelerated Ethernet Adapter (iWARP RNIC)  
1679 Tokyo Electron Device Ltd.  
3000 SD Standard host controller [Ellen]  
167b ZyDAS Technology Corp.  
2102 ZyDAS ZD1202  
187e 3406 ZyAIR B-122 CardBus 11Mbs Wireless LAN Card  
187e 3407 ZyAIR B-320 802.11b Wireless PCI Adapter  
2116 ZD1212B Wireless Adapter  
167d Samsung Electro-Mechanics  
Co., Ltd.  
a000 MagicLAN SWL-2210P 802.11b [Intersil ISL3874]  
167e ONNTO Corp.  
1681 Hercules  
1682 XFX Pine Group Inc.  
5701 Radeon 5700 XT Thicc III Ultra  
c580 Radeon RX 580  
1688 CastleNet Technology Inc.  
1170 WLAN 802.11b card  
168a Utimaco IS GmbH  
2086 CryptoServer Se-Series Hardware Security Module  
c040 CryptoServer CSe-Series Hardware Security Module  
c051 CryptoServer Se-Series Gen2 Hardware Security Module  
c070 u.trust Anchor Hardware Security Module cs7.2 Series  
c071 u.trust Anchor Hardware Security Module cs7.3 Series  
c072 u.trust Anchor Hardware Security Module cs7.3 Series Virtual Function  
# nee Atheros Communications, Inc.  
168c Qualcomm Atheros  
0007 AR5210 Wireless Network Adapter [AR5000 802.11a]  
1737 0007 WPC54A Wireless PC Card  
1b47 0100 Harmony 8450CN Wireless CardBus Module  
1b47 0110 Skyline 4030 / Harmony 8450 802.11a Wireless CardBus Adapter  
8086 2501 PRO/Wireless 5000 LAN PCI Adapter Module  
0011 AR5211 Wireless Network  
Adapter [AR5001A 802.11a]  
0012 AR5211 Wireless Network Adapter [AR5001X 802.11ab]  
1186 3a03 AirPro DWL-A650 Wireless Cardbus Adapter (rev.B)  
1186 3a04 AirPro DWL-AB650 Multimode Wireless Cardbus Adapter  
1186 3a05 AirPro DWL-AB520 Multimode Wireless PCI Adapter  
126c 8031 2201 Mobile Adapter  
1385 4400 WAB501 802.11ab Wireless CardBus Card  
1b47 aa00 8460 802.11ab Wireless CardBus Adapter  
0013 AR5212/5213/2414 Wireless Network Adapter  
0308 3402 AG-100 802.11ag Wireless Cardbus Adapter  
0308 3405 G-102 v2 802.11g Wireless Cardbus Adapter

0308 3408 G-170S 802.11g Wireless CardBus Adapter  
0e11 00e5 NC6000/NC8000 laptop  
10b7 6002 3CRWE154A72 802.11abg Cardbus Adapter  
1113 d301 Philips CPWNA100 Wireless CardBus adapter  
1113 ee23 SMCWPCIT-G 108Mbps Wireless PCI adapter  
1154 033b Buffalo WLI-CB-AMG54  
1154 034e Buffalo WLI-CB-AG108HP 802.11abg Cardbus Adapter  
1186 3202 DWL-G650 (Rev B3,B5) Wireless cardbus adapter  
1186 3203 AirPlus DWL-G520  
Wireless PCI Adapter (rev. A)  
1186 3a07 AirXpert DWL-AG650 Wireless Cardbus Adapter  
1186 3a08 AirXpert DWL-AG520 Wireless PCI Adapter  
1186 3a12 D-Link AirPlus DWL-G650 Wireless Cardbus Adapter(rev.C)  
1186 3a13 AirPlus DWL-G520 Wireless PCI Adapter (rev. B)  
1186 3a14 AirPremier AG DWL-AG530 Wireless PCI Adapter (rev.A)  
1186 3a17 D-Link AirPremier DWL-G680 Wireless Cardbus Adapter  
1186 3a18 D-Link AirPremier DWL-G550 Wireless PCI Adapter  
1186 3a1a WNA-2330 802.11bg Wireless CardBus Adapter  
1186 3a63 D-Link AirPremier DWL-AG660 Wireless Cardbus Adapter  
1186 3a93 Conceptronic C54I Wireless 801.11g PCI card  
1186 3a94 Conceptronic C54C 802.11g Wireless Cardbus Adapter  
1186 3ab0 Allnet ALL0281 Wireless PCI Card  
1385 4600 WAG511 802.11a/b/g Dual Band Wireless PC Card  
1385 4610 WAG511 802.11a/b/g Dual Band Wireless PC Card  
1385 4900 WG311v1 802.11g Wireless PCI Adapter  
1385 4a00 WAG311 802.11a/g Wireless PCI Adapter  
1385 4b00 WG511T 108 Mbps Wireless  
PC Card (rev.A/B)  
1385 4d00 WG311T 108 Mbps Wireless PCI Adapter (rev.A2)  
1385 4f00 WG511U Double 108 Mbps Wireless PC Card  
1385 5a00 WG311T (rev.A3 v1h3/v1h4) 108 Mbps Wireless PCI Adapter [AR2412]  
1385 5b00 WG511T 108 Mbps Wireless PC Card (rev.C)  
1385 5d00 WPN511 RangeMax Wireless PC Card  
1458 e911 GN-WIAG02  
1468 0403 U10H014 802.11g Cardbus Adapter  
1468 0408 ThinkPad 11b/g Wireless LAN Mini PCI Adapter  
14b7 0a10 8480-WD 802.11abg Cardbus Adapter  
14b7 0a60 8482-WD ORiNOCO 11a/b/g Wireless PCI Adapter  
14b7 aa30 8800-FC 802.11bg Cardbus Adapter  
14b7 aa40 8470-WD 802.11bg Cardbus Adapter  
14b9 cb21 CB21 802.11a/b/g Cardbus Adapter  
1668 1026 IBM HighRate 11 a/b/g Wireless CardBus Adapter  
168c 0013 AirPlus XtremeG DWL-G650 Wireless PCMCIA Adapter  
168c 1025 DWL-G650B2 Wireless CardBus Adapter  
168c 1027 Engenius NL-3054CB ARIES b/g CardBus Adapter  
168c 1042 Ubiquiti Networks SuperRange a/b/g Cardbus Adapter  
168c 1051 EZ Connect

g 802.11g 108Mbps Wireless PCI Adapter  
168c 2026 Netgate 5354MP ARIES a(108Mb turbo)/b/g MiniPCI Adapter  
168c 2027 D-Link AirPlus DWL-G520 Wireless PCI Adapter (rev. A)  
168c 2041 Engenius 5354MP Plus ARIES2 b/g MiniPCI Adapter  
168c 2042 Engenius 5354MP Plus ARIES2 a/b/g MiniPCI Adapter  
168c 2051 TRENDnet TEW-443PI Wireless PCI Adapter  
16a5 160a BWP712 802.11bg Wireless CardBus Adapter  
16ab 7302 Trust Speedshare Turbo Pro Wireless PCI Adapter  
1737 0017 WPC55AG  
1737 0026 WMP55AG v1.1  
1737 0035 WPC55AG v1.2 802.11abg Cardbus Adapter  
1737 0036 WMP55AG v1.2 802.11abg PCI Adapter  
1799 3000 F6D3000 Dual-Band Wireless A+G Desktop Card  
1799 3010 F6D3010 Dual-Band Wireless A+G Notebook Card  
17cf 0042 Z-COMAX Highpower XG-622H (400mw) 802.11b/g mini-PCI Adapter  
185f 1012 CM9 Wireless a/b/g MiniPCI Adapter  
185f 2012 Wistron NeWeb WLAN a+b+g model CB9  
a727 6801 3CRXJK10075 OfficeConnect Wireless 108Mbps 11g XJACK PC Card  
001a AR2413/AR2414 Wireless  
Network Adapter [AR5005G(S) 802.11bg]  
1052 168c Sweex Wireless Lan PC Card 54Mbps  
1113 ee20 SMC Wireless CardBus Adapter 802.11g (SMCWCB-G EU)  
1113 ee24 SMC Wireless PCI Card WPCI-G  
1186 3a15 AirPlus G DWL-G630 Wireless Cardbus Adapter (rev.D1)  
1186 3a16 AirPlus G DWL-G510 Wireless PCI Adapter(rev.B)  
1186 3a1c WNA-1330 Notebook Adapter  
1186 3a1d WDA-1320 Desktop Adapter  
1186 3a23 AirPlus G DWL-G520+A Wireless PCI Adapter  
1186 3a24 AirPlus G DWL-G650+A Wireless Cardbus Adapter  
1186 3b08 AirPlus G DWL-G630 Wireless Cardbus Adapter (rev.C1)  
168c 001a Belkin FD7000  
168c 1052 TP-Link TL-WN510G Wireless CardBus Adapter  
168c 2052 Compex Wireless 802.11 b/g MiniPCI Adapter, Rev A1 [WLM54G]  
16ec 0122 Wireless PCI Adapter Model 5418  
1737 0053 WPC54G v7 802.11g Wireless-G Notebook Adapter  
1799 700c F5D7000 v5000 Wireless G Desktop Card  
1799 701d F5D7010 v5000 Wireless G Notebook Card  
17f9 0008 DX-WGNBC 802.11bg Wireless CardBus Adapter  
17f9  
0018 DX-WGDTC 802.11bg Wireless PCI Adapter  
001b AR5413/AR5414 Wireless Network Adapter [AR5006X(S) 802.11abg]  
# Atheros AR5414 32-bit mini-PCI type IIIB  
0777 1107 UB5 802.11a Wireless Mini PCI Adapter  
0777 3002 XR2 802.11g Wireless Mini PCI Adapter  
0777 3005 XR5 802.11a Wireless Mini PCI Adapter  
0777 3009 XR9 900MHz Wireless Mini PCI Adapter  
1154 034e WLI-CB-AG108HP 802.11abg Wireless CardBus Adapter  
1186 3a19 D-Link AirPremier AG DWL-AG660 Wireless Cardbus Adapter

1186 3a22 AirPremier AG DWL-AG530 Wireless PCI Adapter (rev.B)  
 11ad 5001 WN5301A 802.11bg Wireless PCI Adapter  
 1458 e901 GN-WI01HT Wireless a/b/g MiniPCI Adapter  
 168c 001b Wireless LAN PCI LiteOn  
 168c 1062 IPN-W100CB 802.11abg Wireless CardBus Adapter  
 168c 2062 EnGenius EMP-8602 (400mw) or Compex WLM54AG (SuperAG)  
 168c 2063 EnGenius EMP-8602 (400mw) or Compex WLM54AG  
 17f9 000b WL-711A 802.11abg Wireless CardBus Adapter  
 17f9 000c WPIA-112AG 802.11abg Wireless PCI Adapter  
 17f9  
 000d PC-686X 802.11abg Wireless Mini PCI Adapter  
 185f 1600 DCMA-82 High Power WLAN 802.11a/b/g mini-PCI Module (Super A/G, eXtended Range, 400mW)  
 1948 3aba RBTBJ-AW 802.11abg Wireless Cardbus Adapter  
 a727 6804 Wireless 11a/b/g PC Card with XJACK(r) Antenna  
 001c AR242x / AR542x Wireless Network Adapter (PCI-Express)  
 0777 3006 SRX 802.11abg Wireless ExpressCard Adapter  
 103c 137a AR5BXB63 (Foxconn) 802.11bg Mini PCIe NIC  
 106b 0086 AirPort Extreme  
 144f 7106 WLL3140 (Toshiba PA3501U-1MPC) 802.11bg Wireless Mini PCIe Card  
 144f 7128 WLL3141 (Toshiba PA3613U-1MPC) 802.11bg Wireless Mini PCIe Card  
 1468 0428 AR5BXB63 802.11bg NIC  
 1468 042a AR5007EG 802.11bg NIC  
 147b 1033 AirPace Wi-Fi  
 168c 001c AR242x 802.11abg NIC (PCI Express)  
 168c 3061 AR5006EGS 802.11bg NIC (2.4GHz, PCI Express)  
 168c 3062 AR5006EXS 802.11abg NIC (2.4/5.0GHz, PCI Express)  
 168c 3063 AR5006EX 802.11abg NIC (2.4/5.0GHz, PCI Express)  
 168c 3065 AR5006EG 802.11bg NIC (2.4GHz,  
 PCI Express)  
 168c 3067 AR242x 802.11abg Wireless PCI Express Adapter (rev 01)  
 1a3b 1026 AW-GE780 802.11bg Wireless Mini PCIe Card  
 001d AR2417 Wireless Network Adapter [AR5007G 802.11bg]  
 1799 720b F5D7000 v8000 Wireless G Desktop Card  
 1799 721b F5D7010 v8000 Wireless G Notebook Card  
 # the name AR5005VL is used for some AR5513 based designs  
 0020 AR5513 802.11abg Wireless NIC  
 0308 3407 M-102 802.11g Wireless Cardbus Adapter  
 1186 3a67 DWL-G650M Super G MIMO Wireless Notebook Adapter  
 1186 3a68 DWL-G520M Wireless 108G MIMO Desktop Adapter  
 187e 340e M-302 802.11g Wireless PCI Adapter  
 1976 2003 TEW-601PC 802.11g Wireless CardBus Adapter  
 0023 AR5416 Wireless Network Adapter [AR5008 802.11(a)bgn]  
 0308 340b NWD-170N 802.11bgn Wireless CardBus Adapter  
 1154 0365 Buffalo WLP-CB-AG300 802.11abgn Cardbus Adapter  
 1154 0367 WLI-CB-AG301N 802.11abgn Wireless CardBus Adapter  
 1186 3a6a DWA-642 802.11n RangeBooster N CardBus Adapter  
 1186 3a6b DWA-547 802.11n

RangeBooster N 650 DeskTop Adapter  
1186 3a6d DWA-552 802.11n Xtreme N Desktop Adapter (rev A1)  
1186 3a76 DWA-645 802.11n RangeBooster N 650 Notebook Adapter (rev A1)  
1737 0059 WPC300N v2 Wireless-N Notebook Adapter  
1737 0069 WPC100 v1 802.11n RangePlus Wireless Notebook Adapter  
1737 0072 WMP110 v1 802.11n RangePlus Wireless PCI Adapter  
1799 8011 F5D8011 v1 802.11n N1 Wireless Notebook Card  
187e 3411 NWD-370N 802.11n Wireless PCI Adapter  
1976 2008 TEW-621PC 802.11bgn Wireless CardBus Adapter  
0024 AR5418 Wireless Network Adapter [AR5008E 802.11(a)bgn] (PCI-Express)  
106b 0087 AirPort Extreme  
1186 3a70 DWA-556 Xtreme N PCI Express Desktop Adapter  
0027 AR9160 Wireless Network Adapter [AR9001 802.11(a)bgn]  
0777 4082 SR71-A 802.11abgn Wireless Mini PCI Adapter  
0029 AR922X Wireless Network Adapter  
0777 4005 SR71-15 802.11an Mini PCI Adapter  
1186 3a7a DWA-552 802.11n Xtreme N Desktop Adapter (rev A2)  
1186 3a7d DWA-552 802.11n Xtreme N Desktop Adapter  
(rev A3)  
168c 0029 AR922X Wireless Network Adapter  
168c 2096 Compex WLM200NX / Wistron DNMA-92  
002a AR928X Wireless Network Adapter (PCI-Express)  
0777 4f05 SR71-X 802.11abgn Wireless ExpressCard Adapter [AR9280]  
103c 3041 AR5BHB92-H 802.11abgn Wireless Half-size Mini PCIe Card [AR9280]  
103c 3042 AzureWave AW-NE773 802.11abgn Wireless Half-size Mini PCIe Card [AR9280]  
105b e006 T77H053.00 802.11bgn Wireless Mini PCIe Card [AR9281]  
105b e01f T77H047.31 802.11bgn Wireless Half-size Mini PCIe Card [AR9283]  
106b 008f AirPort Extreme  
11ad 6600 WN6600A 802.11bgn Wireless Mini PCIe Card [AR9281]  
144f 7141 WLL6080 802.11bgn Wireless Mini PCIe Card [AR9281]  
168c 0203 DW1525 802.11abgn WLAN PCIe Card [AR9280]  
1a32 0303 EM303 802.11bgn Wireless Mini PCIe Card [AR9281]  
1a32 0306 EM306 802.11bgn Wireless Half-size Mini PCIe Card [AR9283]  
1a3b 1067 AW-NE771 802.11bgn Wireless Mini PCIe Card [AR9281]  
1a3b 1071 AW-NE772 802.11abgn Wireless Mini PCIe Card  
[AR9280]  
1a3b 1081 AW-NE773 802.11abgn Wireless Half-size Mini PCIe Card [AR9280]  
002b AR9285 Wireless Network Adapter (PCI-Express)  
1028 0204 Wireless 1502 802.11bgn Half-size Mini PCIe Card  
1028 0205 Wireless 1702 802.11bgn Half-size Mini PCIe Card [AR9002WB-1NGCD]  
103c 303f U98Z062.10 802.11bgn Wireless Half-size Mini PCIe Card  
103c 3040 U98Z062.12 802.11bgn Wireless Half-size Mini PCIe Card  
105b e017 T77H126.00 802.11bgn Wireless Half-size Mini PCIe Card  
105b e023 T77H121.04 802.11bgn Wireless Half-size Mini PCIe Card  
105b e025 T77H121.05 802.11bgn Wireless Half-size Mini PCIe Card  
1113 e811 WN7811A (Toshiba PA3722U-1MPC) 802.11bgn Wireless Half-size Mini PCIe Card  
185f 30af DNXA-95 802.11bgn Wireless Half-size Mini PCIe Card  
1931 0023 Option GTM67x PCIe WiFi Adapter



1a3b 1089 AW-NE785 / AW-NE785H 802.11bgn Wireless Full or Half-size Mini PCIe Card  
1a3b 2c37 AW-NB037H 802.11bgn Wireless Half-size Mini PCIe Card [AR9002WB-1NGCD]  
1b9a 0401  
XW204E 802.11bgn Wireless Half-size Mini PCIe Card  
1b9a 0c03 WB214E 802.11bgn Wireless Half-size Mini PCIe Card [AR9002WB-1NGCD]  
002c AR2427 802.11bg Wireless Network Adapter (PCI-Express)  
002d AR9227 Wireless Network Adapter  
002e AR9287 Wireless Network Adapter (PCI-Express)  
105b e034 T77H167.00  
0030 AR93xx Wireless Network Adapter  
103c 1627 AR9380/HB112 802.11abgn 3x3 Wi-Fi Adapter  
106b 009a AirPort Extreme  
1186 3a7e DWA-566 Wireless N 300 Dual Band PCIe Desktop Adapter  
1a56 2000 Killer Wireless-N 1102 Half-size Mini PCIe Card [AR9382]  
1a56 2001 Killer Wireless-N 1103 Half-size Mini PCIe Card [AR9380]  
0032 AR9485 Wireless Network Adapter  
1028 0208 Wireless 1506 WLAN Half Mini-Card  
103c 1838 AR9485/HB125 802.11bgn 1x1 Wi-Fi Adapter  
105b e044 Unex DHXA-225  
144d 410e AR9485WB-EG 802.11b/g/n mini-PCIe card on a series 3 laptop  
1a3b 1186 AW-NE186H  
0033 AR958x 802.11abgn Wireless Network Adapter  
168c a120 AR9582 802.11a/n WLAN Mini-PCIe  
Adapter  
0034 AR9462 Wireless Network Adapter  
1028 020b Wireless 1601 802.11abgn Adapter  
1028 0300 Wireless 1802 802.11abgn Adapter  
1a56 2003 Killer Wireless-N 1202 Half-size Mini PCIe Card  
0036 QCA9565 / AR9565 Wireless Network Adapter  
1028 020e Vostro 3470  
0037 AR9485 Wireless Network Adapter  
# Also used as Gigabyte GC-WB150 on a PCIe-to-mini-PCIe converter  
1a3b 2100 AW-NB100H 802.11n Wireless Mini PCIe Card  
003c QCA986x/988x 802.11ac Wireless Network Adapter  
003e QCA6174 802.11ac Wireless Network Adapter  
1a56 143a Killer 1435 Wireless-AC  
1a56 1525 Killer N1525 Wireless-AC  
1a56 1535 Killer Wireless-n/a/ac 1535 Wireless Network Adapter  
0040 QCA9980/9990 802.11ac Wireless Network Adapter  
0041 QCA6164 802.11ac Wireless Network Adapter  
0042 QCA9377 802.11ac Wireless Network Adapter  
11ad 08a6 Qualcomm Atheros QCA9377 802.11ac Wireless Network Adapter  
# compatible with Lenovo's BIOS lock  
17aa 0901 Qualcomm Atheros QCA9377 Wireless Network Adapter  
0046  
QCA9984 802.11ac Wave 2 Wireless Network Adapter  
0050 QCA9887 802.11ac Wireless Network Adapter  
0207 AR5210 Wireless Network Adapter [AR5000 802.11a]

1014 AR5212 802.11abg NIC  
1014 058a ThinkPad 11a/b/g Wireless LAN Mini Express Adapter (AR5BXB6)  
9013 AR5002X Wireless Network Adapter  
ff19 AR5006X Wireless Network Adapter  
ff1b AR2425 Wireless Network Adapter [AR5007EG 802.11bg]  
ff1c AR5008 Wireless Network Adapter  
ff1d AR922x Wireless Network Adapter  
# Found in "AVM Fritz!Box FON WLAN 7270v3"  
168c ee1c AR9220-AC1A [AVM Fritz!Box FON WLAN 7270 v3]  
1695 EPoX Computer Co., Ltd.  
169c Netcell Corporation  
0044 Revolution Storage Processing Card  
# The right ID is 196d, but they got it nibble-swapped in 2202.  
169d Club-3D VB (Wrong ID)  
16a5 Tekram Technology Co.,Ltd.  
16ab Global Sun Technology Inc  
1100 GL24110P  
1101 PLX9052 PCMCIA-to-PCI Wireless LAN  
1102 PCMCIA-to-PCI Wireless Network Bridge  
8501 WL-8305 Wireless LAN PCI Adapter  
16ae SafeNet Inc  
0001  
SafeXcel 1140  
000a SafeXcel 1841  
1141 SafeXcel 1141  
# misused vendor ID 0001  
0001 0001 SafeXcel 1141 v. 1.1  
1841 SafeXcel 1842  
16af SparkLAN Communications, Inc.  
16b4 Aspex Semiconductor Ltd  
16b8 Sonnet Technologies, Inc.  
16be Creatix Polymedia GmbH  
16c3 Synopsys, Inc.  
abcd DWC\_usb3 / PCIe bridge  
abce DWC\_usb3  
abcf DWC\_usb31  
edda EPMockUp  
16c6 Micrel-Kendin  
8695 Centaur KS8695 ARM processor  
8842 KSZ8842-PMQL 2-Port Ethernet Switch  
16c8 Octasic Inc.  
16c9 EONIC B.V. The Netherlands  
16ca CENATEK Inc  
0001 Rocket Drive DL  
# nee Innocore Gaming Ltd., nee Densitron Gaming Ltd., a division of Densitron Technologies  
16cd Advantech Co. Ltd  
0101 DirectPCI SRAM for DPX-11x series  
0102 DirectPCI SRAM for DPX-S/C/E-series

0103 DirectPCI ROM for DPX-11x series  
0104 DirectPCI ROM for DPX-S/C/E-series  
0105 DirectPCI I/O for DPX-114/DPX-115  
0106 DirectPCI I/O for DPX-116  
0107 DirectPCI I/O for DPX-116U  
0108 DirectPCI I/O for DPX-117  
0109 DirectPCI  
I/O for DPX-112  
010a DirectPCI I/O for DPX-C/E-series  
010b DirectPCI I/O for DPX-S series  
16ce Roland Corp.  
16d5 Acromag, Inc.  
0504 PMC-DX504 Reconfigurable FPGA with LVDS I/O  
0520 PMC520 Serial Communication, 232 Octal  
0521 PMC521 Serial Communication, 422/485 Octal  
1020 PMC-AX1020 Reconfigurable FPGA with A/D & D/A  
1065 PMC-AX1065 Reconfigurable FPGA with A/D & D/A  
2004 PMC-DX2004 Reconfigurable FPGA with LVDS I/O  
2020 PMC-AX2020 Reconfigurable FPGA with A/D & D/A  
2065 PMC-AX2065 Reconfigurable FPGA with A/D & D/A  
3020 PMC-AX3020 Reconfigurable FPGA with A/D & D/A  
3065 PMC-AX3065 Reconfigurable FPGA with A/D & D/A  
4243 PMC424, APC424, AcPC424 Digital I/O and Counter Timer Module  
4248 PMC464, APC464, AcPC464 Digital I/O and Counter Timer Module  
424b PMC-DX2002 Reconfigurable FPGA with Differential I/O  
4253 PMC-DX503 Reconfigurable FPGA with TTL and Differential I/O  
4312 PMC-CX1002 Reconfigurable Conduction-Cooled FPGA Virtex-II with Differential  
I/O  
4313 PMC-CX1003 Reconfigurable Conduction-Cooled FPGA Virtex-II with CMOS and Differential I/O  
4322 PMC-CX2002 Reconfigurable Conduction-Cooled FPGA Virtex-II with Differential I/O  
4323 PMC-CX2003 Reconfigurable Conduction-Cooled FPGA Virtex-II with CMOS and Differential I/O  
4350 PMC-DX501 Reconfigurable Digital I/O Module  
4353 PMC-DX2003 Reconfigurable FPGA with TTL and Differential I/O  
4357 PMC-DX502 Reconfigurable Differential I/O Module  
4457 PMC730, APC730, AcPC730 Multifunction Module  
4471 XMC730 Multi-function I/O module with front I/O  
4473 XMC730CC Multi-function I/O module with rear I/O Conduction-cooled  
464d PMC408 32-Channel Digital Input/Output Module  
4850 PMC220-16 12-Bit Analog Output Module  
4a42 PMC483, APC483, AcPC483 Counter Timer Module  
4a50 PMC484, APC484, AcPC484 Counter Timer Module  
4a56 PMC230 16-Bit Analog Output Module  
4b47 PMC330, APC330, AcPC330 Analog Input Module, 16-bit A/D  
4c40 PMC-LX40 Reconfigurable Virtex-4 FPGA with plug-in  
I/O  
4c60 PMC-LX60 Reconfigurable Virtex-4 FPGA with plug-in I/O  
4d4d PMC341, APC341, AcPC341 Analog Input Module, Simultaneous Sample & Hold  
4d4e PMC482, APC482, AcPC482 Counter Timer Board

524d PMC-DX2001 Reconfigurable FPGA with TTL I/O  
5335 PMC-SX35 Reconfigurable Virtex-4 FPGA with plug-in I/O  
5456 PMC470 48-Channel Digital Input/Output Module  
5601 PMC-VLX85 Reconfigurable Virtex-5 FPGA with plug-in I/O  
5602 PMC-VLX110 Reconfigurable Virtex-5 FPGA with plug-in I/O  
5603 PMC-VSX95 Reconfigurable Virtex-5 FPGA with plug-in I/O  
5604 PMC-VLX155 Reconfigurable Virtex-5 FPGA with plug-in I/O  
5605 PMC-VFX70 Reconfigurable Virtex-5 FPGA with plug-in I/O  
5606 PMC-VLX155-1M Reconfigurable Virtex-5 FPGA with plug-in I/O  
5701 PMC-SLX150: Reconfigurable Spartan-6 FPGA with plug-in I/O  
5702 PMC-SLX150-1M: Reconfigurable Spartan-6 FPGA with plug-in I/O  
5801 XMC-VLX85 Reconfigurable Virtex-5 FPGA with plug-in I/O  
5802 XMC-VLX110 Reconfigurable Virtex-5 FPGA with  
plug-in I/O  
5803 XMC-VSX95 Reconfigurable Virtex-5 FPGA with plug-in I/O  
5804 XMC-VLX155 Reconfigurable Virtex-5 FPGA with plug-in I/O  
5807 XMC-SLX150: Reconfigurable Spartan-6 FPGA with plug-in I/O  
5808 XMC-SLX150-1M: Reconfigurable Spartan-6 FPGA with plug-in I/O  
5901 APCe8650 PCI Express IndustryPack Carrier Card  
6301 XMC Module with user-configurable Virtex-6 FPGA, 240k logic cells, SFP front I/O  
6302 XMC Module with user-configurable Virtex-6 FPGA, 365k logic cells, SFP front I/O  
6303 XMC Module with user-configurable Virtex-6 FPGA, 240k logic cells, no front I/O  
6304 XMC Module with user-configurable Virtex-6 FPGA, 365k logic cells, no front I/O  
7000 XMC-7K325F: User-configurable Kintex-7 FPGA, 325k logic cells plus SFP front I/O  
7001 XMC-7K410F: User-configurable Kintex-7 FPGA, 410k logic cells plus SFP front I/O  
7002 XMC-7K325AX: User-Configurable Kintex-7 FPGA, 325k logic cells with AXM Plug-In I/O  
7003 XMC-7K410AX: User-Configurable Kintex-7 FPGA,  
410k logic cells with AXM Plug-In I/O  
7004 XMC-7K325CC: User-Configurable Kintex-7 FPGA, 325k logic cells, conduction-cooled  
7005 XMC-7K410CC: User-Configurable Kintex-7 FPGA, 410k logic cells, conduction-cooled  
7006 XMC-7A200: User-Configurable Artix-7 FPGA, 200k logic cells with Plug-In I/O  
7007 XMC-7A200CC: User-Configurable Conduction-Cooled Artix-7 FPGA, with 200k logic cells  
7011 AP440-1: 32-Channel Isolated Digital Input Module  
7012 AP440-2: 32-Channel Isolated Digital Input Module  
7013 AP440-3: 32-Channel Isolated Digital Input Module  
7014 AP445: 32-Channel Isolated Digital Output Module  
7015 AP471 48-Channel TTL Level Digital Input/Output Module  
7016 AP470 48-Channel TTL Level Digital Input/Output Module  
7017 AP323 16-bit, 20 or 40 Channel Analog Input Module  
7018 AP408: 32-Channel Digital I/O Module  
7019 AP341 14-bit, 16-Channel Simultaneous Conversion Analog Input Module  
701a AP220-16 12-Bit, 16-Channel Analog Output Module  
701b AP231-16 16-Bit,  
16-Channel Analog Output Module  
701c AP225 12-Bit, 16-Channel Analog Output Module with Waveform Memory  
701d AP235 16-Bit, 16-Channel Analog Output Module with Waveform Memory  
7021 APA7-201 Reconfigurable Artix-7 FPGA module 48 TTL channels  
7022 APA7-202 Reconfigurable Artix-7 FPGA module 24 RS485 channels

7023 APA7-203 Reconfigurable Artix-7 FPGA module 24 TTL & 12 RS485 channels  
7024 APA7-204 Reconfigurable Artix-7 FPGA module 24 LVDS channels  
7027 AP418 16-Channel High Voltage Digital Input/Output Module  
7029 AP342 14-bit, 12-Channel Isolated Simultaneous Conversion Analog Input Module  
702a AP226 12-Bit, 8-Channel Isolated Analog Output Module  
702b AP236 16-Bit, 8-Channel Isolated Analog Output Module  
702c AP560A Module 4 Independent isolated CAN bus channels  
7031 AP441-1: 32-Channel Isolated Digital Input Module  
7032 AP441-2: 32-Channel Isolated Digital Input Module  
7033 AP441-3: 32-Channel Isolated Digital Input Module  
7042 AP482 Counter Timer Module  
with TTL Level Input/Output  
7043 AP483 Counter Timer Module with TTL Level and RS422 Input/Output  
7044 AP484 Counter Timer Module with RS422 Input/Output  
7051 APA7-501 Reconfigurable Artix-7 52,160 Cell FPGA module 48 TTL channels  
7052 APA7-502 Reconfigurable Artix-7 52,160 Cell FPGA module 24 RS485 channels  
7053 APA7-503 Reconfigurable Artix-7 52,160 Cell FPGA module 24 TTL & 12 RS485 channels  
7054 APA7-504 Reconfigurable Artix-7 52,160 Cell FPGA module 24 LVDS channels  
7072 AP731 Multi-function I/O Module with 12-bit DAC  
7073 AP730 Multi-function I/O Module 16 Digital I/O 8 Differential Analog In 4 Analog Out  
7731 APZU-301 Zynq Ultrascale+ Module 28 TTL channels  
7733 APZU-303 Zynq Ultrascale+ Module 20 TTL & 3 RS485/422 channels  
7734 APZU-304 Zynq Ultrascale+ Module 14 LVDS channels  
16da Advantech Co., Ltd.  
0011 INES GPIB-PCI  
16df PIKA Technologies Inc.  
# nee Geotest-MTS  
16e2 Marvin Test Solutions  
1034 GX1034 Certification and Verification Module PXI Board  
1100  
GX1100 Arbitrary Waveform and Function Generator PXI Board  
1120 GX1120 Arbitrary Waveform and Function Generator PXI Board  
1164 GX1164 Multi-Channel Programmable Resistor PXI Board  
1632 GX1632e 32-Channel Arbitrary Analog Output PXIe Board  
1648 GX1648 64-Channel Analog Output PXI Board  
1649 GX1649 64-Channel Arbitrary Analog Output PXI Board  
1838 GX1838 Precision DC Source PXI Board  
2065 GX2065 Digital Multimeter PXI Board  
2200 GTX2200 High Resolution Universal Time Interval Counter PXI Board  
2201 GC2200 High Resolution Universal Time Interval Counter PCI Board  
3104 GX3104 4-Channel 20V, 250mA Per Channel SMU PXI Board  
3108 GX3108 4-Channel Source Measure Unit PXI Board  
3116 GX3116e 16-Channel DUT Power Supply PXIe Board  
3348 GX3348 Multi-Channel DC Source and Switch Matrix Board  
3500 GX3500 Digital I/O FLEX FPGA Board  
3700 GX3700e Digital I/O FLEX FPGA PXIe Board  
3701 GX3700 Digital I/O FLEX FPGA PXI Board  
3800 GX3800e Digital I/O FLEX FPGA

## PXIE Board

4943 GX4943 HellFire/Longbow Serial Communication Board  
5050 GC5050 Dynamic Digital I/O with Algorithmic Sequencer PCI Board  
5055 GX5055 Dynamic Digital I/O with Pin Electronics PXI Board  
5083 GX5083 Dynamic Digital I/O with Algorithmic Sequencer PXI Board  
5105 GX5105 High-Speed Digital I/O Timing (Master) Module PXI Board  
5106 GX5106 High-Speed Digital I/O Cycle Timing (Master) Module PXI Board  
5151 GX5150/1 High Speed Digital I/O (50/100MHz) PXI Board  
5152 GX5152/3 DSR High Speed Digital Stimulus/Response PXI Board  
5250 GX5250 Digital I/O Streaming PXI Board  
5280 GX5280 High-Speed Digital I/O PXI Board  
5290 GX5290 High-Speed Dynamic Digital I/O PXI Board  
5294 GX5294 High-Speed Digital I/O PXI Board  
5295 GX5295 Digital I/O with Pin Electronics and PMU PXI Board  
5296 GX5296 Digital I/O with Pin Electronics and PMU PXI Board  
5550 GX5050 Dynamic Digital I/O with Algorithmic Sequencer PXI Board  
5641 GX5641/2 Bi-directional Differential-TTL I/O PXI

## Board

5731 GX5731 Digital I/O with 128 TTL Channels and 3x32 Customizable Channels PXI Board  
5732 GX5732 224-Channel Static Digital I/O PXI Board  
5733 GX5733 Digital I/O with 96 TTL Channels and 32 Customizable Channels PXI Board  
5960 GX5961/4 Digital I/O Timing/Sync with Pin Electronics and PMU PXI Board  
6021 GX6021 20-Channel RF Multiplexer PXI Board  
6062 GX6062 60-Channel RF Multiplexer PXI Board  
6115 GX6115 15-Channel High Current SPDT Form-C Relay PXI Board  
6125 GX6125 25-Channel High-Density SPDT Form-C Relay PXI Board  
6138 GX6138 38-Channel SPST Form-A Relay PXI Board  
6188 GX6188 104-Channel 8x8 Multiplexer/Matrix PXI Board  
6192 GX6192 16, 16x2 High Frequency, High Density Multiplexer PXI Board  
6196 GX6196 96-Channel DPST Form-A Relay Carrier PXI Board  
6256 GX6256 16, 16x2 Low Frequency, High Density Multiplexer PXI Board  
6264 GX6264 128-Channel Scanner/Multiplexer Board  
6315 GX6315 45-Channel High Current SPDT Form-C Relay Board  
6325 GX6325 75-Channel

## High-Density SPDT Form-C Relay Board

6338 GX6338 114-Channel SPST Form-A Relay PXI Board  
6377 GX6377 Multifunction Switching PXI Board  
6384 GX6384 Configurable High-Density Switch Matrix PXI Board  
6616 GX6616 6x2:16 Switch Matrix PXI Board  
6864 GX6864 Video Switching PXI Board  
7400 GX7400 Dual-Output Programmable Power Supply PXI Board  
7404 GX7404 Prototyping and Power Interface PXI Board  
7777 GX7777 Generic Interface PXI Board  
7779 GX7779 Backplane Tester PXI Board

16e3 European Space Agency

1e0f LEON2FT Processor

16e5 Intellon Corp.

6000 INT6000 Ethernet-to-Powerline Bridge [HomePlug AV]

6300 INT6300 Ethernet-to-Powerline Bridge [HomePlug AV]  
16ec U.S. Robotics  
00ed USR997900  
0116 USR997902 10/100/1000 Mbps PCI Network Card  
2f00 USR5660A (USR265660A, USR5660A-BP) 56K PCI Faxmodem  
3685 Wireless Access PCI Adapter Model 022415  
4320 USR997904 10/100/1000 64-bit NIC (Marvell Yukon)  
ab06 USR997901A 10/100 Cardbus NIC  
16ed Sycron N. V.  
1001  
UMIO communication card  
16f2 ETAS GmbH  
0200 I/O board  
16f2 0010 ES53xx I/O board  
16f3 Jetway Information Co., Ltd.  
16f4 Vweb Corp  
8000 VW2010  
16f6 VideoTele.com, Inc.  
1702 Internet Machines Corporation (IMC)  
1705 Digital First, Inc.  
170b NetOctave  
0100 NSP2000-SSL crypto accelerator  
170c YottaYotta Inc.  
1719 EZChip Technologies  
1000 NPA Access Network Processor Family  
# Seems to be a 2nd ID for Vitesse Semiconductor  
1725 Vitesse Semiconductor  
7174 VSC7174 PCI/PCI-X Serial ATA Host Bus Controller  
172a Accelerated Encryption  
13c8 AEP SureWare Runner 1000V3  
# nee Fujitsu Siemens Computers GmbH  
1734 Fujitsu Technology Solutions  
9602 RS780/RS880 PCI to PCI bridge (int gfx)  
1735 Aten International Co. Ltd.  
1737 Linksys  
0029 WPG54G ver. 4 PCI Card  
1032 Gigabit Network Adapter  
1737 0015 EG1032 v2 Instant Gigabit Network Adapter  
1737 0024 EG1032 v3 Instant Gigabit Network Adapter  
1064 Gigabit Network Adapter  
1737 0016 EG1064 v2 Instant Gigabit Network  
Adapter  
ab08 21x4x DEC-Tulip compatible 10/100 Ethernet  
ab09 21x4x DEC-Tulip compatible 10/100 Ethernet  
173b Altima (nee Broadcom)  
0001 AC1002 PCI Gigabit Ethernet controller  
03e8 AC1000 Gigabit Ethernet  
03e9 AC1001 Gigabit Ethernet

03ea AC9100 Gigabit Ethernet  
173b 0001 AC1002  
03eb AC1003 Gigabit Ethernet  
1743 Peppercon AG  
8139 ROL/F-100 Fast Ethernet Adapter with ROL  
1745 ViXS Systems, Inc.  
2020 XCode II Series  
2100 XCode 2100 Series  
1043 48c9 My Cinema PE6200 Analog  
1749 RLX Technologies  
174b PC Partner Limited / Sapphire Technology  
174d WellX Telecom SA  
175c AudioScience Inc  
175e Sanera Systems, Inc.  
1760 TEDIA spol. s r. o.  
0101 PCD-7004 Digital Bi-Directional Ports PCI Card  
0102 PCD-7104 Digital Input & Output PCI Card  
0121 PCT-7303A PC card with IRC counters  
0122 PCT-7408A PC card with counters and timers  
0123 PCT-7424 PCI card with standard counters  
0141 PCA7208AL - Analog Inputs/Outputs  
0142 PCA7208AS - Analog inputs/Outputs  
0143  
PCA7408AL - Analog Inputs/Outputs  
0144 PCA7408AS - Analog Inputs/Outputs  
0145 PCA-7228AL Multifunction PCI IO card  
0146 PCA-7228AS Multifunction PCI IO card  
0147 PCA7428AL Multifunction PCI IO card  
0148 PCA7428AS Multifunction PCI IO card  
0149 PCA7228EL Multifunction PCI IO card with isolated analog inputs  
0150 PCA7428EL Multifunction PCI IO card with isolated analog inputs  
0151 PCA7628AL - PCI card with analog inputs, counters and DIO  
0152 PCA7628AS PCI card with analog inputs, outputs, counters and DIO  
0161 PCA7288A PCI card with analog outputs, counters and DIO  
0180 PCII052 Communication card for MicroUnit network  
0214 PCT-7424C (F0) PC card with standard counters  
0215 PCT-7424C (F1) PC card with standard counters  
0216 PCT-7424E (F0) PC card with standard counters  
0217 PCT-7424E (F1) PC card with standard counters  
0240 PCA7428CL\_F0 - analog Inputs  
0241 PCA7428CL\_F1 - analog Inputs  
0242 PCA7428CS\_F0 - Analog Inputs/Outputs non isolated  
0243  
PCA7428CS\_F1 - Analog Inputs/Outputs non isolated  
0244 PCA7428CE\_F0 - Analog Inputs isolated  
0245 PCA7428CE\_F1 - Analog Inputs isolated  
0303 PCD-7006C Digital Input & Output PCI Card  
0800 PCD8006 - PCIe digital Inputs/Outputs



0840 PCA-8428 General-purpose multifunctional PCIe card with 8 analog inputs and 2 analog outputs  
 0841 PCA-8429 General-purpose multifunctional PCIe card with 8 analog inputs  
 0842 PCA-8438 General-purpose multifunctional PCIe card with 16 analog inputs and 2 analog outputs  
 0843 PCA-8439 General-purpose multifunctional PCIe card with 16 analog inputs  
 ff00 CTU CAN FD PCIe Card  
 1761 Pickering Interfaces Ltd  
 1771 InnoVISION Multimedia Ltd.  
 1775 General Electric  
 177d Cavium, Inc.  
 0001 Nitrox XL N1  
 0003 Nitrox XL N1 Lite  
 0004 Octeon (and older) FIPS  
 0005 Octeon CN38XX Network Processor Pass 3.x  
 0006 RoHS  
 0010 CN15XX/CN16XX [Nitrox PX]  
 0011 CNN35XX [Nitrox III]  
 0012 CNN55XX [Nitrox V]  
 0020 Octeon CN31XX Network Processor  
 0030  
 Octeon CN30XX Network Processor  
 0040 Octeon CN58XX Network Processor  
 0050 Octeon CN57XX Network Processor (CN54XX/CN55XX/CN56XX)  
 0070 Octeon CN50XX Network Processor  
 0080 Octeon CN52XX Network Processor  
 0090 Octeon II CN63XX Network Processor  
 0091 Octeon II CN68XX Network Processor  
 0092 Octeon II CN65XX Network Processor  
 0093 Octeon II CN61XX Network Processor  
 0094 Octeon Fusion CNF71XX Cell processor  
 0095 Octeon III CN78XX Network Processor  
 0096 Octeon III CN70XX Network Processor  
 9700 Octeon III CN73XX Network Processor  
 9702 CN23XX [LiquidIO II] Intelligent Adapter  
 177d 0003 CN2350 [LiquidIO II] 2-port 10GbE Intelligent adapter  
 # This was changed during the production phase to 10GbE adapter.  
 177d 0004 CN2350 [LiquidIO II] 2-port 10GbE Intelligent adapter  
 177d 0005 CN2360 [LiquidIO II] 2-port 10GbE Intelligent adapter  
 177d 0006 CN2360 [LiquidIO II] 2-port 25GbE Intelligent adapter  
 177d 0007 CN2350 [LiquidIO II] 2-port 25GbE Intelligent adapter  
 177d  
 0008 CN2350 [LiquidIO II] 2-port 10GbE SFP+ Intelligent adapter  
 177d 0009 CN2360 [LiquidIO II] 2-port 10GbE SFP+ Intelligent adapter  
 177d 000a CN2350 [LiquidIO II] 2-port 10GBASE-T Intelligent adapter  
 177d 000b CN2360 [LiquidIO II] 2-port 10GBASE-T Intelligent adapter  
 9703 CN23XX [LiquidIO II] NVMe Controller  
 9712 CN23XX [LiquidIO II] SRIOV Virtual Function  
 177d 0003 CN2350 [LiquidIO II] 2-port 10GbE SRIOV Virtual Function  
 177d 0004 CN2350 [LiquidIO II] 2-port 10GbE SRIOV Virtual Function

177d 0005 CN2360 [LiquidIO II] 2-port 10GbE SRIOV Virtual Function  
177d 0006 CN2360 [LiquidIO II] 2-port 25GbE SRIOV Virtual Function  
177d 0007 CN2350 [LiquidIO II] 2-port 25GbE SRIOV Virtual Function  
9713 CN23XX [LiquidIO II] NVMe SRIOV Virtual Function  
9800 Octeon Fusion CNF75XX Processor  
a001 ThunderX MRML(Master RML Bridge to RSL devices)  
a002 THUNDERX PCC Bridge  
    177d a102 CN88XX PCC Bridge  
a008 THUNDERX SMMU  
    177d a108 CN88XX SMMU  
a009 THUNDERX  
Generic Interrupt Controller  
a00a THUNDERX GPIO Controller  
a00b THUNDERX MPI / SPI Controller  
a00c THUNDERX MIO-PTP Controller  
a00d THUNDERX MIX Network Controller  
a00e THUNDERX Reset Controller  
a00f THUNDERX UART Controller  
a010 THUNDERX eMMC/SD Controller  
a011 THUNDERX MIO-BOOT Controller  
a012 THUNDERX TWSI / I2C Controller  
a013 THUNDERX CCPI (Multi-node connect)  
a014 THUNDERX Voltage Regulator Module  
a015 THUNDERX PCIe Switch Logic Interface  
a016 THUNDERX Key Memory  
a017 THUNDERX GTI (Global System Timers)  
a018 THUNDERX Random Number Generator  
a019 THUNDERX DFA  
a01a THUNDERX Zip Coprocessor  
a01b THUNDERX xHCI USB Controller  
a01c THUNDERX AHCI SATA Controller  
    177d a11c CN88XX AHCI SATA Controller  
a01d THUNDERX RAID Coprocessor  
a01e THUNDERX Network Interface Controller  
a01f THUNDERX Traffic Network Switch  
a020 THUNDERX PEM (PCI Express Interface)  
a021 THUNDERX L2C (Level-2 Cache Controller)  
a022 THUNDERX LMC (DRAM Controller)  
a023  
    THUNDERX OCLA (On-Chip Logic Analyzer)  
a024 THUNDERX OSM  
a025 THUNDERX GSER (General Serializer/Deserializer)  
a026 THUNDERX BGX (Common Ethernet Interface)  
a027 THUNDERX IOBN  
a029 THUNDERX NCSI (Network Controller Sideband Interface)  
a02a ThunderX SGPIO (Serial GPIO controller for SATA disk lights)  
a02b THUNDERX SMI / MDIO Controller  
a02c THUNDERX DAP (Debug Access Port)

a02d THUNDERX PCIERC (PCIe Root Complex)  
a02e ThunderX L2C-TAD (Level 2 cache tag and data)  
a02f THUNDERX L2C-CBC  
a030 THUNDERX L2C-MCI  
a031 THUNDERX MIO-FUS (Fuse Access Controller)  
a032 THUNDERX FUSF (Fuse Controller)  
a033 THUNDERX Random Number Generator virtual function  
a034 THUNDERX Network Interface Controller virtual function  
a035 THUNDERX Parallel Bus  
a036 ThunderX RAD (RAID acceleration engine) virtual function  
a037 THUNDERX ZIP virtual function  
a040 THUNDERX CPT Cryptographic Accelerator  
# MAC found on OcteonTx2 series of silicons  
a059 Octeon TX2 CGX (MAC)  
# MAC  
found on Octeon 10 series of silicons  
a060 Octeon 10 RPM (MAC)  
# Octeon Tx2 Loopback Interface block  
a061 Octeon Tx2 Loopback Interface (LBK)  
# Octeon Tx2 Resource Virtualization Unit Physical Function  
a063 Octeon Tx2 RVU Physical Function  
# Octeon Tx2 Resource Virtualization Unit Virtual Function  
a064 Octeon Tx2 RVU Virtual Function  
# Octeon Tx2 Resource Virtualization Unit Admin Function  
a065 Octeon Tx2 RVU Admin Function  
# PTP Timestamping unit on Octeon 10 silicon series  
a09e Octeon 10 PTP controller  
# Cryptographic Accelerator found on Octeon 10 series of silicons  
a0f2 Octeon 10 CPT Cryptographic Accelerator, Physical function  
a0f3 Octeon 10 CPT Cryptographic Accelerator, Virtual function  
# Octeon Tx2 System DPI Interface (SDP) Physical Function  
a0f6 Octeon Tx2 SDP Physical Function  
# Octeon Tx2 System DPI Interface (SDP) Virtual Function  
a0f7 Octeon Tx2 SDP Virtual Function  
a0f8 Octeon Tx2 Loopback Interface Virtual Function (LBKVF)  
# Cryptographic Accelerator  
found on OcteonTx2 series of silicons  
a0fd Octeon Tx2 CPT Cryptographic Accelerator, Physical function  
# Cryptographic Accelerator found on OcteonTx2 series of silicons  
a0fe Octeon Tx2 CPT Cryptographic Accelerator, Virtual function  
a100 THUNDERX CN88XX 48 core SoC  
a200 OCTEON TX CN81XX/CN80XX  
a300 OCTEON TX CN83XX  
af00 CN99xx [ThunderX2] Integrated PCI Host bridge  
af84 CN99xx [ThunderX2] Integrated PCI Express RP Bridge  
1787 Hightech Information System Ltd.  
1789 Ennyah Technologies Corp.  
# also used by Struck Innovative Systeme for joint developments

1796 Research Centre Juelich  
0001 SIS1100 [Gigabit link]  
0002 HOTlink  
0003 Counter Timer  
0004 CAMAC Controller  
0005 PROFIBUS  
0006 AMCC HOTlink  
0007 LVD Cable Bus  
0008 100MHz, 64bit Sequence Generator based on VirtexII  
0009 double 14bit-ADC  
000a SIS1100 with N110 TDC  
000b double 14bit-ADC with memory  
000d Synchronisation Slave  
000e SIS1100-eCMC  
000f TDC (GPX)  
0010 PCIe Counter Timer  
0011  
SIS1100-e single link  
0012 SIS1100-e quad link  
0013 4x2.5GHz SFP to 4 lane PCIe bridge  
0014 SIS1100 with GPX piggy back  
0015 SIS8100 [Gigabit link, MicroTCA]  
0016 SIS1100e with 4 lanes  
0017 Quad 14bit, 50MHz ADC with 2.5GHz SFP  
0018 SIS8300 4-lane PCI Express, Micro TCA for Physics ADC  
0019 SIS SIS8300-Lx MTCA.4 Digitizer  
001a 100MHz, 64bit Sequence Generator based on VirtexII  
001c Quad 16bit, 150MHz ADC with 2.5GHz SFP  
0030 100MHz, 64bit Sequence Generator based on Spartan6  
0031 200MHz 64bit Sequence Generator based on Spartan7  
# nee Techwell, Inc.  
1797 Intersil Techwell  
5864 TW5864 multimedia video controller  
6801 TW6802 multimedia video card  
6802 TW6802 multimedia other device  
6810 TW6816 multimedia video controller  
6811 TW6816 multimedia video controller  
6812 TW6816 multimedia video controller  
6813 TW6816 multimedia video controller  
# port 5 of 8  
6814 TW6816 multimedia video controller  
# port 6 of 8  
6815 TW6816 multimedia video controller  
#  
port 7 of 8  
6816 TW6816 multimedia video controller  
# channel 8 of 8  
6817 TW6816 multimedia video controller

# Example MuniPCI-E card: <http://www.commell.com.tw/product/surveillance/MPX-6864.htm>  
6864 TW6864 multimedia video controller  
1799 Belkin  
6001 F5D6001 Wireless PCI Card [Realtek RTL8180]  
6020 F5D6020 v3000 Wireless PCMCIA Card [Realtek RTL8180]  
6060 F5D6060 Wireless PDA Card  
700f F5D7000 v7000 Wireless G Desktop Card [Realtek RTL8185]  
701f F5D7010 v7000 Wireless G Notebook Card [Realtek RTL8185]  
179a id Quantique  
0001 Quantis PCI 16Mbps  
179c Data Patterns  
0557 DP-PCI-557 [PCI 1553B]  
0566 DP-PCI-566 [Intelligent PCI 1553B]  
1152 DP-cPCI-1152 (8-channel Isolated ADC Module)  
5031 DP-CPCI-5031-Synchro Module  
# cPCI Carrier for Mezzanine Modules  
5112 DP-cPCI-5112 [MM-Carrier]  
5121 DP-CPCI-5121-IP Carrier  
5211 DP-CPCI-5211-IP Carrier  
5679 AGE Display Module  
17a0 Genesys Logic, Inc  
7163 GL9701 PCIe to PCI Bridge  
8083 GL880 USB 1.1 UHCI controller  
8084  
GL880 USB 2.0 EHCI controller  
9750 GL9750 SD Host Controller  
9755 GL9755 SD Host Controller  
e763 GL9763E eMMC Controller  
17aa Lenovo  
0003 LENSE20256GMSP34MEAT2TA  
0004 LENSE20512GMSP34MEAT2TA  
# 250GB nvme ssd from lenovo, can be found in Thinkpad x380 yoga  
0005 LENSE30256GMSP34MEAT3TA  
0006 LENSE30512GMSP34MEAT3TA  
3181 ThinkCentre M75n IoT  
402b Intel 82599ES 10Gb 2-port Server Adapter X520-2  
9602 RS780/RS880 PCI to PCI bridge (int gfx)  
17ab Phillips Components  
17af Hightech Information System Ltd.  
17b3 Hawking Technologies  
ab08 PN672TX 10/100 Ethernet  
17b4 Indra Networks, Inc.  
0011 WebEnhance 100 GZIP Compression Card  
0012 WebEnhance 200 GZIP Compression Card  
0015 WebEnhance 300 GZIP Compression Card  
0016 StorCompress 300 GZIP Compression Card  
0017 StorSecure 300 GZIP Compression and AES Encryption Card  
17c0 Wistron Corp.

17c2 Newisys, Inc.  
17c3 Protogate, Inc.  
# nee Airgo Networks, Inc.  
17cb Qualcomm Technologies, Inc  
0001 AGN100 802.11  
a/b/g True MIMO Wireless Card  
1385 5c00 WGM511 Pre-N 802.11g Wireless CardBus Adapter  
1737 0045 WMP54GX v1 802.11g Wireless-G PCI Adapter with SRX  
0002 AGN300 802.11 a/b/g True MIMO Wireless Card  
1385 6d00 WPNT511 RangeMax 240 Mbps Wireless CardBus Adapter  
1737 0054 WPC54GX4 v1 802.11g Wireless-G Notebook Adapter with SRX400  
0104 APQ8096 PCIe Root Complex [Snapdragon 820]  
0105 MSM8998 PCIe Root Complex  
0106 SDM850 PCIe Root Complex [Snapdragon 850]  
0107 SDM850 PCIe Root Port [Snapdragon 850]  
0108 SM8150 PCIe Root Complex  
0109 SA8195P PCIe Root Complex  
010b SM8250 PCIe Root Complex [Snapdragon 865/870 5G]  
010c SM8350 PCIe Root Complex [Snapdragon 888]  
010e SC8280XP PCI Express Root Port  
0110 SM8475 PCIe Root Complex [Snapdragon 8+ Gen 1]  
0300 MDM9x35 LTE Modem [Snapdragon X7]  
0301 MDM9x45 LTE Modem [Snapdragon X12]  
0302 MDM9x55 LTE Modem [Snapdragon X16]  
0304 SDX24 [Snapdragon X24 4G]  
0306 SDX55 [Snapdragon X55 5G]  
0400 Datacenter Technologies  
QDF2432 PCI Express Root Port  
0401 Datacenter Technologies QDF2400 PCI Express Root Port  
1000 QCS405 PCIe Root Complex  
1101 QCA6390 Wireless Network Adapter  
1103 QCNFA765 Wireless Network Adapter  
1104 QCN6024/9024/9074 Wireless Network Adapter  
1107 WCN785x Wi-Fi 7(802.11be) 320MHz 2x2 [FastConnect 7800]  
105b e0f7 High Band Simultaneous Wireless Network Adapter  
1108 IPQ95xx/97xx PCIe Root Port  
1109 QCN62xx/92xx Wireless Network Adapter  
17cc NetChip Technology, Inc  
2280 USB 2.0  
17cd Cadence Design Systems, Inc.  
17cf Z-Com, Inc.  
17d3 Areca Technology Corp.  
1110 ARC-1110 4-Port PCI-X to SATA RAID Controller  
1120 ARC-1120 8-Port PCI-X to SATA RAID Controller  
1130 ARC-1130 12-Port PCI-X to SATA RAID Controller  
1160 ARC-1160 16-Port PCI-X to SATA RAID Controller  
1170 ARC-1170 24-Port PCI-X to SATA RAID Controller  
1201 ARC-1200 2-Port PCI-Express to SATA II RAID Controller

1203 ARC-1203 2/4/8 Port PCIe 2.0 to SATA 6Gb RAID Controller  
1210 ARC-1210  
4-Port PCI-Express to SATA RAID Controller  
1214 ARC-12x4 PCIe 2.0 to SAS/SATA 6Gb RAID Controller  
17d3 1214 ARC-1214 4-Port PCIe 2.0 to SAS/SATA 6Gb RAID Controller  
17d3 1224 ARC-1224 8-Port PCIe 2.0 to SAS/SATA 6Gb RAID Controller  
17d3 1264 ARC-1264 12/16 Port PCIe 2.0 to SATA 6Gb RAID Controller  
17d3 1284 ARC-1284 24 Port PCIe 2.0 to SATA 6Gb RAID Controller  
1220 ARC-1220 8-Port PCI-Express to SATA RAID Controller  
1222 ARC-1222 8-Port PCI-Express to SAS/SATA II RAID Controller  
1230 ARC-1230 12-Port PCI-Express to SATA RAID Controller  
1260 ARC-1260 16-Port PCI-Express to SATA RAID Controller  
1280 ARC-1280/1280ML 24-Port PCI-Express to SATA II RAID Controller  
17d3 1221 ARC-1221 8-Port PCI-Express to SATA RAID Controller  
1300 ARC-1300ix-16 16-Port PCI-Express to SAS Non-RAID Host Adapter  
1320 ARC-1320 8/16 Port PCIe 2.0 to SAS/SATA 6Gb Non-RAID Host Adapter  
1330 ARC-1330 16 Port PCIe 3.0 to SAS/SATA 12Gb Non-RAID Host Adapter  
1680 ARC-1680 series PCIe  
to SAS/SATA 3Gb RAID Controller  
17d3 1212 ARC-1212 4-Port PCIe to SAS/SATA II RAID Controller  
17d3 1222 ARC-1222 8-Port PCIe to SAS/SATA 3Gb RAID Controller  
17d3 1680 ARC-1680 8/12/16/24 Port PCIe to SAS/SATA 3Gb RAID Controller  
1880 ARC-188x series PCIe 2.0/3.0 to SAS/SATA 6/12Gb RAID Controller  
17d3 1213 ARC-1213 4-Port PCIe 2.0 to SAS/SATA 6Gb RAID Controller  
17d3 1215 ARC-1215 4-Port PCIe 3.0 to SAS/SATA 6Gb RAID Controller  
17d3 1216 ARC-1216 4-Port PCIe 3.0 to SAS/SATA 12Gb RAID Controller  
17d3 1223 ARC-1223 8-Port PCIe 2.0 to SAS/SATA 6Gb RAID Controller  
17d3 1225 ARC-1225 8-Port PCIe 3.0 to SAS/SATA 6Gb RAID Controller  
17d3 1226 ARC-1226 8-Port PCIe 3.0 to SAS/SATA 12Gb RAID Controller  
17d3 1880 ARC-1880 8/12/16/24 Port PCIe 2.0 to SAS/SATA 6Gb RAID Controller  
17d3 1882 ARC-1882 8/12/16/24 Port PCIe 3.0 to SAS/SATA 6Gb RAID Controller  
17d3 1883 ARC-1883 8/12/16/24 Port PCIe 3.0 to SAS/SATA 12Gb RAID Controller  
1884 ARC-1884 series PCIe 3.0  
to SAS/SATA 12/6Gb RAID Controller  
1886 ARC-1886 series PCIe 4.0 to NVMe/SAS/SATA 16/12/6Gb RAID Controller  
17d3 1686 ARC-1686 PCIe 4.0 to NVMe/SAS/SATA 16/12/6Gb RAID Controller  
17d3 1886 ARC-1886 PCIe 4.0 to NVMe/SAS/SATA 16/12/6Gb RAID Controller  
188a ARC-1886 series PCIe 4.0 to NVMe/SAS/SATA 16/12/6Gb RAID Controller  
17d3 1217 ARC-1217 4-Port PCIe 4.0 to SAS/SATA 12/6Gb RAID Controller  
17d3 1227 ARC-1227 8-Port PCIe 4.0 to SAS/SATA 12/6Gb RAID Controller  
17d3 1686 ARC-1686 PCIe 4.0 to NVMe/SAS/SATA 16/12/6Gb RAID Controller  
17d3 1688 ARC-1688 PCIe 4.0 to NVMe/SAS/SATA 16/12/6Gb RAID Controller  
17d3 1886 ARC-1886 PCIe 4.0 to NVMe/SAS/SATA 16/12/6Gb RAID Controller  
# nee Neterion Inc., previously S2io Inc.  
17d5 Exar Corp.  
5731 Xframe 10-Gigabit Ethernet PCI-X  
5732 Xframe II 10-Gigabit Ethernet PCI-X 2.0  
5831 Xframe 10-Gigabit Ethernet PCI-X

103c 12d5 PCI-X 133MHz 10GbE SR Fiber  
10a9 8020 Single Port 10-Gigabit Ethernet (PCI-X, Fiber)  
10a9 8024  
Single Port 10-Gigabit Ethernet (PCI-X, Fiber)  
5832 Xframe II 10-Gigabit Ethernet PCI-X 2.0  
103c 1337 PCI-X 266MHz 10GigE SR [AD385A]  
10a9 8021 Single Port 10-Gigabit Ethernet II (PCI-X, Fiber)  
17d5 6020 Xframe II SR  
17d5 6021 Xframe II SR, Low Profile  
17d5 6022 Xframe E SR  
17d5 6420 Xframe II LR  
17d5 6421 Xframe II LR, Low Profile  
17d5 6422 Xframe E LR  
17d5 6c20 Xframe II CX4  
17d5 6c21 Xframe II CX4, Low Profile  
17d5 6c22 Xframe E CX4  
5833 X3100 Series 10 Gigabit Ethernet PCIe  
17d5 6030 X3110 Single Port SR  
17d5 6031 X3120 Dual Port SR  
17d5 6430 X3110 Single Port LR  
17d5 6431 X3120 Dual Port LR  
17d5 7030 X3110 Single Port LRM  
17d5 7031 X3120 Dual Port LRM  
17d5 7430 X3110 Single Port 10GBase-T  
17d5 7431 X3120 Dual Port 10GBase-T  
17d5 7830 X3110 Single Port 10GBase-CR  
17d5 7831 X3120 Dual Port 10GBase-CR  
17db Cray Inc  
0101 XT Series [Seastar] 3D Toroidal Router  
0501 Cassini 1 [Slingshot 200Gb]  
17de KWorld Computer  
Co. Ltd.  
17df Dini Group  
1864 Virtex4 PCI Board w/ QL5064 Bridge [DN7000K10PCI/DN8000K10PCI/DN8000K10PSX/NOTUS]  
1865 Virtex4 ASIC Emulator [DN8000K10PCIe]  
1866 Virtex4 ASIC Emulator Cable Connection [DN8000K10PCI]  
1867 Virtex4 ASIC Emulator Cable Connection [DN8000K10PCIe]  
1868 Virtex4 ASIC Emulator [DN8000K10PCIe-8]  
1900 Virtex5 PCIe ASIC Emulator  
[DN9000K10PCIe8T/DN9002K10PCIe8T/DN9200K10PCIe8T/DN7006K10PCIe8T/DN7406K10PCIe8T]  
1901 Virtex5 PCIe ASIC Emulator Large BARs  
[DN9000K10PCIe8T/DN9002K10PCIe8T/DN9200K10PCIe8T/DN7006K10PCIe8T/DN7406K10PCIe8T]  
1902 Virtex5 PCIe ASIC Emulator Low Power [Interceptor]  
1903 Spartan6 PCIe FPGA Accelerator Board [DNBFCS12PCIe]  
1904 Virtex6 PCIe ASIC Emulation Board [DNDUALV6\_PCIe4]  
1905 Virtex6 PCIe ASIC Emulation Board [DNV6F6PCIe]  
1906 Virtex6 PCIe ASIC Emulation Board [DN2076K10]  
1907 Virtex6 PCIe ASIC Emulation Board [DNV6F2PCIe]



1908 Virtex6 PCIe ASIC Emulation Board Large BARs[DNV6F2PCIe]  
1909 Kintex7 PCIe FPGA  
Accelerator Board [DNK7F5PCIe]  
190a Virtex7 PCIe ASIC Emulation Board [DNV7F1A]  
190b Stratix5 PCIe ASIC Emulation Board [DNS5GXF2]  
190c Virtex7 PCIe ASIC Emulation Board [DNV7F2A]  
190d Virtex7 PCIe ASIC Emulation Board [DNV7F4A]  
190e Virtex7 PCIe ASIC Emulation Board [DNV7F2B]  
190f KintexUS PCIe MainRef Design [DNPCIe\_40G\_KU\_LL]  
1910 VirtexUS ASIC Emulation Board [DNVUF4A]  
1911 VirtexUS PCIe ASIC Emulation Board [DNVU\_F2PCIe]  
1912 KintexUS PCIe MainRef Design [DNPCIe\_40G\_KU\_LL\_QSFP]  
1913 VirtexUS ASIC Emulation Board [DNVUF1A]  
1914 VirtexUS ASIC Emulation Board [DNVUF2A]  
1915 Arria10 PCIe MainRef Design [DNPCIe\_80G\_A10\_LL]  
1916 VirtexUS PCIe Accelerator Board [DNVUF2\_HPC\_PCIe]  
1917 UltrascalePlus PCIe Accelerator Board [DNPCIe\_400G\_VU\_LL]  
1918 VirtexUS+ ASIC Emulation Board [DNVUPF4A]  
1919 UltrascalePlus PCIe Accelerator Board [DNPCIe\_400G\_VUP\_HBM\_LL]  
1a00 Virtex6 PCIe DMA Netlist Design  
1a01 Virtex6 PCIe Darklite Design [DNPCIe\_HXT\_10G\_LL]  
1a02  
Virtex7 PCIe DMA Netlist Design  
1a03 Kintex7 PCIe Darklite Design [DNPCIe\_K7\_10G\_LL]  
1a05 Stratix5 PCIe Darklite Design [DNS5GX\_F2]  
1a06 VirtexUS PCIe DMA Netlist Design  
1a07 KintexUS PCIe Darklite Design [DNPCIe\_40G\_KU\_LL]  
1a08 KintexUS PCIe Darklite Design [DNPCIe\_40G\_KU\_LL\_QSFP]  
1a09 Arria10 PCIe Darklite Design [DNPCIe\_80G\_A10\_LL]  
1a0a VirtexUS PCIe Darklite Design [DNVUF2\_HPC\_PCIe]  
1a0b UltrascalePlus PCIe Darklite Design [DNPCIe\_400G\_VU\_LL]  
1a0c KintexUS PCIe DRAM Packet Capture Design [DNPCIe\_40G\_KU\_LL]  
1a0d KintexUS PCIe DRAM Packet Capture Design [DNPCIe\_40G\_KU\_LL\_2QSFP]  
1a0e UltrascalePlus PCIe Darklite Design [DNPCIe\_400G\_VUP\_HBM\_LL]  
17e4 Sectra AB  
0001 KK671 Cardbus encryption board  
0002 KK672 Cardbus encryption board  
# nee Entropic Communications Inc.  
17e6 MaxLinear  
0010 EN2010 [c.Link] MoCA Network Controller (Coax, PCI interface)  
0011 EN2010 [c.Link] MoCA Network Controller (Coax, MPEG interface)  
0021 EN2210 [c.Link] MoCA Network Controller  
(Coax)  
0025 EN2510 [c.Link] MoCA Network Controller (Coax, PCIe interface)  
0027 EN2710 [c.Link] MoCA 2.0 Network Controller (Coax, PCIe interface)  
3700 MoCA 2.0 Network Controller (Coax, PCIe interface)  
3710 MoCA 2.5 Network Controller (Coax, PCIe interface)  
17ee Connect Components Ltd

17f2 Albatron Corp.  
17f3 RDC Semiconductor, Inc.  
1010 R1010 IDE Controller  
1011 R1011 IDE Controller  
1012 R1012 IDE Controller  
1031 PCI/PCI-X to PCI-E Bridge  
# Integrated in Vortex86EX, Vortex86EX2 SoC  
1070 CAN Bus Controller  
# Integrated in Vortex86EX, Vortex86EX2 SoCs  
1331 Motion Control Interface  
# Found in the Vortex86EX2 SoC  
1930 Hybrid Function Control Register  
# IGP = on-chip integrated in the MSTI-PMX-1000 (Vortex86MX).  
2010 RDC M2010 VGA-compatible graphics adapter  
2012 M2012/R3308 VGA-compatible graphics adapter  
# IGP = on-chip integrated in the Vortex86DX3. Basic 2D accel. UMA architecture.  
2015 RDC M2015 VGA-compatible graphics adapter  
3010 R3010 HD Audio  
Controller  
# Found in the Vortex86EX SoC  
6011 R6011 ISA Bridge  
# Found in the Vortex86EX2 SoC  
6013 R6013 ISA Bridge  
6020 R6020 North Bridge  
6021 R6021 Host Bridge  
# Integrated in the Vortex86DX2 SoC  
6022 R6022 Host Bridge  
# Found in the Vortex86DX3 SoC  
6023 R6023 Host Bridge  
# Found in the Vortex86EX SoC  
6025 R6025 Host Bridge  
# Found in the Vortex86EX2 SoC  
6026 R6026 Host Bridge  
6030 R6030 ISA Bridge  
6031 R6031 ISA Bridge  
# Found in the Vortex86DX3 SoC  
6035 R6035 ISA Bridge  
# Found in MSTI-PMX-1000 (Vortex86MX) SoC.  
6036 R6036 ISA Bridge  
6040 R6040 MAC Controller  
6060 R6060 USB 1.1 Controller  
6061 R6061 USB 2.0 Controller  
17f7 Topdek Semiconductor Inc.  
17f9 Gemtek Technology Co., Ltd  
17fc IOGEAR, Inc.  
17fe InProComm Inc.  
2120 IPN 2120 802.11b  
1737 0020 WMP11 v4 802.11b Wireless-B PCI Adapter

2220 IPN 2220 802.11g  
1468 0305 T60N871 802.11g Mini PCI Wireless Adapter  
1737 0029 WPC54G v4 802.11g Wireless-G Notebook Adapter  
17ff Benq Corporation  
1800  
Qualcore Logic Inc.  
1100 Nanospeed Trading Gateway  
1803 ProdaSafe GmbH  
1804 Ralink corp. (wrong ID)  
3060 RT3060 Wireless 802.11n 1T/1R  
1805 Euresys S.A.  
0201 PICOLO Alert PCI  
0202 PICOLO Diligent  
0204 PICOLO Alert-RC  
0205 PICOLO Alert PCIe  
0206 PICOLO Diligent Plus PCIe  
0207 PICOLO Alert-RC PCIe  
0300 GRABLINK Expert 2  
0301 GRABLINK Quickpack ColorScan  
0302 GRABLINK Value cPCI  
0303 GRABLINK Expert 2 cPCI  
0305 GRABLINK Avenue  
0306 GRABLINK Quickpack CFA  
0307 GRABLINK Express  
0308 GRABLINK Quickpack CFA PCIe  
0309 GRABLINK Quickpack CFA PCIe (Recovery)  
030a GRABLINK Full  
030b GRABLINK Full (Recovery)  
030c GRABLINK DualBase  
030d GRABLINK DualBase (Recovery)  
030e GRABLINK Base  
030f GRABLINK Base (Recovery)  
0310 GRABLINK Full XR  
0311 GRABLINK Full XR (Recovery)  
0401 DOMINO Iota  
0402 DOMINO Alpha 2  
0403 DOMINO Harmony  
0404 DOMINO Melody  
0407 DOMINO Symphony  
0408 DOMINO Symphony PCIe  
1809 Lumanate, Inc.  
180c IEI Integration  
Corp  
1813 Ambient Technologies Inc  
4000 HaM controllerless modem  
16be 0001 V9x HAM Data Fax Modem  
4100 HaM plus Data Fax Modem  
16be 0002 V9x HAM 1394

1814 Ralink corp.  
0101 Wireless PCI Adapter RT2400 / RT2460  
1043 0127 WiFi-b add-on Card  
1371 0010 Minitar MNW2BPCI Wireless PCI Card  
1462 6828 PC11B2 (MS-6828) Wireless 11b PCI Card  
0200 RT2500 802.11g PCI [PC54G2]  
0201 RT2500 Wireless 802.11bg  
1043 130f WL-130g  
1186 3c00 DWL-G650X Wireless 11g CardBus Adapter  
1371 001e CWC-854 Wireless-G CardBus Adapter  
1371 001f CWM-854 Wireless-G Mini PCI Adapter  
1371 0020 CWP-854 Wireless-G PCI Adapter  
1458 e381 GN-WMKG 802.11b/g Wireless CardBus Adapter  
1458 e931 GN-WIKG 802.11b/g mini-PCI Adapter  
1462 6833 Unknown 802.11g mini-PCI Adapter  
1462 6835 Wireless 11G CardBus CB54G2  
1737 0032 WMP54G v4.0 PCI Adapter  
1799 700a F5D7000 v2000/v3000 Wireless G Desktop Card  
1799 701a F5D7010 v2000/v3000 Wireless G Notebook Card  
1814 2560 RT2500  
Wireless 802.11bg  
182d 9073 WL-115 Wireless Network PCI Adapter  
185f 22a0 CN-WF513 Wireless Cardbus Adapter  
18eb 5312 WL531P IEEE 802.11g PCI Card-EU  
1948 3c00 C54RC v1 Wireless 11g CardBus Adapter  
1948 3c01 C54Ri v1 Wireless 11g PCI Adapter  
0300 Wireless Adapter Canyon CN-WF511  
0301 RT2561/RT61 802.11g PCI  
1186 3c08 AirPlus G DWL-G630 Wireless Cardbus Adapter (rev.E1)  
1186 3c09 DWL-G510 Rev C  
13d1 abe3 miniPCI Pluscom 802.11 a/b/g  
1458 e933 GN-WI01GS  
1458 e934 GN-WP01GS  
1462 b833 MP54G5 (MS-6833B)  
1737 0055 WMP54G v4.1  
1799 700e F5D7000 v6000 Wireless G Desktop Card  
1799 701e F5D7010 v6000 Wireless G Notebook Card  
17f9 0012 AWLC3026T 802.11g Wireless CardBus Adapter  
1814 2561 EW-7108PCg/EW-7128g  
0302 RT2561/RT61 rev B 802.11g  
1186 3a71 DWA-510 Wireless G Desktop Adapter  
1186 3c08 AirPlus G DWL-G630 Wireless Cardbus Adapter (rev.E2)  
1186 3c09 AirPlus G DWL-G510 Wireless Network Adapter (Rev.C)  
1462 b834 PC54G3 Wireless  
11g PCI Card  
1948 3c23 C54RC v2 Wireless 11g CardBus Adapter  
1948 3c24 C54Ri v2 Wireless 11g PCI Adapter  
0401 RT2600 802.11 MIMO

1737 0052 WPC54GR v1 802.11g Wireless-G Notebook Adapter with RangeBooster  
17f9 0011 WPCR-137G 802.11bg Wireless CardBus Adapter  
17f9 0016 WPIR-119GH 802.11bg Wireless Desktop Adapter  
0601 RT2800 802.11n PCI  
1799 801c F5D8011 v3 802.11n N1 Wireless Notebook Card  
187e 3412 NWD-310N 802.11n Wireless PCI Adapter  
0681 RT2890 Wireless 802.11n PCIe  
1458 e939 GN-WS30N-RH 802.11bgn Mini PCIe Card  
0701 RT2760 Wireless 802.11n 1T/2R  
1737 0074 WMP110 v2 802.11n RangePlus Wireless PCI Adapter  
0781 RT2790 Wireless 802.11n 1T/2R PCIe  
11ad 7600 HP WN7600R  
1814 2790 RT2790 Wireless 802.11n 1T/2R PCIe  
3060 RT3060 Wireless 802.11n 1T/1R  
1186 3c04 DWA-525 Wireless N 150 Desktop Adapter (rev.A1)  
3062 RT3062 Wireless 802.11n 2T/2R  
3090 RT3090 Wireless 802.11n 1T/1R PCIe  
13bd 1057 GN-WS32L-RH Half-size Mini PCIe Card  
3091  
RT3091 Wireless 802.11n 1T/2R PCIe  
3092 RT3092 Wireless 802.11n 2T/2R PCIe  
3290 RT3290 Wireless 802.11n 1T/1R PCIe  
103c 18ec Ralink RT3290LE 802.11bgn 1x1 Wi-Fi and Bluetooth 4.0 Combo Adapter  
3298 RT3290 Bluetooth  
103c 18ec Ralink RT3290LE 802.11bgn 1x1 Wi-Fi and Bluetooth 4.0 Combo Adapter  
3592 RT3592 Wireless 802.11abgn 2T/2R PCIe  
359f RT3592 PCIe Wireless Network Adapter  
5360 RT5360 Wireless 802.11n 1T/1R  
1186 3c05 DWA-525 Wireless N 150 Desktop Adapter (rev.A2)  
20f4 703a TEW-703PI N150 Wireless PCI Adapter  
5362 RT5362 PCI 802.11n Wireless Network Adapter  
5390 RT5390 Wireless 802.11n 1T/1R PCIe  
103c 1636 U98Z077.00 Half-size Mini PCIe Card  
5392 RT5392 PCIe Wireless Network Adapter  
539b RT5390R 802.11bgn PCIe Wireless Network Adapter  
539f RT5390 [802.11 b/g/n 1T1R G-band PCI Express Single Chip]  
103c 1637 Pavilion DM1Z-3000 PCIe wireless card  
5592 RT5592 PCIe Wireless Network Adapter  
e932 RT2560F 802.11 b/g PCI  
1815 Devolo AG  
1820 InfiniCon  
Systems Inc.  
1822 Twinhan Technology Co. Ltd  
4e35 Mantis DTV PCI Bridge Controller [Ver 1.0]  
182d SiteCom Europe BV  
# HFC-based ISDN card  
3069 ISDN PCI DC-105V2  
9790 WL-121 Wireless Network Adapter 100g+ [Ver.3]

182e Raza Microelectronics, Inc.  
0008 XLR516 Processor  
# Strange vendor ID used by BCM5785 when in RAID mode  
182f Broadcom  
# HT1000 uses 3 IDs 1166:024a (Native SATA Mode), 1166:024b (PATA/IDE Mode), 182f:000b (RAID Mode)  
depends on SATA BIOS setting  
000b BCM5785 [HT1000] SATA (RAID Mode)  
1830 Credence Systems Corporation  
8000 CPIIn  
8001 CPIId  
8002 CPIx  
8003 CPIq  
183b MikroM GmbH  
08a7 MVC100 DVI  
08a8 MVC101 SDI  
08a9 MVC102 DVI+Audio  
08b0 MVC200-DC  
1846 Alcatel-Lucent  
1849 ASRock Incorporation  
9602 RS780/RS880 PCI to PCI bridge (int gfx)  
184a Thales Computers  
1100 MAX II cPLD  
1850 Advantest Corporation  
0048 EK220-66401 Computer Interface Card  
1851 Microtune, Inc.  
1852 Anritsu Corp.  
1853 SMSC Automotive Infotainment System Group  
1854  
LG Electronics, Inc.  
185b Compro Technology, Inc.  
1489 VideoMate Vista T100  
185f Wistron NeWeb Corp.  
1864 SilverBack  
2110 ISNAP 2110  
1867 Topspin Communications  
5a44 MT23108 InfiniHost HCA  
5a45 MT23108 InfiniHost HCA flash recovery  
5a46 MT23108 InfiniHost HCA bridge  
6278 MT25208 InfiniHost III Ex (Tavor compatibility mode)  
6282 MT25208 InfiniHost III Ex  
186c Humusoft, s.r.o.  
0612 AD612 Data Acquisition Device  
0614 MF614 Multifunction I/O Card  
0622 AD622 Data Acquisition Device  
0624 MF624 Multifunction I/O PCI Card  
0625 MF625 3-phase Motor Driver  
0634 MF634 Multifunction I/O PCIe Card  
0644 MF644 Multifunction I/O Thb Card

186f WiNRADiO Communications  
1876 L-3 Communications  
a101 VignaWATCH PCI  
a102 VignaWATCH PMC  
a103 Vigna I/O  
187e ZyXEL Communications Corporation  
3403 ZyAir G-110 802.11g  
340e M-302 802.11g XtremeMIMO  
1885 Avvida Systems Inc.  
1888 Varisys Ltd  
0301 VMFX1 FPGA PMC module  
0601 VSM2 dual PMC carrier  
0710 VS14x series  
PowerPC PCI board  
0720 VS24x series PowerPC PCI board  
188a Ample Communications, Inc  
1890 Egenera, Inc.  
1894 KNC One  
1896 B&B Electronics Manufacturing Company, Inc.  
4202 MIport 3PCIU2 2-port Serial  
4204 MIport 3PCIU4 4-port Serial  
4208 MIport 3PCIU8 8-port Serial  
4211 MIport 3PCIOU1 1-port Isolated Serial  
4212 MIport 3PCIOU2 2-port Isolated Serial  
4214 MIport 3PCIOU4 4-port Isolated Serial  
bb10 3PCI2 2-Port Serial  
bb11 3PCIO1 1-Port Isolated Serial  
1897 AMtek  
18a1 Astute Networks Inc.  
18a2 Stretch Inc.  
0002 VRC6016 16-Channel PCIe DVR Card  
18a3 AT&T  
18ac DVICO Corporation  
d500 FusionHDTV 5  
d800 FusionHDTV 3 Gold  
d810 FusionHDTV 3 Gold-Q  
d820 FusionHDTV 3 Gold-T  
db30 FusionHDTV DVB-T Pro  
db40 FusionHDTV DVB-T Hybrid  
db78 FusionHDTV DVB-T Dual Express  
18b8 Ammasso  
b001 AMSO 1100 iWARP/RDMA Gigabit Ethernet Coprocessor  
# formally Info-Tek Corp.  
18bc GeCube Technologies, Inc.  
18c3 Micronas Semiconductor Holding AG  
0720 nGene PCI-Express  
Multimedia Controller  
1461 032e Hybrid M779 PCI-E

# Nee Octigabay System  
18c8 Cray Inc  
18c9 ARVOO Engineering BV  
18ca XGI Technology Inc. (eXtreme Graphics Innovation)  
0020 Z7/Z9 (XG20 core)  
0021 Z9s/Z9m (XG21 core)  
0027 Z11/Z11M  
0040 Volari V3XT/V5/V8  
0047 Volari 8300 (chip: XP10, codename: XG47)  
# should be 182d  
18d2 Sitecom Europe BV (Wrong ID)  
# Sitecom HFC-S based ISDN controller card DC-105v2  
3069 DC-105v2 ISDN controller  
18d4 Celestica  
18d8 Dialogue Technology Corp.  
18dd Artimi Inc  
4c6f Artimi RTMI-100 UWB adapter  
18df LeWiz Communications  
18e6 MPL AG  
0001 OSCI [Octal Serial Communication Interface]  
18eb Advance Multimedia Internet Technology, Inc.  
18ec Cesnet, z.s.p.o.  
6d05 ML555  
18ec 0100 NIC (ethernet interfaces)  
18ec 0200 NIC (szedata2) 4x1G  
18ec 0201 NIC (szedata2) 2x10G  
18ec 0300 NIFIC (szedata2) 4x1G  
18ec 0302 NIFIC (szedata2) 2x10G  
18ec 4200 Flexible FlowMon (szedata2) 1x10G  
18ec ff00 Testing design  
18ec ff01 Boot  
design  
c006 COMBO6  
18ec d001 COMBO-4MTX  
18ec d002 COMBO-4SFP  
18ec d003 COMBO-4SFPRO  
18ec d004 COMBO-2XFP  
c032 COMBO-LXT110  
18ec 0100 NIC (ethernet interfaces)  
18ec 0200 NIC (szedata2) 4x1G  
18ec 0201 NIC (szedata2) 2x10G  
18ec 0300 NIFIC (szedata2) 4x1G  
18ec 0302 NIFIC (szedata2) 2x10G  
18ec 4200 Flexible FlowMon (szedata2) 1x10G  
18ec ff00 Testing design  
18ec ff01 Boot design  
c045 COMBO6E  
c050 COMBO-PTM



c058 COMBO6X  
18ec d001 COMBO-4MTX  
18ec d002 COMBO-4SFP  
18ec d003 COMBO-4SFPRO  
18ec d004 COMBO-2XFP  
c132 COMBO-LXT155  
18ec 0100 NIC (ethernet interfaces)  
18ec 0200 NIC (szedata2) 4x1G  
18ec 0201 NIC (szedata2) 2x10G  
18ec 0300 NIFIC (szedata2) 4x1G  
18ec 0302 NIFIC (szedata2) 2x10G  
18ec 4200 Flexible FlowMon (szedata2) 1x10G  
18ec ff00 Testing design  
18ec ff01 Boot design  
c232 COMBO-FXT100  
18ec 0100 NIC (ethernet interfaces)  
18ec 0200 NIC (szedata2) 4x1G  
18ec 0201 NIC (szedata2) 2x10G  
18ec 0300 NIFIC  
(szedata2) 4x1G  
18ec 0302 NIFIC (szedata2) 2x10G  
18ec 4200 Flexible FlowMon (szedata2) 1x10G  
18ec ff00 Testing design  
18ec ff01 Boot design  
c400 COMBO-400G1  
18ee Chenming Mold Ind. Corp.  
18f1 Spectrum GmbH  
18f4 Napatech A/S  
0031 NT20X Network Adapter  
0051 NT20X Capture Card  
0061 NT20E Capture Card  
0064 NT20E Inline Card  
0071 NT4E Capture Card  
0074 NT4E Inline Card  
0081 NT4E 4-port Expansion Card  
0091 NT20X Capture Card [New Rev]  
00a1 NT4E-STD Capture Card  
00a4 NT4E-STD Inline Card  
# 8 x 1 Gbps / 10 Gbps PCIe Optical Bypass Adapter  
00b1 NTBPE Optical Bypass Adapter  
00c5 NT20E2 Network Adapter 2x10Gb  
00d5 NT40E2-4 Network Adapter 4x10Gb  
00e5 NT40E2-1 Network Adapter 1x40Gb  
# 4-Port Adapter for 1 GbE In-Line Bypass Applications  
00f5 NT4E2-4T-BP Network Adapter 4x1Gb with Electrical Bypass  
0105 NT4E2-4-PTP Network Adapter 4x1Gb  
0115 NT20E2-PTP Network Adapter 2x10Gb  
0125 NT4E2-4-PTP Network Adapter 4x1Gb

0135 NT20E2-PTP Network Adapter  
2x10Gb  
0145 NT40E3-4-PTP Network Adapter 4x10Gb  
0155 NT100E3-1-PTP Network Adapter 1x100Gb  
0165 NT80E3-2-PTP Network Adapter 2x40Gb  
0175 NT20E3-2-PTP Network Adapter 2x10Gb  
0185 NT40A01 Network Adapter  
01a5 NT200A01 Network Adapter  
01c5 NT200A02 Network Adapter  
01d5 NT50B01 Network Adapter  
01e5 NT100A01 Network Adapter  
0215 NT400D11 Network Adapter  
0225 NT40A11 Network Adapter  
18f6 NextIO  
1000 [Nexsis] Switch Virtual P2P PCIe Bridge  
1001 [Texsis] Switch Virtual P2P PCIe Bridge  
1050 [Nexsis] Switch Virtual P2P PCI Bridge  
1051 [Texsis] Switch Virtual P2P PCI Bridge  
2000 [Nexsis] Switch Integrated Mgmt. Endpoint  
2001 [Texsis] Switch Integrated Mgmt. Endpoint  
18f7 Commtech, Inc.  
0001 ESCC-PCI-335 Serial PCI Adapter [Fastcom]  
0002 422/4-PCI-335 Serial PCI Adapter [Fastcom]  
0003 232/4-1M-PCI Serial PCI Adapter [Fastcom]  
0004 422/2-PCI-335 Serial PCI Adapter [Fastcom]  
0005 IGESCC-PCI-ISO/1 Serial PCI Adapter [Fastcom]  
000a 232/4-PCI-335 Serial  
PCI Adapter [Fastcom]  
000b 232/8-PCI-335 Serial PCI Adapter [Fastcom]  
000f FSCC Serial PCI Adapter [Fastcom]  
0010 GSCC Serial PCI Adapter [Fastcom]  
0011 QSSB Serial PCI Adapter [Fastcom]  
0014 SuperFSCC Serial PCI Adapter [Fastcom]  
0015 SuperFSCC-104-LVDS Serial PC/104+ Adapter [Fastcom]  
0016 FSCC-232 RS-232 Serial PCI Adapter [Fastcom]  
# Software UARTs  
0017 SuperFSCC-104 Serial PC/104+ Adapter [Fastcom]  
# Software UARTs  
0018 SuperFSCC/4 Serial PCI Adapter [Fastcom]  
# Software UARTs  
0019 SuperFSCC Serial PCI Adapter [Fastcom]  
001a SuperFSCC-LVDS Serial PCI Adapter [Fastcom]  
# Software UARTs  
001b FSCC/4 Serial PCI Adapter [Fastcom]  
# RS-644 Only  
001c SuperFSCC/4-LVDS Serial PCI Adapter [Fastcom]  
# Software UARTs  
001d FSCC Serial PCI Adapter [Fastcom]

001e SuperFSCC/4 Serial PCIe Adapter [Fastcom]  
001f SuperFSCC/4 Serial cPCI Adapter [Fastcom]  
0020 422/4-PCIe Serial PCIe Adapter [Fastcom]  
0021 422/8-PCIe Serial PCIe Adapter [Fastcom]  
# RS-644 Only  
0022  
SuperFSCC/4-LVDS Serial PCIe Adapter [Fastcom]  
# Software UARTs  
0023 SuperFSCC/4 Serial cPCI Adapter [Fastcom]  
# RS-644 Only, Software UARTs  
0025 SuperFSCC/4-LVDS Serial PCI Adapter [Fastcom]  
# RS-644 Only, Software UARTs  
0026 SuperFSCC-LVDS Serial PCI Adapter [Fastcom]  
# Software UARTs  
0027 FSCC/4 Serial PCIe Adapter [Fastcom]  
18fb Resilience Corporation  
1904 Hangzhou Silan Microelectronics Co., Ltd.  
2031 SC92031 PCI Fast Ethernet Adapter  
8139 RTL8139D [Realtek] PCI 10/100BaseTX ethernet adaptor  
1905 Micronas USA, Inc.  
1912 Renesas Technology Corp.  
0002 SH7780 PCI Controller (PCIC)  
0011 SH7757 PCIe End-Point [PBI]  
0012 SH7757 PCIe-PCI Bridge [PPB]  
0013 SH7757 PCIe Switch [PS]  
0014 uPD720201 USB 3.0 Host Controller  
0015 uPD720202 USB 3.0 Host Controller  
001a SH7758 PCIe-PCI Bridge [PPB]  
001b SH7758 PCIe End-Point [PBI]  
001d SH7758 PCIe Switch [PS]  
1919 Soltek Computer Inc.  
1923 Sangoma Technologies Corp.  
0040 A200/Remora FXO/FXS Analog AFT card  
0100  
A104d QUAD T1/E1 AFT card  
0300 A101 single-port T1/E1  
0400 A104u Quad T1/E1 AFT  
1924 Solarflare Communications  
0703 SFC4000 rev A net [Solarstorm]  
10b8 0102 SMC10GPCIe-10BT (A2) [TigerCard]  
10b8 0103 SMC10GPCIe-10BT (A3) [TigerCard]  
10b8 0201 SMC10GPCIe-XFP (A1) [TigerCard]  
1924 0101 SFE4001-A1  
1924 0102 SFE4001-A2  
1924 0103 SFE4001-A3  
1924 0201 SFE4002-A1  
1924 0301 SFE4003-A1  
1924 0302 SFE4003-A2

1924 0303 SFE4003-A3  
1924 0304 SFE4003-A4  
1924 0500 SFE4005-A0  
0710 SFC4000 rev B [Solarstorm]  
10b8 0103 SMC10GPCIe-10BT (A3) [TigerCard]  
10b8 0201 SMC10GPCIe-XFP (A1) [TigerCard]  
1924 0102 SFE4001-A2  
1924 0103 SFE4001-A3  
1924 0201 SFE4002-A1  
1924 0302 SFE4003-A2  
1924 0303 SFE4003-A3  
1924 0304 SFE4003-A4  
1924 0500 SFE4005-A0  
1924 5102 SFN4111T-A2  
1924 5103 SFN4111T-R3  
1924 5104 SFN4111T-R4  
1924 5105 SFN4111T-R5  
1924 5201 SFN4112F-R1  
1924 5202 SFN4112F-R2  
0803 SFC9020 10G Ethernet Controller  
1014  
0478 2-port 10GbE Low-Latency (R7)  
1014 0479 2-port 10GbE OpenOnload (R7)  
1014 04a7 Solarflare 10Gb Low-latency Dual-port HBA (R7)  
1014 04a8 Solarflare 10Gb Dual-port HBA (R7)  
103c 2132 Ethernet 10Gb 2-port 570FLR-SFP+ Adapter (R1)  
103c 2136 Ethernet 10Gb 2-port 570SFP+ Adapter (R7)  
1924 1201 SFA6902F-R1 SFP+ AOE Adapter  
1924 6200 SFN5122F-R0 SFP+ Server Adapter  
1924 6201 SFN5122F-R1 SFP+ Server Adapter  
1924 6202 SFN5122F-R2 SFP+ Server Adapter  
1924 6204 SFN5122F-R4 SFP+ Server Adapter  
1924 6205 SFN5122F-R5 SFP+ Server Adapter  
1924 6206 SFN5122F-R6 SFP+ Server Adapter  
1924 6207 SFN5122F-R7 SFP+ Server Adapter  
1924 6210 SFN5322F-R0 SFP+ Precision Time Synchronization Server Adapter  
1924 6211 SFN5322F-R1 SFP+ Precision Time Synchronization Server Adapter  
1924 6217 SFN5322F-R7 SFP+ Precision Time Synchronization Server Adapter  
1924 6227 SFN6122F-R7 SFP+ Server Adapter  
1924 6237 SFN6322F-R7 SFP+ Precision Time Synchronization Server  
Adapter  
1924 6501 SFN5802K-R1 Mezzanine Adapter  
1924 6511 SFN5814H-R1 Mezzanine Adapter  
1924 6521 SFN5812H-R1 Mezzanine Adapter  
1924 6562 SFN6832F-R2 SFP+ Mezzanine Adapter  
1924 6a05 SFN5112F-R5 SFP+ Server Adapter  
1924 6a06 SFN5112F-R6 SFP+ Server Adapter  
1924 7206 SFN5162F-R6 SFP+ Server Adapter

1924 7207 SFN5162F-R7 SFP+ Server Adapter  
1924 7a06 SFN5152F-R6 SFP+ Server Adapter  
1924 7a07 SFN5152F-R7 SFP+ Server Adapter  
0813 SFL9021 10GBASE-T Ethernet Controller  
1924 6100 SFN5121T-R0 10GBASE-T Server Adapter  
1924 6102 SFN5121T-R2 10GBASE-T Server Adapter  
1924 6103 SFN5121T-R3 10GBASE-T Server Adapter  
1924 6104 SFN5121T-R4 10GBASE-T Server Adapter  
1924 6902 SFN5111T-R2 10GBASE-T Server Adapter  
1924 6904 SFN5111T-R4 10GBASE-T Server Adapter  
1924 7104 SFN5161T-R4 10GBASE-T Server Adapter  
1924 7904 SFN5151T-R4 10GBASE-T Server Adapter  
0903 SFC9120 10G Ethernet Controller  
1014 04cc SFN7122F-R2 2x10GbE SFP+ Flareon Ultra  
1924  
8002 SFN7122F-R1 SFP+ Server Adapter  
1924 8003 SFN7x41Q-R1 Flareon Ultra 7000 Series 10/40G Adapter  
1924 8006 SFN7022F-R1 SFP+ Server Adapter  
1924 8007 SFN7322F-R2 Precision Time SFP+ Server Adapter  
1924 8009 SFN7x22F-R2 Flareon Ultra 7000 Series 10G Adapter  
1924 800a SFN7x02F-R2 Flareon 7000 Series 10G Adapter  
1924 800c SFN7x22F-R3 Flareon Ultra 7000 Series 10G Adapter  
1924 800d SFN7x02F-R3 Flareon 7000 Series 10G Adapter  
1924 8010 SFA7942Q-R1 QSFP+ AOE Adapter  
1924 8015 SFA7942Q-A5-0-R1 QSFP+ AOE Adapter  
0923 SFC9140 10/40G Ethernet Controller  
1924 800b SFN7x42Q-R1 Flareon Ultra 7000 Series 10/40G Adapter  
1924 800e SFN7x42Q-R2 Flareon Ultra 7000 Series 10/40G Adapter  
1924 800f SFN7xx4F-R1 Flareon Ultra 7000 Series 10G Adapter  
0a03 SFC9220 10/40G Ethernet Controller  
1924 8011 SFN8022-R1 8000 Series 10G Adapter  
1924 8012 SFN8522-R1 8000 Series 10G Adapter  
1924 8013 SFN8042-R1 8000 Series 10/40G Adapter  
1924 8014 SFN8542-R1 8000 Series  
10/40G Adapter  
1924 8016 SFN8022-R2 8000 Series 10G Adapter  
1924 8017 SFN8522-R2 8000 Series 10G Adapter  
1924 8018 SFN8042-R2 8000 Series 10/40G Adapter  
1924 8019 SFN8542-R2 8000 Series 10/40G Adapter  
1924 801a SFN8722-R1 8000 Series OCP 10G Adapter  
1924 801b SFN8522-R3 8000 Series 10G Adapter  
1924 801c SFN8042-R3 8000 Series 10/40G Adapter  
1924 8021 SFN8041-R1 8000 Series 10/40G Adapter  
0b03 XtremeScale SFC9250 10/25/40/50/100G Ethernet Controller  
1924 801d x2522-R1 2000 Series 10/25G Adapter  
1924 801e x2542-R1 2000 Series 40/100G Adapter  
1924 8022 XtremeScale X2522 10G Network Adapter  
1924 8024 XtremeScale X2562 OCP 3.0 Dual Port SFP28

1924 8027 XtremeScale X2541 PCIe Single Port QSFP28  
1924 8028 XtremeScale X2522-25G Network Adapter  
1924 802a XtremeScale X2542 PCIe Dual Port QSFP28  
1924 802b XtremeScale X2552 OCP 2.0 Dual Port SFP28  
1924 802c XtremeScale X2522-25G PCIe Dual Port SFP28  
1924 802d XtremeScale X2562 OCP 3.0 Dual  
Port SFP28  
1803 SFC9020 10G Ethernet Controller (Virtual Function)  
1813 SFL9021 10GBASE-T Ethernet Controller (Virtual Function)  
1903 SFC9120 10G Ethernet Controller (Virtual Function)  
1923 SFC9140 10/40G Ethernet Controller (Virtual Function)  
1a03 SFC9220 10/40G Ethernet Controller (Virtual Function)  
1b03 XtremeScale SFC9250 10/25/40/50/100G Ethernet Controller (Virtual Function)  
6703 SFC4000 rev A iSCSI/Onload [Solarstorm]  
10b8 0102 SMC10GPCIe-10BT (A2) [TigerCard]  
10b8 0103 SMC10GPCIe-10BT (A3) [TigerCard]  
10b8 0201 SMC10GPCIe-XFP (A1) [TigerCard]  
1924 0101 SFE4001-A1  
1924 0102 SFE4001-A2  
1924 0103 SFE4001-A3  
1924 0201 SFE4002-A1  
1924 0301 SFE4003-A1  
1924 0302 SFE4003-A2  
1924 0303 SFE4003-A3  
1924 0304 SFE4003-A4  
1924 0500 SFE4005-A0  
c101 EF1-21022T [EtherFabric]  
192a BitMICRO Networks Inc.  
0008 RAMPART  
192e TransDimension  
1931 Option N.V.  
000c Qualcomm MSM6275 UMTS chip  
1932 DiBcom  
193c MAXIM Integrated Products  
193d New  
H3C Technologies Co., Ltd.  
193f AHA Products Group  
0001 AHA36x-PCIX  
0360 AHA360-PCIE  
0363 AHA363-PCIE  
0364 AHA364-PCIE  
0367 AHA367-PCIE  
0370 AHA370-PCIE  
0604 AHA604  
0605 AHA605  
3641 AHA3641  
3642 AHA3642  
6101 AHA6101

6102 AHA6102  
1942 ClearSpeed Technology plc  
e511 Advance X620 accelerator card  
e521 Advance e620 accelerator card  
1947 C-guys, Inc.  
4743 CG200 Dual SD/SDIO Host controller device  
1948 Alpha Networks Inc.  
194a DapTechnology B.V.  
1111 FireSpy3850  
1112 FireSpy450b  
1113 FireSpy450bT  
1114 FireSpy850  
1115 FireSpy850bT  
1200 FireTrac 3460bT  
1201 FireTrac 3460bT (fallback firmware)  
1202 FireTrac 3460bT  
1203 FireTrac 3460bT (fallback firmware)  
# nee Curtis, Inc.  
1954 One Stop Systems, Inc.  
1957 Freescale Semiconductor Inc  
0012 MPC8548E  
0013 MPC8548  
0014 MPC8543E  
0015 MPC8543  
0018 MPC8547E  
0019 MPC8545E  
001a MPC8545  
0020 MPC8568E  
0021 MPC8568  
0022 MPC8567E  
0023 MPC8567  
0030 MPC8533E  
0031 MPC8533  
0032 MPC8544E  
0033  
MPC8544  
0040 MPC8572E  
0041 MPC8572  
0050 MPC8536E  
0051 MPC8536  
0052 MPC8535E  
0053 MPC8535  
0060 MPC8569  
0061 MPC8569E  
0070 P2020E  
0071 P2020  
0078 P2010E  
0079 P2010

0080 MPC8349E  
0081 MPC8349  
0082 MPC8347E TBGA  
0083 MPC8347 TBGA  
0084 MPC8347E PBGA  
110a 4074 SIMATIC NET CP 1628  
0085 MPC8347 PBGA  
110a 4046 SIMATIC NET CP 1623  
0086 MPC8343E  
0087 MPC8343  
00b4 MPC8315E  
00b6 MPC8314E  
1a56 1101 Bigfoot Killer Xeno Pro Gigabit Ethernet Controller  
00c2 MPC8379E  
00c3 MPC8379  
00c4 MPC8378E  
00c5 MPC8378  
00c6 MPC8377E  
00c7 MPC8377  
0100 P1020E  
0101 P1020  
0102 P1021E  
0103 P1021  
0108 P1011E  
0109 P1011  
010a P1012E  
010b P1012  
0110 P1022E  
0111 P1022  
1c7f 5200 EB5200  
0118 P1013E  
0119 P1013  
0128 P1010  
0400 P4080E  
0401 P4080  
0408 P4040E  
0409 P4040  
041f P3041  
0420 QorIQ P5020 Communications Processor with security engine  
0421 QorIQ P5020 Communications Processor without security engine  
0428  
QorIQ P5010 Communications Processor with security engine  
0429 QorIQ P5010 Communications Processor without security engine  
0440 T4240 with security  
0441 T4240 without security  
0446 T4160 with security  
0447 T4160 without security  
0830 T2080 with security



0831 T2080 without security  
0838 T2081 with security  
0839 T2081 without security  
580c MPC5121e  
7010 MPC8641 PCI Host Bridge  
7011 MPC8641D PCI Host Bridge  
7018 MPC8610  
c006 MPC8308  
1a56 1201 Bigfoot Killer E2100 Gigabit Ethernet Controller  
# PCIe interface for emulator  
fc02 RedStone  
# CFI device over PCIe  
fc03 CFI  
1958 Faster Technology, LLC.  
1959 PA Semi, Inc  
a000 PA6T Core  
a001 PWRficient Host Bridge  
a002 PWRficient PCI-Express Port  
a003 PWRficient SMBus Controller  
a004 PWRficient 16550 UART  
a005 PWRficient Gigabit Ethernet  
a006 PWRficient 10-Gigabit Ethernet  
a007 PWRficient DMA Controller  
a008 PWRficient LPC/Localbus Interface  
a009 PWRficient L2 Cache  
a00a PWRficient DDR2  
Memory Controller  
a00b PWRficient SERDES  
a00c PWRficient System/Debug Controller  
a00d PWRficient PCI-Express Internal Endpoint  
1966 Orad Hi-Tec Systems  
1975 DVG64 family  
1977 DVG128 family  
1979 3DVG/UHD3  
1980 HDV2/UHD2  
1234 3160 UHD2LC  
1234 3300 Legacy UHD2  
1234 3410 UHD2  
# nee Atheros Communications, Inc. nee Attansic Technology Corp.  
1969 Qualcomm Atheros  
1026 AR8121/AR8113/AR8114 Gigabit or Fast Ethernet  
1043 8304 P5KPL-CM Motherboard  
1048 Attansic L1 Gigabit Ethernet  
1043 8226 P5B-MX/WiFi-AP, P5KPL-VM Motherboard  
1062 AR8132 Fast Ethernet  
1063 AR8131 Gigabit Ethernet  
1458 e000 GA-G31M-ES2L Motherboard  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]

1066 Attansic L2c Gigabit Ethernet  
1067 Attansic L1c Gigabit Ethernet  
1073 AR8151 v1.0 Gigabit Ethernet  
1083 AR8151 v2.0 Gigabit Ethernet  
1090 AR8162 Fast Ethernet  
1043 108d VivoBook X202E, X202EV  
1091 AR8161 Gigabit Ethernet  
1043 1477 N56VZ  
10a0 QCA8172 Fast Ethernet  
10a1  
QCA8171 Gigabit Ethernet  
2010 QCA8175 card reader controller  
2048 Attansic L2 Fast Ethernet  
2060 AR8152 v1.1 Fast Ethernet  
2062 AR8152 v2.0 Fast Ethernet  
1043 8468 Eee PC 1015PX  
3010 QCA8175 SD controller  
# E2200, E2201, E2205  
e091 Killer E220x Gigabit Ethernet Controller  
e0a1 Killer E2400 Gigabit Ethernet Controller  
e0b1 Killer E2500 Gigabit Ethernet Controller  
196a Sensory Networks Inc.  
0101 NodalCore C-1000 Content Classification Accelerator  
0102 NodalCore C-2000 Content Classification Accelerator  
0105 NodalCore C-3000 Content Classification Accelerator  
196d Club-3D BV  
196e PNY  
1971 AGEIA Technologies, Inc.  
1011 Physics Processing Unit [PhysX]  
1043 0001 PhysX P1  
# nee Eberspaecher Electronics  
1974 Star Electronics GmbH & Co. KG  
0009 FlexCard PMC-II  
0011 FlexCard PMC-II Ethernet  
0018 FlexCard PXIe3  
0019 FlexCard PCIe3  
# IO card for std ethernet and automotive ethernet (ieee 1000Base-T1)  
001a FlexCard PXIe Ethernet  
# IO card for std ethernet  
and automotive ethernet (ieee 1000Base-T1)  
001b FlexCard PCIe Ethernet  
1976 TRENDnet  
1977 Parsec  
197b JMicron Technology Corp.  
0250 JMC250 PCI Express Gigabit Ethernet Controller  
0260 JMC260 PCI Express Fast Ethernet Controller  
0368 JMB368 IDE controller  
0585 JMB58x AHCI SATA controller

2360 JMB360 AHCI Controller  
2361 JMB361 AHCI/IDE  
1462 7235 P965 Neo MS-7235 mainboard  
2362 JMB362 SATA Controller  
1043 8460 P8P67 Deluxe Motherboard  
2363 JMB363 SATA/IDE Controller  
1043 81e4 P5B [JMB363]  
1458 b000 Motherboard  
1849 2363 Motherboard (one of many)  
2364 JMB364 AHCI Controller  
2365 JMB365 AHCI/IDE  
2366 JMB366 AHCI/IDE  
2368 JMB368 IDE controller  
2369 JMB369 Serial ATA Controller  
2380 IEEE 1394 Host Controller  
2381 Standard SD Host Controller  
2382 SD/MMC Host Controller  
2383 MS Host Controller  
2384 xD Host Controller  
2386 Standard SD Host Controller  
2387 SD/MMC Host Controller  
2388 MS Host Controller  
2389 xD Host Controller  
2391  
Standard SD Host Controller  
2392 SD/MMC Host Controller  
2393 MS Host Controller  
2394 xD Host Controller  
1982 Distant Early Warning Communications Inc  
1600 OX16C954 HOST-A  
16ff OX16C954 HOST-B  
1987 Phison Electronics Corporation  
5007 E7 NVMe Controller  
5008 E8 PCIe3 x2 NVMe Controller  
5012 E12 NVMe Controller  
5013 PS5013-E13 PCIe3 NVMe Controller (DRAM-less)  
5015 PS5015-E15 PCIe3 NVMe Controller (DRAM-less)  
5016 E16 PCIe4 NVMe Controller  
5018 E18 PCIe4 NVMe Controller  
5019 PS5019-E19 PCIe4 NVMe Controller (DRAM-less)  
5021 PS5021-E21 PCIe4 NVMe Controller (DRAM-less)  
5026 PS5026-E26 PCIe5 NVMe Controller  
5027 PS5027-E27T PCIe4 NVMe Controller (DRAM-less)  
1989 Montilio Inc.  
0001 RapidFile Bridge  
8001 RapidFile  
198a Nallatech Ltd.  
1993 Innominate Security Technologies AG

1999 A-Logics  
a900 AM-7209 Video Processor  
199a Pulse-LINK, Inc.  
199d Xsigo Systems  
8209 Virtual NIC Device  
890a Virtual HBA Device  
199f Auvitek  
8501 AU85X1 PCI  
REV1.1  
8521 AU8521 TV card  
# nee ServerEngines Corp.  
19a2 Emulex Corporation  
0120 x1 PCIe Gen2 Bridge[Pilot4]  
0200 BladeEngine 10Gb PCI-E iSCSI adapter  
0201 BladeEngine 10Gb PCIe Network Adapter  
0211 BladeEngine2 10Gb Gen2 PCIe Network Adapter  
0212 BladeEngine2 10Gb Gen2 PCIe iSCSI Adapter  
0221 BladeEngine3 10Gb Gen2 PCIe Network Adapter  
0222 BladeEngine3 10Gb Gen2 PCIe iSCSI Adapter  
0700 OneConnect OCe10100/OCe10102 Series 10 GbE  
103c 1747 NC550SFP DualPort 10GbE Server Adapter  
103c 1749 NC550SFP Dual Port Server Adapter  
103c 174a NC551m Dual Port FlexFabric 10Gb Adapter  
103c 174b StorageWorks NC550 DualPort Converged Network Adapter  
103c 3314 NC551i Dual Port FlexFabric 10Gb Adapter  
0702 OneConnect 10Gb iSCSI Initiator  
0704 OneConnect OCe10100/OCe10102 Series 10 GbE CNA  
10df e602 OneConnect OCe10100 10Gb CNA  
10df e630 OneConnect OCe10102-FM-E / OCe10102-FX-E for EMC VNX Symmetrix  
0710 OneConnect 10Gb NIC (be3)  
# FC 5287 / FC 5284; CCIN 5287  
1014  
03d0 PCIe2 2-port 10GbE SR Adapter for POWER  
# FC 5288 / FC 5286; CCIN 5288  
1014 03d1 PCIe2 2-port 10GbE SFP+ Copper Adapter for POWER  
1014 0409 Integrated Multifunction Card with Dual 10GbE SR Optical + Dual 1GbE for Power 750/760  
1014 040a Integrated Multifunction Card with Dual 10GbE SR Copper + Dual 1GbE for Power 750/760  
103c 3315 NC553i 10Gb 2-port FlexFabric Converged Network Adapter  
103c 3340 NC552SFP 2-port 10Gb Server Adapter  
103c 3341 NC552m 10Gb 2-port FlexFabric Converged Network Adapter  
103c 3345 NC553m 10Gb 2-port FlexFabric Converged Network Adapter  
103c 337b NC554FLB 10Gb 2-port FlexFabric Converged Network Adapter  
10df e733 Flex System EN4054 4-port 10Gb Ethernet Mezzanine Adapter  
0712 OneConnect 10Gb iSCSI Initiator (be3)  
0714 OneConnect 10Gb FCoE Initiator (be3)  
103c 3315 NC553i 10Gb 2-port FlexFabric Converged Network Adapter  
103c 337b NC554FLB 10Gb 2-port FlexFabric Converged Network Adapter  
0800 ServerView iRMC HTI

19a4  
Owl Cyber Defense Solutions  
19a8 DAQDATA GmbH  
19ac Kasten Chase Applied Research  
0001 ACA2400 Crypto Accelerator  
19ae Progeny Systems Corporation  
0520 4135 HFT Interface Controller  
0521 Decimator  
19ba ZyXEL Communications Corp.  
2330 ZyWALL Turbo Card  
19c1 Exegy Inc.  
# nee NextNet Wireless  
19d1 Motorola Expedience  
19d4 Quixant Limited  
19da ZOTAC International (MCO) Ltd.  
19de Pico Computing  
19e2 Vector Informatik GmbH  
19e3 DDRdrive LLC  
5801 DDRdrive X1  
5808 DDRdrive X8  
dd52 DDRdrive X1-30  
19e5 Huawei Technologies Co., Ltd.  
0123 ES3000 V3 NVMe PCIe SSD  
19e5 3022 NVMe SSD ES3600P V3 800GB 2.5" U.2  
19e5 3023 NVMe SSD ES3600P V3 1200GB 2.5" U.2  
19e5 3024 NVMe SSD ES3600P V3 1600GB 2.5" U.2  
19e5 3025 NVMe SSD ES3600P V3 2000GB 2.5" U.2  
19e5 3026 NVMe SSD ES3600P V3 3200GB 2.5" U.2  
19e5 3033 NVMe SSD ES3600C V3 1200GB HHHL AIC  
19e5 3034 NVMe SSD ES3600C V3 1600GB HHHL AIC  
19e5 3036 NVMe SSD ES3600C V3 3200GB HHHL AIC  
0200 Hi1822 Family  
(2\*100GE)  
19e5 d139 Hi1822 SP572 (2\*100GE)  
19e5 d13d Hi1822 SC371 (2\*100GE)  
19e5 d147 Hi1822 SP573 (2\*100GE)  
0202 Hi1822 Family (2\*32G FC)  
19e5 d149 Hi1822 SP528 (2\*32G FC)  
19e5 d302 Hi1822 SP521 (2\*32G FC)  
19e5 d304 Hi1822 SP526 (2\*32G FC)  
0203 Hi1822 Family (2\*16G FC)  
19e5 d148 Hi1822 SP527 (2\*16G FC)  
19e5 d301 Hi1822 SP520 (2\*16G FC)  
19e5 d305 Hi1822 SP525 (2\*16G FC)  
0205 Hi1822 Family (2\*100GE)  
19e5 df27 Hi1822 MZ731 MEZZ (2\*100GE)  
0206 Hi1822 Family (2\*25GE)  
19e5 d138 Hi1822 SP582 (2\*25GE)

19e5 d13a Hi1822 SC381 (2\*25GE)  
19e5 d145 Hi1822 SP586 (2\*25GE)  
0210 Hi1822 Family (4\*25GE)  
19e5 df2e Hi1822 MZ532 MEZZ (4\*25GE)  
0211 Hi1822 Family (4\*25GE)  
19e5 d12f Hi1822 SP571 (4\*25GE)  
19e5 d137 Hi1822 SP581 (4\*25GE)  
19e5 d142 Hi1822 SP583 (4\*25GE)  
0212 Hi1822 Family (2\*8G FC)  
19e5 d303 Hi1822 SP522 (2\*8G FC)  
19e5 d306 Hi1822 SP523 (2\*8G FC)  
0222 Hi1822 Family  
19e5 0051 Hi1822 SP681 (2\*25/10GE)  
19e5 0052 Hi1822  
SP680 (4\*25/10GE)  
19e5 00a1 Hi1822 SP670 (2\*100GE)  
1710 iBMA Virtual Network Adapter  
1711 Hi171x Series [iBMC Intelligent Management system chip w/VGA support]  
1822 Hi1822 Family (4\*25GE)  
19e5 d129 Hi1822 SP570 (4\*25GE)  
19e5 d136 Hi1822 SP580 (4\*25GE)  
19e5 d141 Hi1822 SP583 (4\*25GE)  
19e5 d146 Hi1822 SP585 (4\*25GE)  
3714 ES3000 V5 NVMe PCIe SSD  
19e5 5312 NVMe SSD ES3500P V5 2000GB 2.5" U.2  
371e Hi1822 Family Virtual Bridge  
3754 ES3000 V6 NVMe PCIe SSD  
19e5 6122 NVMe SSD ES3600P V6 1600GB 2.5" U.2  
19e5 6123 NVMe SSD ES3600P V6 3200GB 2.5" U.2  
19e5 6124 NVMe SSD ES3600P V6 6400GB 2.5" U.2  
19e5 6141 NVMe SSD ES3800P V6 800GB 2.5" U.2  
19e5 6142 NVMe SSD ES3800P V6 1600GB 2.5" U.2  
19e5 6212 NVMe SSD ES3500P V6 1920GB 2.5" U.2  
19e5 6213 NVMe SSD ES3500P V6 3840GB 2.5" U.2  
19e5 6214 NVMe SSD ES3500P V6 7680GB 2.5" U.2  
19e5 6215 NVMe SSD ES3500P V6 15360GB 2.5" U.2  
375e Hi1822 Family Virtual Function  
375f Hi1822 Family Virtual Function  
379e  
Hi1822 Family Virtual Function  
379f Hi1822 Family Virtual Function  
a120 HiSilicon PCIe Root Port with Gen4  
a121 HiSilicon PCI-PCI Bridge  
a122 HiSilicon Embedded DMA Engine  
a124 HiSilicon Internal SDI Function Engine  
a125 HiSilicon SDI Network Controller  
a126 HiSilicon SDI NVMe Storage Controller  
a127 HiSilicon SDI Accelerator

a12a HiSilicon Add-on PCI-PCI Bridge  
a220 HNS GE Network Controller  
a221 HNS GE/10GE/25GE Network Controller  
19e5 0454 TM280  
19e5 04cc TM210  
19e5 d14a TM280 4\*25G  
19e5 d14b TM210 4\*GE  
a222 HNS GE/10GE/25GE RDMA Network Controller  
a224 HNS GE/10GE/25GE/50GE RDMA Network Controller  
a226 HNS GE/10GE/25GE/50GE/100GE RDMA Network Controller  
a22a HiSilicon Network For SDI  
a22e HNS Network Controller (Virtual Function)  
a22f HNS RDMA Network Controller (Virtual Function)  
a230 HiSilicon SAS 3.0 HBA  
a235 HiSilicon AHCI HBA  
a238 HiSilicon USB 3.0 Host Controller  
a239 HiSilicon USB 2.0 2-port Host Controller  
a23a  
HiSilicon USB 2.0 Host Controller  
a23b HiSilicon USB 1.1 Host Controller  
a250 HiSilicon ZIP Engine  
a251 HiSilicon ZIP Engine(Virtual Function)  
a255 HiSilicon SEC Engine  
a256 HiSilicon SEC Engine(Virtual Function)  
a258 HiSilicon HPRE Engine  
a259 HiSilicon HPRE Engine(Virtual Function)  
a25a HiSilicon RDE Engine  
a25b HiSilicon RDE Engine(Virtual Function)  
19e7 NET (Network Equipment Technologies)  
1001 STIX DSP Card  
1002 STIX - 1 Port T1/E1 Card  
1003 STIX - 2 Port T1/E1 Card  
1004 STIX - 4 Port T1/E1 Card  
1005 STIX - 4 Port FXS Card  
19ee Netronome Systems, Inc.  
19f1 BFG Tech  
19ff Eclipse Electronic Systems, Inc.  
1a03 ASPEED Technology, Inc.  
1150 AST1150 PCI-to-PCI Bridge  
2000 ASPEED Graphics Family  
15d9 0832 X10SRL-F  
15d9 1b95 H12SSL-i  
1a05 deltaww  
1a07 Kvaser AB  
0006 CAN interface PC104+ HS/HS  
0007 CAN interface PC1canx II HS or HS/HS  
0008 CAN interface PCIEcan HS or HS/HS  
0009 CAN interface PCI104 HS/HS

1a08 Sierra semiconductor  
0000  
SC15064  
1a0d SEAKR Engineering  
1a0e DekTec Digital Video B.V.  
083f DTA-2111 VHF/UHF Modulator  
0860 DTA-2144(B) Quad ASI/SDI in+out  
0861 DTA-2145 ASI/SDI in+out with bypass relay  
087c DTA-2172 Dual 3G-SDI/ASI ports  
087e DTA-2174 Quad 3G-SDI/ASI in+out  
087f DTA-2175 3G-SDI/ASI input+output with bypass relay  
0882 DTA-2178 Octal 12G-SDI/ASI ports with genlock  
a882 DTA-2178-ASI Octal ASI Ports  
b87e DTA-2174B Quad 3G-SDI/ASI ports (1x12G) with genlock  
1a17 Force10 Networks, Inc.  
8002 PB-10GE-2P 10GbE Security Card  
1a1d GFaI e.V.  
1a17 Meta Networks MTP-1G IDPS NIC  
1a1e 3Leaf Systems, Inc.  
1a22 Ambric Inc.  
1a29 Fortinet, Inc.  
4338 CP8 Content Processor ASIC  
43a0 CP9 Content Processor ASIC  
4e36 NP6 Network Processor  
4e37 NP7 Network Processor  
1a2b Ascom AG  
0000 GESP v1.2  
0001 GESP v1.3  
0002 ECOMP v1.3  
0005 ETP v1.4  
000a ETP-104 v1.1  
000e DSLP-104 v1.1  
# nee Metalink Ltd.  
1a30 Lantiq  
0680 MtW8171 [Hyperion II]  
0700 Wave300 PSB8224 [Hyperion  
III]  
0710 Wave300 PSB8231 [Hyperion III]  
1a32 Quanta Microsystems, Inc  
1a3b AzureWave  
1112 AR9285 Wireless Network Adapter (PCI-Express)  
1a41 Tiler Corp.  
0001 TILE64 processor  
0002 TILEPro processor  
0200 TILE-Gx processor  
0201 TILE-Gx Processor Virtual Function  
2000 TILE-Gx PCI Express Root Port  
1a4a SLAC National Accelerator Lab TID-AIR



1000 MCOR Power Supply Controller  
1010 AMC EVR - Stockholm Timing Board  
1020 PGPCard - Gen3 Cameralink Interface  
1030 PGPCard - Gen3 GIGe Interface  
2000 PGPCard - 4 Lane  
2001 PGPCard - 8 Lane Plus EVR  
2010 PCI-Express EVR  
2011 PCI-Express EVR - TPR Version  
2020 PGP-GEN3 PCIe - 8 Lane Plus EVR  
2030 AXI Stream DAQ PCIe card  
2040 EXO PCIe TEM  
3000 COB DTM V1  
3001 COB DTM V2  
1a51 Hectronic AB  
1a55 Rohde & Schwarz DVS GmbH  
0010 SDStationOEM  
0011 SDStationOEM II  
0020 Centaurus  
0021 Centaurus II  
0022 Centaurus II LT  
0030 CLIPSTER-VPU 1.x (Hugo)  
0040 Hydra Cinema (JPEG)  
0050 CLIPSTER-VPU 2.x (DigiLab)  
0060  
CLIPSTER-DCI 2.x (HydraX)  
0061 Atomix  
0062 Atomix LT  
0063 Atomix HDMI  
0064 Atomix STAN  
0065 Atomix HDMI STAN  
0070 RED Rocket  
0090 CinePlay  
# nee Bigfoot Networks, now owned by Intel  
1a56 Rivet Networks  
1a57 Highly Reliable Systems  
1a58 Razer USA Ltd.  
1a5d Celoxica  
1a5e Aprius Inc.  
1a5f System TALKS Inc.  
1a68 VirtenSys Limited  
1a71 XenSource, Inc.  
1a73 Violin Memory, Inc  
0001 Mozart [Memory Appliance 1010]  
1a76 Wavesat  
1a77 Lightfleet Corporation  
1a78 Virident Systems Inc.  
0031 FlashMAX Drive  
1a78 0034 FlashMAX PCIe SSD [rev 3]

1a78 0037 FlashMAX PCIe SSD [rev 3D]  
1a78 0038 FlashMAX PCIe SSD [rev 4]  
1a78 0039 FlashMAX PCIe SSD [rev 4D]  
0040 FlashMAX II  
0041 FlashMAX II  
0042 FlashMAX II  
0050 FlashMAX III  
1a84 Commex Technologies  
0001 Vulcan SP HT6210 10-Gigabit Ethernet (rev 02)  
# nee MEN Mikro Elektronik  
1a88 Duagon AG  
4d45 Multifunction IP core  
1a8a StarBridge, Inc.  
1a8c Verigy Pte. Ltd.  
1100 E8001-66443 PCI Express  
CIC  
1a8e DRS Technologies  
2090 Model 2090 PCI Express  
1aa8 Ciprico, Inc.  
0009 RAIDCore Controller  
000a RAIDCore Controller  
1aa9 Schweitzer Engineering Laboratories  
000d SEL-3390S8 Serial Adapter  
000e SEL-3390E4 Ethernet Adapter  
0014 SEL-3390T Time and Ethernet Adapter  
0015 SEL-3350 Mainboard  
0016 SEL-3350 Serial Expansion Board  
0017 SEL-3350 GPIO Expansion Board  
0018 SEL-3390E4 Ethernet Adapter  
001c SEL-3390E4 Ethernet Adapter  
1aab Silver Creations AG  
7750 Sceye 10L  
1aae Global Velocity, Inc.  
1ab4 Distributed Management Task Force, Inc. (DMTF)  
1ab6 CalDigit, Inc.  
6201 RAID Card  
# Parallels VM virtual devices  
1ab8 Parallels, Inc.  
4000 Virtual Machine Communication Interface  
4005 Accelerated Virtual Video Adapter  
4006 Memory Ballooning Controller  
1ab9 Espia Srl  
1ac1 Global Unichip Corp.  
089a Coral Edge TPU  
1ac8 Aeroflex Gaisler  
1acc Point of View BV  
1ad7 Spectracom Corporation  
8000 TSync-PCIe Time Code Processor

9100 TPRO-PCI-66U Timecode  
Reader/Generator  
1ade Spin Master Ltd.  
1501 Swipetech barcode scanner  
3038 PCIe Video Bridge  
13c2 3016 TT-budget S2-4200 Twin  
4254 0552 S952 v3  
1ae0 Google, Inc.  
# NVMe drive in GCP  
001f NVMe device  
0042 Compute Engine Virtual Ethernet [gVNIC]  
abcd Airbrush Combined Paintbox IPU/Oscar Edge TPU [Pixel Neural Core]  
1ae3 SANBlaze Technology, Inc.  
1ae7 First Wise Media GmbH  
0520 HFC-S PCI A [X-TENSIONS XC-520]  
# nee Silicon Software GmbH  
1ae8 Basler AG  
# CameraLink frame grabber for Visual Applets  
0751 mE5 marathon VCL  
# CameraLink HS frame grabber  
0752 mE5 marathon AF2  
# CoaXpress frame grabber  
0753 mE5 marathon ACX QP  
# CameraLink frame grabber  
0754 mE5 marathon ACL  
# CoaXpress frame grabber  
0755 mE5 marathon ACX SP  
# CoaXpress frame grabber  
0756 mE5 marathon ACX DP  
# CoaXpress frame grabber for Visual Applets  
0757 mE5 marathon VCX QP  
# CameraLink HS frame grabber for Visual Applets  
0758 mE5 marathon VF2  
# CameraLink frame grabber for Visual  
Applets / AI applications  
0759 mE5 marathon VCLx  
# CameraLink frame grabber  
0a40 microEnable IV AD1-CL  
# CameraLink frame grabber for Visual Applets  
0a41 microEnable IV VD1-CL  
# CameraLink frame grabber  
0a42 microEnable IV AD4-CL  
# CameraLink frame grabber for Visual Applets  
0a44 microEnable IV VD4-CL  
# CameraLink frame grabber  
0a45 microEnable IV AS1-CL  
# CoaXpress frame grabber  
0a53 microEnable 5 AQ8-CXP6B

# CoaXpress frame grabber for Visual Applets  
0a54 microEnable 5 VQ8-CXP6B  
# CoaXpress frame grabber for Visual Applets  
0a56 microEnable 5 VQ8-CXP6D  
# CoaXpress frame grabber  
0a57 microEnable 5 AQ8-CXP6D  
# CameraLink frame grabber for Visual Applets  
0a58 microEnable 5 VD8-CL  
# CameraLink frame grabber  
0a5a microEnable 5 AD8-CL  
# CoaXpress frame grabber  
0a64 imaWorx CXP-12 Quad  
# OEM product  
0b52 mE5 Abacus 4G Base  
# OEM product  
0b53 mE5 Abacus 4G Base II  
# OEM product  
0b61 mE6 Abacus 4TG  
# CoaXpress frame grabber  
0b63 CXP-12 Interface Card 1C  
# CoaXpress  
frame grabber  
0b64 CXP-12 Interface Card 4C  
# CoaXpress frame grabber  
0b65 CXP-12 Interface Card 2C  
# CoaXpress Thunderbolt frame grabber  
0b66 CXP-12 LightBridge 2C  
# GigE Vision frame grabber  
0e42 microEnable IV AQ4-GE  
# GigE Vision frame grabber for Visual Applets  
0e44 microEnable IV VQ4-GE  
1ae9 Wilocity Ltd.  
0101 Wil6200 PCI Express Upstream Port  
0200 Wil6200 PCI Express Port  
0201 Wil6200 Wireless PCI Express Port  
0301 Wil6200 802.11ad Wireless Network Adapter  
0302 Wil6200 802.11ad Wireless Network Adapter  
0310 Wil6200 802.11ad Wireless Network Adapter  
1aea Alcor Micro  
6601 AU6601 PCI-E Flash card reader controller  
6621 AU6621 PCI-E Flash card reader controller  
6625 AU6625 PCI-E Flash card reader controller  
1aec Wolfson Microelectronics  
# nee Fusion-io  
1aed SanDisk  
1003 ioDimm3 (v1.2)  
1005 ioDimm3  
1014 03c3 High IOPS SSD PCIe Adapter

103c 176f 1.28TB MLC PCIe ioDrive Duo  
103c 1770 5.2TB MLC PCIe ioDrive Octal  
103c 178b 160GB SLC  
PCIe ioDrive  
103c 178c 320GB MLC PCIe ioDrive  
103c 178d 320GB SLC PCIe ioDrive Duo  
103c 178e 640GB MLC PCIe ioDrive Duo  
1006 ioXtreme  
1007 ioXtreme Pro  
1008 ioXtreme-2  
2001 ioDrive2  
3001 ioMemory FHHL  
3002 ioMemory HHHL  
3003 ioMemory Mezzanine  
1aee Caustic Graphics Inc.  
# nee Qumranet, Inc.  
1af4 Red Hat, Inc.  
1000 Virtio network device  
01de fffb Propolis Virtio network device  
1001 Virtio block device  
01de fffa Propolis Virtio block device  
1002 Virtio memory balloon  
1003 Virtio console  
1004 Virtio SCSI  
1005 Virtio RNG  
1009 Virtio filesystem  
1041 Virtio 1.0 network device  
1042 Virtio 1.0 block device  
1043 Virtio 1.0 console  
1044 Virtio 1.0 RNG  
1045 Virtio 1.0 memory balloon  
1048 Virtio 1.0 SCSI  
1049 Virtio 1.0 filesystem  
1050 Virtio 1.0 GPU  
1052 Virtio 1.0 input  
1053 Virtio 1.0 socket  
105a Virtio file system  
1110 Inter-VM shared memory  
1af4 1100 QEMU Virtual Machine  
1af5 Netezza Corp.  
1afa J & W Electronics Co., Ltd.  
1b00  
Montage Technology Co., Ltd.  
c001 CXL Memory Expander Controller M88MX5891  
1ff9 00a2 CXL Memory Expander  
1ff9 00a4 CXL Memory Expander  
1b03 Magnum Semiconductor, Inc,  
6100 DXT/DXTPro Multiformat Broadcast HD/SD Encoder/Decoder/Transcoder

7000 D7 Multiformat Broadcast HD/SD Encoder/Decoder/Transcoder  
1b08 MSC Technologies GmbH  
1b0a Pegatron  
9602 RS780/RS880 PCI to PCI bridge (int gfx)  
1b13 Jaton Corp  
1b1a K&F Computing Research Co.  
0e70 GRAPE  
1b1c Corsair  
1b21 ASMedia Technology Inc.  
0611 ASM1061 Serial ATA Controller  
0612 ASM1061/ASM1062 Serial ATA Controller  
1849 0612 Motherboard  
0622 ASM106x Serial ATA AHCI Controller  
0624 ASM106x SATA/RAID Controller  
0625 106x SATA/RAID Controller  
1040 ASM1040 SuperSpeed USB Host Controller  
1041 ASM1041 SuperSpeed USB Host Controller  
1042 ASM1042 SuperSpeed USB Host Controller  
1043 1059 K53SM motherboard  
1043 8488 P8B WS Motherboard  
1849 1042 Motherboard  
1064 ASM1064 Serial ATA Controller  
1080  
ASM1083/1085 PCIe to PCI Bridge  
1849 1080 Motherboard  
1142 ASM1042A USB 3.0 Host Controller  
1164 ASM1164 Serial ATA AHCI Controller  
1166 ASM1166 Serial ATA Controller  
1182 ASM1182e 2-Port PCIe x1 Gen2 Packet Switch  
1b21 118f ASM1182e 2-Port PCIe x1 Gen2 Packet Switch  
1184 ASM1184e 4-Port PCIe x1 Gen2 Packet Switch  
1849 1184 ASM1184e 4-Port PCIe x1 Gen2 Packet Switch  
1187 ASM1187e 7-Port PCIe x1 Gen2 Packet Switch  
118f ASM1187e 7-Port PCIe x1 Gen2 Packet Switch  
1242 ASM1142 USB 3.1 Host Controller  
1343 ASM1143 USB 3.1 Host Controller  
1806 ASM1806 4-Port PCIe x2 Gen2 Packet Switch  
1812 ASM1812 6-Port PCIe x4 Gen2 Packet Switch  
1824 ASM1824 12-Port PCIe x8 Gen2 Packet Switch  
2142 ASM2142/ASM3142 USB 3.1 Host Controller  
1462 7a72 H270 PC MATE  
2806 ASM2806 4-Port PCIe x2 Gen3 Packet Switch  
2812 ASM2812 6-Port PCIe x4 Gen3 Packet Switch  
2824 ASM2824 PCIe Gen3 Packet Switch  
3042 ASM3042 USB 3.2 Gen 1 xHCI Controller  
3142 ASM3142 USB 3.2  
Gen 2x1 xHCI Controller  
3241 ASM3241 USB 3.2 Gen 2 Host Controller

3242 ASM3242 USB 3.2 Host Controller  
1b26 Netcope Technologies, a.s.  
c132 COMBO-LXT155  
c1c0 NFB-100G1-e0  
c1c1 NFB-100G1-e1  
c250 NFB-200G2-master  
c251 NFB-200G2-slave  
c2c0 NFB-100G2-e0  
c2c1 NFB-100G2-e1  
cb20 COMBO-20G  
cb40 COMBO-40G  
cb80 NFB-40G2  
1b2c Opal-RT Technologies Inc.  
1b36 Red Hat, Inc.  
0001 QEMU PCI-PCI bridge  
0002 QEMU PCI 16550A Adapter  
1af4 1100 QEMU Virtual Machine  
0003 QEMU PCI Dual-port 16550A Adapter  
1af4 1100 QEMU Virtual Machine  
0004 QEMU PCI Quad-port 16550A Adapter  
1af4 1100 QEMU Virtual Machine  
0005 QEMU PCI Test Device  
1af4 1100 QEMU Virtual Machine  
0006 PCI Rocker Ethernet switch device  
0007 PCI SD Card Host Controller Interface  
0008 QEMU PCIe Host bridge  
0009 QEMU PCI Expander bridge  
000a PCI-PCI bridge (multiseat)  
000b QEMU PCIe Expander bridge  
000c QEMU PCIe Root port  
000d QEMU XHCI Host Controller  
0010 QEMU NVM Express Controller  
0011  
QEMU PVPanic device  
0013 QEMU UFS Host Controller  
0100 QXL paravirtual graphic card  
1af4 1100 QEMU Virtual Machine  
1b37 Signal Processing Devices Sweden AB  
0001 ADQ214  
0003 ADQ114  
0005 ADQ112  
000e ADQ108  
000f ADQDSP  
0014 ADQ412  
0015 ADQ212  
001b SDR14  
001c ADQ1600  
001e ADQ208

001f DSU  
0020 ADQ14  
0023 ADQ7  
0026 ADQ8  
0031 ADQ3  
2014 TX320  
2019 S6000  
# now owned by HGST (a Western Digital subsidiary)  
1b39 sTec, Inc.  
0001 S1120 PCIe Accelerator SSD  
1b3a Westar Display Technologies  
7589 HRED J2000 - JPEG 2000 Video Codec Device  
1b3e Teradata Corp.  
1fa8 BYNET BIC2SE/X  
1b3e 00a3 BYNET BIC2SX  
1b3e 00c3 BYNET BIC2SE  
1b40 Schooner Information Technology, Inc.  
# also used by some PROXIM (14b7) devices erroneously  
1b47 Numascale AS  
0601 NumaChip N601  
0602 NumaChip N602  
1b4b Marvell Technology Group Ltd.  
# device 1b4b:0100 reports incorrect vendor id due to hw erratum (correct is 11ab)  
0100 88F3700 [Armada 3700 Family] ARM SoC  
0640  
88SE9128 SATA III 6Gb/s RAID Controller  
2241 88NR2241 Non-Volatile memory controller  
1028 2112 BOSS-N1 Monolithic  
1028 2113 BOSS-N1 Modular  
1028 2151 BOSS-N1 Modular ET  
1028 2196 ROR-N1  
1b4b 2241 Santa Cruz NVMe Host Adapter  
1b96 4000 WD\_BLACK AN1500 NVMe SSD  
1d49 0306 ThinkSystem M.2 NVMe 2-Bay RAID Enablement Kit  
1d49 0307 ThinkSystem 7mm NVMe 2-Bay Rear RAID Enablement Kit  
2b42 88W8997 2.4/5 GHz Dual-Band 2x2 Wi-Fi® 5 (802.11ac) + Bluetooth® 5.3 Solution  
2b43 NXP 88W9098 Wi-Fi 6 (ax) MAC #1  
2b44 NXP 88W9098 Wi-Fi 6 (ax) MAC #2  
2b45 NXP 88W9098 Bluetooth 5.3  
9120 88SE9120 SATA 6Gb/s Controller  
9123 88SE9123 PCIe SATA 6.0 Gb/s controller  
dc93 600e DC-6xxe series SATA 6G controller  
9125 88SE9125 PCIe SATA 6.0 Gb/s controller  
9128 88SE9128 PCIe SATA 6 Gb/s RAID controller  
9130 88SE9128 PCIe SATA 6 Gb/s RAID controller with HyperDuo  
1043 8438 P8P67 Deluxe Motherboard  
9170 88SE9170 PCIe 2.0 x1 2-port SATA 6 Gb/s Controller  
9172



88SE9172 SATA 6Gb/s Controller  
9178 88SE9170 PCIe SATA 6Gb/s Controller  
917a 88SE9172 SATA III 6Gb/s RAID Controller  
9182 88SE9182 PCIe 2.0 x2 2-port SATA 6 Gb/s Controller  
9183 88SS9183 PCIe SSD Controller  
9192 88SE9172 SATA III 6Gb/s RAID Controller  
91a0 88SE912x SATA 6Gb/s Controller [IDE mode]  
91a4 88SE912x IDE Controller  
9215 88SE9215 PCIe 2.0 x1 4-port SATA 6 Gb/s Controller  
9220 88SE9220 PCIe 2.0 x2 2-port SATA 6 Gb/s RAID Controller  
9230 88SE9230 PCIe 2.0 x2 4-port SATA 6 Gb/s RAID Controller  
1028 1fd6 BOSS-S1 Adapter  
1028 1fdf BOSS-S1 Modular  
1028 1fe2 BOSS-S1 Adapter  
1028 2010 BOSS-S2 Adapter  
1028 2260 BOSS-S1 Modular  
1028 2261 BOSS-S2 Adapter  
1bd4 0073 RS0200L6R2iM2  
1d49 0300 ThinkSystem M.2 with Mirroring Enablement Kit  
1d49 0301 ThinkSystem SR630 x16 PCIE with 4 SATA ports Riser  
1d49 0302 ThinkSystem SE350 M.2 SATA 4-Bay Data RAID Mirroring Enablement Kit  
1d49 0303 ThinkSystem SE350 M.2 SATA 4-Bay Data RAID Mirroring Enablement  
Kit  
1d49 0304 ThinkSystem M.2 SATA 2-Bay RAID Enablement Kit  
1d49 0305 ThinkSystem 7mm SATA 2-Bay Rear RAID Enablement Kit  
9235 88SE9235 PCIe 2.0 x2 4-port SATA 6 Gb/s Controller  
9445 88SE9445 PCIe 2.0 x4 4-Port SAS/SATA 6 Gbps RAID Controller  
9480 88SE9480 SAS/SATA 6Gb/s RAID controller  
9485 88SE9485 SAS/SATA 6Gb/s controller  
1b4c GALAX  
1b55 NetUP Inc.  
18f6 Dual DVB Universal CI card  
18f7 Dual DVB Universal CI card rev 1.4  
2a2c Dual DVB-S2-CI card  
e2e4 Dual DVB-T/C-CI RF card  
# 2xHDMI and 2xHD-SDI inputs  
e5f4 MPEG2 and H264 Encoder-Transcoder  
f1c4 Dual ASI-RX/TX-CI card  
1b61 Byd Precision Manufacture Co.,Ltd  
1b66 DELTACAST  
0007 DELTA-3G-elp-d  
1b6f Etron Technology, Inc.  
7023 EJ168 USB 3.0 Host Controller  
1458 5007 GA-880GMA-USB3  
7052 EJ188/EJ198 USB 3.0 Host Controller  
1849 7052 QC5000-ITX/PH  
1b73 Fresco Logic  
1000 FL1000G USB 3.0 Host Controller

1d5c 1000 Anker USB 3.0 Express Card  
1009 FL1009 USB 3.0 Host Controller  
1100  
FL1100 USB 3.0 Host Controller  
16b8 6e31 Allegro Pro USB 3.0 PCIe  
1b74 OpenVox Communication Co. Ltd.  
0115 D115P/D115E Single-port E1/T1 card  
d130 D130P/D130E Single-port E1/T1 card (3rd GEN)  
d210 D210P/D210E Dual-port E1/T1 card(2nd generation)  
d230 D230 Dual-port E1/T1 card (2nd generation)  
d410 D410/430 Quad-port E1/T1 card  
d430 D410/430 Quad-port E1/T1 card  
1b79 Absolute Analysis  
1b85 OCZ Technology Group, Inc.  
1021 RevoDrive 3 X2 PCIe SSD 240 GB (Marvell SAS Controller)  
1041 RevoDrive 3 X2 PCIe SSD 240 GB (Marvell SAS Controller)  
4018 Z Drive 6000/6300 NVME SSD  
6018 RD400/400A SSD  
8788 RevoDrive Hybrid  
1b94 Signatec / Dynamic Signals Corp  
e400 PX14400 Dual Xilinx Virtex5 based Digitizer  
1b96 Western Digital  
2200 Ultrastar DC SN630 NVMe SSD  
2201 Ultrastar DC SN630 NVMe SSD  
2300 Ultrastar DC SN840 NVMe SSD  
2400 Ultrastar DC SN640 NVMe SSD  
2401 Ultrastar DC SN640 NVMe SSD  
2402 Ultrastar DC SN640 NVMe SSD  
2404 Ultrastar DC SN640 NVMe SSD  
2500  
Ultrastar DC SN840 NVMe SSD  
2600 Ultrastar DC ZN540 ZNS NVMe SSD  
2700 Ultrastar DC SN650 NVMe SSD  
2701 Ultrastar DC SN650 NVMe SSD  
2702 Ultrastar DC SN650 NVMe SSD  
2720 Ultrastar DC SN650 NVMe SSD  
2721 Ultrastar DC SN650 NVMe SSD  
2722 Ultrastar DC SN655 NVMe SSD  
3001 RapidFlex C2000 NVMe Initiator  
3714 PC SN730 NVMe SSD  
3734 PC SN730 NVMe SSD  
1b9a XAVi Technologies Corp.  
1baa QNAP Systems, Inc.  
1bad ReFLEX CES  
c001 XpressGXA10-LP1150  
c002 XpressGXA10-LP1151  
1bb0 SimpliVity Corporation  
0002 OmniCube Accelerator OA-3000

0010 OmniCube Accelerator OA-3000-2  
1bb1 Seagate Technology PLC  
005d Nytro PCIe Flash Storage  
1bb1 6501 Nytro XP6500-8A1536 1.5TB  
# 2TB Nytro PCIe controller  
1bb1 6502 Nytro XP6500-8A2048  
# 4TB Nytro PCIe controller  
1bb1 6503 Nytro XP6500-8A4096  
# 2GB DRAM variant of Nytro card  
1bb1 6511 Nytro XH6550-2GB DRAM  
# 8GB variant of Nytro PCIe controller  
1bb1 6512 Nytro XH6550-8GB DRAM  
# 1.5 TB Nytro PCIe controller  
1bb1  
6521 Nytro XP6500-8A1536 1.5TB  
# 2TB Nytro PCIe controller  
1bb1 6522 Nytro XP6500-8A2048  
# 4TB Nytro PCIe controller  
1bb1 6523 Nytro XP6500-8A4096  
0100 Nytro Flash Storage  
1bb1 0101 Nytro XF1440  
1bb1 0103 Nytro 5000  
1bb1 0105 Nytro 5020  
1bb1 0106 Nytro 5020 TCG  
# Larkspur 2.5"  
1bb1 0107 Nytro 5320  
# Larkspur 2.5" TCG  
1bb1 0108 Nytro 5320 TCG  
1bb1 0121 Nytro XM1440  
1bb1 0123 Nytro 5000  
# Kiowa M.2  
1bb1 0125 Nytro 5020  
# Kiowa M.2 TCG  
1bb1 0126 Nytro 5020  
# Larkspur M.2 22110mm  
1bb1 0127 Nytro 5320 M.2  
# Larkspur M.2 22110mm TCG  
1bb1 0128 Nytro 5320 M.2 TCG  
# Larkspur M.2 2280mm  
1bb1 0131 Nytro 5320 M.2  
# Larkspur M.2 2280mm TCG  
1bb1 0132 Nytro 5320 M.2 TCG  
# Larkspur E1.S  
1bb1 0141 Nytro 5320 E1.S  
# Larkspur E1.S TCG  
1bb1 0142 Nytro 5320 E1.S TCG  
# Kersey 2.5"  
1bb1 0151 Nytro 5520

# Kersey 2.5" TCG  
1bb1 0152 Nytro 5520 TCG  
# Nytro 5050H (Ebonhawk - High Performance)  
1bb1 0153 Nytro 5050H  
# Nytro 5050H TCG (Ebonhawk High Performance)  
1bb1 0154 Nytro 5050H TCG  
# Nytro 5050M (Ebonhawk Mainstream Performance)  
1bb1 0155 Nytro 5050M  
# Nytro 5050M TCG (Ebonhawk Mainstream Performance)  
1bb1 0156 Nytro 5050M TCG  
# Nytro 5050M (Ebonhawk Mainstream Performance) - 7mm  
1bb1 0157 Nytro 5050M 7mm  
# Nytro 5050M (Ebonhawk Mainstream Performance) TCG - 7mm  
1bb1 0158 Nytro 5050M TCG 7mm  
# Nytro 5060M (Rocinante Mainstream Performance) - 15mm  
1bb1 0159 Nytro 5060M  
# Nytro 5050M TCG (Rocinante Mainstream Performance) - 15mm  
1bb1 0160 Nytro 5060M TCG  
# Nytro 5060M 7mm (Rocinante Mainstream Performance)  
1bb1 0161 Nytro 5060M 7mm  
# Nytro 5060M TCG (Rocinante Mainstream Performance) - 7mm  
1bb1 0162 Nytro 5060M TCG 7mm  
# Nytro 5060H (Rocinante High Performance)  
1bb1 0163 Nytro 5060H  
# Nytro 5060H TCG (Rocinante High Performance)  
1bb1 0164 Nytro 5060H TCG  
# Nytro 5060H (Rocinante - High Performance) - E3.S 1T  
1bb1 0165 Nytro 5060H E3.S 1T  
# Nytro 5060H (Rocinante - High Performance) - E3.S 1T TCG  
1bb1 0166 Nytro 5060H E3.S 1T TCG  
# Nytro 5060H (Rocinante - High Performance) - E3.L 1T  
1bb1 0167 Nytro 5060H E3.L 1T  
# Nytro 5060H (Rocinante - High Performance) - E3.L 1T TCG  
1bb1 0168 Nytro 5060H E3.L 1T TCG  
# Nytro 5060M (Rocinante Mainstream Performance) - E3.S 1T  
1bb1 0169 Nytro 5060M E3.S 1T  
# Nytro 5060M (Rocinante Mainstream Performance) - E3.S 1T TCG  
1bb1 0170 Nytro 5060M E3.S 1T TCG  
# Nytro 5060M (Rocinante Mainstream Performance) - E3.L 1T  
1bb1 0171 Nytro 5060M E3.L 1T  
# Nytro 5060M (Rocinante Mainstream Performance) - E3.L 1T TCG  
1bb1 0172 Nytro 5060M E3.L 1T TCG  
# Nytro 5060M (Rocinante Mainstream Performance) - E1.S  
1bb1 0173 Nytro 5060M E1.S  
# Nytro 5060M (Rocinante Mainstream Performance) - E1.S TCG  
1bb1 0174 Nytro 5060M E1.S TCG

# Nytro 5350S (Ebonhawk Single Port) - 15mm  
1bb1 0175 Nytro 5350S - 15mm

# Nytro 5350S (Ebonhawk Single Port) TCG - 15mm  
1bb1 0176 Nytro 5350S TCG - 15mm

# Nytro 5360S (Rocinante Single Port) - 15mm  
1bb1  
0177 Nytro 5360S - 15mm

# Nytro 5360S (Rocinante Single Port) TCG - 15mm  
1bb1 0178 Nytro 5360S TCG - 15mm

# Nytro 5360S (Rocinante Single Port) - E3.S  
1bb1 0179 Nytro 5360S - E3.S

# Nytro 5360S (Rocinante Single Port) TCG - E3.S  
1bb1 0180 Nytro 5360S TCG - E3.S  
1bb1 01a1 Nytro XP7102  
5012 FireCuda/IronWolf 510 SSD  
5013 BarraCuda Q5 NVMe SSD (DRAM-less)  
5016 FireCuda 520/IronWolf 525 SSD  
5018 FireCuda 530 SSD

# 2TB  
5021 FireCuda 520 SSD

# 1TB  
5026 FireCuda 540 SSD

1bb3 Bluecherry  
4304 BC-04120A MPEG4 4 port video encoder / decoder  
4309 BC-08240A MPEG4 4 port video encoder / decoder  
4310 BC-16480A MPEG4 16 port video encoder / decoder  
4e04 BC-04120A 4 port MPEG4 video encoder / decoder  
4e09 BC-08240A 8 port MPEG4 video encoder / decoder  
4e10 BC-16480A 16 port MPEG4 video encoder / decoder  
5304 BC-H04120A 4 port H.264 video and audio encoder / decoder  
5308 BC-H08240A 8 port H.264 video and audio encoder / decoder  
5310 BC-H16480A 16 port H.264  
video and audio encoder / decoder

1bb5 Quantenna Communications, Inc.  
1bbf Maxeler Technologies Ltd.  
0003 MAX3  
0004 MAX4

1bc0 Innodisk Corporation  
1001 PCIe 3TG6-P Controller  
1002 PCIe 3TE6 Controller (DRAM-less)  
1160 PCIe 3TE2 Controller  
1321 PCIe 4TG-P Controller  
1322 PCIe 4TE Controller  
2262 PCIe 3TG3-P Controller  
5208 PCIe 3TE7 Controller  
5216 PCIe 3TE8 Controller  
5236 PCIe 4TG2-P Controller

1bcd Apacer Technology

0120 NVMe SSD Drive 960GB  
1bcf NEC Corporation  
001c Vector Engine 1.0  
1bd0 Astronics Corporation  
1001 Mx5 PMC/XMC Databus Interface Card  
1002 PM1553-5 (PC/104+ MIL-STD-1553 Interface Card)  
1004 AB3000 Series Rugged Computer  
1005 PE1000 (Multi-Protocol PCIe/104 Interface Card)  
1006 webCS Wireless Aircraft Communications Server  
1007 AB3000 Series Rugged Computer (Series N)  
1008 ME1000 mPCIe Avionics Interface Card  
100a NG1 Series Avionics Converter  
100b LE5 429 Databus Interface Card  
100c LE5 1553 Databus Interface Card  
1101  
OmniBus II PCIe Multi-Protocol Interface Card  
1102 OmniBusBox II Multi-Protocol Interface Core  
1103 OmniBus II cPCIe/PXIe Multi-Protocol Interface Card  
1200 NG3 Series Mil-Std-1553 Interface  
1201 NG3 Series ARINC 429 Interface  
1202 NG3 Series Avionics Discrete & Serial Interface  
1203 NG3 Series Avionics Discrete Interface  
1bd4 Inspur Electronic Information Industry Co., Ltd.  
0911 Arria10\_PCIe\_F10A1150  
1000 NS8600G1U160 NVME SSD  
1001 NS8600G1U320 NVME SSD  
1002 NS8600G1U640 NVME SSD  
1003 NS8500G1U192 NVME SSD  
1004 NS8500G1U384 NVME SSD  
1005 NS8500G1U768 NVME SSD  
1006 NS6610G1U160, NS6510G1U192 NVME SSD  
1007 NS6610G1U320, NS6510G1U384 NVME SSD  
100c NS8510G1Uxxx, NS8610G1Uxxx NVME SSD  
100e NS8500G2Uxxxx, NS8600G2Uxxxx NVME SSD  
1bee IXXAT Automation GmbH  
0002 CAN-IB100/PCIe  
0003 CAN-IB200/PCIe  
0004 CAN-IB120/PCIe Mini  
0005 CAN-IB130/PCIe 104  
0006 CAN-IB230/PCIe 104  
000e CAN-IB500/PCIe  
000f CAN-IB600/PCIe  
0010 CAN-IB300/PCI  
0011 CAN-IB400/PCI  
0012  
CAN-IB520/PCIe Mini  
0016 CAN-IB410/PMC  
001c CAN-IB810/PMC

001e INpact PCIe  
001f INpact PCIe Mini  
0029 INpact M.2  
002d CAN-IB630/PCIe 104  
002e CAN-IB640/PCIe  
1bef Lantiq  
0011 MIPS SoC PCI Express Port  
1bf4 VTI Instruments Corporation  
0001 SentinelEX  
7011 RX0xxx  
1bf5 Greenliant  
1000 G7200 series U.2 NVMe SSD  
1bfc Duagon AG  
1bfd EeeTOP  
1c00 Nanjing Qinheng Microelectronics Co., Ltd.  
2170 CH351 PCIe Parallel Port Adapter  
2273 CH351 PCIe Dual Port Serial Adapter  
3050 CH382L PCIe Parallel Port Adapter  
3250 CH384 Dual Port Serial and Parallel Port Adapter  
3252 CH382 PCIe Dual Port Serial Adapter  
# Device ID reused: CH352 is for PCI bus, CH382 for PCIe.  
3253 CH352/CH382 PCI/PCIe Dual Port Serial Adapter  
1c09 CSP, Inc.  
4254 10G-PCIE3-8D-2S  
4255 10G-PCIE3-8D-Q  
4256 10G-PCIE3-8D-2S  
4258 10G-PCIE3-8E-2S Network Adapter  
4260 10G-PCIE3-8E-4S Network Adapter  
4261 10G-PCIE3-8E-4S Network Adapter  
4262 10G-PCIE3-8E-4S Network Adapter  
4263  
10G-PCIE3-8E-4S Network Adapter  
4264 10G-PCIE3-8E-2S Network Adapter  
4265 10G-PCIE3-8E-2S Network Adapter  
5000 25G-PCIE3-8A-2S Security Intelligent Adapter  
5001 25G-PCIE3-8B-2S Security Intelligent Adapter  
1c1c Symphony  
0001 82C101  
1c1f SoftLab-NSK  
0015 FD842  
0019 FD722  
001a FD788  
001b FD720  
001c FD922  
001d Vega  
001f FD940  
0020 FD2110  
0021 FD722

0022 FD788  
0023 FD722-M2  
1c28 Lite-On IT Corp. / Plextor  
0122 M6e PCI Express SSD [Marvell 88SS9183]  
# previously Fiberblaze  
1c2c Silicom Denmark  
000a Capture  
000f SmartNIC  
00a0 FBC4G Capture 4x1Gb [Herculaneum]  
00a1 FBC4XG Capture 4x10Gb [Ancona]  
00a2 FBC8XG Capture 8x10Gb [Livorno]  
00a3 FBC2XG Capture 2x10Gb [Genoa]  
00a4 FBC4XGG3 Capture 4x10Gb [Livigno]  
00a5 FBC2XLG Capture 2x40Gb [Livorno]  
00a6 FBC1CG Capture 1x100Gb  
00a9 FBC2XGHH Capture 2x10Gb [Latina]  
00ad FBC2CGG3HL Capture 2x100Gb [Padua]  
00af Capture slave device  
00e0 PacketMover 2x100Gb [Savona]  
00e1 PacketMover  
2x100Gb [Tivoli]  
00e2 PacketMover 2x100Gb [Mango\_04]  
00e3 PacketMover 2x10Gb [Tivoli]  
00e5 PacketMover 2x10Gb [Corfu]  
1000 SmartNIC N5010 4x100Gb  
1001 SmartNIC N5011 w/2xE810 4x100Gb  
1002 SmartNIC N5013 4x100Gb  
1003 SmartNIC N5014 w/2xE810 4x100Gb  
a000 FBC2CGG3 Capture 2x40Gb [Mango\_02]  
a001 FBC2CGG3 Capture 2x100Gb [Mango\_02]  
a003 FBC2CGG3 Capture 16x10Gb [Mango]  
a006 FBC2CGG3 Capture 2x100Gb [Mango]  
a007 FBC2CGG3 Capture 2x40Gb [Mango]  
a008 FBC2CGG3 Capture 2x25Gb [Mango]  
a009 FBC2CGG3 Capture 16x10Gb [Mango]  
a00a FBC2CGG3 Capture 8x10Gb [Mango]  
a00e FB2CG Capture 2x100Gb [Savona]  
a00f FB2CG Capture 2x40Gb [Savona]  
a010 FB2CGHH Capture 2x40Gb [Tivoli]  
a011 FB2CG Capture 2x25Gb [Savona]  
a012 FB2CG Capture 8x10Gb [Savona]  
a013 FB2CGHH Capture 2x25Gb [Tivoli]  
a014 FB2CGHH Capture 8x10Gb [Tivoli]  
a015 FB2CGHH Capture 2x100Gb [Tivoli]  
a016 FB2CG Capture 8x25Gb [Savona]  
a017 FB2CGHH Capture 8x25Gb [Tivoli] a017  
# Used on V120 VME Crate Controller  
1c32



Highland Technology, Inc.  
1c33 Daktronics, Inc  
1c36 Annapurna Labs Ltd.  
0001 Gigabit Ethernet Adapter  
0002 SFP+ 10G Ethernet Adapter  
1c3b Accensus, LLC  
0200 Telas2  
# <http://www.accensusllc.com/accensustelas2.html>  
0300 Telas 2.V  
1c44 Enmotus Inc  
1100 Fuzedrive NVMe SSD  
8000 8000 Storage IO Controller  
# A Western Digital Subsidiary  
1c58 HGST, Inc.  
0003 Ultrastar SN100 Series NVMe SSD  
1014 04f5 PCIe3 1.6TB NVMe Flash Adapter  
1014 04f6 PCIe3 3.2TB NVMe Flash Adapter  
1c58 0003 Ultrastar SN100/SN150 NVMe SSD  
0023 Ultrastar SN200 Series NVMe SSD  
1c58 8823 Ultrastar Memory (ME200)  
1c5c SK hynix  
1282 PC300 NVMe Solid State Drive 128GB  
1283 PC300 NVMe Solid State Drive 256GB  
1284 PC300 NVMe Solid State Drive 512GB  
1285 PC300 NVMe Solid State Drive 1TB  
1327 BC501 NVMe Solid State Drive  
1339 BC511 NVMe SSD  
1504 PC400 NVMe SSD  
1527 PC401 NVMe Solid State Drive 256GB  
1627 PC601 NVMe Solid State Drive  
1639 PC611 NVMe Solid State Drive  
1739  
BC701 NVMe Solid State Drive  
174a Gold P31/BC711/PC711 NVMe Solid State Drive  
1959 Platinum P41/PC801 NVMe Solid State Drive  
1d59 BC901 NVMe Solid State Drive (DRAM-less)  
2204 960GB TLC PCIe Gen3 x4 NVMe M.2 22110  
2427 PE6010 NVMe Solid State Drive  
2429 PE6011 NVMe Solid State Drive  
243b PE6110 NVMe Solid State Drive  
1c5c 0100 PE6110 NVMe Solid State Drive  
2839 PE8000 Series NVMe Solid State Drive  
1028 2143 DC NVMe SED PE8010 RI U.2 960GB  
1028 2144 DC NVMe PE8010 RI U.2 960GB  
1028 2145 DC NVMe SED PE8010 RI U.2 1.92TB  
1028 2146 DC NVMe PE8010 RI U.2 1.92TB  
1028 2147 DC NVMe SED PE8010 RI U.2 3.84TB  
1028 2148 DC NVMe PE8010 RI U.2 3.84TB

1028 2149 DC NVMe SED PE8010 RI U.2 7.68TB  
1028 214a DC NVMe PE8010 RI U.2 7.68TB  
1c5c 0100 PE8000 Series NVMe Solid State Drive  
2849 PE81x0 U.2/3 NVMe Solid State Drive  
1028 2262 DC NVMe OPAL PE8110 RI U.2 960GB  
1028 2263 DC NVMe OPAL PE8110 RI U.2 1920GB  
1028 2264 DC NVMe OPAL PE8110  
RI U.2 3840GB  
1028 2265 DC NVMe OPAL PE8110 RI U.2 7680GB  
1028 2266 DC NVMe ISE PE8110 RI U.2 960GB  
1028 2267 DC NVMe ISE PE8110 RI U.2 1920GB  
1028 2268 DC NVMe ISE PE8110 RI U.2 3840GB  
1028 2269 DC NVMe ISE PE8110 RI U.2 7680GB  
1c5c 0101 PE81x0 U.2/3 NVMe Solid State Drive  
284a PE8110 Series NVMe Solid State Drive  
2a49 PE9110 Series NVMe Solid State Drive  
2a59 PE9010 Series NVMe Solid State Drives  
2b59 PS10x0 Series NVMe Solid State Drives  
1c5f Beijing Memblaze Technology Co. Ltd.  
000d PBlaze5 520/526  
1c5f 0220 NVMe SSD PBlaze5 520 1920G AIC  
1c5f 0221 NVMe SSD PBlaze5 520 1920G 2.5" U.2  
1c5f 0230 NVMe SSD PBlaze5 520 3840G AIC  
1c5f 0231 NVMe SSD PBlaze5 520 3840G 2.5" U.2  
1c5f 4220 NVMe SSD PBlaze5 526 1600G AIC  
1c5f 4221 NVMe SSD PBlaze5 526 1600G 2.5" U.2  
1c5f 4230 NVMe SSD PBlaze5 526 3200G AIC  
1c5f 4231 NVMe SSD PBlaze5 526 3200G 2.5" U.2  
000e PBlaze6 6530/6531/6541/6630  
1c5f 0b20 NVMe SSD PBlaze6 6530 1920G AIC  
1c5f 0b21  
NVMe SSD PBlaze6 6530 1920G 2.5" U.2  
1c5f 0b25 NVMe SSD PBlaze6 6530 1920G E1.S  
1c5f 0b27 NVMe SSD PBlaze6 6630 1920G 2.5" U.2  
1c5f 0b30 NVMe SSD PBlaze6 6530 3840G AIC  
1c5f 0b31 NVMe SSD PBlaze6 6530 3840G 2.5" U.2  
1c5f 0b35 NVMe SSD PBlaze6 6530 3840G E1.S  
1c5f 0b37 NVMe SSD PBlaze6 6630 3840G 2.5" U.2  
1c5f 0b40 NVMe SSD PBlaze6 6530 7680G AIC  
1c5f 0b41 NVMe SSD PBlaze6 6530 7680G 2.5" U.2  
1c5f 0b47 NVMe SSD PBlaze6 6630 7680G 2.5" U.2  
1c5f 1320 NVMe SSD PBlaze6 6531 1920G AIC  
1c5f 1321 NVMe SSD PBlaze6 6531 1920G 2.5" U.2  
1c5f 1330 NVMe SSD PBlaze6 6531 3840G AIC  
1c5f 1331 NVMe SSD PBlaze6 6531 3840G 2.5" U.2  
1c5f 1340 NVMe SSD PBlaze6 6531 7680G AIC  
1c5f 1341 NVMe SSD PBlaze6 6531 7680G 2.5" U.2  
1c5f 1421 NVMe SSD PBlaze6 6541 1920G 2.5" U.2

1c5f 1427 NVMe SSD PBlaze6 6641 1920G 2.5" U.2(dual port)  
1c5f 1431 NVMe SSD PBlaze6 6541 3840G 2.5" U.2  
1c5f 1437 NVMe SSD PBlaze6 6641 3840G 2.5" U.2(dual port)  
1c5f 1441 NVMe SSD  
PBlaze6 6541 7680G 2.5" U.2  
1c5f 1447 NVMe SSD PBlaze6 6641 7680G 2.5" U.2(dual port)  
1c5f 4b20 NVMe SSD PBlaze6 6536 1600G AIC  
1c5f 4b21 NVMe SSD PBlaze6 6536 1600G 2.5" U.2  
1c5f 4b25 NVMe SSD PBlaze6 6536 1600G E1.S  
1c5f 4b27 NVMe SSD PBlaze6 6636 1600G 2.5" U.2  
1c5f 4b30 NVMe SSD PBlaze6 6536 3200G AIC  
1c5f 4b31 NVMe SSD PBlaze6 6536 3200G 2.5" U.2  
1c5f 4b35 NVMe SSD PBlaze6 6536 3200G E1.S  
1c5f 4b37 NVMe SSD PBlaze6 6636 3200G 2.5" U.2  
1c5f 4b40 NVMe SSD PBlaze6 6536 6400G AIC  
1c5f 4b41 NVMe SSD PBlaze6 6536 6400G 2.5" U.2  
1c5f 4b47 NVMe SSD PBlaze6 6636 6400G 2.5" U.2  
1c5f 5320 NVMe SSD PBlaze6 6537 1600G AIC  
1c5f 5321 NVMe SSD PBlaze6 6537 1600G 2.5" U.2  
1c5f 5330 NVMe SSD PBlaze6 6537 3200G AIC  
1c5f 5331 NVMe SSD PBlaze6 6537 3200G 2.5" U.2  
1c5f 5340 NVMe SSD PBlaze6 6537 6400G AIC  
1c5f 5341 NVMe SSD PBlaze6 6537 6400G 2.5" U.2  
1c5f 5421 NVMe SSD PBlaze6 6547 1600G 2.5" U.2  
1c5f 5427 NVMe SSD PBlaze6 6647 1600G 2.5" U.2(dual  
port)  
1c5f 5431 NVMe SSD PBlaze6 6547 3200G 2.5" U.2  
1c5f 5437 NVMe SSD PBlaze6 6647 3200G 2.5" U.2(dual port)  
1c5f 5441 NVMe SSD PBlaze6 6547 6400G 2.5" U.2  
1c5f 5447 NVMe SSD PBlaze6 6647 6400G 2.5" U.2(dual port)  
003d PBlaze5 920/926  
1c5f 0a30 NVMe SSD PBlaze5 920 3840G AIC  
1c5f 0a31 NVMe SSD PBlaze5 920 3840G 2.5" U.2  
1c5f 0a40 NVMe SSD PBlaze5 920 7680G AIC  
1c5f 0a41 NVMe SSD PBlaze5 920 7680G 2.5" U.2  
1c5f 4a30 NVMe SSD PBlaze5 926 3200G AIC  
1c5f 4a31 NVMe SSD PBlaze5 926 3200G 2.5" U.2  
1c5f 4a40 NVMe SSD PBlaze5 926 6400G AIC  
1c5f 4a41 NVMe SSD PBlaze5 926 6400G 2.5" U.2  
003e PBlaze6 6920/6930  
1c5f 0a31 NVMe SSD PBlaze6 6920 3840GB 2.5" U.2  
1c5f 0a41 NVMe SSD PBlaze6 6920 7680GB 2.5" U.2  
1c5f 0b31 NVMe SSD PBlaze6 6930 3840GB 2.5" U.3  
1c5f 0b41 NVMe SSD PBlaze6 6930 7680GB 2.5" U.3  
1c5f 0b51 NVMe SSD PBlaze6 6930 15360GB 2.5" U.3  
1c5f 0b61 NVMe SSD PBlaze6 6930 30720GB 2.5" U.3  
1c5f 4a31 NVMe SSD PBlaze6 6920 3200GB

2.5" U.2  
1c5f 4a41 NVMe SSD PBlaze6 6920 6400GB 2.5" U.2  
1c5f 4b41 NVMe SSD PBlaze6 6936 6400GB 2.5" U.3  
1c5f 4b51 NVMe SSD PBlaze6 6936 12800GB 2.5" U.3  
1c5f 4b61 NVMe SSD PBlaze6 6936 25600GB 2.5" U.3  
003f PBlaze7 7940/7946 NVMe SSD  
1c5f 0431 NVMe SSD PBlaze7 7940 3840G 2.5" U.2  
1c5f 0c31 NVMe SSD PBlaze7 7940 3840G 2.5" U.2  
1c5f 0c41 NVMe SSD PBlaze7 7940 7680G 2.5" U.2  
1c5f 0c51 NVMe SSD PBlaze7 7940 15360G 2.5" U.2  
1c5f 1430 NVMe SSD PBlaze7 7940 3840G AIC  
1c5f 1431 NVMe SSD PBlaze7 7940 3840G 2.5" U.2  
1c5f 1435 NVMe SSD PBlaze7 7940 3840G E1.S  
1c5f 1440 NVMe SSD PBlaze7 7940 7680G AIC  
1c5f 1441 NVMe SSD PBlaze7 7940 7680G 2.5" U.2  
1c5f 1445 NVMe SSD PBlaze7 7940 7680G E1.S  
1c5f 1450 NVMe SSD PBlaze7 7940 15360G AIC  
1c5f 1451 NVMe SSD PBlaze7 7940 15360G 2.5" U.2  
1c5f 4c31 NVMe SSD PBlaze7 7946 3200G 2.5" U.2  
1c5f 4c41 NVMe SSD PBlaze7 7946 6400G 2.5" U.2  
1c5f 4c51 NVMe SSD PBlaze7 7946 12800G 2.5" U.2  
1c5f 5430 NVMe  
SSD PBlaze7 7946 3200G AIC  
1c5f 5431 NVMe SSD PBlaze7 7946 3200G 2.5" U.2  
1c5f 5435 NVMe SSD PBlaze7 7946 3200G E1.S  
1c5f 5440 NVMe SSD PBlaze7 7946 6400G AIC  
1c5f 5441 NVMe SSD PBlaze7 7946 6400G 2.5" U.2  
1c5f 5445 NVMe SSD PBlaze7 7946 6400G E1.S  
1c5f 5450 NVMe SSD PBlaze7 7946 12800G AIC  
1c5f 5451 NVMe SSD PBlaze7 7946 12800G 2.5" U.2  
1ea0 2100 TP2510 Series U.2 NVMe Datacenter SSD(3.84TB)  
1ea0 2101 TP2511 Series U.2 NVMe Datacenter SSD(3.84TB)  
1ea0 2110 TP2510 Series E3.S NVMe Datacenter SSD(3.84TB)  
1ea0 2111 TP2511 Series E3.S NVMe Datacenter SSD(3.84TB)  
1ea0 2200 TP2510 Series U.2 NVMe Datacenter SSD(7.68TB)  
1ea0 2201 TP2511 Series U.2 NVMe Datacenter SSD(7.68TB)  
1ea0 2210 TP2510 Series E3.S NVMe Datacenter SSD(7.68TB)  
1ea0 2211 TP2511 Series E3.S NVMe Datacenter SSD(7.68TB)  
0540 PBlaze4 NVMe SSD  
0550 PBlaze5 700/900  
0555 PBlaze5 510/516  
0557 PBlaze5 910/916  
1c63 Science and Research Centre of Computer Technology (JSC "NICEVT")  
0008  
K1927BB1Ya [EC8430] Angara Interconnection Network Adapter  
1c7e TTTech Computertechnik AG  
0200 zFAS Debug Port  
1c7f Elektrobit Austria GmbH

5100 EB5100  
1c8a TSF5 Corporation  
0001 Hunter PCI Express  
1c8c Mobiveil, Inc.  
1cb0 Shannon Systems  
8266 SP4 Series SSD  
1cb0 2021 SP4 Series OCS U.2 SSD  
1cb0 2121 SP4 Series ZNS U.2 SSD  
1cb0 2f21 SP4E Series NVMe U.2 SSD(1920/3840/7680GB)  
1cb0 2f22 SP4X Series NVMe U.2 SSD(1600/3200/6400GB)  
d000 Venice NVMe SSD  
1cb0 2010 Venice-E Series OCS U.2  
1cb0 2011 Venice Series OCS U.2  
1cb0 2012 Venice-X Series OCS U.2  
# Venice-E Series NVMe U.2 SSD(1.92T/3.84T/7.68T)  
1cb0 2f10 Venice-E Series NVMe U.2  
# Venice Series NVMe U.2 SSD(2T/4T/8T)  
1cb0 2f11 Venice Series NVMe U.2  
# Venice-X Series NVMe U.2 SSD(1.6T/3.2T/6.4T)  
1cb0 2f12 Venice-X Series NVMe U.2  
1cb0 a010 Venice-E Series OCS AIC  
1cb0 a012 Venice-X Series OCS AIC  
# Venice-E Series NVMe AIC SSD(1.92T/3.84T/7.68T)  
1cb0 af10 Venice-E Series  
NVMe AIC  
# Venice-X Series NVMe AIC SSD(1.6T/3.2T/6.4T)  
1cb0 af12 Venice-X Series NVMe AIC  
1cb1 Collion UG & Co.KG  
1cb5 Focusrite Audio Engineering Ltd  
0002 Clarett  
1cb8 Dawning Information Industry Co., Ltd.  
1cc1 ADATA Technology Co., Ltd.  
1202 IM2P32A8 NVMe SSD (DRAM-less)  
# SX6000LNP  
2263 XPG SX6000 Lite NVMe SSD (DRAM-less)  
32a8 SM2P32A8 NVMe SSD (DRAM-less)  
33f3 IM2P33F3 NVMe SSD (DRAM-less)  
33f4 IM2P33F4 NVMe SSD (DRAM-less)  
33f8 IM2P33F8 series NVMe SSD (DRAM-less)  
41c3 SM2P41C3 NVMe SSD (DRAM-less)  
41c8 SM2P41C8 NVMe SSD (DRAM-less)  
5236 XPG GAMMIX S70 BLADE NVMe SSD  
5350 XPG GAMMIX S50, S50 Lite NVMe SSD  
# PREMIUM NVMe SSD for PlayStation 5  
5370 GAMMIX S70 BLADE, PS5 PREMIUM NVMe SSD  
5762 FALCON, GAMMIX S41, SPECTRIX S40G NVMe SSD (DRAM-less)  
5763 XPG GAMMIX S5 NVMe SSD (DRAM-less)  
5766 XPG GAMMIXS1 1L, XPG GAMMIX S5, LEGEND 710 / 740, SWORDFISH NVMe SSD (DRAM-less)

612a LEGEND 750 NVMe SSD (DRAM-less)  
613a ATOM 50, LEGEND 840 NVMe SSD  
(DRAM-less)  
621a LEGEND 850 NVMe SSD (DRAM-less)  
622a LEGEND 960 NVMe SSD  
624a LEGEND 700, XPG GAMMIX S20 NVMe SSD (DRAM-less)  
# 1TB  
627a LEGEND 800 NVMe SSD (DRAM-less)  
# 500GB  
628a LEGEND 800 NVMe SSD (DRAM-less)  
8201 XPG SX8200 Pro PCIe Gen3x4 M.2 2280 Solid State Drive  
1cc4 Shenzhen Unionmemory Information System Ltd.  
1203 NVMe SSD Controller UHXXXa series  
1cc4 a121 NVMe SSD UHXXXa series U.2 960GB  
1cc4 a122 NVMe SSD UHXXXa series U.2 1920GB  
1cc4 a123 NVMe SSD UHXXXa series U.2 3840GB  
1cc4 a124 NVMe SSD UHXXXa series U.2 7680GB  
1cc4 a125 NVMe SSD UHXXXa series U.2 15360GB  
1cc4 a211 NVMe SSD UHXXXa series U.2 800GB  
1cc4 a212 NVMe SSD UHXXXa series U.2 1600GB  
1cc4 a213 NVMe SSD UHXXXa series U.2 3200GB  
1cc4 a214 NVMe SSD UHXXXa series U.2 6400GB  
1cc4 e122 NVMe SSD UH711a series U.2 1920GB  
1cc4 e123 NVMe SSD UH711a series U.2 3840GB  
1cc4 e124 NVMe SSD UH711a series U.2 7680GB  
17a9 RPITJ1TBVME2HWD NVMe SSD 1024GB  
17aa AH631 PCIe 3.0  
NVMe SSD 512GB  
17ab AH631 PCIe 3.0 NVMe SSD 256GB  
2263 AM611 PCIe 3.0 x2 NVMe SSD 256GB  
5008 AM610 PCIe 3.0 x2 NVMe SSD 128GB, 256GB  
5012 RPITJ512PED2OWX NVMe SSD 512GB  
5212 AM521 PCIe 3.0 NVMe SSD 256GB  
6201 AM620 PCIe 3.0 NVMe SSD 128GB  
6202 AM620 PCIe 3.0 NVMe SSD 256GB  
6203 AM620 PCIe 3.0 NVMe SSD 512GB  
6204 AM620 PCIe 3.0 NVMe SSD 1024GB  
6302 AM630 PCIe 4.0 NVMe SSD 256GB  
6303 AM630 PCIe 4.0 x4 NVMe SSD Controller  
6304 AM630 PCIe 4.0 NVMe SSD 1024GB  
6a02 AM6A0 PCIe 4.0 NVMe SSD 256GB  
6a03 RPETJ512MKP1QDQ PCIe 4.0 NVMe SSD 512GB (DRAM-less)  
6a14 RPEYJ1T24MKN2QWY PCIe 4.0 NVMe SSD 1024GB (DRAM-less)  
8030 NVMe SSD Controller UH8X2X/UH7X2X series  
1cc4 1122 NVMe SSD UH812a U.2 1.92TB  
1cc4 1123 NVMe SSD UH812a U.2 3.84TB  
1cc4 1124 NVMe SSD UH812a U.2 7.68TB  
1cc4 1125 NVMe SSD UH812a U.2 15.36TB

1cc4 1222 NVMe SSD UH812a E3.S 1.92TB  
1cc4 1223 NVMe SSD UH812a E3.S 3.84TB  
1cc4 1224 NVMe SSD UH812a E3.S 7.68TB  
1cc4 1225 NVMe SSD UH812a  
E3.S 15.36TB  
1cc4 2112 NVMe SSD UH832a U.2 1.6TB  
1cc4 2113 NVMe SSD UH832a U.2 3.2TB  
1cc4 2114 NVMe SSD UH832a U.2 6.4TB  
1cc4 2115 NVMe SSD UH832a U.2 12.8TB  
1cc4 2212 NVMe SSD UH832a E3.S 1.6TB  
1cc4 2213 NVMe SSD UH832a E3.S 3.2TB  
1cc4 2214 NVMe SSD UH832a E3.S 6.4TB  
1cc4 2215 NVMe SSD UH832a E3.S 12.8TB  
1cc4 3122 NVMe SSD UH712a U.2 1.92TB  
1cc4 3123 NVMe SSD UH712a U.2 3.84TB  
1cc4 3124 NVMe SSD UH712a U.2 7.68TB  
1cc4 3125 NVMe SSD UH712a U.2 15.36TB  
1cc5 Embedded Intelligence, Inc.  
0100 PCIe-CAN-02 Dual CAN bus (9-pin male). PCI Express x1.  
0101 PCIe-CAN-01 Single CAN bus (9-pin male). PCI Express x1.  
1cc7 Radian Memory Systems Inc.  
0200 RMS-200 PCIe NVMe SSD  
0250 RMS-250 U.2 NVMe SSD  
1ccf Zoom Corporation  
0001 TAC-2 Thunderbolt Audio Converter  
1cd2 SesKion GmbH  
0301 Simulyzer-RT CompactPCI Serial DIO-1 card  
0302 Simulyzer-RT CompactPCI Serial PSI5-ECU-1 card  
0303 Simulyzer-RT CompactPCI Serial PSI5-SIM-1 card  
0304 Simulyzer-RT  
CompactPCI Serial PWR-ANA-1 card  
0305 Simulyzer-RT CompactPCI Serial CAN-1 card  
# supports 8x CAN (-FD) interfaces  
0306 Simulyzer-RT CompactPCI Serial CAN-2 card (CAN-FD)  
0307 Simulyzer-RT CompactPCI Serial DIO-2 card [Xilinx Zynq UltraScale+]  
1cd7 Nanjing Magewell Electronics Co., Ltd.  
0002 Pro Capture AIO  
0010 Pro Capture Endpoint  
0014 PRO CAPTURE AIO 4K PLUS  
0017 PRO CAPTURE AIO 4K  
0051 Eco Capture Dual HDMI M.2  
0052 Eco Capture HDMI 4K M.2  
0053 Eco Capture Dual SDI M.2  
0054 Eco Capture Quad SDI M.2  
1cdd secunet Security Networks AG  
1ce4 Exablaze  
0001 ExaNIC X4  
0002 ExaNIC X2

0003 ExaNIC X10  
0004 ExaNIC X10-GM  
0005 ExaNIC X40  
0006 ExaNIC X10-HPT  
0007 ExaNIC X40  
0008 ExaNIC V5P  
0009 ExaNIC X25  
000a ExaNIC X100  
000b ExaNIC V9P  
000c ExaNIC V9P-3  
0100 ExaDISK FX1  
1cf0 Akitio  
1cf7 Subspace Dynamics  
1cfa Corsair Memory, Inc  
1cfd Mangstor  
6300 MX6300 series PCIe x8 NVMe SSD  
1d00 Pure Storage  
1d05 Tongfang Hongkong Limited  
1d0f  
    Amazon.com, Inc.  
7064 NeuronDevice (Inferentia)  
7164 NeuronDevice (Trainium)  
    1d0f 0000 Trainium  
7264 NeuronDevice (Inferentia2)  
7364 NeuronDevice (Trainium2)  
8061 NVMe EBS Controller  
cd01 NVMe SSD Controller  
ec20 Elastic Network Adapter (ENA)  
efa0 Elastic Fabric Adapter (EFA)  
efa1 Elastic Fabric Adapter (EFA)  
efa2 Elastic Fabric Adapter (EFA)  
1d17 Zhaoxin  
070f ZX-100 PCI Express Root Port  
0710 ZX-100/ZX-200 PCI Express Root Port  
0711 ZX-100/ZX-200 PCI Express Root Port  
0712 ZX-100/ZX-200 PCI Express Root Port  
0713 ZX-100/ZX-200 PCI Express Root Port  
0714 ZX-100/ZX-200 PCI Express Root Port  
0715 ZX-100/ZX-200 PCI Express Root Port  
0716 ZX-D PCI Express Root Port  
0717 KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 PCI Express Root Port  
0718 KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 PCI Express Root Port  
0719 KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 PCI Express Root Port  
071a KX-5000/KX-6000/KX-6000G/KH-40000 PCI Express Root Port  
071b KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000  
PCI Express Root Port  
071c KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 PCI Express Root Port  
071d KX-5000/KX-6000/KX-6000G/KH-40000 PCI Express Root Port



071e KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 PCI Express Root Port  
071f ZX-200 Upstream Port of PCI Express Switch  
0720 ZX-200 PCIE RC6 controller  
0721 ZX-200 Downstream Port of PCI Express Switch  
0722 ZX-200 PCIE P2C bridge  
0731 KH-40000 PCI Express Root Port  
0732 KH-40000/KX-7000 PCI Express Root Port  
0733 KX-7000 PCIE Express Root Port  
0734 KX-7000 PCIE Express Root Port  
0735 KX-7000 PCIE Express Root Port  
0736 KX-7000 PCIE Express Root Port  
0737 KX-7000 PCIE Express Root Port  
0738 KX-7000 PCIE Express Root Port  
0739 KX-7000 PCIE Express Root Port  
073a KX-7000 PCIE Express Root Port  
073b KX-7000 PCIE Express Root Port  
1000 ZX-D Standard Host Bridge  
1001 ZX-D/ZX-E/KH-40000/KX-7000 Miscellaneous Bus  
1003 ZX-E Standard Host Bridge  
1005 KH-40000 Standard Host  
Bridge  
1006 KX-6000G Standard Host Bridge  
1007 KX-7000 Standard Host Bridge  
3001 ZX-100 Standard Host Bridge  
300a ZX-100 Miscellaneous Bus  
3038 ZX-100/ZX-200/KX-6000/KX-6000G/KH-40000/KX-7000 Standard Universal PCI to USB Host Controller  
3104 ZX-100/ZX-200/KX-6000/KX-6000G/KH-40000/KX-7000 Standard Enhanced PCI to USB Host Controller  
31b0 ZX-100/KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 Standard Host Bridge  
31b1 ZX-100/KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 Standard Host Bridge  
31b2 ZX-100/KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 DRAM Controller  
31b3 ZX-100/KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 Power Management Controller  
31b4 ZX-100/KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 I/O APIC  
31b5 ZX-100/KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 Scratch Device  
31b7 ZX-100/KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 Standard Host Bridge  
31b8 ZX-100/ZX-D PCI to PCI Bridge  
3200 KX-7000 Host Bridge  
3288 ZX-100/KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 High  
Definition Audio Controller  
345b ZX-100/KX-5000/KX-6000/KX-6000G/KH-40000 Miscellaneous Bus  
3a02 ZX-100 C-320 GPU  
3a03 ZX-D C-860 GPU  
3a04 KX-6000 C-960 GPU  
3a05 KX-7000 C-1190 GPU  
3b01 KH-40000 OPI Controller  
3b02 KH-40000 OPI Controller  
3b03 KH-40000 OPI Controller  
3b04 KH-40000 OPI Controller  
3c00 KH-40000/KX-7000 DRAM Controller

3c02 KX-6000G DRAM Controller  
3d01 KX-6000G C-1080 GPU  
9002 ZX-100/ZX-200/KH-40000/KX-7000 EIDE Controller  
9003 ZX-100/KX-6000/KX-6000G EIDE Controller  
9043 KX-6000G/KH-40000/KX-7000 RAID Controller  
9045 ZX-100/ZX-D/ZX-E RAID Accelerator 0  
9046 ZX-D/ZX-E RAID Accelerator 1  
9083 ZX-100/ZX-200/KX-6000/KX-6000G/KH-40000/KX-7000 StorX AHCI Controller  
9084 ZX-100 StorX AHCI Controller  
9100 ZX-200 Cross bus  
9101 ZX-200 Traffic Controller  
9141 ZX-100 High Definition Audio Controller  
9142 ZX-D High Definition Audio Controller  
9144 ZX-E High Definition Audio Controller  
9145 KX-6000G High Definition Audio Controller  
9146  
KX-7000 High Definition Audio Controller  
9180 ZX-200 Networking Gigabit Ethernet Adapter  
91c1 KH-40000 ZPI Controller  
91c2 KH-40000 ZPI Controller  
9202 ZX-100 USB eXtensible Host Controller  
9203 ZX-200 USB eXtensible Host Controller  
9204 KX-6000/KX-6000G/KX-7000 USB3 xHCI Host Controller  
9205 KH-40000 USB eXtensible Host Controller  
9206 KX-7000 USB4 Contoller  
9286 ZX-D eMMC Host Controller  
9300 ZX-100/KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 eSPI Host Controller  
9500 KX-7000 I2S Controller  
9501 KX-7000 I2S Controller  
95d0 ZX-100 Universal SD Host Controller  
f410 ZX-100/KX-5000/KX-6000/KX-6000G/KH-40000/KX-7000 PCI Com Port  
1d18 RME  
0001 Fireface UFX+  
# acquired by Intel  
1d1c Barefoot Networks, Inc.  
0001 Tofino 1  
0010 Tofino 1  
0100 Tofino 2  
0110 Tofino 2  
1d1d CNEX Labs  
1f1f QEMU NVM Express LightNVM Controller  
2807 8800 series NVMe SSD  
# CEM Solutions Pvt. Ltd.  
1d21 Allo  
1d22 Baidu Technology  
1380 Cloud Storage Device  
3684 Kunlun

AI Accelerator  
3685 Kunlun2 AI Accelerator [VF]  
1d26 Kalray Inc.  
0040 Turbocard2 Accelerator  
0080 Open Network Interface Card 80G  
00c0 Turbocard3 Accelerator  
0140 Open Network Interface Card 40G  
e004 AB01/EMB01 Development Board  
1d37 NovaSparks  
0013 PM3  
0014 PM4  
0015 PM4edge  
0016 PM4edge User Device  
1d40 Techman Electronics (Changshu) Co., Ltd.  
5501 XC100C55-xxxx NVME SSD  
5c01 XC100C5C-xxxx, XC100E5C-xxxx NVME SSD  
b100 PV100C55-xxxx NVME SSD  
1d44 DPT  
a400 PM2x24/PM3224  
1d49 Lenovo  
1d4c Diamanti, Inc.  
1d5c Fantasia Trading LLC  
1d61 Technobox, Inc.  
1d62 Nebbiolo Technologies  
1d65 Imagine Communications Corp.  
04de Taurus/McKinley  
1d69 Celeno Communications  
2432 CL2432  
2440 CL2440  
1d6a Aquantia Corp.  
0001 AQC107 NBase-T/IEEE 802.3bz Ethernet Controller [AQtion]  
4c52 6880 LREC6880BT Single-port 10Gb Ethernet Network Adapter  
00b1 AQtion AQC100 NBase-T/IEEE 802.3an Ethernet Controller [Atlantic 10G]  
00c0 Antigua NBase-T/IEEE 802.3an Ethernet  
Controller - Engineering Sample  
04c0 AQtion AQC113 NBase-T/IEEE 802.3an Ethernet Controller [Antigua 10G]  
4c52 1053 LRES1053PT Quad-port 10Gb Ethernet Network Adapter  
4c52 2051 LRES2051PT Single-port 10Gb Ethernet Network Adapter  
07b1 AQtion AQC107 NBase-T/IEEE 802.3an Ethernet Controller [Atlantic 10G]  
# Older revision of QNAP QM2 M.2 2280 PCIe SSD & 10GbE Expansion Card  
1baa 07b1 QM2-2P10G1TA [QXG 10GbE Network Adapter]  
# Newer revision of QNAP QM2 M.2 2280 PCIe SSD & 10GbE Expansion Card  
1baa 07b2 QM2-2P10G1TA [QM2 Expansion Adapter]  
4c52 6880 LREC6880BT Single-port 10Gb Ethernet Network Adapter  
08b1 AQC108 NBase-T/IEEE 802.3bz Ethernet Controller [AQtion]  
11b1 AQC111 NBase-T/IEEE 802.3bz Ethernet Controller [AQtion]  
12b1 AQC112 NBase-T/IEEE 802.3bz Ethernet Controller [AQtion]  
12c0 AQtion AQC115C NBase-T/IEEE 802.3bz Ethernet Controller [Antigua 2.5G]

14c0 AQC113C NBase-T/IEEE 802.3an Ethernet Controller [Marvell Scalable mGig]  
80b1 AQtion AQC100S  
NBase-T/IEEE 802.3an Ethernet Controller [Atlantic 10G]  
87b1 AQtion AQC107S NBase-T/IEEE 802.3an Ethernet Controller [Atlantic 10G]  
93c0 AQtion AQC114CS NBase-T/IEEE 802.3bz Ethernet Controller [Antigua 5G]  
94c0 AQtion AQC113CS NBase-T/IEEE 802.3an Ethernet Controller [Antigua 10G]  
1043 87f5 ProArt X570-CREATOR WIFI  
d107 AQtion AQC107 NBase-T/IEEE 802.3an Ethernet Controller [Atlantic 10G]  
1043 8741 XG-C100C  
d108 AQC108 NBase-T/IEEE 802.3bz Ethernet Controller [AQtion]  
1d6c Atomic Rules LLC  
1001 A5PL-E1  
1002 A5PL-E7  
1003 S5PEDS-AB  
1004 KC705-K325  
1005 ZC706-Z045  
1006 KCU105-KU040  
1007 XUSP3S-VU095 [Jasper]  
1008 XUSPL4-VU065 [Mustang UltraScale]  
1009 XUSPL4-VU3P [Mustang UltraScale+]  
100a A10PL4-A10GX115  
100b K35-2SFP  
100c K35-4SFP  
100d AR-ARKA-FX0 [Arkville 32B DPDK Data Mover]  
1d6c 2001 DPDK-Aware Virtual Function [Arkville VF]  
100e AR-ARKA-FX1 [Arkville 64B DPDK Data Mover]  
1d6c 2001 DPDK-Aware Virtual Function [Arkville VF]  
100f  
AR-ARKA-FX1 [Arkville 64B DPDK Data Mover for Versal]  
1010 AR-ARKA-FX1 [Arkville 64B DPDK Data Mover for Agilex]  
1011 AR-MAN-U50 [Manitou Class Accelerator for U50]  
1012 AR-MAN-U200 [Manitou Class Accelerator for U200]  
1013 AR-MAN-U250 [Manitou Class Accelerator for U250]  
1014 AR-MAN-U280 [Manitou Class Accelerator for U280]  
1015 AR-ARK-BBDEV-FX0 [Arkville 32B DPDK Baseband Device]  
1016 AR-ARK-BBDEV-FX1 [Arkville 64B DPDK Baseband Device]  
1017 AR-ARK-FX1 [Arkville 64B Multi-Homed Primary Endpoint]  
1018 AR-ARK-FX1 [Arkville 64B Multi-Homed Secondary Endpoint]  
1019 AR-ARK-FX1 [Arkville 64B Multi-Homed Tertiary Endpoint]  
101a AR-ARK-SRIOV-FX0 [Arkville 32B Primary Physical Function]  
101b AR-ARK-SRIOV-FX1 [Arkville 64B Primary Physical Function]  
101c AR-ARK-SRIOV-VF [Arkville Virtual Function]  
101d AR-ARK-NIC [Arkville ArkNIC Kernel Path Device]  
101e AR-ARKA-FX1 [Arkville 64B DPDK Data Mover for Agilex R-Tile]  
101f AR-TK242 [2x100GbE Packet Capture Device]  
1020  
AR-GP-PF [General-Purpose Physical Function]  
1021 AR-MGMT-PF [Board-Generic Management Physical Function]

1022 AR-ARKA-FX2 [Arkville 128B DDPK Data Mover for Agilix]  
1023 AR-BD-FX1 [BufferDirect Zero-Bounce Data Motion Endpoint]  
1024 AR-TK242 [2x10GbE Packet Capture Device]  
1025 AR-TK242-FX2 [2x100GbE Gen5 Packet Capture Device]  
1026 AR-TK242-FX2 [1x200GbE Gen5 Packet Capture Device]  
4200 A5PL-E1-10GETI [10 GbE Ethernet Traffic Instrument]  
1d72 Xiaomi  
1d78 DERA Storage  
1512 TAI NVMe Controller  
1d78 2004 D5437 HHHH 2TB NVMe SSD  
1d78 2006 D5437 HHHH 4TB NVMe SSD  
1d78 2008 D5437 HHHH 8TB NVMe SSD  
1d78 2104 D5437 U.2 2TB NVMe SSD  
1d78 2106 D5437 U.2 4TB NVMe SSD  
1d78 2108 D5437 U.2 8TB NVMe SSD  
1d78 3003 D5457 HHHH 1.6TB NVMe SSD  
1d78 3005 D5457 HHHH 3.2TB NVMe SSD  
1d78 3007 D5457 HHHH 6.4TB NVMe SSD  
1d78 3103 D5457 U.2 1.6TB NVMe SSD  
1d78 3105 D5457 U.2 3.2TB NVMe SSD  
1d78 3107 D5457 U.2 6.4TB NVMe SSD  
1d78 3108 D5437 U.2 7.68TB  
NVMe SSD  
1d78 5003 D5447 HHHH 1.6TB NVMe SSD  
1d78 5004 D5427 HHHH 1.92TB NVMe SSD  
1d78 5005 D5447 HHHH 3.2TB NVMe SSD  
1d78 5006 D5427 HHHH 3.84TB NVMe SSD  
1d78 5007 D5447 HHHH 6.4TB NVMe SSD  
1d78 5008 D5427 HHHH 7.68TB NVMe SSD  
1d78 5103 D5447 U.2 1.6TB NVMe SSD  
1d78 5105 D5447 U.2 3.2TB NVMe SSD  
1d78 5106 AF3UP34DTCUN3T8B SSD  
1d78 5107 D5447 U.2 6.4TB NVMe SSD  
1d78 5114 D5427 U.2 1.92TB NVMe SSD  
1d78 5116 D5427 U.2 3.84TB NVMe SSD  
1d78 5118 D5427 U.2 7.68TB NVMe SSD  
1d78 8107 D5457 U.2 6.4TB NVMe SSD  
1513 DERA MENG NVMe Controller  
1d78 6015 D6456 HHHH 3.2TB NVMe SSD  
1d78 6016 D6436 HHHH 3.84TB NVMe SSD  
1d78 6017 D6456 HHHH 6.4TB NVMe SSD  
1d78 6018 D6436 HHHH 7.68TB NVMe SSD  
1d78 6105 D6457 U.2 3.2TB NVMe SSD  
1d78 6106 D6437 U.2 3.84TB NVMe SSD  
1d78 6107 D6457 U.2 6.4TB NVMe SSD  
1d78 6108 D6437 U.2 7.68TB NVMe SSD  
1d78 6115 D6456 U.2 3.2TB NVMe SSD  
1d78 6116 D6436 U.2 3.84TB NVMe SSD

1d78 6117 D6456 U.2 6.4TB  
NVMe SSD  
1d78 6118 D6436 U.2 7.68TB NVMe SSD  
1515 DERA EMEI NVMe Controller  
1d78 7002 D7436 HHHL 1.92TB NVMe SSD  
1d78 7003 D7456 HHHL 1.6TB NVMe SSD  
1d78 7004 D7436 HHHL 3.84TB NVMe SSD  
1d78 7005 D7456 HHHL 3.2TB NVMe SSD  
1d78 7007 D7456 HHHL 6.4TB NVMe SSD  
1d78 7008 D7436 HHHL 7.68TB NVMe SSD  
1d78 7009 D7456 HHHL 12.8TB NVMe SSD  
1d78 700a D7436 HHHL 15.36TB NVMe SSD  
1d78 7102 D7436 U.2 15mm 1.92TB NVMe SSD  
1d78 7103 D7456 U.2 15mm 1.6TB NVMe SSD  
1d78 7104 D7436 U.2 15mm 3.84TB NVMe SSD  
1d78 7105 D7456 U.2 15mm 3.2TB NVMe SSD  
1d78 7107 D7456 U.2 15mm 6.4TB NVMe SSD  
1d78 7108 D7436 U.2 15mm 7.68TB NVMe SSD  
1d78 7109 D7456 U.2 15mm 12.8TB NVMe SSD  
1d78 710a D7436 U.2 15mm 15.36TB NVMe SSD  
1d78 7202 Aliflash V2 U.2 15mm 1.92TB NVMe SSD  
1d78 7204 Aliflash V2 U.2 15mm 3.84TB NVMe SSD  
1d78 7208 Aliflash V2 U.2 15mm 7.68TB NVMe SSD  
1d79 Transcend Information, Inc.  
2262 NVMe PCIe SSD 220S/MTE662T2  
2263 NVMe PCIe SSD 110S/112S/120S/MTE300S/MTE400S/MTE652T2  
(DRAM-less)  
2264 NVMe PCIe SSD 250H  
2267 NVMe PCIe SSD 240S/MTE710T  
5766 NVMe PCIe SSD 110Q (DRAM-less)  
1d7c Aerotech, Inc.  
# Fiber-optic HyperWire motion control bus from Aerotech.  
0001 HyperWire Adapter  
1d82 NETINT Technologies Inc.  
0101 Codensity D400 SSD  
0102 Codensity D408 PCIe Gen4 NVMe SSD  
0202 Codensity T408 Video Encoding-Decoding Accelerator  
0401 Quadra Video Processing Unit (VPU)  
# nee Fuzhou Rockchip Electronics Co., Ltd  
1d87 Rockchip Electronics Co., Ltd  
0100 RK3399 PCI Express Root Port  
1808 RK1808 Neural Network Processor Card  
3528 RK3528 PCI Express Root Port  
3562 RK3562 PCI Express Root Port  
3566 RK3568 Remote Signal Processor  
3588 RK3588  
1d89 YEESTOR Microelectronics Co., Ltd  
0280 PCIe NVMe SSD

1d8f Enyx  
1d92 Abaco Systems Inc.  
1d93 YADRO  
1d94 Chengdu Haiguang IC Design Co., Ltd.  
1450 Root Complex  
1451 I/O Memory Management Unit  
1452 PCIe Dummy Host Bridge  
1453 PCIE GPP Bridge  
1454 Internal  
PCIe GPP Bridge 0 to Bus B  
1455 PCIe Dummy Function  
1456 PSPCCP Command DMA Processor  
1458 10 Gb Ethernet Controller Port 0/Port1  
1459 10 Gb Ethernet Controller Port 2/Port3  
145a PCIe Dummy Function  
145b PCIE Non-Transparent Bridge  
145c USB3 XHCI  
145d Switch upstream in PCIe  
145e Switch downstream in PCIe  
145f USB 3.0 Host controller  
1460 Data Fabric: Device 18h; Function 0  
1461 Data Fabric: Device 18h; Function 1  
1462 Data Fabric: Device 18h; Function 2  
1463 Data Fabric: Device 18h; Function 3  
1464 Data Fabric: Device 18h; Function 4  
1465 Data Fabric: Device 18h; Function 5  
1466 Data Fabric: Device 18h; Function 6  
1467 Data Fabric: Device 18h; Function 7  
1468 NTBCCP  
7901 FCH SATA Controller [AHCI mode]  
7904 FCH SATA Controller [AHCI mode]  
7906 FCH SD Flash Controller  
790b FCH SMBus Controller  
790e FCH LPC Bridge  
1d95 Graphcore Ltd  
0001 Colossus GC2 [C2]  
0002 Colossus GC1 [S1]  
1d97 Shenzhen Longsys Electronics Co., Ltd.  
1062 Lexar  
NM710 NVME SSD  
1160 FORESEE P900 BGA NVMe SSD (DRAM-less)  
1202 Lexar NM610 PRO NVME SSD (DRAM-less)  
1602 Lexar NM790 NVME SSD (DRAM-less)  
1d97 Lexar NM620 NVME SSD (DRAM-less)  
2263 SM2263EN/SM2263XT-based OEM NVME SSD (DRAM-less)  
2269 FORESEE XP2000, Lexar NM760 NVME SSD (DRAM-less)  
5216 FORESEE XP1000 / Lexar Professional CFexpress Type B Gold series, NM620 PCIe NVME SSD (DRAM-less)

5220 FORESEE XP2100 NVMe SSD (DRAM-less)  
5236 Lexar NM800 PRO NVME SSD  
# nee Facebook, Inc.  
1d9b Meta Platforms, Inc.  
0010 Networking DOM Engine  
0011 IO Bridge  
1da1 Teko Telecom S.r.l.  
1da2 Sapphire Technology Limited  
e26a Radeon R7 250  
e445 Sapphire Radeon RX 6700  
1da3 Habana Labs Ltd.  
0001 HL-1000 AI Inference Accelerator [Goya]  
# PCIe accelerator card for Deep Learning inference tasks  
0030 Greco AI Inference Accelerator  
# PCIe accelerator card for Deep Learning training tasks  
1000 HL-2000 AI Training Accelerator [Gaudi]  
# PCIe accelerator card for Deep Learning training  
tasks with secured firmware  
1010 HL-2000 AI Training Accelerator [Gaudi secured]  
# PCIe accelerator card for Deep Learning training tasks  
1020 Gaudi2 AI Training Accelerator  
1da8 Corigine, Inc.  
3800 Network Flow Processor 3800  
3803 Network Flow Processor 3800 Virtual Function  
1dad Fungible  
0108 FC50, FC100, FC200 DPU NVMeoF Adapters  
1db2 ATP ELECTRONICS INC  
1db7 Phytium Technology Co., Ltd.  
dc20 [X100 Series]  
dc21 VPU Controller [X100 Series]  
dc22 DC Controller [X100 Series]  
dc23 I2S/DMA Controller [X100 Series]  
dc24 NPU Controller [X100 Series]  
dc26 SATA Controller [X100 Series]  
dc27 USB Controller [X100 Series]  
dc29 NANDFLASH Controller [X100 Series]  
dc2b I2S Controller [X100 Series]  
dc2c SPIM Controller [X100 Series]  
dc2d CAN Controller [X100 Series]  
dc2e UART Controller [X100 Series]  
dc2f PWM Controller [X100 Series]  
dc30 MIO Controller [X100 Series]  
dc31 GPIO Controller [X100 Series]  
dc32 SMBUS Controller [X100 Series]  
dc34 PS2  
Controller [X100 Series]  
dc35 LPC Controller [X100 Series]  
dc36 LDMA Controller [X100 Series]



dc38 LSD\_CFG Controller [X100 Series]  
dc3a SWITCH Controller [X100 Series]  
dc3c GPU\_DMA Controller [X100 Series]  
1dbb NGD Systems, Inc.  
1dbe INNOGRIT Corporation  
5216 NVMe SSD Controller IG5216 (DRAM-less)  
5220 NVMe SSD Controller IG5220 (DRAM-less)  
5236 NVMe SSD Controller IG5236  
1dbe 4001 Dongting-B1 DC SSD M.2 480GB  
1dbe 4002 Dongting-B1 DC SSD M.2 960GB  
5636 NVMe DC SSD IG5636  
1dbe 0001 Dongting-N1 DC SSD U.2 1600GB  
1dbe 0002 Dongting-N1 DC SSD U.2 1920GB  
1dbe 0003 Dongting-N1 DC SSD U.2 3200GB  
1dbe 0004 Dongting-N1 DC SSD U.2 3840GB  
1dbe 0005 Dongting-N1 DC SSD U.2 6400GB  
1dbe 0006 Dongting-N1 DC SSD U.2 7680GB  
1dbe 1001 Donghu-Z1 DC ZNS SSD U.2 4000GB  
1dbe 1002 Donghu-Z1 DC ZNS SSD U.2 8000GB  
5638 NVMe DC SSD IG5638  
1dbe 2001 Dongting-N2 DC SSD U.2 1600GB  
1dbe 2002 Dongting-N2 DC SSD U.2 1920GB  
1dbe 2003 Dongting-N2 DC SSD U.2  
3200GB  
1dbe 2004 Dongting-N2 DC SSD U.2 3840GB  
1dbe 2005 Dongting-N2 DC SSD U.2 6400GB  
1dbe 2006 Dongting-N2 DC SSD U.2 7680GB  
1dbe 3001 Donghu-Z2 DC ZNS SSD U.2 4000GB  
1dbe 3002 Donghu-Z2 DC ZNS SSD U.2 8000GB  
1dbf Guizhou Huaxintong Semiconductor Technology Co., Ltd  
0401 StarDragon4800 PCI Express Root Port  
1dc2 Alco Digital Devices Limited  
1dc5 FADU Inc.  
4081 FC4121 PCIe 4.0 NVMe controller [DELTA]  
6150 FC3081 PCIe 3.0 NVMe controller [BRAVO]  
1dcd Liquid Inc.  
1dcf Beijing Sinead Technology Co., Ltd.  
1dd3 Sage Microelectronics Corp.  
1dd4 Swissbit AG  
0010 N-10m2 NVMe SSD  
0016 N-16  
0020 EN-20 BGA NVMe SSD (DRAM-less)  
1dd8 AMD Pensando Systems  
0002 DSC2 Elba Upstream Port  
1dd8 100e Distributed Services Card  
1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5003 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5008 DSC25v2 10/25G 2p 32GB Spl Card

1dd8 5009 DSC2-25 10/25G 2p SFP56 DPU  
 1dd8  
 500a DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
 1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
 1dd8 500c DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R3  
 1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
 1dd8 500e DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R5  
 1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T  
 1000 DSC Capri Upstream Port  
 1dd8 4000 Naples 100Gb 2-port QSFP28 x16 8GB  
 1dd8 4001 Naples 100Gb 2-port QSFP28 x16 4GB  
 1dd8 4002 Naples 25Gb 2-port SFP28 x8 4GB  
 1dd8 4007 DSP DSC-25 Ent 10/25G OCP3 Card  
 1dd8 4008 DSP DSC-25 10/25G 2p SFP28 Card  
 1dd8 400a DSC-100 40/100G 2-port 8G RAM 16G eMMC G1 Services Card  
 1dd8 400c DSC-25 10/25G 2-port 4G RAM 8G eMMC G1 Services Card  
 1dd8 400d DSP DSC-100 Ent 100Gb Card  
 1dd8 400e DSC-25 10/25G 2-port 4G RAM 8G eMMC G1 Services Card  
 1dd8 4014 DSC-100 40/100G 2-port 8G RAM 16G eMMC G1 Services Card  
 1001 DSC Virtual Downstream  
 Port  
 1dd8 100e Distributed Services Card  
 1dd8 4000 Naples 100Gb 2-port QSFP28 x16 8GB  
 1dd8 4001 Naples 100Gb 2-port QSFP28 x16 4GB  
 1dd8 4002 Naples 25Gb 2-port SFP28 x8 4GB  
 1dd8 4007 DSP DSC-25 Ent 10/25G OCP3 Card  
 1dd8 4008 DSP DSC-25 10/25G 2p SFP28 Card  
 1dd8 400a DSC-100 40/100G 2-port 8G RAM 16G eMMC G1 Services Card  
 1dd8 400c DSC-25 10/25G 2-port 4G RAM 8G eMMC G1 Services Card  
 1dd8 400d DSP DSC-100 Ent 100Gb Card  
 1dd8 400e DSC-25 10/25G 2-port 4G RAM 8G eMMC G1 Services Card  
 1dd8 4014 DSC-100 40/100G 2-port 8G RAM 16G eMMC G1 Services Card  
 1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
 1dd8 5003 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
 1dd8 5008 DSC25v2 10/25G 2p 32GB Spl Card  
 1dd8 5009 DSC2-25 10/25G 2p SFP56 DPU  
 1dd8 500a DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
 1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
 1dd8 500c DSC2-200 50/100/200G 2-port 32G  
 RAM 64G eMMC G2 DPU R3  
 1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
 1dd8 500e DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R5  
 1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T  
 1002 DSC Ethernet Controller  
 1dd8 100e Distributed Services Card  
 1dd8 4000 Naples 100Gb 2-port QSFP28 x16 8GB  
 1dd8 4001 Naples 100Gb 2-port QSFP28 x16 4GB  
 1dd8 4002 Naples 25Gb 2-port SFP28 x8 4GB

1dd8 4007 DSP DSC-25 Ent 10/25G OCP3 Card  
1dd8 4008 DSP DSC-25 10/25G 2p SFP28 Card  
1dd8 400a DSC-100 40/100G 2-port 8G RAM 16G eMMC G1 Services Card  
1dd8 400c DSC-25 10/25G 2-port 4G RAM 8G eMMC G1 Services Card  
1dd8 400d DSP DSC-100 Ent 100Gb Card  
1dd8 400e DSC-25 10/25G 2-port 4G RAM 8G eMMC G1 Services Card  
1dd8 4014 DSC-100 40/100G 2-port 8G RAM 16G eMMC G1 Services Card  
1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5003 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5008  
DSC25v2 10/25G 2p 32GB Spl Card  
1dd8 5009 DSC2-25 10/25G 2p SFP56 DPU  
1dd8 500a DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
1dd8 500c DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R3  
1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
1dd8 500e DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R5  
1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T  
1003 DSC Ethernet Controller VF  
1dd8 100e Distributed Services Card  
1dd8 4000 Naples 100Gb 2-port QSFP28 x16 8GB  
1dd8 4001 Naples 100Gb 2-port QSFP28 x16 4GB  
1dd8 4002 Naples 25Gb 2-port SFP28 x8 4GB  
1dd8 4007 DSP DSC-25 Ent 10/25G OCP3 Card  
1dd8 4008 DSP DSC-25 10/25G 2p SFP28 Card  
1dd8 400a DSC-100 40/100G 2-port 8G RAM 16G eMMC G1 Services Card  
1dd8 400c DSC-25 10/25G 2-port 4G RAM 8G eMMC G1 Services Card  
1dd8 400d DSP DSC-100 Ent 100Gb Card  
1dd8 400e DSC-25 10/25G 2-port 4G  
RAM 8G eMMC G1 Services Card  
1dd8 4014 DSC-100 40/100G 2-port 8G RAM 16G eMMC G1 Services Card  
1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5003 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5008 DSC25v2 10/25G 2p 32GB Spl Card  
1dd8 5009 DSC2-25 10/25G 2p SFP56 DPU  
1dd8 500a DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
1dd8 500c DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R3  
1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
1dd8 500e DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R5  
1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T  
1004 DSC Management Controller  
1dd8 100e Distributed Services Card  
1dd8 4000 Naples 100Gb 2-port QSFP28 x16 8GB  
1dd8 4001 Naples 100Gb 2-port QSFP28 x16 4GB  
1dd8 4002 Naples 25Gb 2-port SFP28 x8 4GB  
1dd8 4007 DSP DSC-25 Ent 10/25G OCP3 Card  
1dd8

4008 DSP DSC-25 10/25G 2p SFP28 Card  
1dd8 400a DSC-100 40/100G 2-port 8G RAM 16G eMMC G1 Services Card  
1dd8 400c DSC-25 10/25G 2-port 4G RAM 8G eMMC G1 Services Card  
1dd8 400d DSP DSC-100 Ent 100Gb Card  
1dd8 400e DSC-25 10/25G 2-port 4G RAM 8G eMMC G1 Services Card  
1dd8 4014 DSC-100 40/100G 2-port 8G RAM 16G eMMC G1 Services Card  
1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5003 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5008 DSC25v2 10/25G 2p 32GB Spl Card  
1dd8 5009 DSC2-25 10/25G 2p SFP56 DPU  
1dd8 500a DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
1dd8 500c DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R3  
1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
1dd8 500e DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R5  
1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T

1005

#### DSC NVMe Controller

1dd8 100e Distributed Services Card  
1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5003 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5008 DSC25v2 10/25G 2p 32GB Spl Card  
1dd8 5009 DSC2-25 10/25G 2p SFP56 DPU  
1dd8 500a DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
1dd8 500c DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R3  
1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
1dd8 500e DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R5  
1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T

#### 1006 DSC NVMe Controller VF

1dd8 100e Distributed Services Card  
1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5003 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5008 DSC25v2 10/25G 2p 32GB Spl Card  
1dd8 5009 DSC2-25 10/25G 2p

#### SFP56 DPU

1dd8 500a DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
1dd8 500c DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R3  
1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
1dd8 500e DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R5  
1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T

#### 1007 DSC Storage Accelerator

1dd8 100e Distributed Services Card  
1dd8 4000 Naples 100Gb 2-port QSFP28 x16 8GB  
1dd8 4001 Naples 100Gb 2-port QSFP28 x16 4GB  
1dd8 4002 Naples 25Gb 2-port SFP28 x8 4GB  
1dd8 4007 DSP DSC-25 Ent 10/25G OCP3 Card

1dd8 4008 DSP DSC-25 10/25G 2p SFP28 Card  
1dd8 400a DSC-100 40/100G 2-port 8G RAM 16G eMMC G1 Services Card  
1dd8 400c DSC-25 10/25G 2-port 4G RAM 8G eMMC G1 Services Card  
1dd8 400d DSP DSC-100 Ent 100Gb Card  
1dd8 400e DSC-25 10/25G 2-port 4G RAM 8G eMMC G1 Services Card  
1dd8 4014 DSC-100 40/100G 2-port 8G RAM  
16G eMMC G1 Services Card  
1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5003 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5008 DSC25v2 10/25G 2p 32GB Spl Card  
1dd8 5009 DSC2-25 10/25G 2p SFP56 DPU  
1dd8 500a DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
1dd8 500c DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R3  
1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
1dd8 500e DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R5  
1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T  
1009 DSC Ethernet Controller UPT  
1dd8 100e Distributed Services Card  
1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5003 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5008 DSC25v2 10/25G 2p 32GB Spl Card  
1dd8 5009 DSC2-25 10/25G 2p SFP56 DPU  
1dd8 500a DSC2-200  
50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
1dd8 500c DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R3  
1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
1dd8 500e DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R5  
1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T  
100a DSC Serial Port Controller  
1dd8 100e Distributed Services Card  
1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5003 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5008 DSC25v2 10/25G 2p 32GB Spl Card  
1dd8 5009 DSC2-25 10/25G 2p SFP56 DPU  
1dd8 500a DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
1dd8 500c DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R3  
1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
1dd8 500e DSC2-200 50/100/200G  
2-port 32G RAM 64G eMMC G2 DPU R5  
1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T  
100b DSC vDPA Network Device VF  
1dd8 100e Distributed Services Card  
1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5003 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5008 DSC25v2 10/25G 2p 32GB Spl Card

1dd8 5009 DSC2-25 10/25G 2p SFP56 DPU  
1dd8 500a DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
1dd8 500c DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R3  
1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
1dd8 500e DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R5  
1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T  
100c DSC PDS Core Management  
1dd8 100e Distributed Services Card  
1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5003 DSC2-200 50/100/200G  
2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5008 DSC25v2 10/25G 2p 32GB Spl Card  
1dd8 5009 DSC2-25 10/25G 2p SFP56 DPU  
1dd8 500a DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
1dd8 500c DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R3  
1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
1dd8 500e DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R5  
1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T  
100d DSC Virtio Network Device VF  
1dd8 100e Distributed Services Card  
1dd8 5001 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5003 DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 Services Card  
1dd8 5008 DSC25v2 10/25G 2p 32GB Spl Card  
1dd8 5009 DSC2-25 10/25G 2p SFP56 DPU  
1dd8 500a DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R2  
1dd8 500b DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU  
1dd8 500c DSC2-200  
50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R3  
1dd8 500d DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4  
1dd8 500e DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R5  
1dd8 500f DSC2-200 50/100/200G 2-port 32G RAM 64G eMMC G2 DPU R4-T  
1ddd Thorlabs  
1de0 Groq  
0000 TSP [GroqChip]  
1de0 0000 GC1-010X-ES [GroqCard]  
1de0 c005 GC1-010B [GroqCard]  
1de0 c006 GC1-0109 [GroqCard]  
1de0 c007 GC1-0100 [GroqCard]  
1de1 Tekram Technology Co.,Ltd.  
0391 TRM-S1040 [DC-315 / DC-395 series]  
2020 DC-390 Series SCSI Adapter [AMD Am53C974]  
690c 690c  
dc29 DC290  
1de4 Raspberry Pi Ltd  
0001 RP1 PCIe 2.0 South Bridge  
1de5 Eideticom, Inc

1000 IO Memory Controller  
2000 NoLoad Hardware Development Kit  
3000 eBPF-based PCIe Accelerator  
1ded Alibaba (China) Co., Ltd.  
# A RDMA (iWarp) device provided by Alibaba Cloud used in ECS environment  
107f Elastic RDMA Adapter  
5007 Elastic RDMA Adapter  
8000 M1 Root Port  
8001 ACC-RCiEP  
8002 RCiEP VF  
8003 RCEC PF  
8004  
RCEC VF  
1dee Biwin Storage Technology Co., Ltd.  
2262 HP EX950 NVMe SSD  
2263 HP EX900 NVMe SSD (DRAM-less)  
5216 KingSpec NX series NVMe SSD (DRAM-less)  
1def Ampere Computing, LLC  
e005 eMAG PCI Express Root Port 0  
e006 eMAG PCI Express Root Port 1  
e007 eMAG PCI Express Root Port 2  
e008 eMAG PCI Express Root Port 3  
e009 eMAG PCI Express Root Port 4  
e00a eMAG PCI Express Root Port 5  
e00b eMAG PCI Express Root Port 6  
e00c eMAG PCI Express Root Port 7  
# Root Complex A (RCA)  
e100 Altra PCI Express Root Complex A  
# RCA port 0  
e101 Altra PCI Express Root Port a0  
# RCA port 1  
e102 Altra PCI Express Root Port a1  
# RCA port 2  
e103 Altra PCI Express Root Port a2  
# RAC port 3  
e104 Altra PCI Express Root Port a3  
# RCA port 4  
e105 Altra PCI Express Root Port a4  
# RCA port 5  
e106 Altra PCI Express Root Port a5  
# RCA port 6  
e107 Altra PCI Express Root Port a6  
# RCA port 7  
e108 Altra PCI Express Root Port a7  
# Root Complex B (RCB)  
e110 Altra PCI Express Root Complex  
B  
# RCB port 0

e111 Altra PCI Express Root Port b0  
# RCB port 1  
e112 Altra PCI Express Root Port b1  
# RCB port 2  
e113 Altra PCI Express Root Port b2  
# RCB port 3  
e114 Altra PCI Express Root Port b3  
# RCB port 4  
e115 Altra PCI Express Root Port b4  
# RCB port 5  
e116 Altra PCI Express Root Port b5  
# RCB port 6  
e117 Altra PCI Express Root Port b6  
# RCB port 7  
e118 Altra PCI Express Root Port b7  
1df3 Ethernity Networks  
0201 ACE-NIC40 Programmable Network Accelerator  
1df3 0001 ENA1040  
1df3 0002 ENA1044  
1df3 0003 ENA1044S  
0202 ACE-NIC50 Programmable Network Accelerator  
1df3 0001 ENA2050F  
1df3 0002 ENA2050FS  
0203 ACE-NIC100 Programmable Network Accelerator  
1df3 0000 Maintenance Mode  
1df3 0001 ENA2080F  
1df3 0002 ENA2080FS  
1df3 0003 ENA2100F  
1df3 0004 ENA2040F  
0204 ACE-NIC-NID Programmable Network Accelerator  
1df3 0001 ENA1020Z  
1df3 0002 ENA1020ZS  
0205 ACE-NIC250 Programmable Network Accelerator  
1df3 0000 Maintenance Mode  
1df3  
0001 ENA2250F  
0206 ACE-NIC200 Programmable Network Accelerator  
1df3 0000 Maintenance Mode  
1df3 0001 ENA2200F  
0207 ACE-NIC50RN Programmable Network Accelerator  
1df3 0000 Maintenance Mode  
1df3 0001 ENA2050RN  
0208 ACE-NIC100RN Programmable Network Accelerator  
1df3 0000 Maintenance Mode  
1df3 0001 ENA2100RN  
1df5 Shenzhen TIGO Semiconductor  
1202 kimtigo NVMe SSD (DRAM-less)  
1df7 opencpi.org



0001 ml605  
0002 alst4  
0003 alst4x  
1df8 V&G Information System Co.,Ltd  
3000 PC NVMe SSD  
1df8 3100 M.2 NVMe Gen3\*4 SSD  
c000 DC NVMe SSD  
1df8 c600 Enterprise U.2 NVMe SSD  
d000 PC NVMe SSD  
1df8 d100 M.2 NVMe SSD  
1df8 d201 M.2 NVMe SSD  
1df8 d600 M.2 NVMe SSD  
1dfc JSC NT-COM  
1181 TDM 8 Port E1/T1/J1 Adapter  
1e0d SambaNova Systems, Inc  
1e0f KIOXIA Corporation  
0001 NVMe SSD Controller BG4 (DRAM-less)  
0007 NVMe SSD Controller Cx6  
1028 2078 DC NVMe CD6 RI 960GB  
1028 2079 DC NVMe CD6 RI 1.92TB  
1028 207a DC NVMe CD6 RI 3.84TB  
1028 207b  
DC NVMe CD6 RI 7.68TB  
1028 207c DC NVMe CD6 RI 15.36TB  
1028 207e Dell Ent NVMe CM6 RI 1.92TB  
1028 207f Dell Ent NVMe CM6 RI 3.84TB  
1028 2080 Dell Ent NVMe CM6 RI 7.68TB  
1028 2081 Dell Ent NVMe CM6 RI 15.36TB  
1028 2084 Dell Ent NVMe CM6 MU 1.6TB  
1028 2085 Dell Ent NVMe CM6 MU 3.2TB  
1028 2086 Dell Ent NVMe CM6 MU 6.4TB  
1028 210a Dell Ent NVMe FIPS CM6 RI 1.92TB  
1028 210b Dell Ent NVMe FIPS CM6 RI 3.84TB  
1028 210c Dell Ent NVMe FIPS CM6 RI 7.68TB  
1028 210d Dell Ent NVMe FIPS CM6 RI15.36TB  
1028 210e Dell Ent NVMe FIPS CM6 MU 1.6TB  
1028 210f Dell Ent NVMe FIPS CM6 MU 3.2TB  
1028 2110 Dell Ent NVMe FIPS CM6 MU 6.4TB  
1e0f 0001 Generic NVMe CM6  
0008 RD500/Exceria Plus/Exceria Plus G2 NVMe SSD  
0009 NVMe SSD  
1e0f 0001 Toshiba RC500 Series NVMe SSD  
1e0f 0032 KIOXIA EXCERIA RC10 Series NVMe SSD  
000c NVMe SSD Controller BG5 (DRAM-less)  
000d NVMe SSD Controller XG7  
0010 NVMe SSD Controller XG8  
0011 NVMe SSD Controller CD7  
1028 2189

DC NVMe SED CD7 RI 960GB  
1028 218a DC NVMe CD7 RI 960GB  
1028 218b DC NVMe SED CD7 RI 1.92TB  
1028 218c DC NVMe CD7 RI 1.92TB  
1028 218d DC NVMe SED CD7 RI 3.84TB  
1028 218e DC NVMe CD7 RI 3.84TB  
1028 218f DC NVMe SED CD7 RI 7.68TB  
1028 2190 DC NVMe CD7 RI 7.68TB  
1028 2191 DC NVMe SED CD7 RI 15.36TB  
1028 2192 DC NVMe CD7 RI 15.36TB  
1028 2193 NVMe CD7 E3.S 1.92TB  
1028 2194 NVMe CD7 E3.S 3.84TB  
1028 2195 NVMe CD7 E3.S 7.68TB  
0014 NVMe SSD Controller CM7 EDSFF  
1028 223f Ent NVMe CM7 FIPS E3.S RI 15.36TB  
1028 2240 Ent NVMe CM7 FIPS E3.S RI 7.68TB  
1028 2241 Ent NVMe CM7 FIPS E3.S RI 3.84TB  
1028 2242 Ent NVMe CM7 E3.S RI 15.36TB  
1028 2243 Ent NVMe CM7 E3.S RI 7.68TB  
1028 2244 Ent NVMe CM7 E3.S RI 3.84TB  
1028 2245 Ent NVMe CM7 E3.S RI 1.92TB  
1028 2246 Ent NVMe CM7 E3.S MU 12.8TB  
1028 2247 Ent NVMe CM7 E3.S MU 6.4TB  
1028 2248 Ent NVMe CM7 E3.S MU 3.2TB  
1028 2249 Ent NVMe CM7 E3.S MU 1.6TB  
1028 22b7 Ent NVMe CM7 FIPS E3.S MU  
1.6TB  
1028 22b8 Ent NVMe CM7 FIPS E3.S MU 3.2TB  
1028 22b9 Ent NVMe CM7 FIPS E3.S MU 6.4TB  
1028 22ba Ent NVMe CM7 FIPS E3.S MU 12.8TB  
0018 Exceria Pro NVMe SSD  
001a NVMe SSD Controller BG6 (DRAM-less)  
001f NVMe SSD Controller CD8  
1028 2223 DC NVMe CD8 U.2 SED 15.36TB  
1028 2224 DC NVMe CD8 U.2 SED 7.68TB  
1028 2225 DC NVMe CD8 U.2 SED 3.84TB  
1028 2226 DC NVMe CD8 U.2 SED 1.92TB  
1028 2227 DC NVMe CD8 U.2 SED 960GB  
1028 2228 DC NVMe CD8 U.2 15.36TB  
1028 2229 DC NVMe CD8 U.2 7.68TB  
1028 222a DC NVMe CD8 U.2 3.84TB  
1028 222b DC NVMe CD8 U.2 1.92TB  
1028 222c DC NVMe CD8 U.2 960GB  
0025 NVMe SSD Controller CM7 2.5"  
1028 222d Ent NVMe CM7 FIPS U.2 RI 30.72TB  
1028 222e Ent NVMe CM7 FIPS U.2 RI 15.36TB  
1028 222f Ent NVMe CM7 FIPS U.2 RI 7.68TB  
1028 2230 Ent NVMe CM7 FIPS U.2 RI 3.84TB

1028 2231 Ent NVMe CM7 FIPS U.2 RI 1.92TB  
1028 2232 Ent NVMe CM7 U.2 RI 30.72TB  
1028 2233 Ent NVMe CM7 U.2 RI 15.36TB  
1028 2234 Ent NVMe CM7 U.2  
RI 7.68TB  
1028 2235 Ent NVMe CM7 U.2 RI 3.84TB  
1028 2236 Ent NVMe CM7 U.2 RI 1.92TB  
1028 2237 Ent NVMe CM7 FIPS U.2 MU 12.8TB  
1028 2238 Ent NVMe CM7 FIPS U.2 MU 6.4TB  
1028 2239 Ent NVMe CM7 FIPS U.2 MU 3.2TB  
1028 223a Ent NVMe CM7 FIPS U.2 MU 1.6TB  
1028 223b Ent NVMe CM7 U.2 MU 12.8TB  
1028 223c Ent NVMe CM7 U.2 MU 6.4TB  
1028 223d Ent NVMe CM7 U.2 MU 3.2TB  
1028 223e Ent NVMe CM7 U.2 MU 1.6TB  
002c NVMe SSD Controller CD8P EDSFF  
1028 22bf DC NVMe CD8P E3.S 15.36TB  
1028 22c0 DC NVMe CD8P E3.S 7.68TB  
1028 22c1 DC NVMe CD8P E3.S 3.84TB  
1028 22c2 DC NVMe CD8P E3.S 1.92TB  
1028 22c7 DC NVMe CD8P E3.S MU 12.8TB  
1028 22c8 DC NVMe CD8P E3.S MU 6.4TB  
1028 22c9 DC NVMe CD8P E3.S MU 3.2TB  
1028 22ca DC NVMe CD8P E3.S MU 1.6TB  
1e17 Arnold & Richter Cine Technik GmbH & Co. Betriebs KG  
1e18 Beijing GuangRunTong Technology Development Co.,Ltd  
1e24 Squirrels Research Labs  
0101 Acorn CLE-101  
0215 Acorn CLE-215  
021f Acorn CLE-215+  
1525 Xilinx  
BCU-1525  
# VU33P FPGA Accelerator  
1533 ForestKitten 33  
# JungleCat VU33P Module  
1633 JCM33  
# JungleCat VU35P Module  
1635 JCM35  
1e26 Fujitsu Client Computing Limited  
1e36 Shanghai Enflame Technology Co. Ltd  
0001 T10 [CloudBlazer]  
0002 T11 [CloudBlazer]  
0003 T10(QSFP-DD) [CloudBlazer]  
0021 T20(32GB) [CloudBlazer]  
0022 T20(64GB) [CloudBlazer]  
0023 T21(32GB) [CloudBlazer]  
0024 T21(64GB) [CloudBlazer]  
8001 I20 [CloudBlazer]

8011 I10 [CloudBlazer]  
8012 I10L [CloudBlazer]  
# HHL PCIe card, single slot, 3rd generation from Enflame  
8031 S6 [Enflame]  
# HHL PCIe card, single slot, 3rd generation from Enflame, 24GB device memory  
8032 S6 [Enflame]  
# FHFL PCIe card, single slot, 3rd generation from Enflame  
c031 S30 [Enflame]  
# FHFL PCIe card, dual slot, 3rd generation from Enflame, 48GB device memory  
c032 S90 [Enflame]  
# FHFL PCIe card, dual slot, 3rd generation from Enflame, 48GB device memory  
c033 S60G [Enflame]  
# FHFL PCIe card, dual slot, 3rd generation from  
Enflame, 48GB device memory  
c035 S60 [Enflame]  
# nee Thinci, Inc  
1e38 Blaize, Inc  
0102 Xplorer X1600  
1e39 MEDION AG  
1e3a Cactus Technologies Limited  
2263 270PM6, 270PM7 series NVMe SSD  
1e3b DapuStor Corporation  
0600 NVMe SSD Controller DP600  
1e3b 0006 Enterprise NVMe SSD U.2 ODP 7.68TB (J5001)  
1e3b 0010 Enterprise NVMe SSD U.2 3.84TB (R5102)  
1e3b 0013 Enterprise NVMe SSD U.2 3.20TB (R5302)  
1e3b 0030 Enterprise NVMe SSD U.2 3.84TB (J5100)  
1e3b 0031 Enterprise NVMe SSD U.2 7.68TB (J5100)  
1e3b 0032 Enterprise NVMe SSD U.2 15.36TB (J5100)  
1e3b 0033 Enterprise NVMe SSD U.2 3.20TB (J5300)  
1e3b 0034 Enterprise NVMe SSD U.2 6.40TB (J5300)  
1e3b 0035 Enterprise NVMe SSD U.2 12.80TB (J5300)  
1e3b 0036 Enterprise NVMe SSD AIC 7.68TB (J5110)  
1e3b 0037 Enterprise NVMe SSD AIC 6.40TB (J5310)  
1e3b 0038 Enterprise NVMe SSD U.2 3.84TB (J5100D)  
1e3b 0039 Enterprise NVMe SSD U.2 7.68TB (J5100D)  
1e3b 003b Enterprise NVMe SSD U.2 3.20TB (J5300D)  
1e3b  
003c Enterprise NVMe SSD U.2 6.40TB (J5300D)  
1e3b 003e Enterprise NVMe SSD AIC 3.84TB (J5110)  
1e3b 003f Enterprise NVMe SSD AIC 3.20TB (J5310)  
1e3b 004c Enterprise NVMe SSD U.2 QDP 1.92TB (J5100)  
1e3b 004d Enterprise NVMe SSD U.2 QDP 1.60TB (J5300)  
1e3b 0050 Enterprise NVMe SSD U.2 3.84TB (R5100)  
1e3b 0051 Enterprise NVMe SSD U.2 7.68TB (R5100)  
1e3b 0052 Enterprise NVMe SSD U.2 15.36TB (R5100)  
1e3b 0053 Enterprise NVMe SSD U.2 3.20TB (R5300)  
1e3b 0054 Enterprise NVMe SSD U.2 6.40TB (R5300)

1e3b 0055 Enterprise NVMe SSD U.2 12.80TB (R5300)  
1e3b 0056 Enterprise NVMe SSD U.2 3.84TB (R5101)  
1e3b 0059 Enterprise NVMe SSD U.2 3.20TB (R5301)  
1e3b 0060 Enterprise NVMe SSD U.2 3.84TB (R5100D)  
1e3b 0061 Enterprise NVMe SSD U.2 7.68TB (R5100D)  
1e3b 0063 Enterprise NVMe SSD U.2 3.20TB (R5300D)  
1e3b 0064 Enterprise NVMe SSD U.2 6.40TB (R5300D)  
1e3b 0066 Enterprise NVMe SSD U.2 3.84TB (R5101D)  
1e3b 0069 Enterprise NVMe SSD U.2 3.20TB (R5301D)  
1e3b  
006c Enterprise NVMe SSD U.2 1.92TB (R5101)  
1e3b 006d Enterprise NVMe SSD U.2 1.60TB (J5301)  
1e3b 00b9 Enterprise NVMe SSD U.2 QDP 25.60TB (R5300)  
1e3b 00be Enterprise NVMe SSD U.2 QDP 30.72TB (R5100)  
1e3b 00c1 Enterprise NVMe SSD U.2 QDP 25.60TB (R5300D)  
1e3b 00c4 Enterprise NVMe SSD U.2 QDP 30.72TB (R5100D)  
1e3b 00c9 Enterprise NVMe SSD U.2 ODP 15.36TB (J5001)  
1e3b 00ca Enterprise NVMe SSD U.2 ODP 3.84TB (J5102)  
1e3b 00cb Enterprise NVMe SSD U.2 ODP 7.68TB (J5102)  
1e3b 00cc Enterprise NVMe SSD U.2 QDP 3.84TB (J5101)  
1e3b 00cd Enterprise NVMe SSD U.2 ODP 7.68TB (J5101)  
1e3b 00ce Enterprise NVMe SSD U.2 QDP 3.84TB (J5101D)  
1e3b 00cf Enterprise NVMe SSD U.2 ODP 7.68TB (J5101D)  
1e3b 00dc Enterprise NVMe SSD U.2 ODP 30.72TB with SAMSUNG 32GB DRAM (J5001)  
1e3b 00dd Enterprise NVMe SSD U.2 ODP 30.72TB with MT 32GB DRAM(J5001)  
1e3b 00de Enterprise NVMe SSD U.2 ODP 15.36TB with SK 16GB DRAM(J5001D)  
1e3b 00df Enterprise NVMe SSD U.2 ODP 30.72TB  
with SAMSUNG 32GB DRAM(J5001D)  
1e3b 00e7 Enterprise NVMe SSD U.2 ODP 30.72TB with MT 32GB DRAM(J5001D)  
1e3b 00e8 Enterprise NVMe SSD U.2 QDP 3.20TB (J5301)  
1e3b 00e9 Enterprise NVMe SSD U.2 ODP 6.40TB (J5301)  
1e3b 00ea Enterprise NVMe SSD U.2 QDP 3.20TB (J5301D)  
1e3b 00eb Enterprise NVMe SSD U.2 ODP 6.40TB (J5301D)  
1e3b 00f0 Enterprise NVMe SSD U.2 0.40TB (X2900)  
1e3b 00f1 Enterprise NVMe SSD U.2 0.80TB (X2900)  
1e3b 00f2 Enterprise NVMe SSD U.2 1.60TB (X2900)  
1e3b 00f3 Enterprise NVMe SSD U.2 3.20TB (X2900)  
1e3b 00f5 Enterprise NVMe SSD U.2 0.40TB (X2900P)  
1e3b 00f6 Enterprise NVMe SSD U.2 0.80TB (X2900P)  
1098 Haishen3 NVMe SSD  
1e3b 0001 Enterprise NVMe SSD U.2 0.8TB (H2100)  
1e3b 0002 Enterprise NVMe SSD U.2 0.96TB (H2200)  
1e3b 0004 Enterprise NVMe SSD U.2 1.6TB (H2100)  
1e3b 0005 Enterprise NVMe SSD U.2 1.92TB (H2200)  
1e3b 0009 Enterprise NVMe SSD U.2 0.8TB (H3100)  
1e3b 000a Enterprise NVMe SSD U.2 0.96TB (H3200)  
1e3b 000c Enterprise

NVMe SSD U.2 1.6TB (H3100)  
1e3b 000d Enterprise NVMe SSD U.2 1.92TB (H3200)  
1e3b 0014 Enterprise NVMe SSD U.2 3.2TB (H3100)  
1e3b 0015 Enterprise NVMe SSD U.2 3.84TB (H3200)  
1e3b 0021 Enterprise NVMe SSD U.2 6.4TB (H3100)  
1e3b 0022 Enterprise NVMe SSD U.2 7.68TB (H3200)  
1e3b 0052 Enterprise NVMe SSD U.2 0.8TB (H3900)  
1e3b 0053 Enterprise NVMe SSD U.2 1.6TB (H3900)  
1e3b 0059 Enterprise NVMe SSD U.2 0.75TB (H3900)  
1e3b 0061 Enterprise NVMe SSD HHHL 0.8TB (H2100)  
1e3b 0062 Enterprise NVMe SSD HHHL 0.96TB (H2200)  
1e3b 0064 Enterprise NVMe SSD HHHL 1.6TB (H2100)  
1e3b 0065 Enterprise NVMe SSD HHHL 1.92TB (H2200)  
1e3b 006c Enterprise NVMe SSD HHHL 0.8TB (H3100)  
1e3b 006d Enterprise NVMe SSD HHHL 0.96TB (H3200)  
1e3b 006f Enterprise NVMe SSD HHHL 1.6TB (H3100)  
1e3b 0070 Enterprise NVMe SSD HHHL 1.92TB (H3200)  
1e3b 007c Enterprise NVMe SSD HHHL 3.2TB (H3100)  
1e3b 007d Enterprise NVMe SSD HHHL 3.84TB (H3200)  
1e3b 007f Enterprise NVMe  
SSD HHHL 6.4TB (H3100)  
1e3b 0080 Enterprise NVMe SSD HHHL 7.68TB (H3200)  
1e3b 008a Enterprise NVMe SSD HHHL 0.8TB (H3900)  
1e3b 008b Enterprise NVMe SSD HHHL 1.6TB (H3900)  
1e3b 0091 Enterprise NVMe SSD HHHL 0.75TB (H3900)  
1333 Haishen5 NVMe SSD  
1e3b 0081 Enterprise NVMe SSD U.2 3.84TB (H5100)  
1e3b 0082 Enterprise NVMe SSD U.2 7.68TB (H5100)  
1e3b 0084 Enterprise NVMe SSD U.2 3.2TB (H5300)  
1e3b 0085 Enterprise NVMe SSD U.2 6.4TB (H5300)  
1e3d Burlywood, Inc  
1e43 MaxLinear Inc  
8904 MxL8904  
8906 MxL8906  
8908 MxL8908  
1e44 Valve Software  
1e49 Yangtze Memory Technologies Co.,Ltd  
0001 ZHITAI PC005 NVMe SSD  
0021 ZHITAI TiPro5000 NVMe SSD  
0041 ZHITAI TiPro7000  
0071 ZHITAI TiPlus7100  
# YMTC  
1001 PC005 NVMe SSD  
1011 PC210 NVMe SSD  
1013 PC210 NVMe SSD  
1031 PC300 NVMe SSD (DRAM-less)  
1e4b MAXIO Technology (Hangzhou) Ltd.  
1001 NVMe SSD Controller MAP1001

1002 NVMe SSD Controller MAP1002 (DRAM-less)  
1003 NVMe SSD Controller MAP1003  
1201 NVMe  
SSD Controller MAP1201  
1202 NVMe SSD Controller MAP1202 (DRAM-less)  
1601 NVMe SSD Controller MAP1601  
1602 NVMe SSD Controller MAP1602 (DRAM-less)  
1608 NVMe SSD Controller MAP1608 (DRAM-less)  
1e4c GSI Technology  
0010 Associative Processing Unit [Leda]  
1e4c 0120 SE120  
1e50 IP3 Tech (HK) Limited  
1e52 Tenstorrent Inc  
401e Wormhole  
1e52 0014 n300  
1e52 0018 n150  
b140 Blackhole  
faca Grayskull  
1e52 0003 e150  
1e52 0007 e75  
1e52 000a e300  
1e57 Beijing Panyi Technology Co., Ltd  
0100 The device has already been deleted.  
0000 0100 PY8800 64GB Accelerator  
1e59 Oxford Nanopore Technologies  
0001 MinION Mk1C  
1e5d ASR Microelectronics  
7000 AI controller A7000  
7010 AI controller A7010  
1e60 Hailo Technologies Ltd.  
2864 Hailo-8 AI Processor  
1e67 Untether AI  
0002 runAI200 AI Inference Accelerator  
1e68 Jiangsu Xinsheng Intelligent Technology Co., Ltd  
8111 EP2000Pro PCIe 3 NVMe SSD (DRAM-less)  
1e6b Axiado Corp.  
1e7b Dataland  
1e7c Brainchip Inc  
bca1  
AKD1000 Neural Network Coprocessor [Akida]  
1e7e Pliops  
9034 Pliops Extreme Data Processor [XDP1.0]  
1e7f Jiangsu Huacun Elec. Tech. Co., Ltd.  
6002 MMY MMS350 PCIe 3 NVMe SSD (DRAM-less)  
6003 MMY HC512GP3KH2T PCIe 3 NVMe SSD (DRAM-less)  
1e81 Ramaxel Technology(Shenzhen) Limited  
1203 NVMe SSD Controller UHXXXa series  
1e81 a121 NVMe SSD UHXXXa series U.2 960GB

1e81 a122 NVMe SSD UHXXXa series U.2 1920GB  
1e81 a123 NVMe SSD UHXXXa series U.2 3840GB  
1e81 a124 NVMe SSD UHXXXa series U.2 7680GB  
1e81 a125 NVMe SSD UHXXXa series U.2 15360GB  
1e81 a211 NVMe SSD UHXXXa series U.2 800GB  
1e81 a212 NVMe SSD UHXXXa series U.2 1600GB  
1e81 a213 NVMe SSD UHXXXa series U.2 3200GB  
1e81 a214 NVMe SSD UHXXXa series U.2 6400GB  
1e81 f123 NVMe SSD TP6500 series U.2 3840GB  
6206 AM620 NVMe SSD  
1e83 Huaqin Technology Co.Ltd  
1e85 Heitec AG  
1e89 ID Quantique SA  
0002 Quantis-PCIe-40M  
0003 Quantis-PCIe-240M  
1e93 Beijing Bytedance Network Technology Co., Ltd.  
# aka  
SED Systems  
1e94 Calian SED  
1e95 Solid State Storage Technology Corporation  
1000 XA1-311024 NVMe SSD M.2  
1001 CA6-8D512 NVMe SSD M.2  
1002 NVMe SSD [3DNAND] 2.5" U.2 (LJ1)  
1e95 1101 NVMe SSD [3DNAND] 2.5" U.2 (LJ1)  
1ea0 5636 TP1500 Series U.2 NVMe Datacenter SSD  
1003 CLR-8W512 NVMe SSD M.2 (DRAM-less)  
1005 PLEXTOR M10P(GN) NVMe SSD M.2  
1007 CL4-8D512 NVMe SSD M.2 (DRAM-less)  
1008 CL5-8D512 NVMe SSD M.2 (DRAM-less)  
3500 CA5-8D256 NVMe SSD M.2  
35f1 PLEXTOR M9PGN Plus NVMe SSD M.2  
9100 CL1-3D256-Q11 NVMe SSD M.2  
1e96 Drut Technologies Inc.  
1e9f Lynxi Technologies Co., Ltd.  
1ea0 Tencent Technology (Shenzhen) Company Limited  
2a16 Cloud Intelligent Inference Controller  
2a18 Video Transcode Controller  
2a20 Cloud Intelligent Inference and Training Controller  
2a22 Cloud Intelligent Inference Controller  
1ea7 Intelliprop, Inc  
223a Typhon+ PCIe to Gen-Z Bridge  
224a IPA-PE224A CXL to Gen-Z Bridge [Sphinx]  
1eab Hefei DATANG Storage Technology Co.,LTD.  
300a  
NVMe SSD Controller 300A  
300b NVMe SSD Controller 300B (DRAM-less)  
1eac Quectel Wireless Solutions Co., Ltd.  
1001 EM120R-GL LTE Modem



1002 EM160R-GL LTE Modem  
1eae XFX Limited  
1eb1 VeriSilicon Inc  
1001 Video Accelerator  
1eb4 Quantum Nebula Microelectronics Technology Co.,Ltd.  
3401 SSD Contoller  
1eb9 Senscomm Semiconductor, Inc  
2020 SCM2625 Wi-Fi6 Network Adapter  
1ebd EMERGETECH Company Ltd.  
0101 Seirios 2063 Video Codec  
1ec6 Vastai Technologies  
0100 SV100  
1ec6 0010 VA1V  
1ec6 0011 VA1A  
1ec6 0012 VA1  
1ec6 0013 VA1E  
1ec6 0020 VA10V  
1ec6 0021 VA10A  
1ec6 0022 VA10  
1ec6 0030 VE1P  
1ec6 0031 VE1S  
1ec6 0032 VE1V  
1ec6 0033 VE1M  
1ec6 0034 VE1E  
1ec6 0040 VV1U  
1ec6 0041 VA1U  
0200 SG100  
1ec6 0060 VG1200  
1ec6 0061 VG1600  
1ec6 0062 VG1800  
1ec6 0063 VG1000  
020f SG100 vGPU  
1ec8 Innosilicon Co Ltd  
8800 Fantasy I  
1ec8 12a2 Fantasy I Device  
8810 Fantasy I  
1ec8 12a2 Fantasy I Device  
9800 Fantasy II  
1ec8 12a2  
Fantasy II Device  
9802 Fantasy II  
1ec8 12a2 Fantasy II Device  
9804 Fantasy II  
1ec8 12a2 Fantasy II Device  
9810 Fantasy II-M  
1ec8 12a2 Fantasy II Device  
1ec9 Wingtech Group(HongKong)Limited  
1eca Lightmatter

0000 Enviser-B  
1ed0 Hosin Global Electronics  
1ed2 FuriosaAI, Inc.  
0000 Warboy  
1ed3 Yeston  
1ed5 Moore Threads Technology Co.,Ltd  
0100 MTT S10  
0101 MTT S10  
0102 MTT S30  
0105 MTT S50  
0106 MTT S60  
0111 MTT S100  
0121 MTT S1000M  
0122 MTT S1000  
0123 MTT S2000  
01ff MTT HDMI/DP Audio  
0200 MTT S80 Engineering Sample  
0201 MTT S80  
0202 MTT S70  
0203 MTT S60  
0211 MTT X300  
0221 G2S80  
0222 MTT S3000  
0223 G2S4  
0251 G2N10  
02ff MTT HDMI/DP Audio  
0300 MTT S90 Engineering Sample  
0301 MTT S90  
0323 MTT S4000  
0327 MTT S4000  
03ff MTT HDMI/DP Audio  
1ed8 Digiteq Automotive  
0101 FG4 PCIe Frame Grabber (T100)  
0201 FG4 PCIe Frame Grabber (T200)  
1ed9 Myrtle.ai  
1ee1 Suzhou Kuhan Information Technologies  
0050 Aurora NVMe SSD Controller  
1ee1  
0009 Airglow A430 NVMe SSD U.2 1.6TB  
1ee1 000a Airglow A430 NVMe SSD U.2 3.2TB  
1ee1 000b Airglow A430 NVMe SSD U.2 4.8TB  
1ee1 0012 Airglow Z400 NVMe ZNS SSD U.2 5.76TB  
1ee4 PETAIO INC  
1180 P8118 U.2 Single Port SSD  
1ee9 SUSE LLC  
1eec Viscore Technologies Ltd  
0102 VSE250231S Dual-port 10Gb/25Gb Ethernet PCIe  
1eec VSE250231S Dual-port 10Gb/25Gb Ethernet PCIe

1eed XDX Computing Technology Ltd.  
10a0 XDX110 Graphic/VGA Controller  
10a1 XDX110 Audio Controller  
10a2 XDX110M  
10a4 XDX E1100  
1140 XDX120  
1142 XDX120M  
1144 XDX E1200  
1150 XDX120S  
1160 XDX121  
1170 XDX121S  
11e0 XDX130  
11e4 XDX E1300  
1320 XDX150  
1323 XDX R1500  
1324 XDX X1500  
1330 XDX150S  
1333 XDX R1510  
1340 XDX151  
1350 XDX151S  
1360 XDX151T  
13c0 XDX160T  
13d0 XDX160S  
13d3 XDX R1610  
1500 XDX180  
1503 XDX R1800  
1504 XDX X1800  
1510 XDX180S  
15a0 XDX190  
15a3 XDX R1900  
15a4 XDX X1900  
15a5 XDX X1900D  
15b0 XDX190S  
1810 XDX TJ01 Audio  
1820 XDX TJ02 Audio  
1830  
XDX TJ03 Audio  
1ef6 GrAI Matter Labs  
1ef7 Shenzhen Gunnir Technology Development Co., Ltd  
1efb Flexxon Pte Ltd  
1f02 Beijing Dayu Technology  
1f03 Shenzhen Shichuangyi Electronics Co., Ltd  
1202 MAP1202-Based NVMe SSD (DRAM-less)  
2262 SM2262EN-based OEM SSD  
2263 SM2263XT-Base NVMe SSD  
5216 IG5216-based NVMe SSD (DRAM-less)  
5220 IG5220-Based NVMe SSD  
5236 IG5236-Based NVMe SSD

5636 IG5636-Based NVMe SSD  
1f0a Motorcomm Microelectronics.  
6801 YT6801 Gigabit Ethernet Controller  
1f0f NebulaMatrix Technology  
1041 D1055AS vDPA Ethernet Controller  
1f0f 0001 D1055AS vDPA Ethernet Controller  
1042 D1055AS vDPA Storage Controller  
1f0f 0001 D1055AS vDPA Storage Controller  
1220 D1055AS Ethernet Controller  
1221 D1055AS Ethernet Controller  
1222 D1055AS Ethernet Controller  
1223 D1055AS Ethernet Controller  
1600 M16104 Family  
1f0f 0001 M16104 Family  
1601 M16104 Family Virtual Function  
1f0f 0001 M16104 Family Virtual Function  
1a00 M16104 Family  
1f0f  
0001 M16104 Family  
1a01 M16104 Family Virtual Function  
1f0f 0001 M16104 Family Virtual Function  
2022 D1055AS PCI Express Switch Upstream Port  
9088 D1055AS PCI Express Switch Downstream Port  
1f17 Zettastone Technology  
1f24 xFusion Digital Technologies Co., Ltd.  
1058 EP500/EP600 NVMe SSD  
1f24 1114 EP500 NVMe SSD(RI)  
1f24 1115 EP600 NVMe SSD(MU)  
1f2f China Mobile (Hangzhou) Information Technology Co.Ltd.  
1513 DERA MENG NVMe Controller  
1f2f 6113 KM660 U.2 1.6TB NVMe SSD  
1f2f 6114 KM560 U.2 1.92TB NVMe SSD  
1f2f 6115 KM660 U.2 3.2TB NVMe SSD  
1f2f 6116 KM560 U.2 3.84TB NVMe SSD  
1f2f 6118 KM560 U.2 7.68TB NVMe SSD  
1f31 Nextorage  
4512 Nextorage NE1N NVMe SSD  
1f3f 3SNIC Ltd  
2100 SSSHBA SAS/SATA HBA  
1f3f 0120 HBA 32 Ports  
1f3f 0125 HBA 40 Ports  
1f3f 0180 HBA 16 Ports  
1f3f 0185 HBA 8 Ports  
2200 SSSRAID RAID controller  
1f3f 0185 RAID Controller 16 Ports with 2G Cache  
1f3f 01a1 RAID Controller 40 Ports with 2G Cache  
1f3f 01a4

RAID Controller 16 Ports with 4G Cache  
1f3f 01a8 RAID Controller 32 Ports with 4G Cache  
1f3f 01ad RAID Controller 40 Ports with 4G Cache  
9001 SSSNIC Ethernet VF  
1f3f 1000 Ethernet VF  
9002 SSSNIC Ethernet VF Hyper-V  
1f3f 1000 Ethernet VF Hyper-V  
9003 SSSNIC Ethernet SDI VF  
1f3f 1000 Ethernet SDI VF  
9004 SSSNIC Ethernet SDI VF Hyper-V  
1f3f 1000 Ethernet SDI VF Hyper-V  
9008 SSSFC VF  
1f3f 1000 3SFC VF  
9009 SSSFC VF Hyper-V  
1f3f 1000 3SFC VF Hyper-V  
9010 SSSFC FC Controller  
1f3f 0041 Dual Port 16GE FC to PCIe Gen4 x16 Adapter  
1f3f 0061 Dual Port 32GE FC to PCIe Gen4 x16 Adapter  
9020 SSSNIC Ethernet Network Adapter  
1f3f 0051 Dual Port 25GE Ethernet Network Adapter  
1f3f 0052 Quad Port 25GE Ethernet Network Adapter  
1f3f 00a1 Dual Port 100GE Ethernet Network Adapter  
9030 SSSNIC IPU  
1f3f 0051 Dual Port 25GE IPU  
9031 SSSNIC SDI5.0  
1f3f 0051 Dual Port 25GE SDI5.0lite  
1f3f 00a1 Dual Port 100GE SDI5.0  
9032 SSSNIC SDI5.1  
1f3f 00a1  
Dual Port 100GE SDI5.1  
1f40 Netac Technology Co.,Ltd  
0001 PCIe 4 NVMe SSD (DRAM-less)  
1202 PCIe 3 NVMe SSD (DRAM-less)  
1602 PCIe 4 NVMe SSD (DRAM-less)  
1f40 PCIe 4 NVMe SSD (DRAM-less)  
2263 PCIe 3 SM based NVMe SSD (DRAM-less)  
5216 PCIe 3 NVMe SSD (DRAM-less)  
5236 PCIe 4 INNOGRIT based NVMe SSD  
5765 PCIe 3 NVMe SSD (DRAM-less)  
1f44 VVDN Technologies Private Limited  
# YUSUR Technology Co., Ltd.  
1f47 YUSUR Tech  
# Network Accelerating Card  
2018 DPU Card  
# Network Accelerating Card  
2020 DPU  
1f4b Axera Semiconductor Co., Ltd  
1f52 MangoBoost Inc.

1f56 SAPEON Inc.  
1f60 Accelecom  
0001 XELE-NIC 25K5  
0054 XELE-NIC 25K5  
1f67 Yunsilicon Technology  
1011 metaConnect SmartNIC Physical Function  
1012 metaConnect SmartNIC Virtual Function  
1051 metaFusion DPU Physical Function  
1052 metaFusion DPU Virtual Function  
1059 metaFusion DPU SoC Network Interface  
1111 metaScale SmartNIC Physical Function  
1112 metaScale SmartNIC Virtual Function  
1151 metaVisor DPU  
Physical Function  
1152 metaVisor DPU Virtual Function  
1faa Hexaflake (Shanghai) Information Technology Co., Ltd.  
0c10 Compass C10 PF  
0c11 Compass C10 VF  
1fab Unifabrix Ltd.  
0000 Nexus Alpha IVP  
0100 NoX Gamma  
01fd Smart Memory Node Generic CXL Port (T1)  
# UnifabriX Smart Memory Node Generic CXL Port  
01fe Smart Memory Node Generic CXL Port (T2)  
# UnifabriX Smart Memory Node Generic CXL Port  
01ff Smart Memory Node Generic CXL Port (T3)  
1b00 MAX Host Device  
1fb0 ICube Corporation Limited  
1000 NF1000 Series GPU  
1fb0 1001 NF1001  
1fb0 1002 NF1002  
1fb0 1003 NF1003  
# NF1000 Series GPU  
1001 NF1001  
1fb0 1001 NF1001  
1fb0 1002 NF1002  
1fb0 1003 NF1003  
2000 NF2000 Series GPU  
1fb0 2001 NF2001  
1fb0 2002 NF 2002  
1fb0 2003 NF 2003  
3000 NF3000 Series GPU  
1fb0 3001 NF3001  
1fb0 3002 NF3002  
1fb0 3003 NF3003  
4000 NF4000 Series GPU  
1fb0 4001 NF4001  
1fb0 4002 NF4002

1fb0 4003 NF4003  
5000 NF5000 Series GPU  
1fb0 5001 NF 5001  
1fb0  
5002 NF 5002  
1fb0 5003 NF5003  
# nee Tumsan Oy  
1fc0 Ascom (Finland) Oy  
0300 E2200 Dual E1/Rawpipe Card  
0301 C5400 SHDSL/E1 Card  
# nee PathScale, Inc  
1fc1 QLogic, Corp.  
000d IBA6110 InfiniBand HCA  
0010 IBA6120 InfiniBand HCA  
1fc9 Tehuti Networks Ltd.  
3009 10-Giga TOE SmartNIC  
3010 10-Giga TOE SmartNIC  
0000 3002 10-Giga TOE Single Port XFP SmartNIC  
0000 3004 10-Giga TOE Single Port SFP+ SmartNIC  
0000 3008 10-Giga TOE Single Port CX4 SmartNIC  
3014 10-Giga TOE SmartNIC 2-Port  
0000 3003 10-Giga TOE Dual Port XFP Low Profile SmartNIC  
0000 3005 10-Giga TOE Dual Port SFP+ Low Profile SmartNIC  
0000 3014 10-Giga TOE Dual Port CX4 Low Profile SmartNIC  
3110 10-Giga TOE Single Port SmartNIC  
0000 3004 10-Giga TOE Single Port SFP+ SmartNIC  
3114 10-Giga TOE Dual Port Low Profile SmartNIC  
0000 3005 10-Giga TOE Dual Port SFP+ Low Profile SmartNIC  
0000 3011 10-Giga TOE Dual Port SFP+/CX4 Low Profile SmartNIC  
0000 3012 10-Giga TOE Dual Port CX4/SFP+  
Low Profile SmartNIC  
0000 3014 10-Giga TOE Dual Port CX4 Low Profile SmartNIC  
3310 10-Giga TOE SFP+ Single Port SmartNIC  
0000 3004 10-Giga TOE Single Port SFP+ SmartNIC  
3314 10-Giga TOE Dual Port Low Profile SmartNIC  
0000 3005 10-Giga TOE Dual Port SFP+ Low Profile SmartNIC  
0000 3011 10-Giga TOE Dual Port SFP+/CX4 Low Profile SmartNIC  
0000 3012 10-Giga TOE Dual Port CX4/SFP+ Low Profile SmartNIC  
0000 3014 10-Giga TOE Dual Port CX4 Low Profile SmartNIC  
4010 TN4010 Clean SRAM  
4020 TN9030 10GbE CX4 Ethernet Adapter  
180c 2040 Mustang-200 10GbE Ethernet Adapter  
4022 TN9310 10GbE SFP+ Ethernet Adapter  
1043 8709 XG-C100F 10GbE SFP+ Ethernet Adapter  
1186 4d00 DXE-810S 10GbE SFP+ Ethernet Adapter  
1432 8103 10 Gigabit Ethernet SFP+ PCI Express Adapter  
1fc9 3015 Ethernet Adapter  
4024 TN9210 10GBase-T Ethernet Adapter

4025 TN9510 10GBase-T/NBASE-T Ethernet Adapter  
105a 7203 SANLink3 NBase-T1  
1186 2900 DXE-810T 10GBase-T Ethernet Adapter  
1432  
8102 10 Gigabit Ethernet PCI Express Adapter  
1fc9 3015 Ethernet Adapter  
4026 TN9610 10GbE SFP+ Ethernet Adapter  
4c52 1000 LREC6860AF 10 Gigabit Ethernet Adapter  
4027 TN9710P 10GBase-T/NBASE-T Ethernet Adapter  
1154 0368 LGY-PCIE-MG  
1432 8104 10 Gigabit Ethernet PCI Express Adapter  
1546 4027 GE10-PCIE4XG202P 10Gbase-T/NBASE-T Ethernet Adapter  
1baa 3310 PCIe Expansion Card  
1fc9 3015 Ethernet Adapter  
4c52 1001 LREC6860BT 10 Gigabit Ethernet Adapter  
4527 TN9710Q 5GBase-T/NBASE-T Ethernet Adapter  
1fcc StreamLabs  
f416 MS416  
fb01 MH4LM  
1fce Cognio Inc.  
0001 Spectrum Analyzer PC Card (SAGe)  
1fd4 SUNIX Co., Ltd.  
0001 Matrix multiport serial adapter  
1999 Multiport serial controller  
1fde Kratos Defense & Security Solutions, Inc.  
1125 OpenEdge 1125P  
2500 OpenEdge 2500P  
1fe0 Allwinmeta Co., Ltd.  
1010 AWM 1  
2000 AWM 2  
2010 AWM 2-M  
1fe4 HippStor Technology  
1600 HP600 Series NVMe SSD  
1fe4 0075 Enterprise NVMe SSD U.2 3.84TB(HP610)  
1fe4 0076  
Enterprise NVMe SSD U.2 7.68TB(HP610)  
1fe4 0077 Enterprise NVMe SSD U.2 6.40TB(HP630)  
1fe4 0078 Enterprise NVMe SSD U.2 3.20TB(HP630)  
1ff4 DEEPX Co., Ltd.  
0000 DX\_M1  
0001 DX\_M1A  
1000 DX\_H1  
1ff8 Beijing Gengtu Technology Co.Ltd  
2000 GT6910  
2010 GT6908  
1ff9 Inagile Electronic Technology Co., LTD  
2000 Smart Link Ltd.  
2800 SmartPCI2800 V.92 PCI Soft DFT



2001 Temporal Research Ltd  
2003 Smart Link Ltd.  
8800 LM-I56N  
2004 Smart Link Ltd.  
2036 Netforward Microelectronics Co., Ltd.  
1618 NF1618 PCI Express Ethernet Controller  
2046 Shenzhen Inovance Technology Co., Ltd.  
2048 Beijing SpaceControl Technology Co.Ltd  
20f4 TRENDnet  
2116 ZyDAS Technology Corp.  
21b4 Hunan Goke Microelectronics Co., Ltd  
21c3 21st Century Computer Corp.  
22b8 Flex-Logix Technologies  
22a0 Flex Logix InferX X1 Inference Accelerator  
22db Missing Link Electronics, Inc.  
1200 NVMe Streamer EP ERD  
2304 Colorgraphic Communications Corp.  
2321 Bruker AXS Inc.  
2348 Racore  
2010 8142 100VG/AnyLAN  
256c  
Graphics Technology (HK) Co., Ltd.  
006d HS610  
2646 Kingston Technology Company, Inc.  
0010 HyperX Predator PCIe AHCI SSD  
2262 KC2000/KC2500 NVMe SSD SM2262EN  
2263 A2000 NVMe SSD SM2263EN  
5008 A1000/U-SNS8154P3 x2 NVMe SSD  
500a DC1000B NVMe SSD E12DC  
500b DC1000M NVMe SSD SM2270  
500c OM8PCP Design-In PCIe 3 NVMe SSD (DRAM-less)  
500d OM3PDP3 NVMe SSD  
500e NV1 NVMe SSD E13T (DRAM-less)  
500f NV1 NVMe SSD SM2263XT (DRAM-less)  
5010 OM8SBP NVMe PCIe SSD (DRAM-less)  
5012 DC1500M NVMe SSD SM2270  
5013 KC3000/FURY Renegade NVMe SSD E18  
5014 OM8SEP4 Design-In PCIe 4 NVMe SSD (TLC) (DRAM-less)  
5016 OM3PGP4 NVMe SSD  
5017 NV2 NVMe SSD SM2267XT (DRAM-less)  
5019 NV2 NVMe SSD E21T (DRAM-less)  
# 128GB  
501a OM8PGP4 Design-In PCIe 4 NVMe SSD (TLC) (DRAM-less)  
501b OM8PGP4 NVMe PCIe SSD (DRAM-less)  
501c NV2 NVMe SSD E19T (DRAM-less)  
501d NV2 NVMe SSD TC2200 (DRAM-less)  
501f FURY Renegade NVMe SSD with heatsink  
5021 OM8SEP4 Design-In PCIe 4 NVMe

SSD (QLC) (DRAM-less)  
5023 NV2 NVMe SSD SM2269XT (DRAM-less)  
5024 DC2000B NVMe SSD E18DC  
270b Xantel Corporation  
270f Chaintech Computer Co. Ltd  
2711 AVID Technology Inc.  
2782 Emdoor Digital Technology Co., Ltd  
2955 Connectix Virtual PC  
6e61 OHCI USB 1.1 controller  
2a15 3D Vision(???)  
2a18 Video Transcode Controller  
2bd8 ROPEX Industrie-Elektronik GmbH  
3000 Hansol Electronics Inc.  
3100 Dynabook Inc.  
3112 Satelco Ingenieria S.A.  
3130 AUDIOTRAK  
3142 Post Impression Systems.  
31ab Zonet  
1faa ZEW1602 802.11b/g Wireless Adapter  
328f Shenzhen EMEET Technology Co., Ltd.  
004c OfficeCore M1A  
2019 REC 600 HD Webcam  
3388 Hint Corp  
0013 HiNT HC4 PCI to ISDN bridge, Multimedia audio controller  
0014 HiNT HC4 PCI to ISDN bridge, Network controller  
0020 HB6 Universal PCI-PCI bridge (transparent mode)  
0021 HB6 Universal PCI-PCI bridge (non-transparent mode)  
1775 c200 C2K CompactPCI interface bridge  
1775 ce90 CE9  
4c53 1050 CT7 mainboard  
4c53 1080 CT8 mainboard  
4c53  
1090 Cx9 mainboard  
4c53 10a0 CA3/CR3 mainboard  
4c53 3010 PPCI mezzanine (32-bit PMC)  
4c53 3011 PPCI mezzanine (64-bit PMC)  
4c53 4000 PMCCARR1 carrier board  
0022 HiNT HB4 PCI-PCI Bridge (PCI6150)  
0026 HB2 PCI-PCI Bridge  
1014 AudioTrak Maya  
1018 Audiotrak INCA88  
1019 Mditrak 2120  
101a E.Band [AudioTrak Inca88]  
101b E.Band [AudioTrak Inca88]  
8011 VXPro II Chipset  
3388 8011 VXPro II Chipset CPU to PCI Bridge  
8012 VXPro II Chipset  
3388 8012 VXPro II Chipset PCI to ISA Bridge

8013 VXPro II IDE  
3388 8013 VXPro II Chipset EIDE Controller  
a103 Blackmagic Design DeckLink HD Pro  
3411 Quantum Designs (H.K.) Inc  
3442 Bihl+Wiedemann GmbH  
1783 AS-i 3.0 cPCI Master  
1922 AS-i 3.0 PCI Master  
3475 Arista Networks, Inc.  
34ba Ice Lake-LP PCI Express Root Port #3  
3513 ARCOM Control Systems Ltd  
369a HighSecLabs, Ltd.  
37d9 ITD Firm ltd.  
1138 SCHD-PH-8 Phase detector  
1140 VR-12-PCI 12-ch Relay Actuator Card  
1141 PCI-485(422) Multi-port Serial  
Board  
1142 PCI-CAN2  
3842 eVga.com. Corp.  
38ef 4Links  
# Wrong ID in board programmed sub-did in place of sub-vid  
393e Lenovo (wrong ID)  
3d3d 3DLabs  
0001 GLINT 300SX  
0002 GLINT 500TX  
0000 0000 GLoria L  
0003 GLINT Delta  
0000 0000 GLoria XL  
0004 Permedia  
0005 Permedia  
0006 GLINT MX  
0000 0000 GLoria XL  
1048 0a42 GLoria XXL  
0007 3D Extreme  
0008 GLINT Gamma G1  
1048 0a42 GLoria XXL  
0009 Permedia II 2D+3D  
1040 0011 AccelStar II  
1048 0a42 GLoria XXL  
13e9 1000 6221L-4U  
3d3d 0100 AccelStar II 3D Accelerator  
3d3d 0111 Permedia 3:16  
3d3d 0114 Santa Ana  
3d3d 0116 Oxygen GVX1  
3d3d 0119 Scirocco  
3d3d 0120 Santa Ana PCL  
3d3d 0125 Oxygen VX1  
3d3d 0127 Permedia3 Create!  
000a GLINT R3

3d3d 0121 Oxygen VX1  
000c GLINT R3 [Oxygen VX1]  
3d3d 0144 Oxygen VX1-4X AGP [Permedia 4]  
000d GLint R4 rev A  
000e GLINT Gamma G2  
0011 GLint R4 rev B  
0012 GLint R5 rev A  
0013 GLint R5 rev B  
0020 VP10 visual processor  
0022 VP10  
visual processor  
0024 VP9 visual processor  
002c Wildcat Realizm 100/200  
0030 Wildcat Realizm 800  
0032 Wildcat Realizm 500  
0100 Permedia II 2D+3D  
07a1 Wildcat III 6210  
07a2 Sun XVR-500 Graphics Accelerator  
3d3d 1047 Sun XVR-600 Graphics Accelerator  
07a3 Wildcat IV 7210  
1004 Permedia  
3d04 Permedia  
ffff Glint VGA  
4005 Avance Logic Inc.  
0300 ALS300 PCI Audio Device  
0308 ALS300+ PCI Audio Device  
0309 PCI Input Controller  
1064 ALG-2064  
2064 ALG-2064i  
2128 ALG-2364A GUI Accelerator  
2301 ALG-2301  
2302 ALG-2302  
2303 AVG-2302 GUI Accelerator  
2364 ALG-2364A  
2464 ALG-2464  
2501 ALG-2564A/25128A  
4000 ALS4000 Audio Chipset  
4005 4000 ALS4000 Audio Chipset  
4710 ALC200/200P  
4033 Addtron Technology Co, Inc.  
1360 RTL8139 Ethernet  
4040 NetXen Incorporated  
0001 NXB-10GXSr 10-Gigabit Ethernet PCIe Adapter with SR-XFP optical interface  
103c 7047 NC510F PCIe 10-Gigabit Server Adapter  
0002 NXB-10GCX4 10-Gigabit Ethernet PCIe Adapter with CX4 copper  
interface  
103c 7048 NC510c PCIe 10-Gigabit Server Adapter  
0003 NXB-4GCU Quad Gigabit Ethernet PCIe Adapter with 1000-BASE-T interface

0004 BladeCenter-H 10-Gigabit Ethernet High Speed Daughter Card  
0005 NetXen Dual Port 10GbE Multifunction Adapter for c-Class  
103c 170e NC512m Dual Port 10GbE Multifunction BL-C Adapter  
0024 XG Mgmt  
0025 XG Mgmt  
0100 NX3031 Multifunction 1/10-Gigabit Server Adapter  
103c 171b NC522m Dual Port 10GbE Multifunction BL-c Adapter  
103c 1740 NC375T PCI Express Quad Port Gigabit Server Adapter  
103c 3251 NC375i 1G w/NC524SFP 10G Module  
103c 705a NC375i Integrated Quad Port Multifunction Gigabit Server Adapter  
103c 705b NC522SFP Dual Port 10GbE Server Adapter  
152d 896b TG20 Dual Port 10GbE Server/Storage Adapter  
4040 0124 NX3031 Quad Port Gigabit Server Adapter  
4040 0126 Dual Port SFP+ 10GbE Server Adapter  
4143 Digital Equipment Corp  
4144 Alpha Data  
0044 ADM-XRCIIPro  
4150 ONA Electroerosion  
0001 PCI32TLITE FILSTRUP1  
PCI to VME Bridge Controller  
0006 PCI32TLITE UART 16550 Opencores  
0007 PCI32TLITE CAN Controller Opencores  
415a Auzentech, Inc.  
416c Aladdin Knowledge Systems  
0100 AladdinCARD  
0200 CPC  
4242 Universall Answer Generators  
4254 DVBSky  
4321 Tata Power Strategic Electronics Division  
4348 WCH.CN  
2273 CH351 PCI Dual Serial Port Controller  
3253 CH352 PCI Dual Serial Port Controller  
3453 CH353 PCI Quad Serial Port Controller  
5053 CH352 PCI Serial and Parallel Port Controller  
7053 CH353 PCI Dual Serial and Parallel Ports Controller  
7073 CH356 PCI Quad Serial and Parallel Ports Controller  
7173 CH355 PCI Quad Serial Port Controller  
434e Cornelis Networks  
4444 Internext Compression Inc  
0016 iTVC16 (CX23416) Video Decoder  
0070 0003 WinTV PVR 250  
0070 0009 WinTV PVR 150  
0070 0801 WinTV PVR 150  
0070 0807 WinTV PVR 150  
0070 4001 WinTV PVR 250  
0070 4009 WinTV PVR 250  
0070 4801 WinTV PVR 250  
0070 4803 WinTV PVR 250

0070 8003 WinTV PVR 150  
 0070  
 8801 WinTV PVR 150  
 0070 c801 WinTV PVR 150  
 0070 e807 WinTV PVR 500 (1st unit)  
 0070 e817 WinTV PVR 500 (2nd unit)  
 0070 ff92 WinTV PVR-550  
 0270 0801 WinTV PVR 150  
 104d 013d ENX-26 TV Encoder  
 10fc d038 GV-MVP/RX2W (1st unit)  
 10fc d039 GV-MVP/RX2W (2nd unit)  
 12ab fff3 MPG600  
 12ab ffff MPG600  
 1461 c00a M113 PCI Analog TV (PAL/SECAM, Philips FQ1216MK3 tuner)  
 1461 c00b M113 PCI Analog TV (PAL/SECAM+FM, Philips FM1216MK3 tuner)  
 1461 c00c M113 PCI Analog TV (NTSC, JAPAN version, Philips FI1286MK2 tuner)  
 1461 c010 M113 PCI Analog TV (NTSC, Philips FI1236MK3 tuner)  
 1461 c011 M113 PCI Analog TV (NTSC+FM, Philips FM1236MK3 tuner)  
 1461 c018 M113 PCI Analog TV (NTSC, Philips FQ1236MK5 tuner)  
 1461 c019 UltraTV 1500 MCE, a.k.a. M113 PCI Analog TV (NTSC+FM, Philips FQ1236MK5 tuner)  
 1461 c01a M113 PCI Analog TV (PAL/SECAM, Philips FQ1216MK5 tuner)  
 1461 c01b M113 PCI Analog TV (PAL/SECAM+FM, Philips FM1216MK5 tuner)  
 1461 c030 M113 PCI Analog  
 TV (NTSC-J, Partsnic tuner)  
 1461 c031 M113 PCI Analog TV (NTSC-J+FM, Partsnic tuner)  
 1461 c032 M113 PCI Analog TV (PAL/SECAM, Partsnic tuner)  
 1461 c033 M113 PCI Analog TV (PAL/SECAM+FM, Partsnic tuner)  
 1461 c034 M113 PCI Analog TV (NTSC, Partsnic tuner)  
 1461 c035 M113 PCI Analog TV (NTSC+FM, Partsnic tuner)  
 1461 c03f C115 PCI video capture card (no tuner)  
 1461 c136 M104 mini-PCI Analog TV  
 1461 c20a M755 AVerTV Video Capture (PAL/SECAM, Philips FQ1216MK3 tuner)  
 1461 c218 M755 AVerTV Video Capture (NTSC, Philips FQ1236MK5 tuner)  
 1461 c219 M755 AVerTV Video Capture (NTSC+FM, Philips FQ1236MK5 tuner)  
 1461 c21a M755 AVerTV Video Capture (PAL/SECAM, Philips FQ1216MK5 tuner)  
 1461 c21b M755 AVerTV Video Capture (PAL/SECAM+FM, Philips FM1216MK5 tuner)  
 1461 c230 M755 AVerTV Video Capture (NTSC-J, Partsnic tuner)  
 1461 c231 M755 AVerTV Video Capture (NTSC-J+FM, Partsnic tuner)  
 1461 c232 M755 AVerTV Video Capture (PAL/SECAM, Partsnic tuner)  
 1461 c233  
 M755 AVerTV Video Capture (PAL/SECAM+FM, Partsnic tuner)  
 1461 c234 M755 AVerTV Video Capture (NTSC, Partsnic tuner)  
 1461 c235 M755 AVerTV Video Capture (NTSC+FM, Partsnic tuner)  
 1461 c337 E106 AVerMedia AVerTV Video Capture  
 1461 c439 M116 AVerMedia AVerTV MCE 116 Plus (NTSC/PAL/SECAM+FM+REMOTE, Xceive 2028 tuner)  
 1461 c5ff C755 AVerTV Video Capture card (no tuner)  
 1461 c6ff C115 PCI video capture card (no tuner)  
 1461 c739 M785 AVerMedia PCI Analog TV (NTSC/PAL/SECAM+FM, Xceive 2028 tuner)

9005 0092 VideOh! AVC-2010  
9005 0093 VideOh! AVC-2410  
0803 iTVC15 (CX23415) Video Decoder  
0070 4000 WinTV PVR-350  
0070 4001 WinTV PVR-250  
0070 4800 WinTV PVR-350 (V1)  
12ab 0000 MPG160  
1461 a3ce M179  
1461 a3cf M179  
4468 Bridgeport machines  
4594 Cogetec Informatique Inc  
45fb Baldor Electric Company  
4624 Budker Institute of Nuclear Physics  
adc1 ADC200ME High speed ADC  
de01 DL200ME High resolution delay line PCI based card  
de02 DL200ME Middle resolution  
delay line PCI based card  
4651 TXIC  
4680 Umax Computer Corp  
4843 Hercules Computer Technology Inc  
4916 RedCreek Communications Inc  
1960 RedCreek PCI adapter  
4943 Growth Networks  
494f ACCES I/O Products, Inc.  
0508 PCI-IDO-16A FET Output Card  
0518 PCI-IDO-32A FET Output Card  
0520 PCI-IDO-48 FET Output Card  
0521 PCI-IDO-48A FET Output Card  
0703 PCIe-RO-4 Electromechanical Relay Output Card  
07d0 PCIe-IDO-24 FET Output Card  
0920 PCI-IDI-48 Isolated Digital Input Card  
0bd0 PCIe-IDI-24 Isolated Digital Input Card  
0c50 PCI-DIO-24H 1x 8255 Digital Input / Output Card  
0c51 PCI-DIO-24D 1x 8255 Digital Input / Output Card  
0c52 PCIe-DIO-24 1x 8255 Digital Input / Output Card  
0c53 PCIe-DIO-24H 8255 Digital Input / Output Card  
0c57 mPCIe-DIO-24 8255 Digital Input / Output Card  
0c60 PCI-DIO-48H 8255 Digital Input / Output Card  
0c61 PCIe-DIO-48 8255 Digital Input / Output Card  
0c62 P104-DIO-48 8255 Digital Input / Output Card  
0c68 PCI-DIO-72 8255 Digital  
Input / Output Card  
0c69 P104-DIO-96 8255 Digital Input / Output Card  
0c70 PCI-DIO-96 8255 Digital Input / Output Card  
0c78 PCI-DIO-120 8255 Digital Input / Output Card  
0dc8 PCI-IDIO-16 Isolated Digital Input / FET Output Card  
0e50 PCI-DIO-24S 8255 Digital Input / Output Card  
0e51 PCI-DIO-24H(C) 8255 Digital Input / Output Card

0e52 PCI-DIO-24D(C) 8255 Digital Input / Output Card  
0e53 PCIe-DIO-24S 8255 Digital Input / Output Card  
0e54 PCIe-DIO-24HS 8255 Digital Input / Output Card  
0e55 PCIe-DIO-24DC 8255 Digital Input / Output Card  
0e56 PCIe-DIO-24DCS 8255 Digital Input / Output Card  
0e57 mPCIe-DIO-24S 8255 Digital Input / Output Card  
0e60 PCI-DIO-48S 2x 8255 Digital Input / Output Card  
0e61 PCIe-DIO-48S 2x 8255 Digital Input / Output Card  
0e62 P104-DIO-48S 2x 8255 Digital Input / Output Card  
0f00 PCI-IIRO-8 Isolated Digital / Relay Output Card  
0f01 LPCI-IIRO-8 Isolated Digital / Relay Output Card  
0f02 PCIe-IIRO-8 Isolated Digital / Relay Output Card  
0f08  
PCI-IIRO-16 Isolated Digital / Relay Output Card  
0f09 PCIe-IIRO-16 Isolated Digital / Relay Output Card  
0fc0 PCIe-IDIO-12 Isolated Digital Input / FET Output Card  
0fc1 PCIe-IDI-12 Isolated Digital Input Card  
0fc2 PCIe-IDO-12 FET Output Card  
0fd0 PCIe-IDIO-24 Isolated Digital Input / FET Output Card  
1050 PCI-422/485-2 2x RS422/RS484 Card  
1051 PCIe-COM-2SRJ 2x RS422/RS484 Card w/RJ45 Connectors  
1052 104I-COM-2S 2x RS422/RS484 PCI/104 Board  
1053 mPCIe-COM-2S 2x RS422/RS484 PCI Express Mini Card  
1058 PCI-COM422/4 4x RS422 Card  
1059 PCI-COM485/4 4x RS485 Card  
105a PCIe-COM422-4 4x RS422 Card  
105b PCIe-COM485-4 4x RS485 Card  
105c PCIe-COM-4SRJ 4x RS422/RS485 Card w/RJ45 Connectors  
105d 104I-COM-4S 4x RS422/RS484 PCI/104 Board  
105e mPCIe-COM-4S 4x RS422/RS484 PCI Express Mini Card  
1068 PCI-COM422/8 8x RS422 Card  
1069 PCI-COM485/8 8x RS485 Card  
106a PCIe-COM422-8 8x RS422 Card  
106b PCIe-COM485-8 8x RS485 Card  
106c 104I-COM-8S 8x RS422/RS485 PCI/104  
Board  
1088 PCI-COM232/1 1x RS232 Card  
1090 PCI-COM232/2 2x RS232 Card  
1091 PCIe-COM232-2RJ 2x RS232 Card w/RJ45 Connectors  
1093 mPCIe-COM232-2 2x RS232 PCI Express Mini Card  
1098 PCIe-COM232-4 4x RS232 Card  
1099 PCIe-COM232-4RJ 4x RS232 Card w/RJ45 Connectors  
109b mPCIe-COM232-4 4x RS232 PCI Express Mini Card  
10a8 P104-COM232-8 8x RS232 PC-104+ Board  
10a9 PCIe-COM232-8 8x RS232 Card  
10c9 PCI-COM-1S 1x RS422/RS485 Card  
10d0 PCI-COM2S 2x RS422/RS485 Card  
10d1 PCIe-COM-2SMRJ 2x RS232/RS422/RS485 Card w/RJ45 Connectors



10d2 104I-COM-2SM 2x RS232/RS422/RS485 PCI/104 Board  
10d3 mPCIe-COM-2SM 2x RS232/RS422/RS485 PCI Express Mini Card  
10d8 PCI-COM-4SM 4x RS232/RS422/RS485 Card  
10d9 PCIe-COM-4SM 4x RS232/RS422/RS485 Card  
10da PCIe-COM-4SMRJ 4x RS232/RS422/RS485 Card w/RJ45 Connectors  
10db 104I-COM-4SM 4x RS232/RS422/RS485 PCI/104 Board  
10dc mPCIe-COM-4SM 4x RS232/RS422/RS485 PCI Express Mini Card  
10e8 PCI-COM-8SM 8x RS232/RS422/RS485 Card  
10e9 PCIe-COM-8SM  
8x RS232/RS422/RS485 Card  
10ea 104I-COM-8SM 8x RS232/RS422/RS485 PCI-104 Board  
1108 mPCIe-ICM485-1 1x Isolated RS485 PCI Express Mini Card  
1110 mPCIe-ICM422-2 2x Isolated RS422 PCI Express Mini Card  
1111 mPCIe-ICM485-2 2x Isolated RS485 PCI Express Mini Card  
1118 mPCIe-ICM422-4 4x Isolated RS422 PCI Express Mini Card  
1119 mPCIe-ICM485-4 4x Isolated RS485 PCI Express Mini Card  
1148 PCI-ICM-1S 1x Isolated RS422/RS485 Card  
1150 PCI-ICM-2S 2x Isolated RS422/RS485 Card  
1152 PCIe-ICM-2S 2x Isolated RS422/RS485 Card  
1158 PCI-ICM422/4 4x Isolated RS422 Card  
1159 PCI-ICM485/4 4x Isolated RS485 Card  
115a PCIe-ICM-4S 4x Isolated RS422/RS485 Card  
1190 PCIe-ICM232-2 2x Isolated RS232 Card  
1191 mPCIe-ICM232-2 2x Isolated RS232 PCI Express Mini Card  
1198 PCIe-ICM232-4 4x Isolated RS232 Card  
1199 mPCIe-ICM232-4 4x Isolated RS422 PCI Express Mini Card  
11d0 PCIe-ICM-2SM 2x Isolated RS232/RS422/RS485 Card  
11d8 PCIe-ICM-4SM 4x Isolated RS232/RS422/RS485 Card  
1250  
PCI-WDG-2S Watchdog and 2x Serial Card  
12d0 PCI-WDG-IMPAC  
2230 PCI-QUAD-8 8x Quadrature Input Card  
2231 PCI-QUAD-4 4x Quadrature Input Card  
22c0 PCI-WDG-CSM Watchdog Card  
25c0 P104-WDG-E Watchdog PC/104+ Board  
2c50 PCI-DIO-96CT 96x Digital Input / Output Card  
2c58 PCI-DIO-96C3 96x Digital Input / Output Card w/3x 8254 Counter Card  
2ee0 PCIe-DIO24S-CTR12 24x Digital Input / Output Card w/4x 8254 Counter Card  
2fc0 P104-WDG-CSM Watchdog PC/104+ Board  
2fc1 P104-WDG-CSMA Advanced Watchdog PC/104+ Board  
5ed0 PCI-DAC  
6c90 PCI-DA12-2 2x 12-bit Analog Output Card  
6c98 PCI-DA12-4 4x 12-bit Analog Output Card  
6ca0 PCI-DA12-6 6x 12-bit Analog Output Card  
6ca8 PCI-DA12-8 8x 12-bit Analog Output Card  
6ca9 PCI-DA12-8V  
6cb0 PCI-DA12-16 16x 12-bit Analog Output Card  
6cb1 PCI-DA12-16V

8ef0 P104-FAS16-16  
 aca8 PCI-AI12-16 12-bit 100kHz Analog Input Card  
 aca9 PCI-AI12-16A 12-bit 100kHz Analog Input w/FIFO Card  
 eca8 PCI-AIO12-16 12-bit 100kHz Analog Input w/2x  
 Analog Output and FIFO Card  
 ecaa PCI-A12-16A 12-bit 100kHz Analog Input w/2x Analog Output and FIFO Card  
 ece8 LPCI-A16-16A 16-bit 500kHz Analog Input low-profile Card  
 ece9 LPCI-AIO16A 16-bit 500kHz Analog Input low-profile Card  
 4978 Axil Computer Inc  
 4a14 NetVin  
 5000 NV5000SC  
 4a14 5000 RT8029-Based Ethernet Adapter  
 4b10 Buslogic Inc.  
 4b43 KonteX Inc.  
 4c48 LUNG HWA Electronics  
 4c4d Liquid-Markets GmbH  
 # Dev versions of TaSR, not for production.  
 9998 TaSR  
 # First versions of UberNIC, not for production.  
 9999 UberNIC PoC/testing/dev  
 4c52 LR-LINK  
 1001 Smart Network Adapter  
 4c52 a008 LREG1008PT Single-port 1Gb Smart Ethernet Network Adapter  
 4c52 a009 LREG1009PT Single-port 2.5Gb Smart Ethernet Network Adapter  
 1002 Smart Network Adapter  
 4c52 a006 LREG1006PT Single-port 1.2Gb Network Security Isolation Adapter  
 4c52 a007 LREG1007PT Quad-port 10Gb Smart Ethernet Network Adapter  
 1003 Smart Network Adapter  
 1004 Smart Network Adapter  
 4c52 b010 LREG1010PF  
 Single-port 10Gb FPGA Network Security Isolation Adapter  
 4c52 b011 LREG1011PF Dual-port 10Gb FPGA Network Security Isolation Adapter  
 4c53 SBS Technologies  
 0000 PLUSTEST device  
 4c53 3000 PLUSTEST card (PC104+)  
 4c53 3001 PLUSTEST card (PMC)  
 0001 PLUSTEST-MM device  
 4c53 3002 PLUSTEST-MM card (PMC)  
 4ca1 Seanix Technology Inc  
 4d51 MediaQ Inc.  
 0200 MQ-200  
 4d54 Microtechnica Co Ltd  
 4d56 Balluff MV GmbH  
 0000 [mvHYPERION-CLe/CLb] CameraLink PCI Express x1 Frame Grabber  
 0001 [mvHYPERION-CLf/CLm] CameraLink PCI Express x4 Frame Grabber  
 0010 [mvHYPERION-16R16/-32R16] 16 Video Channel PCI Express x4 Frame Grabber  
 0020 [mvHYPERION-HD-SDI] HD-SDI PCI Express x4 Frame Grabber  
 0030 [mvHYPERION-HD-SDI-Merger] HD-SDI PCI Express x4 Frame Grabber

7012 [mvBlueNAOS BVS CA-BN] PCIe Gen1 x2 Camera  
7014 [mvBlueNAOS BVS CA-BN] PCIe Gen1 x4 Camera  
7022 [mvBlueNAOS BVS CA-BN] PCIe Gen2 x2 Camera  
7024 [mvBlueNAOS BVS CA-BN] PCIe Gen2 x4 Camera  
4ddc ILC Data Device Corp  
0100  
DD-42924I5-300 (ARINC 429 Data Bus)  
0300 SB-3620 Motion Feedback Device  
0340 SB-3623 Motion Feedback Device  
0400 SB-3622 Motion Feedback Device  
0500 SB-3621 Motion Feedback Device  
0510 SB-3624 Motion Feedback Device  
0801 BU-65570I1 MIL-STD-1553 Test and Simulation  
0802 BU-65570I2 MIL-STD-1553 Test and Simulation  
0811 BU-65572I1 MIL-STD-1553 Test and Simulation  
0812 BU-65572I2 MIL-STD-1553 Test and Simulation  
0881 BU-65570T1 MIL-STD-1553 Test and Simulation  
0882 BU-65570T2 MIL-STD-1553 Test and Simulation  
0891 BU-65572T1 MIL-STD-1553 Test and Simulation  
0892 BU-65572T2 MIL-STD-1553 Test and Simulation  
0901 BU-65565C1 MIL-STD-1553 Data Bus  
0902 BU-65565C2 MIL-STD-1553 Data Bus  
0903 BU-65565C3 MIL-STD-1553 Data Bus  
0904 BU-65565C4 MIL-STD-1553 Data Bus  
0b01 BU-65569I1 MIL-STD-1553 Data Bus  
0b02 BU-65569I2 MIL-STD-1553 Data Bus  
0b03 BU-65569I3 MIL-STD-1553 Data Bus  
0b04 BU-65569I4 MIL-STD-1553 Data Bus  
0d01 SB-3641 Motion Feedback Device  
0d10  
SB-365x Motion Feedback Device  
2f00 SB-3642 Motion Feedback Device  
3000 SB-3644 Motion Feedback Device  
4e4c NieL TechSolution  
4e58 Nutanix, Inc.  
0001 Virtual NVMe Controller  
5045 University of Toronto  
4243 BLASTbus PCI Interface Card v1  
5046 GemTek Technology Corporation  
1001 PCI Radio  
5053 Voyetra Technologies  
2010 Daytona Audio Adapter  
50b2 TerraTec Electronic GmbH  
50ce System-on-Chip Engineering S.L.  
0001 RELY-MIL-XMC-TSN-SWITCH  
5136 S S Technologies  
5143 Qualcomm Inc  
5145 Ensoniq (Old)

3031 Concert AudioPCI  
5168 Animation Technologies Inc.  
0300 FlyDVB-S  
0301 FlyDVB-T  
5301 Alliance Semiconductor Corp.  
0001 ProMotion aT3D  
5333 S3 Graphics Ltd.  
0551 Plato/PX (system)  
5631 86c325 [ViRGE]  
8800 86c866 [Vision 866]  
8801 86c964 [Vision 964]  
8810 86c764\_0 [Trio 32 vers 0]  
8811 86c764/765 [Trio32/64/64V+]  
8812 86cM65 [Aurora64V+]  
8813 86c764\_3 [Trio 32/64 vers 3]  
8814 86c767 [Trio 64UV+]  
8815 86cM65 [Aurora 128]  
883d 86c988 [ViRGE/VX]  
8870  
FireGL  
8880 86c868 [Vision 868 VRAM] vers 0  
8881 86c868 [Vision 868 VRAM] vers 1  
8882 86c868 [Vision 868 VRAM] vers 2  
8883 86c868 [Vision 868 VRAM] vers 3  
88b0 86c928 [Vision 928 VRAM] vers 0  
88b1 86c928 [Vision 928 VRAM] vers 1  
88b2 86c928 [Vision 928 VRAM] vers 2  
88b3 86c928 [Vision 928 VRAM] vers 3  
88c0 86c864 [Vision 864 DRAM] vers 0  
88c1 86c864 [Vision 864 DRAM] vers 1  
88c2 86c864 [Vision 864-P DRAM] vers 2  
88c3 86c864 [Vision 864-P DRAM] vers 3  
88d0 86c964 [Vision 964 VRAM] vers 0  
88d1 86c964 [Vision 964 VRAM] vers 1  
88d2 86c964 [Vision 964-P VRAM] vers 2  
88d3 86c964 [Vision 964-P VRAM] vers 3  
88f0 86c968 [Vision 968 VRAM] rev 0  
88f1 86c968 [Vision 968 VRAM] rev 1  
88f2 86c968 [Vision 968 VRAM] rev 2  
88f3 86c968 [Vision 968 VRAM] rev 3  
8900 86c755 [Trio 64V2/DX]  
5333 8900 86C775 Trio64V2/DX  
8901 86c775/86c785 [Trio 64V2/DX or /GX]  
5333 8901 86C775 Trio64V2/DX, 86C785 Trio64V2/GX  
8902 Plato/PX  
8903 Trio 3D business  
multimedia  
8904 86c365, 86c366 [Trio 3D]

1014 00db Integrated Trio3D  
4843 314a Terminator 128/3D GLH  
5333 8904 86C365 Trio3D AGP  
8905 Trio 64V+ family  
8906 Trio 64V+ family  
8907 Trio 64V+ family  
8908 Trio 64V+ family  
8909 Trio 64V+ family  
890a Trio 64V+ family  
890b Trio 64V+ family  
890c Trio 64V+ family  
890d Trio 64V+ family  
890e Trio 64V+ family  
890f Trio 64V+ family  
8a01 86c375 [ViRGE/DX] or 86c385 [ViRGE/GX]  
0e11 b032 ViRGE/GX  
10b4 1617 Nitro 3D  
10b4 1717 Nitro 3D  
5333 8a01 ViRGE/DX  
8a10 ViRGE/GX2  
1092 8a10 Stealth 3D 4000  
8a13 86c360 [Trio 3D/1X], 86c362, 86c368 [Trio 3D/2X]  
5333 8a13 Trio3D/2X  
8a20 86c794 [Savage 3D]  
5333 8a20 86C391 Savage3D  
8a21 86c390 [Savage 3D/MV]  
5333 8a21 86C390 Savage3D/MV  
8a22 Savage 4  
1033 8068 Savage 4  
1033 8069 Savage 4  
1033 8110 Savage 4 LT  
105d 0018 SR9 8Mb SDRAM  
105d 002a SR9 Pro 16Mb SDRAM  
105d 003a SR9 Pro 32Mb SDRAM  
105d 092f SR9 Pro+ 16Mb SGRAM  
1092 4207  
Stealth III S540  
1092 4800 Stealth III S540  
1092 4807 SpeedStar A90  
1092 4808 Stealth III S540  
1092 4809 Stealth III S540  
1092 480e Stealth III S540  
1092 4904 Stealth III S520  
1092 4905 SpeedStar A200  
1092 4a09 Stealth III S540  
1092 4a0b Stealth III S540 Xtreme  
1092 4a0f Stealth III S540  
1092 4e01 Stealth III S540

1102 101d 3d Blaster Savage 4  
1102 101e 3d Blaster Savage 4  
5333 8100 86C394-397 Savage4 SDRAM 100  
5333 8110 86C394-397 Savage4 SDRAM 110  
5333 8125 86C394-397 Savage4 SDRAM 125  
5333 8143 86C394-397 Savage4 SDRAM 143  
5333 8a22 86C394-397 Savage4  
5333 8a2e 86C394-397 Savage4 32bit  
5333 9125 86C394-397 Savage4 SGRAM 125  
5333 9143 86C394-397 Savage4 SGRAM 143  
8a23 Savage 4  
8a25 ProSavage PM133  
0303 0303 D9840-60001 [Brio BA410 Motherboard]  
8a26 ProSavage KM133  
8c00 ViRGE/M3  
8c01 ViRGE/MX  
1179 0001 ViRGE/MX  
8c02 ViRGE/MX+  
8c03 ViRGE/MX+MV  
8c10 86C270-294 [SavageMX-MV]  
8c11 82C270-294 [SavageMX]  
8c12  
86C270-294 [SavageIX-MV]  
1014 017f ThinkPad T20/T22  
1179 0001 86C584 SuperSavage/IXC Toshiba  
8c13 86C270-294 [SavageIX]  
1179 0001 Magnia Z310  
8c22 SuperSavage MX/128  
8c24 SuperSavage MX/64  
8c26 SuperSavage MX/64C  
8c2a SuperSavage IX/128 SDR  
8c2b SuperSavage IX/128 DDR  
8c2c SuperSavage IX/64 SDR  
8c2d SuperSavage IX/64 DDR  
8c2e SuperSavage IX/C SDR  
1014 01fc ThinkPad T23  
8c2f SuperSavage IX/C DDR  
8d01 86C380 [ProSavageDDR K4M266]  
8d02 VT8636A [ProSavage KN133] AGP4X VGA Controller (TwisterK)  
8d03 VT8751 [ProSavageDDR P4M266]  
8d04 VT8375 [ProSavage8 KM266/KL266]  
8e00 DeltaChrome  
8e26 ProSavage  
8e40 2300E Graphics Processor  
8e48 Matrix [Chrome S25 / S27]  
5333 0130 Chrome S27 256M DDR2  
9043 Chrome 430 GT  
9045 Chrome 430 ULP / 435 ULP / 440 GTX

9060 Chrome 530 GT  
# Found in VIA Embedded uH4 graphics card  
9070 Chrome 5400EW  
9102 86C410 [Savage 2000]  
1092 5932 Viper II Z200  
1092 5934 Viper II Z200  
1092 5952 Viper  
II Z200  
1092 5954 Viper II Z200  
1092 5a35 Viper II Z200  
1092 5a37 Viper II Z200  
1092 5a55 Viper II Z200  
1092 5a57 Viper II Z200  
ca00 SonicVibes  
5431 AuzenTech, Inc.  
544c Teralogic Inc  
0350 TL880-based HDTV/ATSC tuner  
544d TBS Technologies  
6178 DVB Tuner PCIe Card  
544d 6904 TBS6904 DVB-S2 Quad Tuner PCIe Card  
544d 6905 TBS6905 DVB-S2 Quad Tuner PCIe Card  
6205 0001 TBS6205 DVB-T2/T/C Quad TV Tuner PCIe Card  
6209 0001 TBS6209 DVB-T2/C2/T/C/ISDB-T OctaTV Tuner  
6590 0001 TBS6590 DVB-S/S2/S2X/T/T2/C/C2/ISDB-T + 2xCI  
6590 0002 TBS6590SE DVB-S/S2/S2X/T/T2/C/C2 + 2xCI  
6704 ffff TBS6704 (Quad ATSC/QAMB)  
6903 0020 TBS6903x (Dual DVB-S/S2/S2X)  
6903 0021 TBS6903x (Dual DVB-S/S2/S2X)  
6903 8888 TBS6903x (Dual DVB-S/S2/S2X)  
6909 0009 TBS6909x (Octa DVB-S/S2/S2X)  
6909 0010 TBS6909x (Octa DVB-S/S2/S2X)  
6909 0019 TBS6909x (Octa DVB-S/S2/S2X)  
6910 0001 TBS6910 DVB-S/S2 + 2xCI  
6910 0002 TBS6910SE DVB-S/S2/S2x + 2xCI  
5452 SCANLAB AG  
3443  
RTC4  
5455 Technische Universitaet Berlin  
4458 S5933  
5456 GoTVView  
5519 Cnet Technologies, Inc.  
5544 Dunord Technologies  
0001 I-30xx Scanner Interface  
5555 Genroco, Inc  
0003 TURBOstor HFP-832 [HiPPI NIC]  
0004 Torrent QN16e [16-128 Channel MPEG QAM Modulator for DVB-C]  
3b00 Epiphan DVI2PCIe video capture card  
5646 Vector Fabrics BV

5654 VoiceTronix Pty Ltd  
5678 Dawicontrol Computersysteme GmbH  
5700 Netpower  
# alternately Extreme Engineering Solutions, Inc.  
5845 X-ES, Inc.  
584d AuzenTech Co., Ltd.  
5851 Exacq Technologies  
8008 tDVR8008 8-port video capture card  
8016 tDVR8016 16-chan video capture card  
8032 tDVR8032 32-chan video capture card  
5853 XenSource, Inc.  
0001 Xen Platform Device  
c000 Citrix XenServer PCI Device for Windows Update  
c110 Virtualized HID  
c147 Virtualized Graphics Device  
c200 XCP-ng Project PCI Device for Windows Update  
5854 GoTView  
5ace Beholder International Ltd.  
6205 TBS Technologies (wrong ID)  
6209 TBS Technologies (wrong  
ID)  
631c SmartInfra Ltd  
1652 PXI-1652 Signal Generator  
2504 PXI-2504 Signal Interrogator  
6356 UltraStor  
6374 c't Magazin fuer Computertechnik  
6773 GPPCI  
6409 Logitech Corp.  
6549 Teradici Corp.  
1200 TERA1200 PC-over-IP Host  
6590 TBS Technologies (wrong ID)  
6666 Decision Computer International Co.  
0001 PCCOM4  
0002 PCCOM8  
0004 PCCOM2  
0101 PCI 8255/8254 I/O Card  
0200 12-bit AD/DA Card  
0201 14-bit AD/DA Card  
1011 Industrial Card  
1021 8 photo couple 8 relay Card  
1022 4 photo couple 4 relay Card  
1025 16 photo couple 16 relay Card  
4000 WatchDog Card  
6688 Zycoo Co., Ltd  
1200 CooVox TDM Analog Module  
1400 CooVOX TDM GSM Module  
1600 CooVOX TDM E1/T1 Module  
1800 CooVOX TDM BRI Module



6704 TBS Technologies (wrong ID)  
6766 Glenfly Tech Co., Ltd.  
3d00 Arise-GT-10C0  
3d02 Arise1020  
3d03 Arise-GT-1040  
3d04 Arise1010  
3d06 Arise-GT-10C0t  
3d07 Arise2030  
3d08 Arise2020  
3d40 GLF HDMI/DP Audio  
3d41 GLF HDMI/DP Audio  
3d43 GLF HDMI/DP Audio  
6899  
ZT Systems  
# nee Qumranet  
6900 Red Hat, Inc.  
6903 TBS Technologies (wrong ID)  
6909 TBS Technologies (wrong ID)  
6910 TBS Technologies (wrong ID)  
6f67 NOVAIUM Technology  
7063 pcHDTV  
2000 HD-2000  
3000 HD-3000  
5500 HD5500 HDTV  
7284 HT OMEGA Inc.  
7357 IOxOS Technologies SA  
7910 7910 [Althea]  
7377 Shenzhen Colorful Yugong Technology and Development Co.  
7401 EndRun Technologies  
e100 PTP3100 PCIe PTP Slave Clock  
7470 TP-LINK Technologies Co., Ltd.  
7526 HongQin (Beijing) Technology Co., Ltd.  
0082 HQ SSD M.2  
0083 HQ SSD 2TB M.2 NVMe  
7604 O.N. Electronic Co Ltd.  
78c0 Herrick Technology Laboratories, Inc. [HTL]  
0000 HTLv-1 / HTLv-2 / HTLv-13 / HTLv-23  
0011 HTLv-53  
7bde MIDAC Corporation  
7fed PowerTV  
8008 Quacom Electronic GmbH  
0010 WDOG1 [PCI-Watchdog 1]  
0011 PWDOG2 [PCI-Watchdog 2]  
0015 Clock77/PCI & Clock77/PCIe (DCF-77 receiver)  
# Wrong ID used in subsystem ID of AsusTek PCI-USB2 PCI card.  
807d Asustek Computer, Inc.  
8086 Intel Corporation  
0007 82379AB

0008  
Extended Express System Support Controller  
0039 21145 Fast Ethernet  
0040 Core Processor DRAM Controller  
0041 Core Processor PCI Express x16 Root Port  
0042 Core Processor Integrated Graphics Controller  
0043 Core Processor Secondary PCI Express Root Port  
0044 Core Processor DRAM Controller  
1025 0347 Aspire 7740G  
1025 0487 TravelMate 5742  
1028 040a Latitude E6410  
144d c06a R730 Laptop  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
e4bf 50c1 PC1-GROOVE  
0045 Core Processor PCI Express x16 Root Port  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
0046 Core Processor Integrated Graphics Controller  
1028 040a Latitude E6410  
144d c06a R730 Laptop  
17c0 10d9 Medion Akoya E7214 Notebook PC [MD98410]  
e4bf 50c1 PC1-GROOVE  
0047 Core Processor Secondary PCI Express Root Port  
0048 Core Processor DRAM Controller  
0049 Core Processor PCI Express x16 Root Port  
004a Core Processor Integrated Graphics Controller  
004b Core Processor  
Secondary PCI Express Root Port  
0050 Core Processor Thermal Management Controller  
0069 Core Processor DRAM Controller  
0082 Centrino Advanced-N 6205 [Taylor Peak]  
8086 1301 Centrino Advanced-N 6205 AGN  
8086 1306 Centrino Advanced-N 6205 ABG  
8086 1307 Centrino Advanced-N 6205 BG  
8086 1321 Centrino Advanced-N 6205 AGN  
8086 1326 Centrino Advanced-N 6205 ABG  
0083 Centrino Wireless-N 1000 [Condor Peak]  
8086 1205 Centrino Wireless-N 1000 BGN  
8086 1206 Centrino Wireless-N 1000 BG  
8086 1225 Centrino Wireless-N 1000 BGN  
8086 1226 Centrino Wireless-N 1000 BG  
8086 1305 Centrino Wireless-N 1000 BGN  
8086 1306 Centrino Wireless-N 1000 BG  
8086 1325 Centrino Wireless-N 1000 BGN  
8086 1326 Centrino Wireless-N 1000 BG  
0084 Centrino Wireless-N 1000 [Condor Peak]  
8086 1215 Centrino Wireless-N 1000 BGN  
8086 1216 Centrino Wireless-N 1000 BG  
8086 1315 Centrino Wireless-N 1000 BGN

8086 1316 Centrino Wireless-N 1000 BG  
0085 Centrino Advanced-N 6205  
[Taylor Peak]  
8086 1311 Centrino Advanced-N 6205 (802.11a/b/g/n)  
8086 1316 Centrino Advanced-N 6205 ABG  
0087 Centrino Advanced-N + WiMAX 6250 [Kilmer Peak]  
8086 1301 Centrino Advanced-N + WiMAX 6250 2x2 AGN  
8086 1306 Centrino Advanced-N + WiMAX 6250 2x2 ABG  
8086 1321 Centrino Advanced-N + WiMAX 6250 2x2 AGN  
8086 1326 Centrino Advanced-N + WiMAX 6250 2x2 ABG  
0089 Centrino Advanced-N + WiMAX 6250 [Kilmer Peak]  
8086 1311 Centrino Advanced-N + WiMAX 6250 2x2 AGN  
8086 1316 Centrino Advanced-N + WiMAX 6250 2x2 ABG  
008a Centrino Wireless-N 1030 [Rainbow Peak]  
8086 5305 Centrino Wireless-N 1030 BGN  
8086 5307 Centrino Wireless-N 1030 BG  
8086 5325 Centrino Wireless-N 1030 BGN  
8086 5327 Centrino Wireless-N 1030 BG  
008b Centrino Wireless-N 1030 [Rainbow Peak]  
8086 5315 Centrino Wireless-N 1030 BGN  
8086 5317 Centrino Wireless-N 1030 BG  
0090 Centrino Advanced-N 6230 [Rainbow Peak]  
8086 5211 Centrino Advanced-N 6230 AGN  
8086 5215 Centrino Advanced-N  
6230 BGN  
8086 5216 Centrino Advanced-N 6230 ABG  
0091 Centrino Advanced-N 6230 [Rainbow Peak]  
8086 5201 Centrino Advanced-N 6230 AGN  
8086 5205 Centrino Advanced-N 6230 BGN  
8086 5206 Centrino Advanced-N 6230 ABG  
8086 5207 Centrino Advanced-N 6230 BG  
8086 5221 Centrino Advanced-N 6230 AGN  
8086 5225 Centrino Advanced-N 6230 BGN  
8086 5226 Centrino Advanced-N 6230 ABG  
0100 2nd Generation Core Processor Family DRAM Controller  
1028 04aa XPS 8300  
1043 844d P8P67/P8H67 Series Motherboard  
1734 11b9 Esprimo P510 D3171 motherboard  
17aa 3070 ThinkCentre M91p  
8086 200d DH61CR motherboard  
0101 Xeon E3-1200/2nd Generation Core Processor Family PCI Express Root Port  
1028 04b2 Vostro 3350  
106b 00dc MacBookPro8,2 [Core i7, 15", 2011]  
144d c652 NP300E5C series laptop  
0102 2nd Generation Core Processor Family Integrated Graphics Controller  
1028 04aa XPS 8300  
1043 0102 P8H67 Series Motherboard  
1734 11b9 G640 [Sandy Bridge, HD Graphics] on

Esprimo P510 D3171 motherboard  
17aa 3070 ThinkCentre M91p  
0104 2nd Generation Core Processor Family DRAM Controller  
1028 04a3 Precision M4600  
1028 04b2 Vostro 3350  
1028 04da Vostro 3750  
106b 00dc MacBookPro8,2 [Core i7, 15", 2011]  
144d c652 NP300E5C series laptop  
17aa 21cf ThinkPad T520  
0105 Xeon E3-1200/2nd Generation Core Processor Family PCI Express Root Port  
106b 00dc MacBookPro8,2 [Core i7, 15", 2011]  
0106 2nd Generation Core Processor Family Integrated Graphics Controller  
0108 Xeon E3-1200 Processor Family DRAM Controller  
0109 Xeon E3-1200/2nd Generation Core Processor Family PCI Express Root Port  
010a Xeon E3-1200 Processor Family Integrated Graphics Controller  
010b Xeon E3-1200/2nd Generation Core Processor Family Integrated Graphics Controller  
010c Xeon E3-1200/2nd Generation Core Processor Family DRAM Controller  
010d Xeon E3-1200/2nd Generation Core Processor Family PCI Express Root Port  
010e Xeon E3-1200/2nd Generation Core Processor  
Family Integrated Graphics Controller  
0112 2nd Generation Core Processor Family Integrated Graphics Controller  
0116 2nd Generation Core Processor Family Integrated Graphics Controller  
1028 04da Vostro 3750  
144d c652 integrated HD 3000 graphics controller on NP300E5C series laptop  
0122 2nd Generation Core Processor Family Integrated Graphics Controller  
0126 2nd Generation Core Processor Family Integrated Graphics Controller  
1028 04cc Vostro 3350  
17aa 21ce ThinkPad T420  
17aa 21cf ThinkPad T520  
0150 Xeon E3-1200 v2/3rd Gen Core processor DRAM Controller  
1043 84ca P8 series motherboard  
1458 d000 Ivy Bridge GT1 [HD Graphics]  
15d9 0624 X9SCM-F Motherboard  
1849 0150 Motherboard  
0151 Xeon E3-1200 v2/3rd Gen Core processor PCI Express Root Port  
1043 1477 N56VZ  
1043 844d P8 series motherboard  
1043 84ca P8H77-I Motherboard  
8086 2010 Server Board S1200BTS  
0152 Xeon E3-1200 v2/3rd Gen Core processor Graphics Controller  
1043 84ca P8H77-I Motherboard  
0153  
3rd Gen Core Processor Thermal Subsystem  
1043 1517 Zenbook Prime UX31A  
0154 3rd Gen Core processor DRAM Controller  
1025 0806 Aspire E1-470G  
1025 0813 Aspire R7-571  
103c 17f6 ProBook 4540s

1043 108d VivoBook X202EV  
1043 1477 N56VZ  
1043 1517 Zenbook Prime UX31A  
10cf 16bf LIFEBOOK E752  
0155 Xeon E3-1200 v2/3rd Gen Core processor PCI Express Root Port  
8086 2010 Server Board S1200BTS  
0156 3rd Gen Core processor Graphics Controller  
1043 108d VivoBook X202EV  
0158 Xeon E3-1200 v2/Ivy Bridge DRAM Controller  
1043 844d P8 series motherboard  
8086 2010 Server Board S1200BT Family  
0159 Xeon E3-1200 v2/3rd Gen Core processor PCI Express Root Port  
015a Xeon E3-1200 v2/Ivy Bridge Graphics Controller  
015c Xeon E3-1200 v2/3rd Gen Core processor DRAM Controller  
015d Xeon E3-1200 v2/3rd Gen Core processor PCI Express Root Port  
1043 844d P8 series motherboard  
015e Xeon E3-1200 v2/3rd Gen Core processor Graphics Controller  
0162 IvyBridge  
GT2 [HD Graphics 4000]  
1043 84ca P8 series motherboard  
1849 0162 Motherboard  
0166 3rd Gen Core processor Graphics Controller  
1043 1517 Zenbook Prime UX31A  
1043 2103 N56VZ  
10cf 16c1 LIFEBOOK E752  
016a Xeon E3-1200 v2/3rd Gen Core processor Graphics Controller  
1043 844d P8B WS Motherboard  
0172 Xeon E3-1200 v2/3rd Gen Core processor Graphics Controller  
0176 3rd Gen Core processor Graphics Controller  
0201 Arctic Sound  
0284 Comet Lake PCH-LP LPC Premium Controller/eSPI Controller  
1028 09be Latitude 7410  
02a3 Comet Lake PCH-LP SMBus Host Controller  
1028 09be Latitude 7410  
02a4 Comet Lake SPI (flash) Controller  
1028 09be Latitude 7410  
02a6 Comet Lake North Peak  
02b0 Comet Lake PCI Express Root Port #9  
02b1 Comet Lake PCI Express Root Port #10  
02b3 Comet Lake PCI Express Root Port #12  
02b4 Comet Lake PCI Express Root Port #13  
02b5 Comet Lake PCI Express Root Port #14  
02b8 Comet Lake PCI Express Root Port #1  
02bc Comet Lake PCI Express  
Root Port #5  
02bf Comet Lake PCI Express Root Port #8  
02c5 Comet Lake Serial IO I2C Host Controller  
1028 09be Latitude 7410

02c8 Comet Lake PCH-LP cAVS  
1028 09be Latitude 7410

02d3 Comet Lake SATA AHCI Controller

02d7 Comet Lake RAID Controller

02e0 Comet Lake Management Engine Interface  
1028 09be Latitude 7410

02e3 Comet Lake AMT SOL Redirection

02e8 Serial IO I2C Host Controller  
1028 09be Latitude 7410

02e9 Comet Lake Serial IO I2C Host Controller  
1028 09be Latitude 7410

02ea Comet Lake PCH-LP LPSS: I2C Controller #2

02ed Comet Lake PCH-LP USB 3.1 xHCI Host Controller  
1028 09be Latitude 7410

02ef Comet Lake PCH-LP Shared SRAM  
1028 09be Latitude 7410

02f0 Comet Lake PCH-LP CNVi WiFi  
8086 0034 Dual Band Wi-Fi 5(802.11ac) Wireless-AC 9560 160MHz 2x2 [Jefferson Peak]  
8086 0070 Dual Band Wi-Fi 6(802.11ax) AX201 160MHz 2x2 [Harrison Peak]  
8086 0074 Dual Band Wi-Fi 6(802.11ax) AX201 160MHz 2x2 [Harrison Peak]  
8086 0234 Dual Band  
Wi-Fi 5(802.11ac) Wireless-AC 9560 80MHz 2x2 [Jefferson Peak]  
8086 0264 Dual Band Wi-Fi 5(802.11ac) Wireless-AC 9461 80MHz 1x1 [Jefferson Peak]  
8086 02a4 Dual Band Wi-Fi 5(802.11ac) Wireless-AC 9462 80MHz 1x1 [Jefferson Peak]  
8086 4070 Dual Band Wi-Fi 6(802.11ax) AX201 160MHz 2x2 [Harrison Peak]

02f5 Comet Lake PCH-LP SCS3

02f9 Comet Lake Thermal Subsystem  
1028 09be Latitude 7410

02fc Comet Lake Integrated Sensor Solution  
1028 09be Latitude 7410

0309 80303 I/O Processor PCI-to-PCI Bridge

030d 80312 I/O Companion Chip PCI-to-PCI Bridge

0326 6700/6702PXH I/OxAPIC Interrupt Controller A  
103c 3208 ProLiant DL140 G2  
1775 1100 CR11/VR11 Single Board Computer

0327 6700PXH I/OxAPIC Interrupt Controller B  
103c 3208 ProLiant DL140 G2  
1775 1100 CR11/VR11 Single Board Computer

0329 6700PXH PCI Express-to-PCI Bridge A

032a 6700PXH PCI Express-to-PCI Bridge B

032c 6702PXH PCI Express-to-PCI Bridge A

0330 80332 [Dobson] I/O processor (A-Segment Bridge)

0331  
80332 [Dobson] I/O processor (A-Segment IOAPIC)

0332 80332 [Dobson] I/O processor (B-Segment Bridge)

0333 80332 [Dobson] I/O processor (B-Segment IOAPIC)

0334 80332 [Dobson] I/O processor (ATU)

0335 80331 [Lindsay] I/O processor (PCI-X Bridge)

0336 80331 [Lindsay] I/O processor (ATU)  
0340 41210 [Lanai] Serial to Parallel PCI Bridge (A-Segment Bridge)  
0341 41210 [Lanai] Serial to Parallel PCI Bridge (B-Segment Bridge)  
0370 80333 Segment-A PCIe Express to PCI-X bridge  
0371 80333 A-Bus IOAPIC  
0372 80333 Segment-B PCIe Express to PCI-X bridge  
0373 80333 B-Bus IOAPIC  
0374 80333 Address Translation Unit  
0402 Xeon E3-1200 v3/4th Gen Core Processor Integrated Graphics Controller  
0406 Haswell Integrated Graphics Controller  
040a Xeon E3-1200 v3 Processor Integrated Graphics Controller  
0412 Xeon E3-1200 v3/4th Gen Core Processor Integrated Graphics Controller  
1028 05d7 Alienware X51 R2  
103c 1998 EliteDesk 800 G1  
17aa 3098 ThinkCentre E73  
17aa 309f  
ThinkCentre M83  
0416 4th Gen Core Processor Integrated Graphics Controller  
17aa 220e ThinkPad T440p  
041a Xeon E3-1200 v3 Processor Integrated Graphics Controller  
041e 4th Generation Core Processor Family Integrated Graphics Controller  
0434 DH89XXCC Series QAT  
0435 DH895XCC Series QAT  
0436 DH8900CC Null Device  
0438 DH8900CC Series Gigabit Network Connection  
043a DH8900CC Series Gigabit Fiber Network Connection  
043c DH8900CC Series Gigabit Backplane Network Connection  
0440 DH8900CC Series Gigabit SFP Network Connection  
0442 DH89XXCC Series QAT Virtual Function  
0443 DH895XCC Series QAT Virtual Function  
0482 82375EB/SB PCI to EISA Bridge  
0483 82424TX/ZX [Saturn] CPU to PCI bridge  
0484 82378ZB/IB, 82379AB (SIO, SIO.A) PCI to ISA Bridge  
0486 82425EX/ZX [Aries] PCIsset with ISA bridge  
04a3 82434LX/NX [Mercury/Neptune] Processor to PCI bridge  
04d0 82437FX [Triton FX]  
0500 E8870 Processor bus control  
0501 E8870 Memory controller  
# and registers common  
to both SPs  
0502 E8870 Scalability Port 0  
# and global performance monitoring  
0503 E8870 Scalability Port 1  
0510 E8870IO Hub Interface Port 0 registers (8-bit compatibility port)  
0511 E8870IO Hub Interface Port 1 registers  
0512 E8870IO Hub Interface Port 2 registers  
0513 E8870IO Hub Interface Port 3 registers  
0514 E8870IO Hub Interface Port 4 registers

0515 E8870IO General SIOH registers  
0516 E8870IO RAS registers  
0530 E8870SP Scalability Port 0 registers  
0531 E8870SP Scalability Port 1 registers  
0532 E8870SP Scalability Port 2 registers  
0533 E8870SP Scalability Port 3 registers  
0534 E8870SP Scalability Port 4 registers  
0535 E8870SP Scalability Port 5 registers  
# (bi-interleave 0) and global registers that are neither per-port nor per-interleave  
0536 E8870SP Interleave registers 0 and 1  
# (bi-interleave 1)  
0537 E8870SP Interleave registers 2 and 3  
0600 RAID Controller  
8086 0136 SRCU31L  
8086 01af SRCZCR  
8086 01c1 ICP Vortex GDT8546RZ  
8086  
01f7 SCR32  
# uninitialized SRCU32 RAID Controller  
061f 80303 I/O Processor  
0684 H470 Chipset LPC/eSPI Controller  
0685 Z490 Chipset LPC/eSPI Controller  
0687 Q470 Chipset LPC/eSPI Controller  
068d Comet Lake LPC Controller  
06a3 Comet Lake PCH SMBus Controller  
06a4 Comet Lake PCH SPI Controller  
06a8 Comet Lake PCH Serial IO UART Host Controller #0  
06a9 Comet Lake PCH Serial IO UART Host Controller #1  
06aa Comet Lake PCH Serial IO SPI Controller #0  
06ab Comet Lake PCH Serial IO SPI Controller #1  
06ac Comet Lake PCI Express Root Port #21  
06b0 Comet Lake PCI Express Root Port #9  
06ba Comet Lake PCI Express Root Port #1  
06bb Comet Lake PCI Express Root Port #4  
06bd Comet Lake PCIe Port #6  
06bf Comet Lake PCIe Port #8  
06c0 Comet Lake PCI Express Root Port #17  
06c8 Comet Lake PCH cAVS  
06d2 Comet Lake SATA AHCI Controller  
06d6 Comet Lake PCH-H RAID  
06d7 Comet Lake PCH-H RAID  
06e0 Comet Lake HECI Controller  
06e3 Comet Lake Keyboard and Text (KT)  
Redirection  
06e8 Comet Lake PCH Serial IO I2C Controller #0  
06e9 Comet Lake PCH Serial IO I2C Controller #1  
06ea Comet Lake PCH Serial IO I2C Controller #2  
06eb Comet Lake PCH Serial IO I2C Controller #3



06ed Comet Lake USB 3.1 xHCI Host Controller  
06ef Comet Lake PCH Shared SRAM  
06f0 Comet Lake PCH CNVi WiFi  
1a56 1651 Dual Band Wi-Fi 6(802.11ax) Killer AX1650s 160MHz 2x2 [Cyclone Peak]  
1a56 1652 Dual Band Wi-Fi 6(802.11ax) Killer AX1650i 160MHz 2x2 [Cyclone Peak]  
8086 0034 Dual Band Wi-Fi 5(802.11ac) Wireless-AC 9560 160MHz 2x2 [Jefferson Peak]  
8086 0074 Dual Band Wi-Fi 6(802.11ax) AX201 160MHz 2x2 [Harrison Peak]  
8086 02a4 Dual Band Wi-Fi 5(802.11ac) Wireless-AC 9462 80MHz 1x1 [Jefferson Peak]  
8086 42a4 Dual Band Wi-Fi 5(802.11ac) Wireless-AC 9462 80MHz 1x1 [Jefferson Peak]  
06f9 Comet Lake PCH Thermal Controller  
06fb Comet Lake PCH Serial IO SPI Controller #2  
0700 CE Media Processor A/V Bridge  
0701 CE Media Processor NAND Flash Controller  
0703  
CE Media Processor Media Control Unit 1  
0704 CE Media Processor Video Capture Interface  
0707 CE Media Processor SPI Slave  
0708 Atom Processor CE 4100  
0709 Atom Processor CE 4200  
0800 Moorestown SPI Ctrl 0  
0801 Moorestown SPI Ctrl 1  
0802 Moorestown I2C 0  
0803 Moorestown I2C 1  
0804 Moorestown I2C 2  
0805 Moorestown Keyboard Ctrl  
0806 Moorestown USB Ctrl  
0807 Moorestown SD Host Ctrl 0  
0808 Moorestown SD Host Ctrl 1  
0809 Moorestown NAND Ctrl  
080a Moorestown Audio Ctrl  
080b Moorestown ISP  
080c Moorestown Security Controller  
080d Moorestown External Displays  
080e Moorestown SCU IPC  
080f Moorestown GPIO Controller  
0810 Moorestown Power Management Unit  
0811 Moorestown OTG Ctrl  
0812 Moorestown SPI Ctrl 2  
0813 Moorestown SC DMA  
0814 Moorestown LPE DMA  
0815 Moorestown SSP0  
0817 Medfield Serial IO I2C Controller #3  
0818 Medfield Serial IO I2C Controller #4  
0819 Medfield Serial IO I2C Controller #5  
081a Medfield GPIO Controller [Core]  
081b  
Medfield Serial IO HSUART Controller #1  
081c Medfield Serial IO HSUART Controller #2

081d Medfield Serial IO HSUART Controller #3  
081e Medfield Serial IO HSUART DMA Controller  
081f Medfield GPIO Controller [AON]  
0820 Medfield SD Host Controller  
0821 Medfield SDIO Controller #1  
0822 Medfield SDIO Controller #2  
0823 Medfield eMMC Controller #0  
0824 Medfield eMMC Controller #1  
0827 Medfield Serial IO DMA Controller  
0828 Medfield Power Management Unit  
0829 Medfield USB Device Controller (OTG)  
082a Medfield SCU IPC  
082c Medfield Serial IO I2C Controller #0  
082d Medfield Serial IO I2C Controller #1  
082e Medfield Serial IO I2C Controller #2  
0885 Centrino Wireless-N + WiMAX 6150  
8086 1305 Centrino Wireless-N + WiMAX 6150 BGN  
8086 1307 Centrino Wireless-N + WiMAX 6150 BG  
8086 1325 Centrino Wireless-N + WiMAX 6150 BGN  
8086 1327 Centrino Wireless-N + WiMAX 6150 BG  
0886 Centrino Wireless-N + WiMAX 6150  
8086 1315 Centrino Wireless-N + WiMAX 6150  
BGN  
8086 1317 Centrino Wireless-N + WiMAX 6150 BG  
0887 Centrino Wireless-N 2230  
8086 4062 Centrino Wireless-N 2230 BGN  
8086 4462 Centrino Wireless-N 2230 BGN  
0888 Centrino Wireless-N 2230  
8086 4262 Centrino Wireless-N 2230 BGN  
088e Centrino Advanced-N 6235  
8086 4060 Centrino Advanced-N 6235 AGN  
8086 4460 Centrino Advanced-N 6235 AGN  
088f Centrino Advanced-N 6235  
8086 4260 Centrino Advanced-N 6235 AGN  
0890 Centrino Wireless-N 2200  
8086 4022 Centrino Wireless-N 2200 BGN  
8086 4422 Centrino Wireless-N 2200 BGN  
8086 4822 Centrino Wireless-N 2200 BGN  
0891 Centrino Wireless-N 2200  
8086 4222 Centrino Wireless-N 2200 BGN  
0892 Centrino Wireless-N 135  
8086 0062 Centrino Wireless-N 135 BGN  
8086 0462 Centrino Wireless-N 135 BGN  
0893 Centrino Wireless-N 135  
8086 0262 Centrino Wireless-N 135 BGN  
0894 Centrino Wireless-N 105  
8086 0022 Centrino Wireless-N 105 BGN  
8086 0422 Centrino Wireless-N 105 BGN

8086 0822 Centrino Wireless-N 105  
BGN  
0895 Centrino Wireless-N 105  
8086 0222 Centrino Wireless-N 105 BGN  
0896 Centrino Wireless-N 130  
8086 5005 Centrino Wireless-N 130 BGN  
8086 5007 Centrino Wireless-N 130 BG  
8086 5025 Centrino Wireless-N 130 BGN  
8086 5027 Centrino Wireless-N 130 BG  
0897 Centrino Wireless-N 130  
8086 5015 Centrino Wireless-N 130 BGN  
8086 5017 Centrino Wireless-N 130 BG  
08a7 Quark SoC X1000 SDIO / eMMC Controller  
08ae Centrino Wireless-N 100  
8086 1005 Centrino Wireless-N 100 BGN  
8086 1007 Centrino Wireless-N 100 BG  
8086 1025 Centrino Wireless-N 100 BGN  
8086 1027 Centrino Wireless-N 100 BG  
08af Centrino Wireless-N 100  
8086 1015 Centrino Wireless-N 100 BGN  
8086 1017 Centrino Wireless-N 100 BG  
08b1 Wireless 7260  
8086 4020 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 402a Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 4060 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 4062 Wireless-N 7260 [Wilkins Peak 2]  
8086 406a Dual Band Wireless-N  
7260 [Wilkins Peak 2]  
8086 4070 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 4072 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 4160 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 4162 Wireless-N 7260 [Wilkins Peak 2]  
8086 4170 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 4420 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 4460 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 4462 Wireless-N 7260 [Wilkins Peak 2]  
8086 446a Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 4470 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 4472 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 4560 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 4570 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 486e Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 4870 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 4a6c Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 4a6e Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 4a70 Dual Band Wireless-AC  
7260 [Wilkins Peak 2]  
8086 4c60 Dual Band Wireless-AC 7260 [Wilkins Peak 2]

8086 4c70 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 5070 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 5072 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 5170 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 5770 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 c020 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 c02a Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 c060 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 c062 Wireless-N 7260 [Wilkins Peak 2]  
8086 c06a Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 c070 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 c072 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 c160 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 c162 Wireless-N 7260 [Wilkins Peak 2]  
8086 c170 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 c360 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 c420 Dual Band Wireless-N  
7260 [Wilkins Peak 2]  
8086 c460 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 c462 Wireless-N 7260 [Wilkins Peak 2]  
8086 c470 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 c472 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 c560 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 c570 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 c760 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 c770 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 cc60 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 cc70 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
08b2 Wireless 7260  
8086 4220 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 4260 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 4262 Wireless-N 7260 [Wilkins Peak 2]  
8086 426a Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 4270 Wireless-N 7260 [Wilkins Peak 2]  
8086 4272 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 4360 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 4370 Dual Band Wireless-AC  
7260 [Wilkins Peak 2]  
8086 c220 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 c260 Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 c262 Wireless-N 7260 [Wilkins Peak 2]  
8086 c26a Dual Band Wireless-N 7260 [Wilkins Peak 2]  
8086 c270 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 c272 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
8086 c370 Dual Band Wireless-AC 7260 [Wilkins Peak 2]  
08b3 Wireless 3160  
8086 0060 Dual Band Wireless-N 3160 [Wilkins Peak 1]  
8086 0062 Wireless-N 3160 [Wilkins Peak 1]

8086 0070 Dual Band Wireless-AC 3160 [Wilkins Peak 1]  
8086 0072 Dual Band Wireless-AC 3160 [Wilkins Peak 1]  
8086 0170 Dual Band Wireless-AC 3160 [Wilkins Peak 1]  
8086 0172 Dual Band Wireless-AC 3160 [Wilkins Peak 1]  
8086 0260 Dual Band Wireless-N 3160 [Wilkins Peak 1]  
8086 0470 Dual Band Wireless-AC 3160 [Wilkins Peak 1]  
8086 0472 Dual Band Wireless-AC 3160 [Wilkins Peak 1]  
8086 1070 Dual Band Wireless-AC 3160 [Wilkins Peak 1]  
8086 1170  
Dual Band Wireless-AC 3160 [Wilkins Peak 1]  
8086 8060 Dual Band Wireless N-3160 [Wilkins Peak 1]  
8086 8062 Wireless N-3160 [Wilkins Peak 1]  
8086 8070 Dual Band Wireless AC 3160 [Wilkins Peak 1]  
8086 8072 Dual Band Wireless AC 3160 [Wilkins Peak 1]  
8086 8170 Dual Band Wireless AC 3160 [Wilkins Peak 1]  
8086 8172 Dual Band Wireless AC 3160 [Wilkins Peak 1]  
8086 8470 Dual Band Wireless AC 3160 [Wilkins Peak 1]  
8086 8570 Dual Band Wireless AC 3160 [Wilkins Peak 1]  
08b4 Wireless 3160  
8086 0270 Dual Band Wireless-AC 3160 [Wilkins Peak 1]  
8086 0272 Dual Band Wireless-AC 3160 [Wilkins Peak 1]  
8086 0370 Dual Band Wireless-AC 3160 [Wilkins Peak 1]  
8086 8260 Dual Band Wireless AC 3160 [Wilkins Peak 1]  
8086 8270 Dual Band Wireless AC 3160 [Wilkins Peak 1]  
8086 8272 Dual Band Wireless AC 3160 [Wilkins Peak 1]  
8086 8370 Dual Band Wireless AC 3160 [Wilkins Peak 1]  
# PowerVR SGX 545  
08cf Atom Processor Z2760 Integrated Graphics Controller  
0931 Atom  
Processor CE 2600 [Puma 6]  
0934 Quark SoC X1000 I2C Controller and GPIO Controller  
0935 Quark SoC X1000 SPI Controller  
0936 Quark SoC X1000 HS-UART  
0937 Quark SoC X1000 10/100 Ethernet MAC  
0939 Quark SoC X1000 USB EHCI Host Controller / USB 2.0 Device  
093a Quark SoC X1000 USB OHCI Host Controller  
0953 PCIe Data Center SSD  
8086 3702 DC P3700 SSD  
8086 3703 DC P3700 SSD [2.5" SFF]  
8086 3704 DC P3500 SSD [Add-in Card]  
8086 3705 DC P3500 SSD [2.5" SFF]  
8086 3709 DC P3600 SSD [Add-in Card]  
8086 370a DC P3600 SSD [2.5" SFF]  
8086 370d SSD 750 Series [Add-in Card]  
8086 370e SSD 750 Series [2.5" SFF]  
0958 Quark SoC X1000 Host Bridge  
095a Wireless 7265  
8086 1010 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]

8086 5000 Dual Band Wireless-N 7265 [Stone Peak 2 AGN]  
8086 5002 Wireless-N 7265 [Stone Peak 2 BGN]  
8086 500a Dual Band Wireless-N 7265 [Stone Peak 2 AGN]  
8086 5010 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 5012 Dual Band Wireless-AC  
7265 [Stone Peak 2 AC]  
8086 5020 Dual Band Wireless-N 7265 [Stone Peak 2 AGN]  
8086 502a Dual Band Wireless-N 7265 [Stone Peak 2 AGN]  
8086 5090 Dual Band Wireless-AC 7265 [Maple Peak AC]  
8086 5100 Dual Band Wireless-AC 7265 [Stone Peak 2 AGN]  
8086 5102 Wireless-N 7265 [Stone Peak 2 BGN]  
8086 510a Dual Band Wireless-AC 7265 [Stone Peak 2 AGN]  
8086 5110 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 5112 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 5190 Dual Band Wireless-AC 7265 [Maple Peak AC]  
8086 5400 Dual Band Wireless-AC 7265 [Stone Peak 2 AGN]  
8086 5410 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 5412 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 5420 Dual Band Wireless-N 7265 [Stone Peak 2 AGN]  
8086 5490 Dual Band Wireless-AC 7265 [Maple Peak AC]  
8086 5510 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 5590 Dual Band Wireless-AC 7265 [Maple Peak AC]  
8086 9000 Dual Band Wireless-AC 7265 [Stone Peak 2 AGN]  
8086  
900a Dual Band Wireless-AC 7265 [Stone Peak 2 AGN]  
8086 9010 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 9012 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 9110 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 9112 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 9210 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 9310 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 9400 Dual Band Wireless-AC 7265 [Stone Peak 2 AGN]  
8086 9410 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 9510 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
095b Wireless 7265  
8086 5200 Dual Band Wireless-N 7265 [Stone Peak 2 AGN]  
8086 5202 Wireless-N 7265 [Stone Peak 2 BGN]  
8086 520a Dual Band Wireless-N 7265 [Stone Peak 2 AGN]  
8086 5210 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 5212 Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 5290 Dual Band Wireless-AC 7265 [Maple Peak AC]  
8086 5302 Wireless-N 7265 [Stone Peak 2 BGN]  
8086 5310  
Dual Band Wireless-AC 7265 [Stone Peak 2 AC]  
8086 9200 Dual Band Wireless-AC 7265 [Stone Peak 2 AGN]  
095e Quark SoC X1000 Legacy Bridge  
0960 80960RP (i960RP) Microprocessor/Bridge  
0962 80960RM (i960RM) Bridge

0964 80960RP (i960RP) Microprocessor/Bridge  
0975 Optane NVMe SSD H10 with Solid State Storage [Teton Glacier]  
0998 Ice Lake IEH  
09a2 Ice Lake Memory Map/VT-d  
09a3 Ice Lake RAS  
09a4 Ice Lake Mesh 2 PCIe  
09a6 Ice Lake MSM  
09a7 Ice Lake PMON MSM  
09ab RST VMD Managed Controller  
09ad Optane NVMe SSD H20 with Solid State Storage [Pyramid Glacier]  
09c4 PAC with Intel Arria 10 GX FPGA  
0a03 Haswell-ULT Thermal Subsystem  
0a04 Haswell-ULT DRAM Controller  
17aa 2214 ThinkPad X240  
0a06 Haswell-ULT Integrated Graphics Controller  
0a0c Haswell-ULT HD Audio Controller  
17aa 2214 ThinkPad X240  
0a16 Haswell-ULT Integrated Graphics Controller  
17aa 2214 ThinkPad X240  
0a22 Haswell-ULT Integrated Graphics Controller  
0a26 Haswell-ULT Integrated Graphics  
Controller  
0a2a Haswell-ULT Integrated Graphics Controller  
0a2e Haswell-ULT Integrated Graphics Controller  
0a53 DC P3520 SSD  
0a54 NVMe Datacenter SSD [3DNAND, Beta Rock Controller]  
1028 1fe1 Express Flash NVMe 1TB 2.5" U.2 (P4500)  
1028 1fe2 Express Flash NVMe 2TB 2.5" U.2 (P4500)  
1028 1fe3 Express Flash NVMe 4TB 2.5" U.2 (P4500)  
1028 1fe4 Express Flash NVMe 4TB HHHL AIC (P4500)  
1028 1fee Express Flash NVMe 1.6TB 2.5" U.2 (P4610)  
1028 1fef Express Flash NVMe 3.2TB 2.5" U.2 (P4610)  
1028 1ff0 Express Flash NVMe 6.4TB 2.5" U.2 (P4610)  
1028 1fff Express Flash NVMe 8.0TB 2.5" U.2 (P4510)  
1028 2003 Express Flash NVMe 1.0 TB 2.5" U.2 (P4510)  
1028 2004 Express Flash NVMe 2.0TB 2.5" U.2 (P4510)  
1028 2005 Express Flash NVMe 4.0TB 2.5" U.2 (P4510)  
108e 4870 NVMe PCIe 3.0 SSD 6.4TB AIC (P4608)  
108e 4871 NVMe PCIe 3.0 SSD 6.4TB 2.5-inch (P4600)  
108e 4879 NVMe PCIe 3.0 SSD v2 6.4TB AIC (P4618)  
108e 487a NVMe PCIe 3.0 SSD v2 6.4TB 2.5-inch (P4610)  
1137  
0227 NVMe Datacenter SSD [3DNAND] 1.6TB 2.5" U.2 (P4600)  
1137 0228 NVMe Datacenter SSD [3DNAND] 2.0TB 2.5" U.2 (P4600)  
1137 0229 NVMe Datacenter SSD [3DNAND] 3.2TB 2.5" U.2 (P4600)  
1137 022b NVMe Datacenter SSD [3DNAND] 1.0TB 2.5" U.2 (P4500)  
1137 022c NVMe Datacenter SSD [3DNAND] 2.0TB 2.5" U.2 (P4500)  
1137 022d NVMe Datacenter SSD [3DNAND] 4.0TB 2.5" U.2 (P4500)

1137 0231 NVMe Datacenter SSD [3DNAND] 0.5TB 2.5" U.2 (P4501)  
1137 0232 NVMe Datacenter SSD [3DNAND] 1.0TB 2.5" U.2 (P4501)  
1137 0233 NVMe Datacenter SSD [3DNAND] 2.0TB 2.5" U.2 (P4501)  
1137 0258 NVMe Datacenter SSD [3DNAND] 1.6TB 2.5" U.2 (P4610)  
1137 025a NVMe Datacenter SSD [3DNAND] 3.2TB 2.5" U.2 (P4610)  
1137 025b NVMe Datacenter SSD [3DNAND] 1.0TB 2.5" U.2 (P4510)  
1137 025c NVMe Datacenter SSD [3DNAND] 2.0TB 2.5" U.2 (P4510)  
1137 025d NVMe Datacenter SSD [3DNAND] 4.0TB 2.5" U.2 (P4510)  
1137 025e NVMe Datacenter SSD [3DNAND] 8.0TB 2.5" U.2 (P4510)  
1590 025d NVMe Datacenter  
SSD [3DNAND] 1.0TB 2.5" U.2 (P4500)  
1590 025e NVMe Datacenter SSD [3DNAND] 2.0TB 2.5" U.2 (P4500)  
1590 025f NVMe Datacenter SSD [3DNAND] 4.0TB 2.5" U.2 (P4500)  
1590 0262 NVMe Datacenter SSD [3DNAND] 1.6TB 2.5" U.2 (P4600)  
1590 0264 NVMe Datacenter SSD [3DNAND] 3.2TB 2.5" U.2 (P4600)  
1590 0265 NVMe Datacenter SSD [3DNAND] 6.4TB 2.5" U.2 (P4600)  
1590 026c NVMe Datacenter SSD [3DNAND] 4.0TB AIC (P4500)  
1d49 4702 Thinksystem Intel P4500 NVMe U.2  
1d49 4704 Thinksystem Intel P4500 NVMe AIC  
1d49 4712 Thinksystem Intel P4600 NVMe U.2  
1d49 4714 Thinksystem Intel P4600 NVMe AIC  
1d49 4802 Thinksystem U.2 P4510 NVMe SSD  
1d49 4812 Thinksystem U.2 P4610 NVMe SSD  
8086 4308 SSD D5-P4320 and D5-P4326  
8086 4702 NVMe Datacenter SSD [3DNAND] SE 2.5" U.2 (P4500)  
8086 4704 NVMe Datacenter SSD [3DNAND] SE AIC (P4500)  
8086 4712 NVMe Datacenter SSD [3DNAND] ME 2.5" U.2 (P4600)  
8086 4714 NVMe Datacenter SSD [3DNAND] ME AIC (P4600)  
8086 4802 NVMe Datacenter  
SSD [3DNAND] SE 2.5" U.2 (P4510)  
8086 4804 NVMe Datacenter SSD [3DNAND] SE AIC (P4510)  
8086 4805 NVMe Datacenter SSD [3DNAND] SE M.2 (P4511)  
8086 4812 NVMe Datacenter SSD [3DNAND] ME 2.5" U.2 (P4610)  
8086 4814 NVMe Datacenter SSD [3DNAND] ME AIC (P4610)  
0a55 NVMe DC SSD [3DNAND, Beta Rock Controller]  
1028 1fe5 Express Flash NVMe 1.6TB 2.5" U.2 (P4600)  
1028 1fe6 Express Flash NVMe 2TB 2.5" U.2 (P4600)  
1028 1fe7 Express Flash NVMe 3.2TB 2.5" U.2 (P4600)  
1028 1fe8 Express Flash NVMe 2.0TB HHHL AIC (P4600)  
1028 1fe9 Express Flash NVMe 4.0TB HHHL AIC (P4600)  
0b00 Ice Lake CBDMA [QuickData Technology]  
0b26 Thunderbolt 4 Bridge [Goshen Ridge 2020]  
0b27 Thunderbolt 4 USB Controller [Goshen Ridge 2020]  
0b2b PAC with Intel Stratix 10 SX FPGA [FPGA PAC D5005]  
0b60 NVMe DC SSD [3DNAND, Sentinel Rock Controller]  
1028 2060 NVMe SED MU U.2 1.6TB (P5600)  
1028 2061 NVMe SED MU U.2 3.2TB (P5600)  
1028 2062 NVMe SED MU U.2 6.4TB (P5600)



1028 2064 NVMe  
SED RI U.2 1.92TB (P5500)  
1028 2065 NVMe SED RI U.2 3.84TB (P5500)  
1028 2066 NVMe SED RI U.2 7.68TB (P5500)  
1028 209e NVMe MU U.2 1.6TB (P5600)  
1028 209f NVMe MU U.2 3.2TB (P5600)  
1028 2100 NVMe MU U.2 6.4TB (P5600)  
1028 2102 NVMe RI U.2 1.92TB (P5500)  
1028 2103 NVMe RI U.2 3.84TB (P5500)  
1028 2104 NVMe RI U.2 7.68TB (P5500)  
1028 219a NVMe P5316 RI 15.36TB  
1028 219b NVMe P5316 RI 30.72TB  
1028 219c NVMe SED P5316 RI 15.36  
1028 219d NVMe SED P5316 RI 30.72  
1028 219e NVMe FIPS P5316 RI 15.36TB  
1028 219f NVMe FIPS P5316 RI 30.72  
8086 8008 NVMe Datacenter SSD [3DNAND] SE 2.5" U.2 (P5510)  
8086 8d08 NVMe Datacenter SSD [3DNAND] VE 2.5" U.2 (P5316)  
8086 8d1d NVMe Datacenter SSD [3DNAND] VE E1.L 9.5/18mm (P5316)  
8086 c008 NVMe Datacenter SSD [3DNAND] SE U.2 15mm (P5530)  
0b69 Ponte Vecchio XT (2 Tile) [Data Center GPU Max 1450]  
0b6e Ponte Vecchio XT (1 Tile) [Data Center GPU Max 1100C]  
0bd0 Ponte Vecchio XL (2 Tile)  
0bd4 Ponte Vecchio  
XT (2 Tile) [Data Center GPU Max 1550VG]  
0bd5 Ponte Vecchio XT (2 Tile) [Data Center GPU Max 1550]  
0bd6 Ponte Vecchio XT (2 Tile) [Data Center GPU Max 1550]  
0bd7 Ponte Vecchio XT (2 Tile) [Data Center GPU Max 1350]  
0bd8 Ponte Vecchio XT (2 Tile) [Data Center GPU Max 1350]  
0bd9 Ponte Vecchio XT (1 Tile) [Data Center GPU Max 1100]  
0bda Ponte Vecchio XT (1 Tile) [Data Center GPU Max 1100]  
0bdb Ponte Vecchio XT (1 Tile) [Data Center GPU Max 1100]  
0be0 Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0be1 Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
105b 0d7c D270S/D250S Motherboard  
0be2 Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0be3 Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0be4 Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0be5 Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0be6 Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0be7 Atom Processor D2xxx/N2xxx Integrated  
Graphics Controller  
0be8 Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0be9 Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0bea Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0beb Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0bec Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0bed Atom Processor D2xxx/N2xxx Integrated Graphics Controller

0bee Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0bef Atom Processor D2xxx/N2xxx Integrated Graphics Controller  
0bf0 Atom Processor D2xxx/N2xxx DRAM Controller  
0bf1 Atom Processor D2xxx/N2xxx DRAM Controller  
0bf2 Atom Processor D2xxx/N2xxx DRAM Controller  
0bf3 Atom Processor D2xxx/N2xxx DRAM Controller  
0bf4 Atom Processor D2xxx/N2xxx DRAM Controller  
0bf5 Atom Processor D2xxx/N2xxx DRAM Controller  
105b 0d7c D270S/D250S Motherboard  
0bf6 Atom Processor D2xxx/N2xxx DRAM Controller  
0bf7 Atom Processor D2xxx/N2xxx DRAM Controller  
0c00 4th Gen Core  
Processor DRAM Controller  
1028 05d7 Alienware X51 R2  
103c 1998 EliteDesk 800 G1  
17aa 3098 ThinkCentre E73  
17aa 309f ThinkCentre M83  
0c01 Xeon E3-1200 v3/4th Gen Core Processor PCI Express x16 Controller  
0c04 Xeon E3-1200 v3/4th Gen Core Processor DRAM Controller  
103c 1909 ZBook 15  
17aa 220e ThinkPad T440p  
0c05 Xeon E3-1200 v3/4th Gen Core Processor PCI Express x8 Controller  
0c08 Xeon E3-1200 v3 Processor DRAM Controller  
0c09 Xeon E3-1200 v3/4th Gen Core Processor PCI Express x4 Controller  
0c0c Xeon E3-1200 v3/4th Gen Core Processor HD Audio Controller  
103c 1998 EliteDesk 800 G1  
17aa 220e ThinkPad T440p  
17aa 309f ThinkCentre M83  
0c40 Atom Processor CE 5300  
0c46 Atom Processor S1200 PCI Express Root Port 1  
0c47 Atom Processor S1200 PCI Express Root Port 2  
0c48 Atom Processor S1200 PCI Express Root Port 3  
0c49 Atom Processor S1200 PCI Express Root Port 4  
0c4e Atom Processor S1200 NTB Primary  
0c50 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D  
QuickData Technology Device  
0c51 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QuickData Technology Device  
0c52 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QuickData Technology Device  
0c53 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QuickData Technology Device  
0c54 Atom Processor S1200 Internal  
0c55 Atom Processor S1200 DFX 1  
0c56 Atom Processor S1200 DFX 2  
0c59 Atom Processor S1200 SMBus 2.0 Controller 0  
0c5a Atom Processor S1200 SMBus 2.0 Controller 1  
0c5b Atom Processor S1200 SMBus Controller 2  
0c5c Atom Processor S1200 SMBus Controller 3  
0c5d Atom Processor S1200 SMBus Controller 4  
0c5e Atom Processor S1200 SMBus Controller 5

0c5f Atom Processor S1200 UART  
0c60 Atom Processor S1200 Integrated Legacy Bus  
0c70 Atom Processor S1200 Internal  
0c71 Atom Processor S1200 Internal  
0c72 Atom Processor S1200 Internal  
0c73 Atom Processor S1200 Internal  
0c74 Atom Processor S1200 Internal  
0c75 Atom Processor S1200 Internal  
0c76 Atom Processor S1200 Internal  
0c77 Atom  
Processor S1200 Internal  
0c78 Atom Processor S1200 Internal  
0c79 Atom Processor S1200 Internal  
0c7a Atom Processor S1200 Internal  
0c7b Atom Processor S1200 Internal  
0c7c Atom Processor S1200 Internal  
0c7d Atom Processor S1200 Internal  
0c7e Atom Processor S1200 Internal  
0c7f Atom Processor S1200 Internal  
0cf8 Ethernet Controller X710 Intel(R) FPGA Programmable Acceleration Card N3000 for Networking  
8086 0000 Ethernet Controller X710 Intel(R) FPGA Programmable Acceleration Card N3000 for Networking  
8086 0001 Ethernet Controller X710 Intel(R) FPGA Programmable Acceleration Card N3000 for Networking  
0d00 Crystal Well DRAM Controller  
0d01 Crystal Well PCI Express x16 Controller  
0d04 Crystal Well DRAM Controller  
0d05 Crystal Well PCI Express x8 Controller  
0d09 Crystal Well PCI Express x4 Controller  
0d0c Crystal Well HD Audio Controller  
0d16 Crystal Well Integrated Graphics Controller  
0d26 Crystal Well Integrated Graphics Controller  
0d36 Crystal Well  
Integrated Graphics Controller  
0d4c Ethernet Connection (11) I219-LM  
0d4d Ethernet Connection (11) I219-V  
8086 0d4d Ethernet Connection (11) I219-V  
0d4e Ethernet Connection (10) I219-LM  
0d4f Ethernet Connection (10) I219-V  
0d53 Ethernet Connection (12) I219-LM  
0d55 Ethernet Connection (12) I219-V  
0d58 Ethernet Controller XXV710 Intel(R) FPGA Programmable Acceleration Card N3000 for Networking  
8086 0000 Ethernet Controller XXV710 Intel(R) FPGA Programmable Acceleration Card N3000 for Networking  
8086 0001 Ethernet Controller XXV710 Intel(R) FPGA Programmable Acceleration Card N3000 for Networking  
0d9f Ethernet Controller I225-IT  
0dc5 Ethernet Connection (23) I219-LM  
1028 0c06 Precision 3580  
0dc6 Ethernet Connection (23) I219-V  
0dcd Ethernet Connection C825-X  
0dd2 Ethernet Network Adapter I710

1137 0000 I710T4LG 4x1 GbE RJ45 PCIe NIC  
1137 02e3 I710T4LG 4x1 GbE RJ45 PCIe NIC  
8086 0000 Ethernet Network Adapter I710-T4L  
8086 000d Ethernet Network  
Adapter I710-T4L  
8086 0010 Ethernet Network Adapter I710-T4L for OCP 3.0  
8086 401a Ethernet Network Adapter I710-T4L  
8086 401b Ethernet Network Adapter I710-T4L for OCP 3.0  
0dd5 Ethernet Adaptive Virtual Function  
0dda Ethernet Connection X722 for 10GbE SFP+  
1bd4 0076 Ethernet Connection F102IX722 for 10GbE SFP  
1bd4 0082 Ethernet Connection F102IX722 for 10GbE SFP  
0e00 Xeon E7 v2/Xeon E5 v2/Core i7 DMI2  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
15d9 066b X9SRL-F  
0e01 Xeon E7 v2/Xeon E5 v2/Core i7 PCI Express Root Port in DMI2 Mode  
0e02 Xeon E7 v2/Xeon E5 v2/Core i7 PCI Express Root Port 1a  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
0e03 Xeon E7 v2/Xeon E5 v2/Core i7 PCI Express Root Port 1b  
0e04 Xeon E7 v2/Xeon E5 v2/Core i7 PCI Express Root Port 2a  
0e05 Xeon E7 v2/Xeon E5 v2/Core i7 PCI Express Root Port 2b  
0e06 Xeon E7 v2/Xeon E5 v2/Core i7 PCI Express Root Port 2c  
0e07 Xeon E7 v2/Xeon E5 v2/Core i7 PCI Express Root Port 2d  
0e08  
Xeon E7 v2/Xeon E5 v2/Core i7 PCI Express Root Port 3a  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
0e09 Xeon E7 v2/Xeon E5 v2/Core i7 PCI Express Root Port 3b  
0e0a Xeon E7 v2/Xeon E5 v2/Core i7 PCI Express Root Port 3c  
0e0b Xeon E7 v2/Xeon E5 v2/Core i7 PCI Express Root Port 3d  
0e10 Xeon E7 v2/Xeon E5 v2/Core i7 IIO Configuration Registers  
0e13 Xeon E7 v2/Xeon E5 v2/Core i7 IIO Configuration Registers  
0e17 Xeon E7 v2/Xeon E5 v2/Core i7 IIO Configuration Registers  
0e18 Xeon E7 v2/Xeon E5 v2/Core i7 IIO Configuration Registers  
0e1c Xeon E7 v2/Xeon E5 v2/Core i7 IIO Configuration Registers  
0e1d Xeon E7 v2/Xeon E5 v2/Core i7 R2PCIe  
0e1e Xeon E7 v2/Xeon E5 v2/Core i7 UBOX Registers  
0e1f Xeon E7 v2/Xeon E5 v2/Core i7 UBOX Registers  
0e20 Xeon E7 v2/Xeon E5 v2/Core i7 Crystal Beach DMA Channel 0  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
15d9 066b X9SRL-F  
0e21 Xeon E7 v2/Xeon E5 v2/Core i7 Crystal Beach DMA Channel 1  
1028 04f7 Xeon E5 v2 on PowerEdge  
R320 server  
15d9 066b X9SRL-F  
0e22 Xeon E7 v2/Xeon E5 v2/Core i7 Crystal Beach DMA Channel 2  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
15d9 066b X9SRL-F  
0e23 Xeon E7 v2/Xeon E5 v2/Core i7 Crystal Beach DMA Channel 3

1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
15d9 066b X9SRL-F  
0e24 Xeon E7 v2/Xeon E5 v2/Core i7 Crystal Beach DMA Channel 4  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
15d9 066b X9SRL-F  
0e25 Xeon E7 v2/Xeon E5 v2/Core i7 Crystal Beach DMA Channel 5  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
15d9 066b X9SRL-F  
0e26 Xeon E7 v2/Xeon E5 v2/Core i7 Crystal Beach DMA Channel 6  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
15d9 066b X9SRL-F  
0e27 Xeon E7 v2/Xeon E5 v2/Core i7 Crystal Beach DMA Channel 7  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
15d9 066b X9SRL-F  
0e28 Xeon E7 v2/Xeon E5 v2/Core i7 VTd/Memory Map/Misc  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
15d9 066b X9SRL-F  
0e29 Xeon E7 v2/Xeon E5 v2/Core  
i7 Memory Hotplug  
0e2a Xeon E7 v2/Xeon E5 v2/Core i7 IIO RAS  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
15d9 066b X9SRL-F  
0e2c Xeon E7 v2/Xeon E5 v2/Core i7 IOAPIC  
15d9 066b X9SRL-F  
0e2e Xeon E7 v2/Xeon E5 v2/Core i7 CBDMA  
0e2f Xeon E7 v2/Xeon E5 v2/Core i7 CBDMA  
0e30 Xeon E7 v2/Xeon E5 v2/Core i7 Home Agent 0  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
0e32 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link 0  
0e33 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link 1  
0e34 Xeon E7 v2/Xeon E5 v2/Core i7 R2PCIe  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
0e36 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Ring Performance Ring Monitoring  
1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
0e37 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Ring Performance Ring Monitoring  
0e38 Xeon E7 v2/Xeon E5 v2/Core i7 Home Agent 1  
0e3a Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link 2  
0e3e Xeon E7 v2/Xeon E5 v2/Core i7 QPI Ring Performance Ring Monitoring  
0e3f Xeon E7 v2/Xeon E5 v2/Core i7 QPI Ring Performance  
Ring Monitoring  
0e40 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link 2  
0e41 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Ring Registers  
0e43 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link Reut 2  
0e44 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link Reut 2  
0e45 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link Agent Register  
0e47 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link Agent Register  
0e60 Xeon E7 v2/Xeon E5 v2/Core i7 Home Agent 1  
0e68 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 Target Address/Thermal Registers

0e6a Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 Channel Target Address Decoder Registers  
 0e6b Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 Channel Target Address Decoder Registers  
 0e6c Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 Channel Target Address Decoder Registers  
 0e6d Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 Channel Target Address Decoder Registers  
 0e71 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller  
 0 RAS Registers  
 0e74 Xeon E7 v2/Xeon E5 v2/Core i7 R2PCIe  
 0e75 Xeon E7 v2/Xeon E5 v2/Core i7 R2PCIe  
 0e77 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Ring Registers  
 0e79 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 RAS Registers  
 0e7d Xeon E7 v2/Xeon E5 v2/Core i7 UBOX Registers  
 0e7f Xeon E7 v2/Xeon E5 v2/Core i7 QPI Ring Registers  
 0e80 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link 0  
 0e81 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Ring Registers  
 1028 04f7 Xeon E5 v2 on PowerEdge R320 server  
 0e83 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link Reut 0  
 0e84 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link Reut 0  
 0e85 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link Agent Register  
 0e87 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Registers  
 0e90 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link 1  
 0e93 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link 1  
 0e94 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link Reut 1  
 0e95 Xeon E7 v2/Xeon E5 v2/Core i7 QPI Link Agent Register  
 0ea0 Xeon E7 v2/Xeon E5 v2/Core i7 Home Agent 0  
 1028 04f7  
 Xeon E5 v2 on PowerEdge R320 server  
 0ea8 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Target Address/Thermal Registers  
 0eaa Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Channel Target Address Decoder Registers  
 0eab Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Channel Target Address Decoder Registers  
 0eac Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Channel Target Address Decoder Registers  
 0ead Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Channel Target Address Decoder Registers  
 0eae Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO Registers  
 0eaf Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO Registers  
 0eb0 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 Channel 0-3 Thermal Control 0  
 0eb1 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 Channel 0-3 Thermal Control 1  
 0eb2 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 Channel 0-3 ERROR Registers 0  
 0eb3 Xeon E7 v2/Xeon E5 v2/Core  
 i7 Integrated Memory Controller 1 Channel 0-3 ERROR Registers 1  
 0eb4 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 Channel 0-3 Thermal Control 2  
 0eb5 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 Channel 0-3 Thermal Control 3  
 0eb6 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 Channel 0-3 ERROR Registers 2  
 0eb7 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 1 Channel 0-3 ERROR Registers 3  
 0ebc Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO Registers  
 0ebe Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO Registers  
 0ebf Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO Registers  
 0ec0 Xeon E7 v2/Xeon E5 v2/Core i7 Power Control Unit 0  
 0ec1 Xeon E7 v2/Xeon E5 v2/Core i7 Power Control Unit 1  
 0ec2 Xeon E7 v2/Xeon E5 v2/Core i7 Power Control Unit 2

0ec3 Xeon E7 v2/Xeon E5 v2/Core i7 Power Control Unit 3  
0ec4 Xeon E7 v2/Xeon E5 v2/Core i7 Power Control Unit 4  
0ec8 Xeon E7 v2/Xeon E5 v2/Core i7 System Address Decoder  
0ec9 Xeon E7 v2/Xeon E5 v2/Core  
i7 Broadcast Registers  
0eca Xeon E7 v2/Xeon E5 v2/Core i7 Broadcast Registers  
0ed8 Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO  
0ed9 Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO  
0edc Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO  
0edd Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO  
0ede Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO  
0edf Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO  
0ee0 Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0ee1 Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0ee2 Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0ee3 Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0ee4 Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0ee5 Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0ee6 Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0ee7 Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0ee8 Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0ee9 Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0eea Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0eeb Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0eec  
Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0eed Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0eee Xeon E7 v2/Xeon E5 v2/Core i7 Unicast Registers  
0ef0 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Channel 0-3 Thermal Control 0  
0ef1 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Channel 0-3 Thermal Control 1  
0ef2 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Channel 0-3 ERROR Registers 0  
0ef3 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Channel 0-3 ERROR Registers 1  
0ef4 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Channel 0-3 Thermal Control 2  
0ef5 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Channel 0-3 Thermal Control 3  
0ef6 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Channel 0-3 ERROR Registers 2  
0ef7 Xeon E7 v2/Xeon E5 v2/Core i7 Integrated Memory Controller 0 Channel 0-3 ERROR Registers 3  
0ef8 Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO  
0ef9  
Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO  
0efa Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO  
0efb Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO  
0efc Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO  
0efd Xeon E7 v2/Xeon E5 v2/Core i7 DDRIO  
0f00 Atom Processor Z36xxx/Z37xxx Series SoC Transaction Register  
0f04 Atom Processor Z36xxx/Z37xxx Series High Definition Audio Controller  
0f06 Atom Processor Z36xxx/Z37xxx Series LPIO1 DMA Controller  
0f08 Atom Processor Z36xxx/Z37xxx Series LPIO1 PWM Controller  
0f09 Atom Processor Z36xxx/Z37xxx Series LPIO1 PWM Controller

0f0a Atom Processor Z36xxx/Z37xxx Series LPIO1 HSUART Controller #1  
0f0c Atom Processor Z36xxx/Z37xxx Series LPIO1 HSUART Controller #2  
0f0e Atom Processor Z36xxx/Z37xxx Series LPIO1 SPI Controller  
0f12 Atom Processor E3800/CE2700 Series SMBus Controller  
0f14 Atom Processor Z36xxx/Z37xxx Series SDIO Controller  
0f15 Atom Processor Z36xxx/Z37xxx Series SDIO Controller  
0f16 Atom Processor Z36xxx/Z37xxx Series SDIO Controller  
0f18 Atom Processor  
Z36xxx/Z37xxx Series Trusted Execution Engine  
0f1c Atom Processor Z36xxx/Z37xxx Series Power Control Unit  
0f20 Atom Processor E3800 Series SATA IDE Controller  
0f21 Atom Processor E3800 Series SATA IDE Controller  
0f22 Atom Processor E3800 Series SATA AHCI Controller  
0f23 Atom Processor E3800 Series SATA AHCI Controller  
0f28 Atom Processor Z36xxx/Z37xxx Series LPE Audio Controller  
0f31 Atom Processor Z36xxx/Z37xxx Series Graphics & Display  
0f34 Atom Processor Z36xxx/Z37xxx Series USB EHCI  
0f35 Atom Processor Z36xxx/Z37xxx, Celeron N2000 Series USB xHCI  
1025 0936 Aspire ES1  
0f37 Atom Processor Z36xxx/Z37xxx Series OTG USB Device  
0f38 Atom Processor Z36xxx/Z37xxx Series Camera ISP  
0f40 Atom Processor Z36xxx/Z37xxx Series LPIO2 DMA Controller  
0f41 Atom Processor Z36xxx/Z37xxx Series LPIO2 I2C Controller #1  
0f42 Atom Processor Z36xxx/Z37xxx Series LPIO2 I2C Controller #2  
0f43 Atom Processor Z36xxx/Z37xxx Series LPIO2 I2C Controller #3  
0f44 Atom Processor  
Z36xxx/Z37xxx Series LPIO2 I2C Controller #4  
0f45 Atom Processor Z36xxx/Z37xxx Series LPIO2 I2C Controller #5  
0f46 Atom Processor Z36xxx/Z37xxx Series LPIO2 I2C Controller #6  
0f47 Atom Processor Z36xxx/Z37xxx Series LPIO2 I2C Controller #7  
0f48 Atom Processor E3800 Series PCI Express Root Port 1  
0f4a Atom Processor E3800 Series PCI Express Root Port 2  
0f4c Atom Processor E3800 Series PCI Express Root Port 3  
0f4e Atom Processor E3800 Series PCI Express Root Port 4  
0f50 Atom Processor E3800 Series eMMC 4.5 Controller  
1000 82542 Gigabit Ethernet Controller (Fiber)  
0e11 b0df NC6132 Gigabit Ethernet Adapter (1000-SX)  
0e11 b0e0 NC6133 Gigabit Ethernet Adapter (1000-LX)  
0e11 b123 NC6134 Gigabit Ethernet Adapter (1000-LX)  
1014 0119 Netfinity Gigabit Ethernet SX Adapter  
8086 1000 PRO/1000 Gigabit Server Adapter  
1001 82543GC Gigabit Ethernet Controller (Fiber)  
0e11 004a NC6136 Gigabit Server Adapter  
1014 01ea Netfinity Gigabit Ethernet SX Adapter  
8086  
1002 PRO/1000 F Server Adapter  
8086 1003 PRO/1000 F Server Adapter  
1002 Pro 100 LAN+Modem 56 Cardbus II



8086 200e Pro 100 LAN+Modem 56 Cardbus II  
8086 2013 Pro 100 SR Mobile Combo Adapter  
8086 2017 Pro 100 S Combo Mobile Adapter  
1004 82543GC Gigabit Ethernet Controller (Copper)  
0e11 0049 NC7132 Gigabit Upgrade Module  
0e11 b1a4 NC7131 Gigabit Server Adapter  
1014 10f2 Gigabit Ethernet Server Adapter  
8086 1004 PRO/1000 T Server Adapter  
8086 2004 PRO/1000 T Server Adapter  
1008 82544EI Gigabit Ethernet Controller (Copper)  
1014 0269 iSeries 1000/100/10 Ethernet Adapter  
1028 011b PowerEdge 1650/2550  
1028 011c PRO/1000 XT Network Connection  
8086 1107 PRO/1000 XT Server Adapter  
8086 2107 PRO/1000 XT Server Adapter  
8086 2110 PRO/1000 XT Desktop Adapter  
8086 3108 PRO/1000 XT Network Connection  
1009 82544EI Gigabit Ethernet Controller (Fiber)  
1014 0268 iSeries Gigabit Ethernet Adapter  
8086 1109 PRO/1000 XF Server Adapter  
8086 2109  
PRO/1000 XF Server Adapter  
100a 82540EM Gigabit Ethernet Controller  
100c 82544GC Gigabit Ethernet Controller (Copper)  
8086 1112 PRO/1000 T Desktop Adapter  
8086 2112 PRO/1000 T Desktop Adapter  
100d 82544GC Gigabit Ethernet Controller (LOM)  
1028 0123 PRO/1000 XT Network Connection  
1079 891f 82544GC Based Network Connection  
4c53 1080 CT8 mainboard  
8086 110d 82544GC Based Network Connection  
100e 82540EM Gigabit Ethernet Controller  
1014 0265 PRO/1000 MT Network Connection  
1014 0267 PRO/1000 MT Network Connection  
1014 026a PRO/1000 MT Network Connection  
1028 002e Optiplex GX260  
1028 0134 PowerEdge 600SC  
1028 0151 Optiplex GX270  
107b 8920 PRO/1000 MT Desktop Adapter  
1af4 1100 QEMU Virtual Machine  
8086 001e PRO/1000 MT Desktop Adapter  
8086 002e PRO/1000 MT Desktop Adapter  
8086 1376 PRO/1000 GT Desktop Adapter  
8086 1476 PRO/1000 GT Desktop Adapter  
100f 82545EM Gigabit Ethernet Controller (Copper)  
1014 0269 iSeries 1000/100/10  
Ethernet Adapter  
1014 028e PRO/1000 MT Network Connection

15ad 0750 PRO/1000 MT Single Port Adapter  
8086 1000 PRO/1000 MT Network Connection  
8086 1001 PRO/1000 MT Server Adapter  
1010 82546EB Gigabit Ethernet Controller (Copper)  
0e11 00db NC7170 Gigabit Server Adapter  
1014 027c PRO/1000 MT Dual Port Network Adapter  
15ad 0760 PRO/1000 MT Dual Port Adapter  
18fb 7872 RESlink-X  
1fc1 0026 Niagara 2260 Bypass Card  
4c53 1080 CT8 mainboard  
4c53 10a0 CA3/CR3 mainboard  
8086 1011 PRO/1000 MT Dual Port Server Adapter  
8086 1012 PRO/1000 MT Dual Port Server Adapter  
8086 101a PRO/1000 MT Dual Port Network Connection  
8086 3424 SE7501HG2 Mainboard  
1011 82545EM Gigabit Ethernet Controller (Fiber)  
1014 0268 iSeries Gigabit Ethernet Adapter  
8086 1002 PRO/1000 MF Server Adapter  
8086 1003 PRO/1000 MF Server Adapter (LX)  
1012 82546EB Gigabit Ethernet Controller (Fiber)  
0e11 00dc NC6170 Gigabit Server Adapter  
8086 1012 PRO/1000 MF Dual Port Server  
Adapter  
1013 82541EI Gigabit Ethernet Controller  
8086 0013 PRO/1000 MT Network Connection  
8086 1013 PRO/1000 MT Network Connection  
8086 1113 PRO/1000 MT Desktop Adapter  
1014 82541ER Gigabit Ethernet Controller  
8086 0014 PRO/1000 MT Desktop Connection  
8086 1014 PRO/1000 MT Network Connection  
1015 82540EM Gigabit Ethernet Controller (LOM)  
8086 1015 PRO/1000 MT Mobile Connection  
1016 82540EP Gigabit Ethernet Controller (Mobile)  
1014 052c PRO/1000 MT Mobile Connection  
1179 0001 PRO/1000 MT Mobile Connection  
8086 1016 PRO/1000 MT Mobile Connection  
1017 82540EP Gigabit Ethernet Controller  
8086 1017 PRO/1000 MT Desktop Connection  
1018 82541EI Gigabit Ethernet Controller  
8086 1018 PRO/1000 MT Mobile Connection  
1019 82547EI Gigabit Ethernet Controller  
1458 1019 GA-8IPE1000 Pro2 motherboard (865PE)  
1458 e000 Intel Gigabit Ethernet (Kenai II)  
8086 1019 PRO/1000 CT Desktop Connection  
8086 301f D865PERL mainboard  
8086 3025 D875PBZ  
motherboard  
8086 302c D865GBF Mainboard

8086 3427 S875WP1-E mainboard  
101a 82547EI Gigabit Ethernet Controller (Mobile)  
8086 101a PRO/1000 CT Mobile Connection  
101d 82546EB Gigabit Ethernet Controller  
8086 1000 PRO/1000 MT Quad Port Server Adapter  
101e 82540EP Gigabit Ethernet Controller (Mobile)  
1014 0549 Thinkpad  
1179 0001 PRO/1000 MT Mobile Connection  
8086 101e PRO/1000 MT Mobile Connection  
101f Ethernet Controller V710 for 5GBASE-T  
1026 82545GM Gigabit Ethernet Controller  
1028 0168 Precision Workstation 670 Mainboard  
1028 0169 Precision 470  
8086 1000 PRO/1000 MT Server Connection  
8086 1001 PRO/1000 MT Server Adapter  
8086 1002 PRO/1000 MT Server Adapter  
8086 1003 PRO/1000 GT Server Adapter  
8086 1026 PRO/1000 MT Server Connection  
1027 82545GM Gigabit Ethernet Controller  
103c 3103 NC310F PCI-X Gigabit Server Adapter  
8086 1001 PRO/1000 MF Server Adapter(LX)  
8086 1002 PRO/1000 MF Server Adapter(LX)  
8086 1003 PRO/1000 MF Server  
Adapter(LX)  
8086 1027 PRO/1000 MF Server Adapter  
1028 82545GM Gigabit Ethernet Controller  
8086 1028 PRO/1000 MB Server Connection  
1029 82559 Ethernet Controller  
1030 82559 InBusiness 10/100  
1031 82801CAM (ICH3) PRO/100 VE (LOM) Ethernet Controller  
1014 0209 ThinkPad A/T/X Series  
104d 80e7 Vaio PCG-GR214EP/GR214MP/GR215MP/GR314MP/GR315MP  
104d 813c Vaio PCG-GRV616G  
107b 5350 EtherExpress PRO/100 VE  
1179 0001 EtherExpress PRO/100 VE  
144d c000 EtherExpress PRO/100 VE  
144d c001 EtherExpress PRO/100 VE  
144d c003 EtherExpress PRO/100 VE  
144d c006 vpr Matrix 170B4  
1032 82801CAM (ICH3) PRO/100 VE Ethernet Controller  
1033 82801CAM (ICH3) PRO/100 VM (LOM) Ethernet Controller  
1034 82801CAM (ICH3) PRO/100 VM Ethernet Controller  
1035 82801CAM (ICH3)/82562EH (LOM) Ethernet Controller  
1036 82801CAM (ICH3) 82562EH Ethernet Controller  
1037 82801CAM (ICH3) Chipset Ethernet Controller  
1038 82801CAM (ICH3) PRO/100 VM (KM) Ethernet Controller  
0e11

0098 Evo N600c  
1039 82801DB PRO/100 VE (LOM) Ethernet Controller  
1014 0267 NetVista A30p  
114a 0582 PC8 onboard ethernet ETH1  
103a 82801DB PRO/100 VE (CNR) Ethernet Controller  
103b 82801DB PRO/100 VM (LOM) Ethernet Controller  
103c 82801DB PRO/100 VM (CNR) Ethernet Controller  
103d 82801DB PRO/100 VE (MOB) Ethernet Controller  
1014 0522 ThinkPad R40  
1028 2002 Latitude D500  
8086 103d 82562EZ 10/100 Ethernet Controller  
103e 82801DB PRO/100 VM (MOB) Ethernet Controller  
1040 536EP Data Fax Modem  
16be 1040 V.9X DSP Data Fax Modem  
1043 PRO/Wireless LAN 2100 3B Mini PCI Adapter  
103c 08b0 tc1100 tablet  
8086 2522 Samsung X10/P30 integrated WLAN  
8086 2527 MIM2000/Centrino  
8086 2561 Dell Latitude D800  
8086 2581 Toshiba Satellite M10  
1048 82597EX 10GbE Ethernet Controller  
8086 a01f PRO/10GbE LR Server Adapter  
8086 a11f PRO/10GbE LR Server Adapter  
1049 82566MM Gigabit Network Connection  
103c 30c1 Compaq 6910p  
17aa 20b9 ThinkPad T61/R61  
104a  
82566DM Gigabit Network Connection  
104b 82566DC Gigabit Network Connection  
104c 82562V 10/100 Network Connection  
104d 82566MC Gigabit Network Connection  
104e Ethernet Controller X710 for 10 Gigabit SFP+  
104f Ethernet Controller X710 for 10 Gigabit backplane  
1050 82562EZ 10/100 Ethernet Controller  
1014 0287 ThinkCentre S50  
1028 019d Dimension 3000  
1462 728c 865PE Neo2 (MS-6728)  
1462 758c MS-6758 (875P Neo)  
8086 3020 D865PERL mainboard  
8086 302f Desktop Board D865GBF  
8086 3427 S875WP1-E mainboard  
1051 82801EB/ER (ICH5/ICH5R) integrated LAN Controller  
1052 PRO/100 VM Network Connection  
1053 PRO/100 VM Network Connection  
1054 PRO/100 VE Network Connection  
1055 PRO/100 VM Network Connection  
1056 PRO/100 VE Network Connection  
1057 PRO/100 VE Network Connection

1059 82551QM Ethernet Controller  
105b 82546GB Gigabit Ethernet Controller (Copper)  
105e 82571EB/82571GB Gigabit Ethernet Controller D0/D1 (copper applications)  
103c 7044  
NC360T PCI Express Dual Port Gigabit Server Adapter  
103c 704e Dual Port 1000Base-T (PCIe) [AD337A]  
1775 1100 CR11/VR11 Single Board Computer  
1775 6003 Telum GE-QT  
18df 1214 2x 1GbE, PCIe x1, dual Intel 82571EB chips  
8086 005e PRO/1000 PT Dual Port Server Connection  
8086 105e PRO/1000 PT Dual Port Network Connection  
8086 10d5 82571PT Gigabit PT Quad Port Server ExpressModule  
8086 115e PRO/1000 PT Dual Port Server Adapter  
8086 125e PRO/1000 PT Dual Port Server Adapter  
8086 135e PRO/1000 PT Dual Port Server Adapter  
105f 82571EB Gigabit Ethernet Controller  
103c 704f Dual Port 1000Base-SX (PCIe) [AD338A]  
8086 005a PRO/1000 PF Dual Port Server Adapter  
8086 115f PRO/1000 PF Dual Port Server Adapter  
8086 125f PRO/1000 PF Dual Port Server Adapter  
8086 135f PRO/1000 PF Dual Port Server Adapter  
1060 82571EB Gigabit Ethernet Controller  
8086 0060 PRO/1000 PB Dual Port Server Connection  
8086 1060 PRO/1000 PB Dual Port Server Connection  
1064 82562ET/EZ/GT/GZ  
- PRO/100 VE (LOM) Ethernet Controller  
1043 80f8 P5GD1-VW Mainboard  
1065 82562ET/EZ/GT/GZ - PRO/100 VE Ethernet Controller  
1066 82562 EM/EX/GX - PRO/100 VM (LOM) Ethernet Controller  
1067 82562 EM/EX/GX - PRO/100 VM Ethernet Controller  
1068 82562ET/EZ/GT/GZ - PRO/100 VE (LOM) Ethernet Controller Mobile  
103c 30d5 530 Laptop  
1069 82562EM/EX/GX - PRO/100 VM (LOM) Ethernet Controller Mobile  
106a 82562G - PRO/100 VE (LOM) Ethernet Controller  
106b 82562G - PRO/100 VE Ethernet Controller Mobile  
1075 82547GI Gigabit Ethernet Controller  
1028 0165 PowerEdge 750  
8086 0075 PRO/1000 CT Network Connection  
8086 1075 PRO/1000 CT Network Connection  
1076 82541GI Gigabit Ethernet Controller  
1028 0165 PRO/1000 MT Network Connection  
1028 016d PRO/1000 MT Network Connection  
1028 019a PRO/1000 MT Network Connection  
1028 106d PRO/1000 MT Network Connection  
8086 0076 PRO/1000 MT Network Connection  
8086 1076 PRO/1000 MT Network Connection  
8086 1176

PRO/1000 MT Desktop Adapter  
8086 1276 PRO/1000 MT Network Adapter  
1077 82541GI Gigabit Ethernet Controller  
1179 0001 PRO/1000 MT Mobile Connection  
8086 0077 PRO/1000 MT Mobile Connection  
8086 1077 PRO/1000 MT Mobile Connection  
1078 82541ER Gigabit Ethernet Controller  
8086 1078 82541ER-based Network Connection  
1079 82546GB Gigabit Ethernet Controller  
103c 12a6 Dual Port 1000Base-T [A9900A]  
103c 12cf Core Dual Port 1000Base-T [AB352A]  
1775 10d0 V5D Single Board Computer Gigabit Ethernet  
1775 ce90 CE9  
1fc1 0027 Niagara 2261 Failover NIC  
4c53 1090 Cx9 / Vx9 mainboard  
4c53 10b0 CL9 mainboard  
8086 0079 PRO/1000 MT Dual Port Network Connection  
8086 1079 PRO/1000 MT Dual Port Network Connection  
8086 1179 PRO/1000 MT Dual Port Server Adapter  
8086 117a PRO/1000 MT Dual Port Server Adapter  
107a 82546GB Gigabit Ethernet Controller  
103c 12a8 Dual Port 1000base-SX [A9899A]  
8086 107a PRO/1000 MF Dual Port Server Adapter  
8086 127a PRO/1000  
MF Dual Port Server Adapter  
107b 82546GB Gigabit Ethernet Controller  
8086 007b PRO/1000 MB Dual Port Server Connection  
8086 107b PRO/1000 MB Dual Port Server Connection  
107c 82541PI Gigabit Ethernet Controller  
8086 1376 PRO/1000 GT Desktop Adapter  
8086 1476 PRO/1000 GT Desktop Adapter  
107d 82572EI Gigabit Ethernet Controller (Copper)  
8086 1082 PRO/1000 PT Server Adapter  
8086 1084 PRO/1000 PT Server Adapter  
8086 1092 PRO/1000 PT Server Adapter  
107e 82572EI Gigabit Ethernet Controller (Fiber)  
8086 1084 PRO/1000 PF Server Adapter  
8086 1085 PRO/1000 PF Server Adapter  
8086 1094 PRO/1000 PF Server Adapter  
107f 82572EI Gigabit Ethernet Controller  
1080 FA82537EP 56K V.92 Data/Fax Modem PCI  
1081 631xESB/632xESB LAN Controller Copper  
1082 631xESB/632xESB LAN Controller fiber  
1083 631xESB/632xESB LAN Controller SERDES  
1084 631xESB/632xESB IDE Redirection  
1085 631xESB/632xESB Serial Port Redirection  
1086 631xESB/632xESB IPMI/KCS0  
1087

631xESB/632xESB UHCI Redirection  
1089 631xESB/632xESB BT  
108a 82546GB Gigabit Ethernet Controller  
8086 108a PRO/1000 P Dual Port Server Adapter  
8086 118a PRO/1000 P Dual Port Server Adapter  
108b 82573V Gigabit Ethernet Controller (Copper)  
1462 176c on board on MSI 945P - NEO (MS-7176)  
108c 82573E Gigabit Ethernet Controller (Copper)  
108e 82573E KCS (Active Management)  
108f Active Management Technology - SOL  
1091 PRO/100 VM Network Connection  
1092 PRO/100 VE Network Connection  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
1093 PRO/100 VM Network Connection  
1094 PRO/100 VE Network Connection  
1095 PRO/100 VE Network Connection  
1096 80003ES2LAN Gigabit Ethernet Controller (Copper)  
15d9 1096 Motherboard  
15d9 8680 X7DVL-E-O motherboard  
8086 3476 S5000PSLSATA Server Board  
1097 631xESB/632xESB DPT LAN Controller (Fiber)  
1098 80003ES2LAN Gigabit Ethernet Controller (Serdes)  
1099 82546GB Gigabit Ethernet Controller (Copper)  
8086 1099 PRO/1000  
GT Quad Port Server Adapter  
109a 82573L Gigabit Ethernet Controller  
1179 ff10 PRO/1000 PL  
17aa 2001 ThinkPad T60  
17aa 207e ThinkPad X60/X60s  
8086 109a PRO/1000 PL Network Connection  
8086 309c Desktop Board D945GTP  
8086 30a5 Desktop Board D975XBX  
109b 82546GB PRO/1000 GF Quad Port Server Adapter  
109e 82597EX 10GbE Ethernet Controller  
8086 a01f PRO/10GbE CX4 Server Adapter  
8086 a11f PRO/10GbE CX4 Server Adapter  
10a0 82571EB PRO/1000 AT Quad Port Bypass Adapter  
10a1 82571EB PRO/1000 AF Quad Port Bypass Adapter  
10a4 82571EB Gigabit Ethernet Controller  
8086 10a4 PRO/1000 PT Quad Port Server Adapter  
8086 11a4 PRO/1000 PT Quad Port Server Adapter  
10a5 82571EB Gigabit Ethernet Controller (Fiber)  
8086 10a5 PRO/1000 PF Quad Port Server Adapter  
8086 10a6 PRO/1000 PF Quad Port Server Adapter  
10a6 82599EB 10-Gigabit Dummy Function  
10a7 82575EB Gigabit Network Connection  
8086 10a8 82575EB Gigabit Riser Card  
10a9 82575EB Gigabit Backplane

## Connection

10b0 82573L PRO/1000 PL Network Connection  
10b2 82573V PRO/1000 PM Network Connection  
10b3 82573E PRO/1000 PM Network Connection  
10b4 82573L PRO/1000 PL Network Connection  
10b5 82546GB Gigabit Ethernet Controller (Copper)  
103c 3109 NC340T PCI-X Quad-port Gigabit Server Adapter  
8086 1099 PRO/1000 GT Quad Port Server Adapter  
8086 1199 PRO/1000 GT Quad Port Server Adapter  
10b6 82598 10GbE PCI-Express Ethernet Controller  
10b9 82572EI Gigabit Ethernet Controller (Copper)  
103c 704a 110T PCIe Gigabit Server Adapter  
8086 1083 PRO/1000 PT Desktop Adapter  
8086 1093 PRO/1000 PT Desktop Adapter  
10ba 80003ES2LAN Gigabit Ethernet Controller (Copper)  
10bb 80003ES2LAN Gigabit Ethernet Controller (Serdes)  
10bc 82571EB/82571GB Gigabit Ethernet Controller (Copper)  
1014 0368 4-Port 10/100/1000 Base-TX PCI Express Adapter for POWER  
103c 704b NC364T PCI Express Quad Port Gigabit Server Adapter  
# 375-3481-01 REV:50  
108e 11bc Quad Port Adapter  
8086  
10bc PRO/1000 PT Quad Port LP Server Adapter  
8086 11bc PRO/1000 PT Quad Port LP Server Adapter (Kirkwood Low Profile)  
10bd 82566DM-2 Gigabit Network Connection  
1028 0211 OptiPlex 755  
10bf 82567LF Gigabit Network Connection  
10c0 82562V-2 10/100 Network Connection  
1028 020d Inspiron 530  
10c2 82562G-2 10/100 Network Connection  
10c3 82562GT-2 10/100 Network Connection  
10c4 82562GT 10/100 Network Connection  
10c5 82562G 10/100 Network Connection  
10c6 82598EB 10-Gigabit AF Dual Port Network Connection  
8086 a05f 10-Gigabit XF SR Dual Port Server Adapter  
8086 a15f 10-Gigabit XF SR Dual Port Server Adapter  
10c7 82598EB 10-Gigabit AF Network Connection  
1014 037f 10-Gigabit XF SR Server Adapter  
1014 0380 10-Gigabit XF LR Server Adapter  
8086 a05f 10-Gigabit XF SR Server Adapter  
8086 a15f 10-Gigabit XF SR Server Adapter  
8086 a16f 10-Gigabit XF SR Server Adapter  
10c8 82598EB 10-Gigabit AT Network Connection  
8086 a10c 10-Gigabit AT Server Adapter  
8086  
a11c 10-Gigabit AT Server Adapter  
8086 a12c 10-Gigabit AT Server Adapter  
10c9 82576 Gigabit Network Connection



103c 31ef NC362i Integrated Dual port Gigabit Server Adapter  
103c 323f NC362i Integrated Dual port Gigabit Server Adapter  
10a9 8028 UV-BaseIO dual-port GbE  
13a3 0037 DS4100 Secure Multi-Gigabit Server Adapter with Compression  
15d9 a811 H8DGU  
4c52 9212 LREC9212PT Dual-port 10Gb Ethernet Network Adapter  
8086 a01c Gigabit ET Dual Port Server Adapter  
8086 a03c Gigabit ET Dual Port Server Adapter  
8086 a04c Gigabit ET Dual Port Server Adapter  
10ca 82576 Virtual Function  
10cb 82567V Gigabit Network Connection  
10cc 82567LM-2 Gigabit Network Connection  
10cd 82567LF-2 Gigabit Network Connection  
10ce 82567V-2 Gigabit Network Connection  
10d3 82574L Gigabit Network Connection  
103c 1785 NC112i 1-port Ethernet Server Adapter  
103c 3250 NC112T PCI Express single Port Gigabit Server Adapter  
1043 8369 Motherboard  
1093 76e9 PCIe-8233  
Ethernet Adapter  
10a9 8029 Prism XL Single Port Gigabit Ethernet  
15d9 0605 X8SIL  
15d9 060a X7SPA-H/X7SPA-HF Motherboard  
15d9 060d C7SIM-Q Motherboard  
4c52 2201 LRES2201PT Single-port 1Gb Ethernet Network Adapter  
8086 0001 Gigabit CT2 Desktop Adapter  
8086 3578 Server Board S1200BTLR  
8086 357a Server Board S1200BTS  
8086 a01f Gigabit CT Desktop Adapter  
e4bf 50c1 PC1-GROOVE  
e4bf 50c2 PC2-LIMBO  
10d4 Matrox Concord GE (customized Intel 82574)  
10d5 82571PT Gigabit PT Quad Port Server ExpressModule  
10d6 82575GB Gigabit Network Connection  
8086 10d6 Gigabit VT Quad Port Server Adapter  
8086 145a Gigabit VT Quad Port Server Adapter  
8086 147a Gigabit VT Quad Port Server Adapter  
10d8 82599EB 10 Gigabit Unprogrammed  
10d9 82571EB Dual Port Gigabit Mezzanine Adapter  
103c 1716 NC360m Dual Port 1GbE BL-c Adapter  
10da 82571EB Quad Port Gigabit Mezzanine Adapter  
103c 1717 NC364m Quad Port 1GbE BL-c Adapter  
10db 82598EB 10-Gigabit Dual Port Network  
Connection  
10dd 82598EB 10-Gigabit AT CX4 Network Connection  
10de 82567LM-3 Gigabit Network Connection  
10df 82567LF-3 Gigabit Network Connection  
10e1 82598EB 10-Gigabit AF Dual Port Network Connection

8086 a15f 10-Gigabit SR Dual Port Express Module  
10e2 82575GB Gigabit Network Connection  
8086 10e2 Gigabit VT Quad Port Server Adapter  
10e5 82567LM-4 Gigabit Network Connection  
10e6 82576 Gigabit Network Connection  
8086 a01f Gigabit EF Dual Port Server Adapter  
8086 a02f Gigabit EF Dual Port Server Adapter  
10e7 82576 Gigabit Network Connection  
103c 31ff NC362i Integrated Dual Port BL-c Gigabit Server Adapter  
4c52 9701 LREC9701EF Single-port 1Gb Ethernet Network Adapter  
10e8 82576 Gigabit Network Connection  
8086 a02b Gigabit ET Quad Port Server Adapter  
8086 a02c Gigabit ET Quad Port Server Adapter  
10ea 82577LM Gigabit Network Connection  
1028 040a Latitude E6410  
1028 040b Latitude E6510  
e4bf 50c1 PC1-GROOVE  
10eb 82577LC Gigabit Network  
Connection  
10ec 82598EB 10-Gigabit AT CX4 Network Connection  
8086 a01f 10-Gigabit CX4 Dual Port Server Adapter  
8086 a11f 10-Gigabit CX4 Dual Port Server Adapter  
10ed 82599 Ethernet Controller Virtual Function  
10ef 82578DM Gigabit Network Connection  
1028 02da OptiPlex 980  
15d9 060d C7SIM-Q Motherboard  
10f0 82578DC Gigabit Network Connection  
10f1 82598EB 10-Gigabit AF Dual Port Network Connection  
8086 a20f 10-Gigabit AF DA Dual Port Server Adapter  
8086 a21f 10-Gigabit AF DA Dual Port Server Adapter  
10f4 82598EB 10-Gigabit AF Network Connection  
8086 106f 10-Gigabit XF LR Server Adapter  
8086 a06f 10-Gigabit XF LR Server Adapter  
10f5 82567LM Gigabit Network Connection  
17aa 20ee ThinkPad T400  
10f6 82574L Gigabit Network Connection  
10f7 10 Gigabit BR KX4 Dual Port Network Connection  
108e 7b12 Sun Dual 10GbE PCIe 2.0 FEM  
8086 000d Ethernet Mezzanine Adapter X520-KX4-2  
10f8 82599 10 Gigabit Dual Port Backplane Connection  
1028 1f63 10GbE  
2P X520k bNDC  
103c 17d2 Ethernet 10Gb 2-port 560M Adapter  
103c 18d0 Ethernet 10Gb 2-port 560FLB Adapter  
1059 0111 T4007 10GbE interface  
1059 0130 T4009 10GbE interface  
8086 000c Ethernet X520 10GbE Dual Port KX4-KR Mezz  
10f9 82599 10 Gigabit Dual Port Network Connection

10fb 82599ES 10-Gigabit SFI/SFP+ Network Connection  
1028 1f72 Ethernet 10G 4P X520/I350 rNDC  
103c 17d0 Ethernet 10Gb 2-port 560FLR-SFP+ Adapter  
103c 17d2 Ethernet 10Gb 2-port 560M Adapter  
103c 17d3 Ethernet 10Gb 2-port 560SFP+ Adapter  
103c 211b Ethernet 10Gb 1-port P560FLR-SFP+ Adapter  
103c 2147 Ethernet 10Gb 1-port 561i Adapter  
103c 2159 Ethernet 10Gb 2-port 562i Adapter  
108e 7b11 Ethernet Server Adapter X520-2  
1170 004c 82599 DP 10G Mezzanine Adapter  
1374 1a08 PE310G4SPI9/PE310G4SPI9L/PE310G4SPI9LA Quad Port Fiber 10 Gigabit Ethernet PCI Express  
Server Adapter  
15d9 0611 AOC-STGN-i2S  
1734 11a9 10 Gigabit Dual Port Network Connection  
17aa 1071 ThinkServer X520-2  
AnyFabric  
17aa 4007 82599ES 10-Gigabit SFI/SFP+ Network Connection  
17aa 402b 82599ES 10Gb 2-port Server Adapter X520-DA2  
17aa 402f FPGA Card XC7VX690T-3FFG1157E  
18d4 0c09 82599ES 10Gb 2-port SFP+ OCP Mezz Card MOP81-I-10GS2  
193d 1004 560F-B  
1bd4 001b 10G SFP+ DP ER102Fi4 Rack Adapter  
1bd4 002f 10G SFP+ DP EP102Fi4A Adapter  
1bd4 0032 10G SFP+ DP EP102Fi4 Adapter  
1bd4 0067 F102I82599  
4c52 1024 LR-LINK LRES9804BF Quad-port 10Gb Ethernet Server Adapter  
4c52 3002 LRES3002PF Dual-port 10Gb Ethernet Server Adapter for OCP  
4c52 3012 LRES3012PF Dual-port 10Gb Ethernet Server Adapter for OCP  
4c52 9801 LREC9801BF Single-port 10Gb Ethernet Server Adapter  
4c52 9802 LREC9802BF Dual-port 10Gb Ethernet Server Adapter  
8086 0002 Ethernet Server Adapter X520-DA2  
8086 0003 Ethernet Server Adapter X520-2  
8086 0006 Ethernet Server Adapter X520-1  
8086 0008 Ethernet OCP Server Adapter X520-2  
8086 000a Ethernet Server Adapter X520-1  
8086 000c Ethernet  
Server Adapter X520-2  
8086 10a6 82599ES 10Gb 2 port Server Adapter X520-DA2  
8086 7a11 Ethernet Server Adapter X520-2  
8086 7a12 Ethernet Server Adapter X520-2  
10fc 82599 10 Gigabit Dual Port Network Connection  
10fe 82552 10/100 Network Connection  
1107 PRO/1000 MF Server Adapter (LX)  
1130 82815 815 Chipset Host Bridge and Memory Controller Hub  
1025 1016 Travelmate 612 TX  
1043 8027 CUSL2-C/TUSL2-C Mainboard  
104d 80df Vaio PCG-FX403  
8086 4532 Desktop Board D815EEA2/D815EFV

8086 4557 D815EGEW Mainboard  
1131 82815 815 Chipset AGP Bridge  
1132 82815 Chipset Graphics Controller (CGC)  
1025 1016 Travelmate 612 TX  
103c 2001 e-pc 40  
104d 80df Vaio PCG-FX403  
8086 4532 Desktop Board D815EEA2/D815EFV  
8086 4541 D815EEA Motherboard  
8086 4557 D815EGEW Mainboard  
1136 Thunderbolt 4 Bridge [Maple Ridge 4C 2020]  
1137 Thunderbolt 4 NHI [Maple Ridge 4C 2020]  
1138 Thunderbolt 4 USB Controller [Maple Ridge 4C 2020]  
1161 82806AA PCI64 Hub Advanced Programmable  
Interrupt Controller  
8086 1161 82806AA PCI64 Hub APIC  
1162 Xscale 80200 Big Endian Companion Chip  
1190 Merrifield SD/SDIO/eMMC Controller  
1191 Merrifield Serial IO HSUART Controller  
1192 Merrifield Serial IO HSUART DMA Controller  
1194 Merrifield Serial IO SPI Controller  
1195 Merrifield Serial IO I2C Controller  
1196 Merrifield Serial IO I2C Controller  
1199 Merrifield GPIO Controller  
119e Merrifield USB Device Controller (OTG)  
11a0 Merrifield SCU IPC  
11a1 Merrifield Power Management Unit  
11a2 Merrifield Serial IO DMA Controller  
11a5 Merrifield Serial IO PWM Controller  
11c3 Quark SoC X1000 PCIe Root Port 0  
11c4 Quark SoC X1000 PCIe Root Port 1  
11eb Simics NVMe Controller  
1200 IXP1200 Network Processor  
172a 0000 AEP SSL Accelerator  
1209 8255xER/82551IT Fast Ethernet Controller  
140b 0610 PMC610 quad Ethernet board  
1af4 1100 QEMU Virtual Machine  
4c53 1050 CT7 mainboard  
4c53 1051 CE7 mainboard  
4c53 1070 PC6 mainboard  
1221 82092AA  
PCI to PCMCIA Bridge  
1222 82092AA IDE Controller  
1223 SAA7116  
1225 82452KX/GX [Orion]  
1226 82596 PRO/10 PCI  
1227 82865 EtherExpress PRO/100A  
1228 82556 EtherExpress PRO/100 Smart  
1229 82557/8/9/0/1 Ethernet Pro 100

0e11 3001 82559 Fast Ethernet LOM with Alert on LAN\*  
0e11 3002 82559 Fast Ethernet LOM with Alert on LAN\*  
0e11 3003 82559 Fast Ethernet LOM with Alert on LAN\*  
0e11 3004 82559 Fast Ethernet LOM with Alert on LAN\*  
0e11 3005 82559 Fast Ethernet LOM with Alert on LAN\*  
0e11 3006 82559 Fast Ethernet LOM with Alert on LAN\*  
0e11 3007 82559 Fast Ethernet LOM with Alert on LAN\*  
0e11 b01e NC3120 Fast Ethernet NIC  
0e11 b01f NC3122 Fast Ethernet NIC (dual port)  
0e11 b02f NC1120 Ethernet NIC  
0e11 b04a Netelligent 10/100TX NIC with Wake on LAN  
0e11 b0c6 NC3161 Fast Ethernet NIC (embedded, WOL)  
0e11 b0c7 NC3160 Fast Ethernet NIC (embedded)  
0e11 b0d7 NC3121 Fast Ethernet NIC (WOL)  
0e11 b0dd NC3131 Fast Ethernet NIC (dual port)  
0e11  
b0de NC3132 Fast Ethernet Module (dual port)  
0e11 b0e1 NC3133 Fast Ethernet Module (100-FX)  
0e11 b134 NC3163 Fast Ethernet NIC (embedded, WOL)  
0e11 b13c NC3162 Fast Ethernet NIC (embedded)  
0e11 b144 NC3123 Fast Ethernet NIC (WOL)  
0e11 b163 NC3134 Fast Ethernet NIC (dual port)  
0e11 b164 NC3135 Fast Ethernet Upgrade Module (dual port)  
0e11 b1a4 NC7131 Gigabit Server Adapter  
1014 005c 82558B Ethernet Pro 10/100  
1014 01bc 82559 Fast Ethernet LAN On Motherboard  
1014 01f1 10/100 Ethernet Server Adapter  
1014 01f2 10/100 Ethernet Server Adapter  
1014 0207 Ethernet Pro/100 S  
1014 0232 10/100 Dual Port Server Adapter  
1014 023a ThinkPad R30  
1014 105c Netfinity 10/100  
1014 2205 ThinkPad A22p  
1014 305c 10/100 EtherJet Management Adapter  
1014 405c 10/100 EtherJet Adapter with Alert on LAN  
1014 505c 10/100 EtherJet Secure Management Adapter  
1014 605c 10/100 EtherJet Secure Management Adapter  
1014 705c 10/100 Netfinity 10/100 Ethernet  
Security Adapter  
1014 805c 10/100 Netfinity 10/100 Ethernet Security Adapter  
1028 009b 10/100 Ethernet Server Adapter  
1028 00ce 10/100 Ethernet Server Adapter  
1033 8000 PC-9821X-B06  
1033 8016 PK-UG-X006  
1033 801f PK-UG-X006  
1033 8026 PK-UG-X006  
1033 8063 82559-based Fast Ethernet Adapter  
1033 8064 82559-based Fast Ethernet Adapter

103c 10c0 NetServer 10/100TX  
103c 10c3 NetServer 10/100TX  
103c 10ca NetServer 10/100TX  
103c 10cb NetServer 10/100TX  
103c 10e3 NetServer 10/100TX  
103c 10e4 NetServer 10/100TX  
103c 1200 NetServer 10/100TX  
108e 10cf EtherExpress PRO/100(B)  
10c3 1100 SmartEther100 SC1100  
10cf 1115 8255x-based Ethernet Adapter (10/100)  
10cf 1143 8255x-based Ethernet Adapter (10/100)  
110a 008b 82551QM Fast Ethernet Multifunction PCI/CardBus Controller  
114a 0582 PC8 onboard ethernet ETH2  
1179 0001 8255x-based Ethernet Adapter (10/100)  
1179 0002 PCI FastEther LAN on Docker  
1179 0003 8255x-based Fast Ethernet  
1259  
2560 AT-2560 100  
1259 2561 AT-2560 100 FX Ethernet Adapter  
1266 0001 NE10/100 Adapter  
13e9 1000 6221L-4U  
144d 2501 SEM-2000 MiniPCI LAN Adapter  
144d 2502 SEM-2100IL MiniPCI LAN Adapter  
1668 1100 EtherExpress PRO/100B (TX) (MiniPCI Ethernet+Modem)  
1775 1100 CR11/VR11 Single Board Computer  
1775 ce90 CE9  
1af4 1100 QEMU Virtual Machine  
4c53 1080 CT8 mainboard  
4c53 10e0 PSL09 PrPMC  
8086 0001 EtherExpress PRO/100B (TX)  
8086 0002 EtherExpress PRO/100B (T4)  
8086 0003 EtherExpress PRO/10+  
8086 0004 EtherExpress PRO/100 WfM  
8086 0005 82557 10/100  
8086 0006 82557 10/100 with Wake on LAN  
8086 0007 82558 10/100 Adapter  
8086 0008 82558 10/100 with Wake on LAN  
8086 0009 82558B PRO/100+ PCI (TP)  
8086 000a EtherExpress PRO/100+ Management Adapter  
8086 000b EtherExpress PRO/100+  
8086 000c EtherExpress PRO/100+ Management Adapter  
8086 000d EtherExpress PRO/100+ Alert On LAN II\* Adapter  
8086 000e EtherExpress PRO/100+ Management  
Adapter with Alert On LAN\*  
8086 000f EtherExpress PRO/100 Desktop Adapter  
8086 0010 EtherExpress PRO/100 S Management Adapter  
8086 0011 EtherExpress PRO/100 S Management Adapter  
8086 0012 EtherExpress PRO/100 S Advanced Management Adapter (D)

8086 0013 EtherExpress PRO/100 S Advanced Management Adapter (E)  
8086 0030 EtherExpress PRO/100 Management Adapter with Alert On LAN\* GC  
8086 0031 EtherExpress PRO/100 Desktop Adapter  
8086 0040 EtherExpress PRO/100 S Desktop Adapter  
8086 0041 EtherExpress PRO/100 S Desktop Adapter  
8086 0042 EtherExpress PRO/100 Desktop Adapter  
8086 0050 EtherExpress PRO/100 S Desktop Adapter  
8086 1009 EtherExpress PRO/100+ Server Adapter  
8086 100c EtherExpress PRO/100+ Server Adapter (PILA8470B)  
8086 1012 EtherExpress PRO/100 S Server Adapter (D)  
8086 1013 EtherExpress PRO/100 S Server Adapter (E)  
8086 1015 EtherExpress PRO/100 S Dual Port Server Adapter  
8086 1017 EtherExpress PRO/100+ Dual Port Server Adapter  
8086  
1030 EtherExpress PRO/100+ Management Adapter with Alert On LAN\* G Server  
8086 1040 EtherExpress PRO/100 S Server Adapter  
8086 1041 EtherExpress PRO/100 S Server Adapter  
8086 1042 EtherExpress PRO/100 Server Adapter  
8086 1050 EtherExpress PRO/100 S Server Adapter  
8086 1051 EtherExpress PRO/100 Server Adapter  
8086 1052 EtherExpress PRO/100 Server Adapter  
8086 10f0 EtherExpress PRO/100+ Dual Port Adapter  
8086 1229 82557/8/9 [Ethernet Pro 100]  
8086 2009 EtherExpress PRO/100 S Mobile Adapter  
8086 200d EtherExpress PRO/100 Cardbus  
8086 200e EtherExpress PRO/100 LAN+V90 Cardbus Modem  
8086 200f EtherExpress PRO/100 SR Mobile Adapter  
8086 2010 EtherExpress PRO/100 S Mobile Combo Adapter  
8086 2013 EtherExpress PRO/100 SR Mobile Combo Adapter  
8086 2016 EtherExpress PRO/100 S Mobile Adapter  
8086 2017 EtherExpress PRO/100 S Combo Mobile Adapter  
8086 2018 EtherExpress PRO/100 SR Mobile Adapter  
8086 2019 EtherExpress PRO/100 SR Combo  
Mobile Adapter  
8086 2101 EtherExpress PRO/100 P Mobile Adapter  
8086 2102 EtherExpress PRO/100 SP Mobile Adapter  
8086 2103 EtherExpress PRO/100 SP Mobile Adapter  
8086 2104 EtherExpress PRO/100 SP Mobile Adapter  
8086 2105 EtherExpress PRO/100 SP Mobile Adapter  
8086 2106 EtherExpress PRO/100 P Mobile Adapter  
8086 2107 EtherExpress PRO/100 Network Connection  
8086 2108 EtherExpress PRO/100 Network Connection  
8086 2200 EtherExpress PRO/100 P Mobile Combo Adapter  
8086 2201 EtherExpress PRO/100 P Mobile Combo Adapter  
8086 2202 EtherExpress PRO/100 SP Mobile Combo Adapter  
8086 2203 EtherExpress PRO/100+ MiniPCI  
8086 2204 EtherExpress PRO/100+ MiniPCI  
8086 2205 EtherExpress PRO/100 SP Mobile Combo Adapter

8086 2206 EtherExpress PRO/100 SP Mobile Combo Adapter  
8086 2207 EtherExpress PRO/100 SP Mobile Combo Adapter  
8086 2208 EtherExpress PRO/100 P Mobile Combo Adapter  
8086 2402 EtherExpress PRO/100+ MiniPCI  
8086 2407 EtherExpress PRO/100+ MiniPCI  
8086  
2408 EtherExpress PRO/100+ MiniPCI  
8086 2409 EtherExpress PRO/100+ MiniPCI  
8086 240f EtherExpress PRO/100+ MiniPCI  
8086 2410 EtherExpress PRO/100+ MiniPCI  
8086 2411 EtherExpress PRO/100+ MiniPCI  
8086 2412 EtherExpress PRO/100+ MiniPCI  
8086 2413 EtherExpress PRO/100+ MiniPCI  
8086 3000 82559 Fast Ethernet LAN on Motherboard  
8086 3001 82559 Fast Ethernet LOM with Basic Alert on LAN\*  
8086 3002 82559 Fast Ethernet LOM with Alert on LAN II\*  
8086 3006 EtherExpress PRO/100 S Network Connection  
8086 3007 EtherExpress PRO/100 S Network Connection  
8086 3008 EtherExpress PRO/100 Network Connection  
8086 3010 EtherExpress PRO/100 S Network Connection  
8086 3011 EtherExpress PRO/100 S Network Connection  
8086 3012 EtherExpress PRO/100 Network Connection  
8086 301a S845WD1-E mainboard  
8086 3411 SDS2 Mainboard  
122d 430FX - 82437FX TSC [Triton I]  
122e 82371FB PIIX ISA [Triton I]  
1230 82371FB PIIX IDE [Triton I]  
1231 DSVD Modem  
1234  
430MX - 82371MX Mobile PCI I/O IDE Xcelerator (MPIIX)  
1235 430MX - 82437MX Mob. System Ctrlr (MTSC) & 82438MX Data Path (MTDP)  
1237 440FX - 82441FX PMC [Natoma]  
01de fffe Propolis Virtual 440FX  
1af4 1100 Qemu virtual machine  
1239 82371FB PIIX IDE Interface  
123b 82380PB PCI to PCI Docking Bridge  
123c 82380AB (MISA) Mobile PCI-to-ISA Bridge  
123d 683053 Programmable Interrupt Device  
123e 82466GX (IHPC) Integrated Hot-Plug Controller (hidden mode)  
123f 82466GX Integrated Hot-Plug Controller (IHPC)  
1240 82752 (752) AGP Graphics Accelerator  
124b 82380FB (MPCI2) Mobile Docking Controller  
124c Ethernet Connection E823-L for backplane  
124d Ethernet Connection E823-L for SFP  
124e Ethernet Connection E823-L/X557-AT 10GBASE-T  
124f Ethernet Connection E823-L 1GbE  
1250 430HX - 82439HX TXC [Triton II]  
125b Ethernet Controller I226-LM



125c Ethernet Controller I226-V  
125d Ethernet Controller I226-IT  
12d1 Ethernet Controller E830-CC for backplane  
12d2 Ethernet  
Controller E830-CC for QSFP  
12d3 Ethernet Controller E830-CC for SFP  
12d4 Ethernet Controller E830-CC for SFP-DD  
1360 82806AA PCI64 Hub PCI Bridge  
1361 82806AA PCI64 Hub Controller (HRes)  
8086 1361 82806AA PCI64 Hub Controller (HRes)  
8086 8000 82806AA PCI64 Hub Controller (HRes)  
1452 Infrastructure Data Path Function  
145c Infrastructure Data Path Function  
1460 82870P2 P64H2 Hub PCI Bridge  
1461 82870P2 P64H2 I/OxAPIC  
15d9 3480 P4DP6  
4c53 1090 Cx9/Vx9 mainboard  
1462 82870P2 P64H2 Hot Plug Controller  
1501 82567V-3 Gigabit Network Connection  
1502 82579LM Gigabit Network Connection (Lewisville)  
1028 04a3 Precision M4600  
17aa 21ce ThinkPad T520  
17aa 3070 ThinkCentre M91p  
8086 3578 Server Board S1200BTLR  
8086 357a Server Board S1200BTS  
1503 82579V Gigabit Network Connection  
1043 849c P8P67 Deluxe Motherboard  
10cf 161c LIFEBOOK E752  
8086 200d DH61CR motherboard  
1507 Ethernet Express Module X520-P2  
1508 82598EB Gigabit BX Network  
Connection  
1509 82580 Gigabit Network Connection  
150a 82576NS Gigabit Network Connection  
150b 82598EB 10-Gigabit AT2 Server Adapter  
8086 a10c 82598EB 10-Gigabit AT2 Server Adapter  
8086 a11c 82598EB 10-Gigabit AT2 Server Adapter  
8086 a12c 82598EB 10-Gigabit AT2 Server Adapter  
150c 82583V Gigabit Network Connection  
150d 82576 Gigabit Backplane Connection  
8086 a10c Gigabit ET Quad Port Mezzanine Card  
150e 82580 Gigabit Network Connection  
103c 1780 NC365T 4-port Ethernet Server Adapter  
8086 12a1 Ethernet Server Adapter I340-T4  
8086 12a2 Ethernet Server Adapter I340-T4  
150f 82580 Gigabit Fiber Network Connection  
1510 82580 Gigabit Backplane Connection  
1511 82580 Gigabit SFP Connection

1513 CV82524 Thunderbolt Controller [Light Ridge 4C 2010]  
1514 Ethernet X520 10GbE Dual Port KX4 Mezz  
8086 000b Ethernet X520 10GbE Dual Port KX4 Mezz  
1515 X540 Ethernet Controller Virtual Function  
1516 82580 Gigabit Network Connection  
8086 12b1 Ethernet  
Server Adapter I340-T2  
8086 12b2 Ethernet Server Adapter I340-T2  
1517 82599ES 10 Gigabit Network Connection  
1137 006a UCS CNA M61KR-I Intel Converged Network Adapter  
1518 82576NS SerDes Gigabit Network Connection  
151a DSL2310 Thunderbolt Controller [Eagle Ridge 2C 2011]  
151b CVL2510 Thunderbolt Controller [Light Peak 2C 2010]  
151c 82599 10 Gigabit TN Network Connection  
108e 7b13 Dual 10GBASE-T LP  
151d Ethernet Connection E823-L for QSFP  
1520 I350 Ethernet Controller Virtual Function  
1521 I350 Gigabit Network Connection  
1028 0602 Gigabit 2P I350-t LOM  
1028 0693 Gigabit 2P I350-t LOM  
1028 06e2 Gigabit 2P I350-t LOM  
1028 0757 Gigabit I350-t LOM  
1028 075a Gigabit I350-t LOM  
1028 1f60 Gigabit 4P I350-t rNDC  
1028 1f62 Gigabit 4P X540/I350 rNDC  
1028 1fa8 Ethernet 10G 4P X550/I350 rNDC  
1028 1fa9 Ethernet 10G 4P X550 rNDC  
1028 1faa Gigabit 4P X550/I350 rNDC  
1028 ff9a Gigabit 4P X710/I350 rNDC  
103c 17d1 Ethernet 1Gb 4-port 366FLR Adapter  
103c  
2003 Ethernet 1Gb 2-port 367i Adapter  
103c 2226 Ethernet 1Gb 1-port 364i Adapter  
103c 337f Ethernet 1Gb 2-port 361i Adapter  
103c 3380 Ethernet 1Gb 4-port 366i Adapter  
103c 339e Ethernet 1Gb 2-port 361T Adapter  
103c 8157 Ethernet 1Gb 4-port 366T Adapter  
108e 7b16 Quad Port GbE PCIe 2.0 ExpressModule, UTP  
108e 7b18 Quad Port GbE PCIe 2.0 Low Profile Adapter, UTP  
1093 7648 PCIe-8237R Ethernet Adapter  
1093 7649 PCIe-8236 Ethernet Adapter  
1093 76b1 PCIe-8237R-S Ethernet Adapter  
1093 775b PCIe-8237 Ethernet Adapter  
10a9 802a UV2-BaseIO dual-port GbE  
1137 023e 1GigE I350 LOM  
15d9 0000 AOC-SGP-i4  
15d9 0652 Dual Port i350 GbE MicroLP [AOC-CGP-i2]  
17aa 1074 ThinkServer I350-T4 AnyFabric

17aa 4005 I350 Gigabit Network Connection  
18d4 0c07 I350 1Gb 2-port RJ45 OCP Mezz Card MOP41-I-1GT2  
193d 1005 360T-B  
193d 1007 360T-L  
# NIC-ETH360T-3S-4P OCP3.0 4x1G Base-T Card  
193d 1080 NIC-ETH360T-3S-4P  
1bd4 001d 1G base-T QP EP014Ti1  
Adapter  
1bd4 0035 1G base-T QP EP014Ti1 Adapter  
1bd4 0066 F014I350  
1bd4 008a F012I350  
1bd4 008d ENFI1100-T4  
4c52 0350 I350 1Gb 2-port Ethernet Network Adapter  
4c52 1350 LREC9222HT Dual-port 1Gb Ethernet Network Adapter  
4c52 2003 LRES2003PT Dual-port 1Gb Ethernet Network Adapter  
4c52 2005 LRES2005PT Quad-port 1Gb Ethernet Network Adapter  
4c52 2006 LRES2006PT Six-port 1Gb Ethernet Network Adapter  
4c52 2008 LRES2008PT Eight-port 1Gb Ethernet Network Adapter  
4c52 2018 LRES2018PT Twelve-port 1Gb Ethernet Network Adapter  
4c52 2202 LRES2202PT Dual-port 1Gb Ethernet Network Adapter  
4c52 2217 LRES2217PT Dual-port 1Gb Ethernet Network Adapter  
4c52 3010 LRES3010PF Dual-port 1Gb Ethernet Server Adapter for OCP  
4c52 3023 LRES3023PT Quad-port 1Gb Ethernet Server Adapter for OCP  
4c52 3041 LRES3041PT Dual-port 1Gb Ethernet Server Adapter for OCP  
4c52 4006 LRES4006MT Quad-port 1Gb Ethernet Network Adapter  
4c52 9712 LREC9712HT Dual-port 10Gb Ethernet  
Network Adapter  
8086 0001 Ethernet Server Adapter I350-T4  
8086 0002 Ethernet Server Adapter I350-T2  
8086 0003 Ethernet Network Adapter I350-T4 for OCP NIC 3.0  
8086 00a1 Ethernet Server Adapter I350-T4  
8086 00a2 Ethernet Server Adapter I350-T2  
8086 00a3 Ethernet Network Adapter I350-T4 for OCP NIC 3.0  
8086 00aa Ethernet Network Adapter I350-T4 for OCP NIC 3.0  
8086 4017 Ethernet Network Adapter I350-T4 for OCP NIC 3.0  
8086 5001 Ethernet Server Adapter I350-T4  
8086 5002 Ethernet Server Adapter I350-T2  
8086 5003 Ethernet 1G 4P I350-t OCP  
1522 I350 Gigabit Fiber Network Connection  
108e 7b17 Quad Port GbE PCIe 2.0 ExpressModule, MMF  
108e 7b19 Dual Port GbE PCIe 2.0 Low Profile Adapter, MMF  
4c52 1006 LRES1006PF Six-port 1Gb Ethernet Network Adapter  
4c52 2203 LRES2203PF Dual-port 1Gb Ethernet Network Adapter  
4c52 9710 LREC9710HF Single-port 1Gb Ethernet Network Adapter  
4c52 9712 LREC9712HF Dual-port 1Gb Ethernet Network Adapter  
4c52 9714  
LREC9714HF Quad-port 1Gb Ethernet Network Adapter  
8086 0002 Ethernet Server Adapter I350-T2

8086 0003 Ethernet Server Adapter I350-F4  
8086 0004 Ethernet Server Adapter I350-F2  
8086 0005 Ethernet Server Adapter I350-F1  
8086 00a2 Ethernet Server Adapter I350-T2  
8086 00a3 Ethernet Server Adapter I350-F4  
8086 00a4 Ethernet Server Adapter I350-F2  
1523 I350 Gigabit Backplane Connection  
1028 0060 Gigabit 2P I350 LOM  
1028 1f9b Gigabit 4P I350-t bNDC  
103c 1784 Ethernet 1Gb 2-port 361FLB Adapter  
103c 18d1 Ethernet 1Gb 2-port 361FLB Adapter  
103c 1989 Ethernet 1Gb 2-port 363i Adapter  
103c 339f Ethernet 1Gb 4-port 366M Adapter  
4c52 9714 LREC9714HT Quad-port 10Gb Ethernet Network Adapter  
8086 1f52 1GbE 4P I350 Mezz  
1524 I350 Gigabit Connection  
1525 82567V-4 Gigabit Network Connection  
1526 82576 Gigabit Network Connection  
8086 a05c Gigabit ET2 Quad Port Server Adapter  
8086 a06c Gigabit ET2 Quad Port Server Adapter  
1527 82580 Gigabit Fiber  
Network Connection  
8086 0001 Ethernet Server Adapter I340-F4  
8086 0002 Ethernet Server Adapter I340-F4  
1528 Ethernet Controller 10-Gigabit X540-AT2  
1028 1f61 Ethernet 10G 4P X540/I350 rNDC  
103c 192d 561FLR-T 2-port 10Gb Ethernet Adapter  
103c 2004 Ethernet 10Gb 2-port 561i Adapter  
103c 211a Ethernet 10Gb 2-port 561T Adapter  
108e 4853 Ethernet Controller 10-Gigabit X540-AT2  
108e 7b14 Sun Dual Port 10 GbE PCIe 2.0 ExpressModule, Base-T  
108e 7b15 Sun Dual Port 10 GbE PCIe 2.0 Low Profile Adapter, Base-T  
1137 00bf Ethernet Converged Network Adapter X540-T2  
1170 0052 Ethernet Controller 10-Gigabit X540-AT2  
15d9 0734 AOC-STG-I2T  
17aa 1073 ThinkServer X540-T2 AnyFabric  
17aa 4006 Ethernet Controller 10-Gigabit X540-AT2  
1bd4 001a 10G base-T DP ER102Ti3 Rack Adapter  
1bd4 0033 10G base-T DP EP102Ti3 Adapter  
1bd4 0034 10G base-T DP EP102Ti3A Adapter  
4c52 9802 LREC9802BT Dual-port 10Gb Ethernet Network Adapter  
8086 0001 Ethernet Converged  
Network Adapter X540-T2  
8086 0002 Ethernet Converged Network Adapter X540-T1  
8086 001a Ethernet Converged Network Adapter X540-T2  
8086 00a2 Ethernet Converged Network Adapter X540-T1  
8086 1f61 Ethernet 10G 4P X540/I350 rNDC  
8086 5003 Ethernet 10G 2P X540-t Adapter

8086 5004 Ethernet 10G 2P X540-t Adapter  
1529 82599 10 Gigabit Dual Port Network Connection with FCoE  
152a 82599 10 Gigabit Dual Port Backplane Connection with FCoE  
152e 82599 Virtual Function  
152f I350 Virtual Function  
1530 X540 Virtual Function  
1531 I210 Gigabit Unprogrammed  
1533 I210 Gigabit Network Connection  
1028 0b35 I210 Gigabit Network Connection  
103c 0003 Ethernet I210-T1 GbE NIC  
1059 0180 RD10019 1GbE interface  
1093 7706 Compact Vision System Ethernet Adapter  
10a9 802c UV300 BaseIO single-port GbE  
10a9 802d UV3000 BaseIO GbE Network  
17aa 1059 I210 Gigabit Network Connection  
17aa 1100 ThinkServer Ethernet Server Adapter  
17aa 1509 I210 Gigabit Network Connection  
17aa  
404d I210 PCIe 1Gb 1-Port RJ45 LOM  
17aa 407a I210 PCIe 1Gb 1-Port RJ45 LOM  
4c52 1051 LRES1051PT Dual-port 1Gb Ethernet Network Adapter  
4c52 1210 LREC9204CT Single-port 1Gb Ethernet Network Adapter  
4c52 2057 LRES2057PT Dual-port 1Gb Ethernet Network Adapter  
4c52 2206 LRES2206PT Single-port 1Gb Ethernet Network Adapter  
4c52 2210 LRES2210PT Single-port 1Gb Ethernet Network Adapter  
4c52 2211 LRES2211PT Single-port 1Gb Ethernet Network Adapter  
4c52 2214 LRES2214PT Single-port 1Gb Ethernet Network Adapter  
4c52 3002 LRES3002PT Dual-port 1Gb Ethernet Network Adapter  
4c52 3004 LRES3004PT Quad-port 1Gb Ethernet Network Adapter  
8086 0001 Ethernet Server Adapter I210-T1  
8086 0002 Ethernet Server Adapter I210-T1  
1536 I210 Gigabit Fiber Network Connection  
4c52 2204 LRES2204PT Single-port 1Gb Ethernet Network Adapter  
4c52 2212 LRES2212PF Single-port 1Gb Ethernet Network Adapter  
4c52 2213 LRES2213PF Single-port 1Gb Ethernet Network Adapter  
4c52  
6230 LREC6230PF Single-port 1Gb Ethernet Network Adapter  
1537 I210 Gigabit Backplane Connection  
1059 0110 T4005 1GbE interface  
1059 0111 T4007 1GbE interface  
1059 0120 T4008 1GbE interface  
1059 0130 T4009 1GbE interface  
1059 0140 T2035 1GbE interface  
1059 0150 RD-01068 1GbE interface  
1059 0170 RD-01213 10GbE interface  
1538 I210 Gigabit Network Connection  
1539 I211 Gigabit Network Connection  
153a Ethernet Connection I217-LM

103c 1909 ZBook 15  
103c 1998 EliteDesk 800 G1  
17aa 220e ThinkPad T440p  
17aa 309f ThinkCentre M83  
153b Ethernet Connection I217-V  
1547 DSL3510 Thunderbolt Controller [Cactus Ridge 4C 2012]  
1548 DSL3310 Thunderbolt Controller [Cactus Ridge 2C 2012]  
1549 DSL2210 Thunderbolt Controller [Port Ridge 1C 2011]  
154a Ethernet Server Adapter X520-4  
8086 011a Ethernet Converged Network Adapter X520-4  
8086 011b Ethernet Converged Network Adapter X520-4  
8086 011c Ethernet Converged Network Adapter X520-4  
154c Ethernet  
Virtual Function 700 Series  
154d Ethernet 10G 2P X520 Adapter  
8086 7b11 10GbE 2P X520 Adapter  
1557 82599 10 Gigabit Network Connection  
17aa 4008 82599EN 10 Gigabit Network Connection  
1bd4 001c 10G SFP+ SP ER101Fi4 Rack Adapter  
1bd4 0030 10G SFP+ SP EP101Fi4A Adapter  
8086 0001 Ethernet OCP Server Adapter X520-1  
1558 Ethernet Converged Network Adapter X520-Q1  
8086 011a Ethernet Converged Network Adapter X520-Q1  
8086 011b Ethernet Converged Network Adapter X520-Q1  
1559 Ethernet Connection I218-V  
155a Ethernet Connection I218-LM  
17aa 2214 ThinkPad X240  
155c Ethernet Server Bypass Adapter  
8086 0001 Ethernet Server Bypass Adapter X540-T2  
155d Ethernet Server Bypass Adapter  
8086 0001 Ethernet Server Bypass Adapter X520-SR2  
8086 0002 Ethernet Server Bypass Adapter X520-LR2  
1560 Ethernet Controller X540  
4c52 9801 LREC9801BT Single-port 10Gb Ethernet Network Adapter  
1563 Ethernet Controller X550  
1028 1fa8 Ethernet 10G 4P X550/I350 rNDC  
1028  
1fa9 Ethernet 10G 4P X550 rNDC  
1137 02b2 X550-TX 10 Gig LOM  
1137 02b3 X550-TX 10 Gig LOM  
1170 0001 Intel Ethernet Controller X550-T2 OCP card  
14c0 1201 X550 10Gb 2P RJ45 OCP Mezz  
1590 00d1 Ethernet 10Gb 2-port 562T Adapter  
1590 00d2 Ethernet 10Gb 2-port 562FLR-T Adapter  
16b8 7217 Twin10G Thunderbolt 3 Edition  
18d4 0c08 X550 10Gb 2-port RJ45 OCP Mezz Card MOP81-I-10GT2  
193d 1008 560T-B  
193d 1009 560T-L

193d 1011 UN-NIC-ETH563T-sL-2P  
4c52 1025 LRES1025PT Dual-port 10Gb Ethernet Network Adapter  
4c52 9812 LREC9812BT Dual-port 10Gb Ethernet Network Adapter  
8086 0001 Ethernet Converged Network Adapter X550-T2  
8086 001a Ethernet Converged Network Adapter X550-T2  
8086 001b Ethernet Server Adapter X550-T2 for OCP  
8086 001d Ethernet 10G 2P X550-t Adapter  
8086 0022 Ethernet Converged Network Adapter X550-T2  
1564 X550 Virtual Function  
1565 X550 Virtual Function  
1566 DSL4410 Thunderbolt NHI [Redwood Ridge 2C 2013]  
1567 DSL4410 Thunderbolt  
Bridge [Redwood Ridge 2C 2013]  
1568 DSL4510 Thunderbolt NHI [Redwood Ridge 4C 2013]  
1569 DSL4510 Thunderbolt Bridge [Redwood Ridge 4C 2013]  
156a DSL5320 Thunderbolt 2 NHI [Falcon Ridge 2C 2013]  
156b DSL5320 Thunderbolt 2 Bridge [Falcon Ridge 2C 2013]  
156c DSL5520 Thunderbolt 2 NHI [Falcon Ridge 4C 2013]  
156d DSL5520 Thunderbolt 2 Bridge [Falcon Ridge 4C 2013]  
156f Ethernet Connection I219-LM  
1028 06dc Latitude E7470  
103c 8079 EliteBook 840 G3  
17aa 2247 ThinkPad T570  
1570 Ethernet Connection I219-V  
1571 Ethernet Virtual Function 700 Series  
1572 Ethernet Controller X710 for 10GbE SFP+  
1028 0000 Ethernet 10G X710 rNDC  
1028 1f99 Ethernet 10G 4P X710/I350 rNDC  
1028 1f9c Ethernet 10G 4P X710 SFP+ rNDC  
103c 0000 Ethernet 10Gb 562SFP+ Adapter  
103c 22fc Ethernet 10Gb 2-port 562FLR-SFP+ Adapter  
103c 22fd Ethernet 10Gb 2-port 562SFP+ Adapter  
1137 0000 Ethernet Converged NIC X710-DA  
1137 013b Ethernet Converged NIC X710-DA4  
1137 020a  
Ethernet Converged NIC X710-DA2  
1590 0000 Ethernet Controller X710 for 10GbE SFP+  
1590 0225 Ethernet 10GbE 4P 563SFP+ Adapter  
1590 022f Ethernet 10Gb 2-port 564i Communication Board  
17aa 0000 ThinkServer X710 AnyFabric for 10GbE SFP+  
17aa 4001 ThinkServer X710-4 AnyFabric for 10GbE SFP+  
17aa 4002 ThinkServer X710-2 AnyFabric for 10GbE SFP+  
193d 1020 NIC-ETH561F-sL-4x10G  
193d 1021 NIC-ETH561F-sL-2x10G  
# NIC-ETH561F-3S-2P OCP3.0 2x10G SFP+ Card  
193d 1081 NIC-ETH561F-3S-2P  
19e5 d11c Ethernet 2-port X710 10Gb SFP+ Adapter SP330  
1bd4 0042 10G SFP+ DP EP102Fi4 Adapter

1bd4 0056 Ethernet Network Adapter X710-BM2 for OCP NIC 3.0  
1bd4 0065 F102IX710  
1bd4 0074 Ethernet Network Adapter X710-BM2 for lldp  
1bd4 008b F102IX710  
4c52 3003 LRES3003PF Quad-port 10Gb Ethernet Server Adapter for OCP  
4c52 3007 LRES3007PF Quad-port 10Gb Ethernet Server Adapter for OCP  
4c52 3039 LRES3039PF Dual-port 10Gb Ethernet Server Adapter for OCP  
4c52 9804 LREC9804BF  
Quad-port 10Gb Ethernet Server Adapter  
4c52 9812 LREC9812BF Dual-port 10Gb Ethernet Server Adapter  
8086 0000 Ethernet Converged Network Adapter X710  
8086 0001 Ethernet Converged Network Adapter X710-4  
8086 0002 Ethernet Converged Network Adapter X710-4  
8086 0004 Ethernet Converged Network Adapter X710-4  
8086 0005 Ethernet Converged Network Adapter X710  
8086 0006 Ethernet Converged Network Adapter X710  
8086 0007 Ethernet Converged Network Adapter X710-2  
8086 0008 Ethernet Converged Network Adapter X710-2  
8086 0009 Ethernet Controller X710 for 10GbE SFP+  
8086 000a Ethernet Controller X710 for 10GbE SFP+  
8086 000b Ethernet Server Adapter X710-DA2 for OCP  
8086 000d Ethernet Controller X710 for 10GbE SFP+  
8086 000e Ethernet Server Adapter OCP X710-2  
8086 000f Ethernet Server Adapter OCP X710-2  
8086 0010 Ethernet Converged Network Adapter X710  
8086 0011 Ethernet Network Adapter X710-2 for OCP NIC 3.0  
8086 0012 Ethernet Network Adapter  
X710-4 for OCP NIC 3.0  
8086 0013 Ethernet 10G 2P X710 OCP  
8086 0014 Ethernet 10G 4P X710 OCP  
8086 0015 Ethernet Server Adapter X710-DA2 for OCP  
8086 00a1 Ethernet Network Adapter X710-2 for OCP NIC 3.0  
8086 00a2 Ethernet Network Adapter X710-4 for OCP NIC 3.0  
8086 4005 Ethernet Controller X710 for 10GbE SFP+  
8086 4006 Ethernet Controller X710 for 10GbE SFP+  
8086 4007 Ethernet Controller X710 for 10GbE SFP+  
1574 Ethernet Controller XL710 Emulation  
1575 DSL6340 Thunderbolt 3 NHI [Alpine Ridge 2C 2015]  
1576 DSL6340 Thunderbolt 3 Bridge [Alpine Ridge 2C 2015]  
1577 DSL6540 Thunderbolt 3 NHI [Alpine Ridge 4C 2015]  
1578 DSL6540 Thunderbolt 3 Bridge [Alpine Ridge 4C 2015]  
157b I210 Gigabit Network Connection  
ea50 cc10 RXi2-BP  
157c I210 Gigabit Backplane Connection  
157d DSL5110 Thunderbolt 2 NHI (Low Power) [Win Ridge 2C 2014]  
157e DSL5110 Thunderbolt 2 Bridge (Low Power) [Win Ridge 2C 2014]  
1580 Ethernet Controller XL710 for 40GbE backplane  
1581



Ethernet Controller X710 for 10GbE backplane  
1028 0000 Ethernet 10G X710-k bNDC  
1028 1f98 Ethernet 10G 4P X710-k bNDC  
1028 1f9e Ethernet 10G 2P X710-k bNDC  
1059 0150 RD-01068 10GbE-KR interface  
1059 0170 RD-01213 10GbE interface  
1590 0000 Ethernet 2-port 563i Adapter  
1590 00f8 Ethernet 2-port 563i Adapter  
193d 100e NIC-ETH561i-Mb-4x10G  
8086 0000 Ethernet Converged Network Adapter XL710-Q2  
1583 Ethernet Controller XL710 for 40GbE QSFP+  
1028 0000 Ethernet 40G 2P XL710 QSFP+ rNDC  
1028 1f9f Ethernet 40G 2P XL710 QSFP+ rNDC  
108e 0000 10 Gb/40 Gb Ethernet Adapter  
108e 7b1b 10 Gb/40 Gb Ethernet Adapter  
108e 7b1d 10Gb/40Gb Ethernet Adapter  
1137 0000 Ethernet Converged NIC XL710-QDA2  
1137 013c Ethernet Converged NIC XL710-QDA2  
4c52 3042 LRES3042PF Dual-port 40Gb Ethernet Server Adapter for OCP  
4c52 9902 LREC9902BF Dual-port 40Gb Ethernet Server Adapter  
8086 0000 Ethernet Converged Network Adapter XL710-Q2  
8086 0001 Ethernet Converged  
Network Adapter XL710-Q2  
8086 0002 Ethernet Converged Network Adapter XL710-Q2  
8086 0003 Ethernet I/O Module XL710-Q2  
8086 0004 Ethernet Server Adapter XL710-Q2OCP  
8086 0006 Ethernet Converged Network Adapter XL710-Q2  
1584 Ethernet Controller XL710 for 40GbE QSFP+  
4c52 9901 LREC9901BF Single-port 40Gb Ethernet Server Adapter  
8086 0000 Ethernet Converged Network Adapter XL710-Q1  
8086 0001 Ethernet Converged Network Adapter XL710-Q1  
8086 0002 Ethernet Converged Network Adapter XL710-Q1  
8086 0003 Ethernet I/O Module XL710-Q1  
8086 0004 Ethernet Server Adapter XL710-Q1OCP  
1585 Ethernet Controller X710 for 10GbE QSFP+  
1586 Ethernet Controller X710 for 10GBASE-T  
108e 0000 Ethernet Controller X710 for 10GBASE-T  
108e 4857 Ethernet Controller X710 for 10GBASE-T  
1587 Ethernet Controller XL710 for 20GbE backplane  
103c 0000 Ethernet 10/20Gb 2-port 660FLB Adapter  
103c 22fe Ethernet 10/20Gb 2-port 660FLB Adapter  
1588 Ethernet Controller XL710 for  
20GbE backplane  
103c 0000 Ethernet 10/20Gb 2-port 660M Adapter  
103c 22ff Ethernet 10/20Gb 2-port 660M Adapter  
1137 0000 Ethernet Network Adapter XXV710  
1137 02b4 Ethernet Network Adapter XXV710 OCP 2.0  
1589 Ethernet Controller X710/X557-AT 10GBASE-T

108e 0000 Quad Port 10GBase-T Adapter  
108e 7b1c Quad Port 10GBase-T Adapter  
4c52 9804 LREC9804BT Quad-port 10Gb Ethernet Network Adapter  
8086 0000 Ethernet Converged Network Adapter X710-T  
8086 0001 Ethernet Converged Network Adapter X710-T4  
8086 0002 Ethernet Converged Network Adapter X710-T4  
8086 0003 Ethernet Converged Network Adapter X710-T  
8086 00a0 Ethernet Converged Network Adapter X710-T4  
8086 1003 Ethernet Converged Network Adapter X710-T  
158a Ethernet Controller XXV710 for 25GbE backplane  
1590 0000 10/25Gb Ethernet Adapter  
1590 0286 Synergy 4610C 10/25Gb Ethernet Adapter  
8086 0000 Ethernet Controller XXV710 for 25GbE backplane  
8086 000a Ethernet 25G 2P XXV710 Mezz  
158b Ethernet  
Controller XXV710 for 25GbE SFP28  
1137 0000 Ethernet Network Adapter XXV710  
1137 0225 Ethernet Network Adapter XXV710  
1137 02b4 Ethernet Network Adapter XXV710 OCP 2.0  
# UEFI PXE Disabled  
1374 0230 Single Port 25 Gigabit Ethernet PCI Express Server Adapter (PE325G1I71)  
# With UEFI PXE Enabled  
1374 0231 Single Port 25 Gigabit Ethernet PCI Express Server Adapter (PE325G1I71EU)  
# UEFI PXE Disabled  
1374 0234 Dual Port 25 Gigabit Ethernet PCI Express Server Adapter (PE325G2I71)  
# With UEFI PXE Enabled  
1374 0235 Dual Port 25 Gigabit Ethernet PCI Express Server Adapter (PE325G2I71EU)  
# PCIe x8 Bifurcated as x4x4, UEFI PXE Disabled, low profile  
1374 0238 Quad Port 25 Gigabit Ethernet PCI Express Server Adapter (PE325G4I71L)  
# PCIe x8 Bifurcated as x4x4, UEFI PXE Enabled, low profile  
1374 0239 Quad Port 25 Gigabit Ethernet PCI Express Server Adapter (PE325G4I71LEU)  
# PCIe x16 Bifurcated as x8x8, UEFI PXE Disabled, low profile  
1374 023a Quad Port 25 Gigabit Ethernet  
PCI Express Server Adapter (PE31625G4I71L)  
# PCIe x16 Bifurcated as x8x8, UEFI PXE Enabled, low profile  
1374 023b Quad Port 25 Gigabit Ethernet PCI Express Server Adapter (PE31625G4I71LEU)  
1590 0000 Ethernet Network Adapter XXV710-2  
1590 0253 Ethernet 10/25/Gb 2-port 661SFP28 Adapter  
4c52 3017 LRES3017PF Dual-port 25Gb Ethernet Server Adapter for OCP  
8086 0000 Ethernet Network Adapter XXV710  
8086 0001 Ethernet Network Adapter XXV710-2  
8086 0002 Ethernet Network Adapter XXV710-2  
8086 0003 Ethernet Network Adapter XXV710-1  
8086 0004 Ethernet Network Adapter XXV710-1  
8086 0005 Ethernet Network Adapter OCP XXV710-2  
8086 0006 Ethernet Network Adapter OCP XXV710-2  
8086 0007 Ethernet Network Adapter OCP XXV710-1  
8086 0008 Ethernet Network Adapter OCP XXV710-1

8086 0009 Ethernet 25G 2P XXV710 Adapter  
8086 000a Ethernet 25G 2P XXV710 OCP  
8086 000c Ethernet Network Adapter XXV710-DA2 for OCP 3.0  
8086 000d Ethernet 25G 2P XXV710 OCP  
8086  
4001 Ethernet Network Adapter XXV710-2  
1591 Ethernet Controller E810-C for backplane  
8086 bccc Ethernet Controller E810-C for Intel(R) Open FPGA Stack  
1592 Ethernet Controller E810-C for QSFP  
1137 02bf E810CQDA2 2x100 GbE QSFP28 PCIe NIC  
193d 1050 NIC-ETH1060F-LP-2P 2x100GbE Ethernet PCIe Card  
4c52 1014 LRES1014PF Dual-port 100Gb Ethernet Server Adapter  
4c52 3026 LRES3026PF Dual-port 100Gb Ethernet Server Adapter for OCP  
8086 0001 Ethernet Network Adapter E810-C-Q1  
8086 0002 Ethernet Network Adapter E810-C-Q2  
8086 0004 Ethernet Network Adapter E810-C-Q2  
8086 0005 Ethernet Network Adapter E810-C-Q1 for OCP3.0  
8086 0006 Ethernet Network Adapter E810-C-Q2 for OCP3.0  
8086 0009 Ethernet Network Adapter E810-C-Q1  
8086 000a Ethernet Network Adapter E810-C-Q1 for OCP  
8086 000b Ethernet 100G 2P E810-C Adapter  
8086 000c Ethernet 100G 2P E810-C OCP  
8086 000d Ethernet Network Adapter E810-L-Q2 for OCP 3.0  
8086 000e Ethernet Network Adapter E810-2C-Q2  
8086  
000f Ethernet Network Adapter E810-C-Q2T  
8086 0010 Ethernet 100G 2P E810-C-stg Adapter  
8086 0011 Ethernet Network Adapter E810-C-Q1 for OCP3.0  
8086 0012 Ethernet 100G 2P E810-C-st Adapter  
8086 0013 Ethernet Network Adapter E810-C-Q1 for OCP 3.0  
8086 0014 Ethernet 100G 2P E810-2C Adapter  
1593 Ethernet Controller E810-C for SFP  
1137 02c3 E810XXVDA4 4x25/10 GbE SFP28 PCIe NIC  
1137 02e9 E810XXVDA4TG 4x25/10 GbE SFP28 PCIe NIC  
1137 02ea E810XXVDA4T 4x25/10 GbE SFP28 PCIe NIC  
4c52 1023 LRES1023PF Quad-port 25Gb Ethernet Server Adapter  
4c52 3027 LRES3027PF Quad-port 25Gb Ethernet Server Adapter for OCP  
8086 0002 Ethernet Network Adapter E810-L-2  
8086 0005 Ethernet Network Adapter E810-XXV-4  
8086 0006 Ethernet Network Adapter E810-XXV-4  
8086 0007 Ethernet Network Adapter E810-XXV-4  
8086 0008 Ethernet Network Adapter E810-XXV-2  
8086 0009 Ethernet Network Adapter E810-XXV-2 for OCP 2.0  
8086 000a Ethernet 25G 4P E810-XXV Adapter  
8086  
000c Ethernet Network Adapter E810-XXV-4 for OCP 3.0  
8086 000d Ethernet 25G 4P E810-XXV OCP  
8086 000e Ethernet Network Adapter E810-XXV-4T

8086 000f Ethernet 25G 4P E810-XXV-stg Adapter  
8086 0010 Ethernet 25G 4P E810-XXV-st Adapter  
8086 4010 Ethernet Network Adapter E810-XXV-4  
8086 4013 Ethernet Network Adapter E810-XXV-4 for OCP 3.0  
8086 401c Ethernet Network Adapter E810-XXV-4 for OCP 3.0  
1599 Ethernet Controller E810-XXV for backplane  
8086 0001 Ethernet 25G 2P E810-XXV-k Mezz  
159a Ethernet Controller E810-XXV for QSFP  
159b Ethernet Controller E810-XXV for SFP  
1137 02be E810XXVDA2 2x25/10 GbE SFP28 PCIe NIC  
# NIC-ETH660F-3S-2P 2x25GbE SFP28 Network Adapter for OCP 3.0  
193d 1085 NIC-ETH660F-3S-2P  
1bd4 0057 Ethernet Network Adapter E810-XXVAM2  
1bd4 0058 Ethernet Network Adapter E810-XXVAM2 for OCP 3.0  
1bd4 006e Ethernet Network Adapter E810-XXVAM2 for BD  
1bd4 0083 Ethernet Network Adapter E810-XXVAM2 for lldp  
1bd4 00a0 S252IE810  
1eec  
0102 VSE-225-41E Dual-port 10Gb/25Gb Etherent PCIe  
4c52 0003 LRES1021PF Dual-port 25Gb Ethernet Server Adapter  
4c52 3029 LRES3029PF Dual-port 25Gb Ethernet Server Adapter for OCP  
8086 0001 Ethernet 25G 2P E810-XXV OCP  
8086 0002 Ethernet 25G 2P E810-XXV Adapter  
8086 0003 Ethernet Network Adapter E810-XXV-2  
8086 0005 Ethernet Network Adapter E810-XXV-2 for OCP 3.0  
8086 4001 Ethernet Network Adapter E810-XXV-2  
8086 4002 Ethernet Network Adapter E810-XXV-2 for OCP 3.0  
8086 4003 Ethernet Network Adapter E810-XXV-2  
8086 4015 Ethernet Network Adapter E810-XXV-2 for OCP 3.0  
15a0 Ethernet Connection (2) I218-LM  
15a1 Ethernet Connection (2) I218-V  
15a2 Ethernet Connection (3) I218-LM  
15a3 Ethernet Connection (3) I218-V  
15a4 Ethernet Switch FM10000 Host Interface  
15a5 Ethernet Switch FM10000 Host Virtual Interface  
15a8 Ethernet Connection X552 Virtual Function  
15a9 X552 Virtual Function  
15aa Ethernet Connection X552 10 GbE Backplane  
1059  
0120 T4008 10GbE interface  
15ab Ethernet Connection X552 10 GbE Backplane  
1059 0150 RD-01068 10GbE interface  
1059 0170 RD-01213 10GbE interface  
15ac Ethernet Connection X552 10 GbE SFP+  
1059 0160 RD-01167 10GbE interface  
15ad Ethernet Connection X552/X557-AT 10GBASE-T  
15ae Ethernet Connection X552 1000BASE-T  
15b0 Ethernet Connection X552 Backplane

15b4 X553 Virtual Function  
15b5 DSL6340 USB 3.1 Controller [Alpine Ridge]  
15b6 DSL6540 USB 3.1 Controller [Alpine Ridge]  
15b7 Ethernet Connection (2) I219-LM  
15b8 Ethernet Connection (2) I219-V  
1462 7994 H110M ECO/GAMING  
1462 7a72 H270 PC MATE  
15b9 Ethernet Connection (3) I219-LM  
15bb Ethernet Connection (7) I219-LM  
15bc Ethernet Connection (7) I219-V  
15bd Ethernet Connection (6) I219-LM  
15be Ethernet Connection (6) I219-V  
15bf JHL6240 Thunderbolt 3 NHI (Low Power) [Alpine Ridge LP 2016]  
15c0 JHL6240 Thunderbolt 3 Bridge (Low Power) [Alpine Ridge LP 2016]  
15c1 JHL6240 Thunderbolt 3 USB 3.1  
Controller (Low Power) [Alpine Ridge LP 2016]  
15c2 Ethernet Connection X553 Backplane  
15c3 Ethernet Connection X553 Backplane  
15c4 Ethernet Connection X553 10 GbE SFP+  
15c5 X553 Virtual Function  
15c6 Ethernet Connection X553 1GbE  
15c7 Ethernet Connection X553 1GbE  
15c8 Ethernet Connection X553/X557-AT 10GBASE-T  
15ce Ethernet Connection X553 10 GbE SFP+  
15d0 Ethernet SDI Adapter  
8086 0001 Ethernet SDI Adapter FM10420-100GbE-QDA2  
8086 0002 Ethernet SDI Adapter FM10840-MTP2  
15d1 Ethernet Controller 10G X550T  
4c52 9811 LREC9811BT Single-port 10Gb Ethernet Network Adapter  
8086 0002 Ethernet Converged Network Adapter X550-T1  
8086 001b Ethernet Server Adapter X550-T1 for OCP  
8086 0021 Ethernet Converged Network Adapter X550-T1  
8086 00a2 Ethernet Converged Network Adapter X550-T1  
15d2 JHL6540 Thunderbolt 3 NHI (C step) [Alpine Ridge 4C 2016]  
15d3 JHL6540 Thunderbolt 3 Bridge (C step) [Alpine Ridge 4C 2016]  
15d4 JHL6540 Thunderbolt 3 USB Controller  
(C step) [Alpine Ridge 4C 2016]  
15d5 Ethernet SDI Adapter FM10420-25GbE-DA2  
8086 0001 Ethernet SDI Adapter FM10420-25GbE-DA2  
15d6 Ethernet Connection (5) I219-V  
15d7 Ethernet Connection (4) I219-LM  
15d8 Ethernet Connection (4) I219-V  
17aa 2247 ThinkPad T570  
17aa 224f ThinkPad X1 Carbon 5th Gen  
17aa 225d ThinkPad T480  
15d9 JHL6340 Thunderbolt 3 NHI (C step) [Alpine Ridge 2C 2016]  
15da JHL6340 Thunderbolt 3 Bridge (C step) [Alpine Ridge 2C 2016]  
15db JHL6340 Thunderbolt 3 USB 3.1 Controller (C step) [Alpine Ridge 2C 2016]

15df Ethernet Connection (8) I219-LM  
15e0 Ethernet Connection (8) I219-V  
15e1 Ethernet Connection (9) I219-LM  
15e2 Ethernet Connection (9) I219-V  
15e3 Ethernet Connection (5) I219-LM  
15e4 Ethernet Connection X553 1GbE  
15e5 Ethernet Connection X553 1GbE  
15e7 JHL7540 Thunderbolt 3 Bridge [Titan Ridge 2C 2018]  
15e8 JHL7540 Thunderbolt 3 NHI [Titan Ridge 2C 2018]  
15e9 JHL7540 Thunderbolt 3 USB Controller [Titan Ridge 2C 2018]  
15ea  
JHL7540 Thunderbolt 3 Bridge [Titan Ridge 4C 2018]  
15eb JHL7540 Thunderbolt 3 NHI [Titan Ridge 4C 2018]  
1028 09be Latitude 7410  
15ec JHL7540 Thunderbolt 3 USB Controller [Titan Ridge 4C 2018]  
1028 09be Latitude 7410  
15ef JHL7540 Thunderbolt 3 Bridge [Titan Ridge DD 2018]  
15f0 JHL7540 Thunderbolt 3 USB Controller [Titan Ridge DD 2018]  
15f2 Ethernet Controller I225-LM  
4c52 2031 LRES2031PT Single-port 2.5Gb Ethernet Network Adapter  
8086 0001 Ethernet Network Adapter I225-T1  
8086 0002 Ethernet Network Adapter I225-T1  
15f3 Ethernet Controller I225-V  
4c52 2031 LRES2031PT Single-port 2.5Gb Ethernet Network Adapter  
8086 0003 Intel(R) Ethernet Controller (3) I225-V  
15f4 Ethernet Connection (15) I219-LM  
15f5 Ethernet Connection (15) I219-V  
15f6 I210 Gigabit Ethernet Connection  
15f9 Ethernet Connection (14) I219-LM  
15fa Ethernet Connection (14) I219-V  
15fb Ethernet Connection (13) I219-LM  
15fc Ethernet Connection (13) I219-V  
15ff Ethernet Controller  
X710 for 10GBASE-T  
1014 0000 PCIe3 4-port 10GbE Base-T Adapter  
1137 0000 X710TLG GbE RJ45 PCIe NIC  
1137 02c1 X710T2LG 2x10 GbE RJ45 PCIe NIC  
1137 02c2 X710T4LG 4x10 GbE RJ45 PCIe NIC  
1137 02d9 Ethernet Network Adapter X710-T2L OCP 3.0  
1137 02da Ethernet Network Adapter X710-T4L OCP 3.0  
# NIC-ETH565T-3S-2P OCP3.0 2x10G Base-T Card  
193d 1082 NIC-ETH565T-3S-2P  
4c52 1012 LRES1012PT Dual-port 10Gb Ethernet Network Adapter  
4c52 3021 LRES3021PT Dual-port 10Gb Ethernet Server Adapter for OCP  
8086 0000 Ethernet Network Adapter X710-TL  
8086 0001 Ethernet Network Adapter X710-T4L  
8086 0002 Ethernet Network Adapter X710-T4L  
8086 0003 Ethernet Network Adapter X710-T2L

8086 0004 Ethernet Network Adapter X710-T2L  
8086 0005 Ethernet 10G 2P X710-T2L-t Adapter  
8086 0006 Ethernet 10G 4P X710-T4L-t Adapter  
8086 0007 Ethernet 10G 2P X710-T2L-t OCP  
8086 0008 Ethernet 10G 4P X710-T4L-t OCP  
8086 0009 Ethernet Network Adapter X710-T4L for OCP 3.0  
8086  
000a Ethernet Network Adapter X710-T4L for OCP 3.0  
8086 000b Ethernet Network Adapter X710-T2L for OCP 3.0  
8086 000c Ethernet Network Adapter X710-T2L for OCP 3.0  
8086 000d Ethernet 10G 2P X710-T2L-t OCP  
8086 000f Ethernet Network Adapter X710-T2L for OCP 3.0  
8086 4009 Ethernet Network Adapter X710-T2L  
8086 4012 Ethernet Network Adapter X710-T4L for OCP 3.0  
8086 4018 Ethernet Network Adapter X710-T2L for OCP 3.0  
8086 4019 Ethernet Network Adapter X710-T4L  
1600 Broadwell-U Host Bridge -OPI  
1601 Broadwell-U PCI Express x16 Controller  
1602 Broadwell-U Integrated Graphics  
1603 Broadwell-U Processor Thermal Subsystem  
1604 Broadwell-U Host Bridge -OPI  
1605 Broadwell-U PCI Express x8 Controller  
1606 HD Graphics  
1607 Broadwell-U CHAPS Device  
1608 Broadwell-U Host Bridge -OPI  
1609 Broadwell-U x4 PCIe  
160a Broadwell-U Integrated Graphics  
160b Broadwell-U Integrated Graphics  
160c Broadwell-U Audio Controller  
160d Broadwell-U Integrated  
Graphics  
160e Broadwell-U Integrated Graphics  
160f Broadwell-U SoftSKU  
1610 Broadwell-U Host Bridge - DMI  
1612 HD Graphics 5600  
1614 Broadwell-U Host Bridge - DMI  
1616 HD Graphics 5500  
103c 2216 ZBook 15u G2 Mobile Workstation  
1618 Broadwell-U Host Bridge - DMI  
161a Broadwell-U Integrated Graphics  
161b Broadwell-U Integrated Graphics  
161d Broadwell-U Integrated Graphics  
161e HD Graphics 5300  
1622 Iris Pro Graphics 6200  
1626 HD Graphics 6000  
162a Iris Pro Graphics P6300  
162b Iris Graphics 6100  
162d Broadwell-U Integrated Graphics

162e Broadwell-U Integrated Graphics  
1632 Broadwell-U Integrated Graphics  
1636 Broadwell-U Integrated Graphics  
163a Broadwell-U Integrated Graphics  
163b Broadwell-U Integrated Graphics  
163d Broadwell-U Integrated Graphics  
163e Broadwell-U Integrated Graphics  
1889 Ethernet Adaptive Virtual Function  
188a Ethernet Connection E823-C for backplane  
188b Ethernet Connection E823-C for QSFP  
188c Ethernet Connection  
E823-C for SFP  
1028 0abd Ethernet Connection 25G 4P E823-C LOM  
17aa 405e E823 25G/10G Ethernet LOM Controller  
188d Ethernet Connection E823-C/X557-AT 10GBASE-T  
188e Ethernet Connection E823-C 1GbE  
17aa 405f E823 1G Ethernet LOM Controller  
1890 Ethernet Connection E822-C for backplane  
1891 Ethernet Connection E822-C for QSFP  
1892 Ethernet Connection E822-C for SFP  
1893 Ethernet Connection E822-C/X557-AT 10GBASE-T  
1894 Ethernet Connection E822-C 1GbE  
1897 Ethernet Connection E822-L for backplane  
1898 Ethernet Connection E822-L for SFP  
1899 Ethernet Connection E822-L/X557-AT 10GBASE-T  
189a Ethernet Connection E822-L 1GbE  
18a0 Atom Processor P5xxx Series QAT  
18a1 C4XXX Series QAT Virtual Function  
18b3 Atom Processor P5xxx Series SATA Controller  
18d0 Atom Processor P5xxx Series USB xHCI Controller  
18d3 Atom Processor P5xxx Series MEI Controller  
18d6 Atom Processor P5xxx Series MEI Controller  
18df Atom Processor P5xxx Series SMBus Controller  
18e0  
Atom Processor P5xxx Series SPI Controller  
18e1 Atom Processor P5xxx Series Trace Hub  
18ee 200xx Series QAT  
18ef 200xx Series QAT Virtual Function  
18f3 Atom Processor P5xxx Series SATA Controller  
1900 Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor Host Bridge/DRAM Registers  
1901 6th-10th Gen Core Processor PCIe Controller (x16)  
1902 HD Graphics 510  
1903 Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor Thermal Subsystem  
1028 06d6 Latitude 7275 tablet  
1028 06dc Latitude E7470  
1028 06e4 XPS 15 9550  
1028 06e6 Latitude 11 5175 2-in-1  
1028 09be Latitude 7410



103c 825b OMEN-17-w001nv  
17aa 225d ThinkPad T480  
1904 Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor Host Bridge/DRAM Registers  
1028 06dc Latitude E7470  
1028 06f3 Latitude 3570  
103c 8079 EliteBook 840 G3  
17aa 2247 ThinkPad T570  
17aa 382a B51-80 Laptop  
1905 Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor PCIe Controller (x8)  
1906 HD Graphics 510  
17aa 382a B51-80 Laptop  
1908  
Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor Host Bridge/DRAM Registers  
1909 Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor PCIe Controller (x4)  
190b HD Graphics 510  
190c Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor Host Bridge/DRAM Registers  
1028 06d6 Latitude 7275 tablet  
1028 06e6 Latitude 11 5175 2-in-1  
190f Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor Host Bridge/DRAM Registers  
1910 Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor Host Bridge/DRAM Registers  
1028 06e4 XPS 15 9550  
103c 825b OMEN-17-w001nv  
1911 Xeon E3-1200 v5/v6 / E3-1500 v5 / 6th/7th/8th Gen Core Processor Gaussian Mixture Model  
1028 0869 Vostro 3470  
1028 09be Latitude 7410  
1462 7994 H110M ECO/GAMING  
1462 7a72 H270 PC MATE  
17aa 2247 ThinkPad T570  
17aa 224f ThinkPad X1 Carbon 5th Gen  
17aa 225d ThinkPad T480  
1912 HD Graphics 530  
1916 Skylake GT2 [HD Graphics 520]  
1028 06dc Latitude E7470  
1028 06f3 Latitude 3570  
103c 8079 EliteBook  
840 G3  
17aa 2247 ThinkPad T570  
1918 Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor Host Bridge/DRAM Registers  
1919 Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor Imaging Unit  
1028 06d6 Latitude 7275 tablet  
1028 06e6 Latitude 11 5175 2-in-1  
191b HD Graphics 530  
1028 06e4 XPS 15 9550  
103c 825b OMEN-17-w001nv  
191d HD Graphics P530  
191e HD Graphics 515  
1028 06d6 Latitude 7275 tablet  
1028 06e6 Latitude 11 5175 2-in-1

191f Xeon E3-1200 v5/E3-1500 v5/6th Gen Core Processor Host Bridge/DRAM Registers  
1921 HD Graphics 520  
1923 HD Graphics 535  
1926 Iris Graphics 540  
1927 Iris Graphics 550  
192b Iris Graphics 555  
192d Iris Graphics P555  
1932 Iris Pro Graphics 580  
193a Iris Pro Graphics P580  
193b Iris Pro Graphics 580  
193d Iris Pro Graphics P580  
1960 80960RP (i960RP) Microprocessor  
101e 0431 MegaRAID 431 RAID Controller  
101e 0438 MegaRAID 438 Ultra2 LVD RAID Controller  
101e 0466 MegaRAID 466 Express Plus RAID Controller  
101e  
0467 MegaRAID 467 Enterprise 1500 RAID Controller  
101e 0490 MegaRAID 490 Express 300 RAID Controller  
101e 0762 MegaRAID 762 Express RAID Controller  
101e 09a0 PowerEdge Expandable RAID Controller 2/SC  
1028 0467 PowerEdge Expandable RAID Controller 2/DC  
1028 1111 PowerEdge Expandable RAID Controller 2/SC  
103c 03a2 MegaRAID  
103c 10c6 MegaRAID 438, NetRAID-3Si  
103c 10c7 MegaRAID T5, Integrated NetRAID  
103c 10cc MegaRAID, Integrated NetRAID  
103c 10cd NetRAID-1Si  
105a 0000 SuperTrak  
105a 2168 SuperTrak Pro  
105a 5168 SuperTrak66/100  
1111 1111 MegaRAID 466, PowerEdge Expandable RAID Controller 2/SC  
1111 1112 PowerEdge Expandable RAID Controller 2/SC  
113c 03a2 MegaRAID  
e4bf 1010 CG1-RADIO  
e4bf 1020 CU2-QUARTET  
e4bf 1040 CU1-CHORUS  
e4bf 3100 CX1-BAND  
1962 80960RM (i960RM) Microprocessor  
105a 0000 SuperTrak SX6000 I2O CPU  
1964 80960RN (i960RN) Microprocessor  
1980 Atom Processor C3000 Series System Agent  
19a1 Atom Processor C3000  
Series Error Registers  
19a2 Atom Processor C3000 Series Root Complex Event Collector  
19a3 Atom Processor C3000 Series Integrated QAT Root Port  
19a4 Atom Processor C3000 Series PCI Express Root Port #0  
19a5 Atom Processor C3000 Series PCI Express Root Port #1  
19a6 Atom Processor C3000 Series PCI Express Root Port #2

19a7 Atom Processor C3000 Series PCI Express Root Port #3  
19a8 Atom Processor C3000 Series PCI Express Root Port #4  
19a9 Atom Processor C3000 Series PCI Express Root Port #5  
19aa Atom Processor C3000 Series PCI Express Root Port #6  
19ab Atom Processor C3000 Series PCI Express Root Port #7  
19ac Atom Processor C3000 Series SMBus Contoller - Host  
19b0 Atom Processor C3000 Series SATA Controller 0  
19b1 Atom Processor C3000 Series SATA Controller 0  
19b2 Atom Processor C3000 Series SATA Controller 0  
19b3 Atom Processor C3000 Series SATA Controller 0  
19b4 Atom Processor C3000 Series SATA Controller 0  
19b5 Atom Processor C3000 Series SATA Controller  
0  
19b6 Atom Processor C3000 Series SATA Controller 0  
19b7 Atom Processor C3000 Series SATA Controller 0  
19be Atom Processor C3000 Series SATA Controller 0  
19bf Atom Processor C3000 Series SATA Controller 0  
19c0 Atom Processor C3000 Series SATA Controller 1  
19c1 Atom Processor C3000 Series SATA Controller 1  
19c2 Atom Processor C3000 Series SATA Controller 1  
19c3 Atom Processor C3000 Series SATA Controller 1  
19c4 Atom Processor C3000 Series SATA Controller 1  
19c5 Atom Processor C3000 Series SATA Controller 1  
19c6 Atom Processor C3000 Series SATA Controller 1  
19c7 Atom Processor C3000 Series SATA Controller 1  
19ce Atom Processor C3000 Series SATA Controller 1  
19cf Atom Processor C3000 Series SATA Controller 1  
19d0 Atom Processor C3000 Series USB 3.0 xHCI Controller  
19d1 Atom Processor C3000 Series Integrated LAN Root Port #0  
19d2 Atom Processor C3000 Series Integrated LAN Root Port #1  
19d3 Atom Processor C3000 Series ME HECI 1  
19d4 Atom Processor  
C3000 Series ME HECI 2  
19d5 Atom Processor C3000 Series ME KT Controller  
19d6 Atom Processor C3000 Series ME HECI 3  
19d8 Atom Processor C3000 Series HSUART Controller  
19dc Atom Processor C3000 Series LPC or eSPI  
19dd Atom Processor C3000 Series Primary to Side Band (P2SB) Bridge  
19de Atom Processor C3000 Series Power Management Controller  
19df Atom Processor C3000 Series SMBus controller  
19e0 Atom Processor C3000 Series SPI Controller  
19e2 Atom Processor C3000 Series QuickAssist Technology  
19e3 Atom Processor C3000 Series QuickAssist Technology Virtual Function  
1a1c Ethernet Connection (17) I219-LM  
1a1d Ethernet Connection (17) I219-V  
1a1e Ethernet Connection (16) I219-LM  
1028 0b10 Precision 3571  
1a1f Ethernet Connection (16) I219-V

1a21 82840 840 [Carmel] Chipset Host Bridge (Hub A)  
1a23 82840 840 [Carmel] Chipset AGP Bridge  
1a24 82840 840 [Carmel] Chipset PCI Bridge (Hub B)  
1a30 82845 845 [Brookdale] Chipset Host Bridge  
1028 010e Optiplex GX240  
147b  
0505 BL7 motherboard  
15d9 3280 Supermicro P4SBE Mainboard  
1a31 82845 845 [Brookdale] Chipset AGP Bridge  
1a38 5000 Series Chipset DMA Engine  
15d9 8680 X7DVL-E-O motherboard  
8086 3476 S5000PSLSATA Server Board  
1a48 82597EX 10GbE Ethernet Controller  
8086 a01f PRO/10GbE SR Server Adapter  
8086 a11f PRO/10GbE SR Server Adapter  
1b48 82597EX 10GbE Ethernet Controller  
8086 a01f PRO/10GbE LR Server Adapter  
8086 a11f PRO/10GbE LR Server Adapter  
# Also rebranded as Montage IOH M88IO3020  
1bcd Emmitsburg (C740 Family) USB 3.2 Gen 1 xHCI Controller  
1bd4 00a5 RS0800I5H16i  
1bd2 Sapphire Rapids SATA AHCI Controller  
1bf2 Sapphire Rapids SATA AHCI Controller  
1c00 6 Series/C200 Series Chipset Family Desktop SATA Controller (IDE mode, ports 0-3)  
1c01 6 Series/C200 Series Chipset Family Mobile SATA Controller (IDE mode, ports 0-3)  
1c02 6 Series/C200 Series Chipset Family 6 port Desktop SATA AHCI Controller  
1028 04aa XPS 8300  
1043 844d P8 series motherboard  
17aa  
3070 ThinkCentre M91p  
8086 200d DH61CR motherboard  
8086 7270 Server Board S1200BT Family  
1c03 6 Series/C200 Series Chipset Family 6 port Mobile SATA AHCI Controller  
1028 04a3 Precision M4600  
1028 04b2 Vostro 3350  
1028 04da Vostro 3750  
17aa 21cf ThinkPad T520  
8086 7270 Apple MacBookPro8,2 [Core i7, 15", 2011]  
1c04 6 Series/C200 Series Desktop SATA RAID Controller  
103c 3118 Smart Array B110i SATA RAID Controller  
1c05 6 Series/C200 Series Mobile SATA RAID Controller  
1c06 Z68 Express Chipset SATA RAID Controller  
1c08 6 Series/C200 Series Chipset Family Desktop SATA Controller (IDE mode, ports 4-5)  
1c09 6 Series/C200 Series Chipset Family Mobile SATA Controller (IDE mode, ports 4-5)  
1c10 6 Series/C200 Series Chipset Family PCI Express Root Port 1  
1028 04aa XPS 8300  
1028 04da Vostro 3750  
1043 844d P8 series motherboard

17aa 21cf ThinkPad T520  
8086 7270 Server Board S1200BTS / Apple MacBook Pro 8,1/8,2  
1c12 6 Series/C200  
Series Chipset Family PCI Express Root Port 2  
1028 04aa XPS 8300  
17aa 21cf ThinkPad T520  
8086 7270 Apple MacBookPro8,2 [Core i7, 15", 2011]  
1c14 6 Series/C200 Series Chipset Family PCI Express Root Port 3  
1028 04da Vostro 3750  
8086 7270 Apple MacBookPro8,2 [Core i7, 15", 2011]  
1c16 6 Series/C200 Series Chipset Family PCI Express Root Port 4  
1028 04aa XPS 8300  
17aa 21cf ThinkPad T520  
1c18 6 Series/C200 Series Chipset Family PCI Express Root Port 5  
1028 04da Vostro 3750  
17aa 21cf ThinkPad T520  
8086 7270 Server Board S1200BTS  
1c1a 6 Series/C200 Series Chipset Family PCI Express Root Port 6  
1028 04da Vostro 3750  
1043 844d P8 series motherboard  
1c1c 6 Series/C200 Series Chipset Family PCI Express Root Port 7  
1c1e 6 Series/C200 Series Chipset Family PCI Express Root Port 8  
1043 844d P8 series motherboard  
1c20 6 Series/C200 Series Chipset Family High Definition Audio Controller  
1028 0490 Alienware M17x R3  
1028 04a3 Precision M4600  
1028  
04aa XPS 8300  
1028 04b2 Vostro 3350  
1028 04da Vostro 3750  
# Realtek ALC656  
103c 2abf HP Pavilion p6-2100 Desktop PC Series  
1043 8418 P8P67 Deluxe Motherboard  
1043 841b P8H67 Series Motherboard  
17aa 21cf ThinkPad T520  
17aa 3070 ThinkCentre M91p  
# Realtek ALC888 audio codec  
8086 2008 DQ67SW board  
8086 200d DH61CR motherboard  
8086 7270 Apple MacBookPro8,2 [Core i7, 15", 2011]  
1c22 6 Series/C200 Series Chipset Family SMBus Controller  
1028 04a3 Precision M4600  
1028 04aa XPS 8300  
1028 04b2 Vostro 3350  
1028 04da Vostro 3750  
1043 844d P8 series motherboard  
17aa 21cf ThinkPad T520  
17aa 3070 ThinkCentre M91p

8086 200d DH61CR motherboard  
8086 7270 Server Board S1200BT Family / Apple MacBook Pro 8,1/8,2  
1c24 6 Series/C200 Series Chipset Family Thermal Management Controller  
1c25 6 Series/C200 Series Chipset Family DMI to PCI Bridge  
1c26 6 Series/C200 Series Chipset Family USB Enhanced Host Controller #1  
1028 04a3 Precision M4600  
1028  
04aa XPS 8300  
1028 04b2 Vostro 3350  
1028 04da Vostro 3750  
1043 844d P8 series motherboard  
17aa 21cf ThinkPad T520  
17aa 3070 ThinkCentre M91p  
8086 200d DH61CR motherboard  
8086 7270 Server Board S1200BT Family / Apple MacBook Pro 8,1/8,2  
1c27 6 Series/C200 Series Chipset Family USB Universal Host Controller #1  
8086 7270 Apple MacBookPro8,2 [Core i7, 15", 2011]  
1c2c 6 Series/C200 Series Chipset Family USB Universal Host Controller #5  
8086 7270 Apple MacBookPro8,2 [Core i7, 15", 2011]  
1c2d 6 Series/C200 Series Chipset Family USB Enhanced Host Controller #2  
1028 04a3 Precision M4600  
1028 04aa XPS 8300  
1028 04b2 Vostro 3350  
1028 04da Vostro 3750  
1043 844d P8 series motherboard  
17aa 21cf ThinkPad T520  
17aa 3070 ThinkCentre M91p  
8086 200d DH61CR motherboard  
8086 7270 Server Board S1200BT Family / Apple MacBook Pro 8,1/8,2  
1c33 6 Series/C200 Series Chipset Family LAN Controller  
1c35 6 Series/C200 Series Chipset Family VECI  
Controller  
1c3a 6 Series/C200 Series Chipset Family MEI Controller #1  
1028 0493 Latitude E6420  
1028 04a3 Precision M4600  
1028 04aa XPS 8300  
1028 04b2 Vostro 3350  
1028 04da Vostro 3750  
1043 844d P8 series motherboard  
17aa 21cf ThinkPad T520  
17aa 3070 ThinkCentre M91p  
8086 200d DH61CR motherboard  
8086 7270 Apple MacBookPro8,2 [Core i7, 15", 2011]  
1c3b 6 Series/C200 Series Chipset Family MEI Controller #2  
1c3c 6 Series/C200 Series Chipset Family IDE-r Controller  
1c3d 6 Series/C200 Series Chipset Family KT Controller  
17aa 3070 ThinkCentre M91p  
1c40 6 Series/C200 Series Chipset Family LPC Controller

1c41 Mobile SFF 6 Series Chipset Family LPC Controller  
1c42 6 Series/C200 Series Chipset Family LPC Controller  
1c43 Mobile 6 Series Chipset Family LPC Controller  
1c44 Z68 Express Chipset LPC Controller  
1c45 6 Series/C200 Series Chipset Family LPC Controller  
1c46 P67 Express Chipset LPC Controller  
1043 844d P8P67 Deluxe Motherboard  
1c47  
UM67 Express Chipset LPC Controller  
1c48 6 Series/C200 Series Chipset Family LPC Controller  
1c49 HM65 Express Chipset LPC Controller  
8086 7270 Apple MacBookPro8,2 [Core i7, 15", 2011]  
1c4a H67 Express Chipset LPC Controller  
1028 04aa XPS 8300  
1043 844d P8H67 Series Motherboard  
1c4b HM67 Express Chipset LPC Controller  
1028 04b2 Vostro 3350  
1028 04da Vostro 3750  
1c4c Q65 Express Chipset LPC Controller  
1c4d QS67 Express Chipset LPC Controller  
1c4e Q67 Express Chipset LPC Controller  
17aa 3070 ThinkCentre M91p  
1c4f QM67 Express Chipset LPC Controller  
1028 04a3 Precision M4600  
17aa 21cf ThinkPad T520  
1c50 B65 Express Chipset LPC Controller  
1c51 6 Series/C200 Series Chipset Family LPC Controller  
1c52 C202 Chipset LPC Controller  
8086 7270 Server Board S1200BTS  
1c53 6 Series/C200 Series Chipset Family LPC Controller  
1c54 C204 Chipset LPC Controller  
1c55 6 Series/C200 Series Chipset Family LPC Controller  
1c56 C206 Chipset LPC Controller  
1043  
844d P8B WS Motherboard  
1c57 6 Series/C200 Series Chipset Family LPC Controller  
1c58 Upgraded B65 Express Chipset LPC Controller  
1c59 Upgraded HM67 Express Chipset LPC Controller  
1c5a Upgraded Q67 Express Chipset LPC Controller  
1c5b 6 Series/C200 Series Chipset Family LPC Controller  
1c5c H61 Express Chipset LPC Controller  
8086 200d DH61CR motherboard  
1c5d 6 Series/C200 Series Chipset Family LPC Controller  
1c5e 6 Series/C200 Series Chipset Family LPC Controller  
1c5f 6 Series/C200 Series Chipset Family LPC Controller  
1d00 C600/X79 series chipset 4-Port SATA IDE Controller  
1d02 C600/X79 series chipset 6-Port SATA AHCI Controller  
1028 04f7 C602J on PowerEdge R320 server

1d04 C600/X79 series chipset SATA RAID Controller  
1d06 C600/X79 series chipset SATA Premium RAID Controller  
1d08 C600/X79 series chipset 2-Port SATA IDE Controller  
1d10 C600/X79 series chipset PCI Express Root Port 1  
1028 04f7 C602J on PowerEdge R320 server  
1d11 C600/X79 series  
chipset PCI Express Root Port 1  
1d12 C600/X79 series chipset PCI Express Root Port 2  
1d13 C600/X79 series chipset PCI Express Root Port 2  
1d14 C600/X79 series chipset PCI Express Root Port 3  
1d15 C600/X79 series chipset PCI Express Root Port 3  
1d16 C600/X79 series chipset PCI Express Root Port 4  
1d17 C600/X79 series chipset PCI Express Root Port 4  
1d18 C600/X79 series chipset PCI Express Root Port 5  
1028 04f7 C602J on PowerEdge R320 server  
1d19 C600/X79 series chipset PCI Express Root Port 5  
1d1a C600/X79 series chipset PCI Express Root Port 6  
1d1b C600/X79 series chipset PCI Express Root Port 6  
1d1c C600/X79 series chipset PCI Express Root Port 7  
1d1d C600/X79 series chipset PCI Express Root Port 7  
1d1e C600/X79 series chipset PCI Express Root Port 8  
1028 04f7 C602J on PowerEdge R320 server  
1d1f C600/X79 series chipset PCI Express Root Port 8  
1d20 C600/X79 series chipset High Definition Audio Controller  
1d22 C600/X79 series chipset SMBus Host  
Controller  
15d9 066b X9SRL-F  
1d24 C600/X79 series chipset Thermal Management Controller  
15d9 066b X9SRL-F  
1d25 C600/X79 series chipset DMI to PCI Bridge  
1d26 C600/X79 series chipset USB2 Enhanced Host Controller #1  
1028 04f7 C602J on PowerEdge R320 server  
15d9 066b X9SRL-F  
1d2d C600/X79 series chipset USB2 Enhanced Host Controller #2  
1028 04f7 C602J on PowerEdge R320 server  
103c 18a9 HP DL360e G8  
15d9 066b X9SRL-F  
1d33 C600/X79 series chipset LAN Controller  
1d35 C600/X79 series chipset VECI Controller  
1d3a C600/X79 series chipset MEI Controller #1  
1028 04f7 C602J on PowerEdge R320 server  
15d9 066b X9SRL-F  
1d3b C600/X79 series chipset MEI Controller #2  
1028 04f7 C602J on PowerEdge R320 server  
15d9 066b X9SRL-F  
1d3c C600/X79 series chipset IDE-r Controller  
1d3d C600/X79 series chipset KT Controller  
1d3e C600/X79 series chipset PCI Express Virtual Root Port



1028 04f7 C602J on PowerEdge R320 server  
1d3f C608/C606/X79 series chipset  
PCI Express Virtual Switch Port  
1d40 C600/X79 series chipset LPC Controller  
1d41 C600/X79 series chipset LPC Controller  
1028 04f7 C602J on PowerEdge R320 server  
15d9 066b X9SRL-F  
1d50 C608 chipset Dual 4-Port SATA/SAS Storage Control Unit  
1d54 C600/X79 series chipset Dual 4-Port SATA/SAS Storage Control Unit  
1d55 C600/X79 series chipset 4-Port SATA/SAS Storage Control Unit  
1d58 C606 chipset Dual 4-Port SATA/SAS Storage Control Unit  
1d59 C604/X79 series chipset 4-Port SATA/SAS Storage Control Unit  
1d5a C600/X79 series chipset Dual 4-Port SATA Storage Control Unit  
1d5b C602 chipset 4-Port SATA Storage Control Unit  
1d5c C600/X79 series chipset Dual 4-Port SATA/SAS Storage Control Unit  
1d5d C600/X79 series chipset 4-Port SATA/SAS Storage Control Unit  
1d5e C600/X79 series chipset Dual 4-Port SATA Storage Control Unit  
1d5f C600/X79 series chipset 4-Port SATA Storage Control Unit  
1d60 C608 chipset Dual 4-Port SATA/SAS Storage Control Unit  
1d64 C600/X79 series  
chipset Dual 4-Port SATA/SAS Storage Control Unit  
1d65 C600/X79 series chipset 4-Port SATA/SAS Storage Control Unit  
1d68 C606 chipset Dual 4-Port SATA/SAS Storage Control Unit  
1d69 C604/X79 series chipset 4-Port SATA/SAS Storage Control Unit  
1d6a C600/X79 series chipset Dual 4-Port SATA Storage Control Unit  
1d6b C602 chipset 4-Port SATA Storage Control Unit  
0497 1028 Dell Precision T3600  
1d6c C600/X79 series chipset Dual 4-Port SATA/SAS Storage Control Unit  
1d6d C600/X79 series chipset 4-Port SATA/SAS Storage Control Unit  
1d6e C600/X79 series chipset Dual 4-Port SATA Storage Control Unit  
1d6f C600/X79 series chipset 4-Port SATA Storage Control Unit  
1d70 C600/X79 series chipset SMBus Controller 0  
1d71 C608/C606/X79 series chipset SMBus Controller 1  
1d72 C608 chipset SMBus Controller 2  
1d74 C608/C606/X79 series chipset PCI Express Upstream Port  
1d76 C600/X79 series chipset Multi-Function Glue  
1e00 7 Series/C210 Series Chipset Family 4-port SATA Controller  
[IDE mode]  
1734 11d6 B75 [Ivy Bridge] chipset on Esprimo P510 D3171 motherboard  
1e01 7 Series Chipset Family 4-port SATA Controller [IDE mode]  
144d c652 NP300E5C series laptop  
1e02 7 Series/C210 Series Chipset Family 6-port SATA Controller [AHCI mode]  
1043 84ca P8 series motherboard  
1734 11d6 B75 [Ivy Bridge] chipset on Esprimo P510 D3171 motherboard  
1849 1e02 Motherboard  
1e03 7 Series Chipset Family 6-port SATA Controller [AHCI mode]  
1043 108d VivoBook X202EV  
1043 1477 N56VZ

1043 1517 Zenbook Prime UX31A  
10cf 16e2 LIFEBOOK E752  
144d c652 NP300E5C series laptop  
1e04 7 Series/C210 Series Chipset Family SATA Controller [RAID mode]  
1e05 7 Series Chipset SATA Controller [RAID mode]  
1e06 7 Series/C210 Series Chipset Family SATA Controller [RAID mode]  
1e07 7 Series Chipset Family SATA Controller [RAID mode]  
1e08 7 Series/C210 Series Chipset Family 2-port SATA Controller [IDE mode]  
1e09 7 Series Chipset Family 2-port SATA Controller [IDE mode]  
144d c652 NP300E5C series laptop  
1e0e 7 Series/C210 Series Chipset Family SATA Controller [RAID mode]  
1e10 7 Series/C216 Chipset Family PCI Express Root Port 1  
1043 108d VivoBook X202EV  
1043 1477 N56VZ  
1043 1517 Zenbook Prime UX31A  
1043 84ca P8H77-I Motherboard  
10cf 16e9 LIFEBOOK E752  
144d c652 NP300E5C series laptop  
1734 11d6 B75 [Ivy Bridge] chipset on Esprimo P510 D3171 motherboard  
1849 1e10 Motherboard  
1e12 7 Series/C210 Series Chipset Family PCI Express Root Port 2  
1043 108d VivoBook X202EV  
1043 1477 N56VZ  
1043 1517 Zenbook Prime UX31A  
1e14 7 Series/C210 Series Chipset Family PCI Express Root Port 3  
10cf 16e9 LIFEBOOK E752  
1e16 7 Series/C216 Chipset Family PCI Express Root Port 4  
1043 108d VivoBook X202EV  
1043 1477 N56VZ  
144d c652 NP300E5C series laptop  
1849 1618 Z77 Extreme4 motherboard  
1e18 7 Series/C210 Series Chipset Family PCI Express Root Port 5  
1043 84ca P8H77-I Motherboard  
1849 1e18 Motherboard  
1e1a  
7 Series/C210 Series Chipset Family PCI Express Root Port 6  
1734 11d6 B75 [Ivy Bridge] chipset on Esprimo P510 D3171 motherboard  
1849 1e1a Motherboard  
1e1c 7 Series/C210 Series Chipset Family PCI Express Root Port 7  
1e1e 7 Series/C210 Series Chipset Family PCI Express Root Port 8  
10cf 16e9 LIFEBOOK E752  
1849 1e1e Motherboard  
1e20 7 Series/C216 Chipset Family High Definition Audio Controller  
1028 054b XPS One 2710  
1043 108d VivoBook X202EV  
1043 1477 N56VZ  
1043 1517 Zenbook Prime UX31A

1043 8415 P8H77-I Motherboard  
1043 8445 P8Z77-V LX Motherboard  
10cf 1757 LIFEBOOK E752  
144d c652 NP300E5C series laptop  
1734 11d8 B75 [Ivy Bridge] chipset CX20642 audio controller on Esprimo P510 D3171 motherboard  
1849 1898 Z77 Extreme4 motherboard  
1e22 7 Series/C216 Chipset Family SMBus Controller  
1043 108d VivoBook X202EV  
1043 1477 N56VZ  
1043 1517 Zenbook Prime UX31A  
1043 84ca P8 series motherboard  
10cf 16e6 LIFEBOOK E752  
144d c652 NP300E5C  
series laptop  
1734 11d6 B75 [Ivy Bridge] chipset on Esprimo P510 D3171 motherboard  
1849 1e22 Motherboard  
1e24 7 Series/C210 Series Chipset Family Thermal Management Controller  
1043 1517 Zenbook Prime UX31A  
1e25 7 Series/C210 Series Chipset Family DMI to PCI Bridge  
1e26 7 Series/C216 Chipset Family USB Enhanced Host Controller #1  
1043 108d VivoBook X202EV  
1043 1477 N56VZ  
1043 1517 Zenbook Prime UX31A  
1043 84ca P8 series motherboard  
10cf 16e8 LIFEBOOK E752  
144d c652 NP300E5C series laptop  
1734 11d6 B75 [Ivy Bridge] chipset USB 2.0 controller on Esprimo P510 D3171 motherboard  
1849 1e26 Motherboard  
1e2d 7 Series/C216 Chipset Family USB Enhanced Host Controller #2  
1043 108d VivoBook X202EV  
1043 1477 N56VZ  
1043 1517 Zenbook Prime UX31A  
1043 84ca P8 series motherboard  
10cf 16e8 LIFEBOOK E752  
144d c652 NP300E5C series laptop  
1734 11d6 B75 [Ivy Bridge] chipset USB 2.0 controller on Esprimo P510 D3171 motherboard  
1849 1e2d Motherboard  
1e31  
7 Series/C210 Series Chipset Family USB xHCI Host Controller  
103c 179b Elitebook 8470p  
103c 17ab ProBook 6570b  
1043 108d VivoBook X202EV  
1043 1477 N56VZ  
1043 1517 Zenbook Prime UX31A  
1043 84ca P8 series motherboard  
10cf 16ee LIFEBOOK E752  
1734 11d6 B75 [Ivy Bridge] chipset USB 3.0 controller on Esprimo P510 D3171 motherboard  
17aa 21f3 ThinkPad T430

1849 1e31 Motherboard  
1e33 7 Series/C210 Series Chipset Family LAN Controller  
1e3a 7 Series/C216 Chipset Family MEI Controller #1  
1043 108d VivoBook X202EV  
1043 1477 N56VZ  
1043 1517 Zenbook Prime UX31A  
1043 84ca P8 series motherboard  
10cf 16ea LIFEBOOK E752  
144d c652 NP300E5C series laptop  
1734 11d6 B75 [Ivy Bridge] chipset on Esprimo P510 D3171 motherboard  
1849 1e3a Motherboard  
1e3b 7 Series/C210 Series Chipset Family MEI Controller #2  
1e3c 7 Series/C210 Series Chipset Family IDE-r Controller  
1e3d 7 Series/C210 Series Chipset Family KT Controller  
1e41 7 Series  
Chipset Family LPC Controller  
1e42 7 Series Chipset Family LPC Controller  
1e43 7 Series Chipset Family LPC Controller  
1e44 Z77 Express Chipset LPC Controller  
1043 84ca P8 series motherboard  
1849 1e44 Motherboard  
1e45 7 Series Chipset Family LPC Controller  
1e46 Z75 Express Chipset LPC Controller  
1e47 Q77 Express Chipset LPC Controller  
1e48 Q75 Express Chipset LPC Controller  
1e49 B75 Express Chipset LPC Controller  
1734 11d6 Esprimo P510 D3171 motherboard  
1e4a H77 Express Chipset LPC Controller  
1043 84ca P8H77-I Motherboard  
1e4b 7 Series Chipset Family LPC Controller  
1e4c 7 Series Chipset Family LPC Controller  
1e4d 7 Series Chipset Family LPC Controller  
1e4e 7 Series Chipset Family LPC Controller  
1e4f 7 Series Chipset Family LPC Controller  
1e50 7 Series Chipset Family LPC Controller  
1e51 7 Series Chipset Family LPC Controller  
1e52 7 Series Chipset Family LPC Controller  
1e53 C216 Series Chipset LPC Controller  
1e54 7 Series Chipset Family  
LPC Controller  
1e55 QM77 Express Chipset LPC Controller  
1e56 QS77 Express Chipset LPC Controller  
1e57 HM77 Express Chipset LPC Controller  
1e58 UM77 Express Chipset LPC Controller  
1e59 HM76 Express Chipset LPC Controller  
1043 1477 N56VZ  
1043 1517 Zenbook Prime UX31A  
10cf 16e0 LIFEBOOK E752

1e5a 7 Series Chipset Family LPC Controller  
1e5b UM77 Express Chipset LPC Controller  
1e5c 7 Series Chipset Family LPC Controller  
1e5d HM75 Express Chipset LPC Controller  
144d c652 NP300E5C series laptop  
1e5e HM70 Express Chipset LPC Controller  
1043 108d VivoBook X202EV  
1e5f NM70 Express Chipset LPC Controller  
1f00 Atom processor C2000 SoC Transaction Router  
1f01 Atom processor C2000 SoC Transaction Router  
1f02 Atom processor C2000 SoC Transaction Router  
1f03 Atom processor C2000 SoC Transaction Router  
1f04 Atom processor C2000 SoC Transaction Router  
1f05 Atom processor C2000 SoC Transaction Router  
1f06 Atom processor C2000 SoC Transaction Router  
1f07  
Atom processor C2000 SoC Transaction Router  
1f08 Atom processor C2000 SoC Transaction Router  
1f09 Atom processor C2000 SoC Transaction Router  
1f0a Atom processor C2000 SoC Transaction Router  
1f0b Atom processor C2000 SoC Transaction Router  
1f0c Atom processor C2000 SoC Transaction Router  
1f0d Atom processor C2000 SoC Transaction Router  
1f0e Atom processor C2000 SoC Transaction Router  
1f0f Atom processor C2000 SoC Transaction Router  
1f10 Atom processor C2000 PCIe Root Port 1  
1f11 Atom processor C2000 PCIe Root Port 2  
1f12 Atom processor C2000 PCIe Root Port 3  
1f13 Atom processor C2000 PCIe Root Port 4  
1f14 Atom processor C2000 RAS  
1f15 Atom processor C2000 SMBus 2.0  
1f16 Atom processor C2000 RCEC  
1f18 Atom processor C2000 QAT  
1f19 Atom processor C2000 QAT  
1f20 Atom processor C2000 4-Port IDE SATA2 Controller  
1f21 Atom processor C2000 4-Port IDE SATA2 Controller  
1f22 Atom processor C2000 AHCI SATA2 Controller  
1f23 Atom processor C2000 AHCI SATA2  
Controller  
1f24 Atom processor C2000 RAID SATA2 Controller  
1f25 Atom processor C2000 RAID SATA2 Controller  
1f26 Atom processor C2000 RAID SATA2 Controller  
1f27 Atom processor C2000 RAID SATA2 Controller  
1f2c Atom processor C2000 USB Enhanced Host Controller  
0200 1028 Atom C2338 on Dell 0K8Y0N motherboard  
1f2e Atom processor C2000 RAID SATA2 Controller  
1f2f Atom processor C2000 RAID SATA2 Controller  
1f30 Atom processor C2000 2-Port IDE SATA3 Controller

1f31 Atom processor C2000 2-Port IDE SATA3 Controller  
1f32 Atom processor C2000 AHCI SATA3 Controller  
1f33 Atom processor C2000 AHCI SATA3 Controller  
1f34 Atom processor C2000 RAID SATA3 Controller  
1f35 Atom processor C2000 RAID SATA3 Controller  
1f36 Atom processor C2000 RAID SATA3 Controller  
1f37 Atom processor C2000 RAID SATA3 Controller  
1f38 Atom processor C2000 PCU  
1f39 Atom processor C2000 PCU  
1f3a Atom processor C2000 PCU  
1f3b Atom processor C2000 PCU  
1f3c Atom processor C2000 PCU SMBus  
1f3d  
Atom Processor C2000 PECI SMBus  
1f3e Atom processor C2000 RAID SATA3 Controller  
1f3f Atom processor C2000 RAID SATA3 Controller  
1f40 Ethernet Connection I354 1.0 GbE Backplane  
1028 05f1 Ethernet Connection I354 1.0 GbE Backplane  
1f41 Ethernet Connection I354  
1f42 Atom processor C2000 GbE  
1f44 Atom processor C2000 GbE Virtual Function  
1f45 Ethernet Connection I354 2.5 GbE Backplane  
2014 Sky Lake-E Ubox Registers  
2015 Sky Lake-E Ubox Registers  
2016 Sky Lake-E Ubox Registers  
2018 Sky Lake-E M2PCI Registers  
201a Sky Lake-E Non-Transparent Bridge Registers  
201c Sky Lake-E Non-Transparent Bridge Registers  
201d Volume Management Device NVMe RAID Controller  
2020 Sky Lake-E DMI3 Registers  
15d9 095d X11SPM-TF  
2021 Sky Lake-E CBDMA Registers  
2024 Sky Lake-E MM/Vt-d Configuration Registers  
2025 Sky Lake-E RAS  
2026 Sky Lake-E IOAPIC  
2030 Sky Lake-E PCI Express Root Port A  
2031 Sky Lake-E PCI Express Root Port B  
2032 Sky Lake-E PCI Express Root  
Port C  
2033 Sky Lake-E PCI Express Root Port D  
2034 Sky Lake-E VT-d  
2035 Sky Lake-E RAS Configuration Registers  
2036 Sky Lake-E IOxAPIC Configuration Registers  
2040 Sky Lake-E Integrated Memory Controller  
2041 Sky Lake-E Integrated Memory Controller  
2042 Sky Lake-E Integrated Memory Controller  
2043 Sky Lake-E Integrated Memory Controller  
2044 Sky Lake-E Integrated Memory Controller

2045 Sky Lake-E LM Channel 1  
2046 Sky Lake-E LMS Channel 1  
2047 Sky Lake-E LMDP Channel 1  
2048 Sky Lake-E DECS Channel 2  
2049 Sky Lake-E LM Channel 2  
204a Sky Lake-E LMS Channel 2  
204b Sky Lake-E LMDP Channel 2  
204c Sky Lake-E M3KTI Registers  
204d Sky Lake-E M3KTI Registers  
204e Sky Lake-E M3KTI Registers  
2054 Sky Lake-E CHA Registers  
2055 Sky Lake-E CHA Registers  
2056 Sky Lake-E CHA Registers  
2057 Sky Lake-E CHA Registers  
2058 Sky Lake-E KTI 0  
2059 Sky Lake-E UPI Registers  
2066 Sky Lake-E Integrated Memory Controller  
2068 Sky Lake-E DDRIO Registers  
2069  
Sky Lake-E DDRIO Registers  
206a Sky Lake-E IOxAPIC Configuration Registers  
206e Sky Lake-E DDRIO Registers  
206f Sky Lake-E DDRIO Registers  
2078 Sky Lake-E PCU Registers  
207a Sky Lake-E PCU Registers  
2080 Sky Lake-E PCU Registers  
2081 Sky Lake-E PCU Registers  
2082 Sky Lake-E PCU Registers  
2083 Sky Lake-E PCU Registers  
2084 Sky Lake-E PCU Registers  
2085 Sky Lake-E PCU Registers  
2086 Sky Lake-E PCU Registers  
2088 Sky Lake-E DDRIO Registers  
208d Sky Lake-E CHA Registers  
208e Sky Lake-E CHA Registers  
# Engineering sample GPU  
2240 Larrabee  
2241 Larrabee  
2250 Xeon Phi coprocessor 5100 series  
225c Xeon Phi coprocessor SE10/7120 series  
225d Xeon Phi coprocessor 3120 series  
225e Xeon Phi coprocessor 31S1  
2262 Xeon Phi coprocessor 7220  
2280 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series SoC Transaction Register  
2284 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series High Definition Audio Controller  
2286 Atom/Celeron/Pentium  
Processor x5-E8000/J3xxx/N3xxx Series LPIO1 DMA Controller  
228a Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series LPIO1 HSUART Controller #1

228c Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series LPIO1 HSUART Controller #2  
2292 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx SMBus Controller  
2294 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series MMC Controller  
2295 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series SDIO Controller  
2296 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series SD Controller  
2298 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series Trusted Execution Engine  
229c Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series PCU  
22a3 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series SATA Controller  
22a4 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series SATA AHCI Controller  
22a8 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series Low Power Engine Audio  
22b0 Atom/Celeron/Pentium  
Processor x5-E8000/J3xxx/N3xxx Integrated Graphics Controller  
22b1 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Integrated Graphics Controller  
22b5 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series USB xHCI Controller  
22b8 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series Imaging Unit  
22c0 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series LPIO2 DMA Controller  
22c1 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series LPIO2 I2C Controller #1  
22c2 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series LPIO2 I2C Controller #2  
22c3 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series LPIO2 I2C Controller #3  
22c4 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series LPIO2 I2C Controller #4  
22c5 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series LPIO2 I2C Controller #5  
22c6 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series LPIO2 I2C Controller #6  
22c7 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx  
Series LPIO2 I2C Controller #7  
22c8 Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series PCI Express Port #1  
22ca Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series PCI Express Port #2  
22cc Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series PCI Express Port #3  
22ce Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series PCI Express Port #4  
22dc Atom/Celeron/Pentium Processor x5-E8000/J3xxx/N3xxx Series Power Management Controller  
2310 DH89xxCC LPC Controller  
2323 DH89xxCC 4 Port SATA AHCI Controller  
2330 DH89xxCC SMBus Controller  
2331 DH89xxCC Chap Counter  
2332 DH89xxCC Thermal Subsystem  
2334 DH89xxCC USB2 Enhanced Host Controller #1  
2335 DH89xxCC USB2 Enhanced Host Controller #1  
2342 DH89xxCC PCI Express Root Port #1  
2343 DH89xxCC PCI Express Root Port #1  
2344 DH89xxCC PCI Express Root Port #2  
2345 DH89xxCC PCI Express Root Port #2  
2346 DH89xxCC PCI Express Root Port #3  
2347 DH89xxCC PCI Express Root Port #3  
2348  
DH89xxCC PCI Express Root Port #4  
2349 DH89xxCC PCI Express Root Port #4  
2360 DH89xxCC Watchdog Timer  
2364 DH89xxCC MEI 0  
2365 DH89xxCC MEI 1



2390 DH895XCC Series LPC Controller  
23a1 DH895XCC Series 2-Port SATA Controller [IDE Mode]  
23a3 DH895XCC Series 4-Port SATA Controller [AHCI Mode]  
23a6 DH895XCC Series 2-Port SATA Controller [IDE Mode]  
23b0 DH895XCC Series SMBus Controller  
23b1 DH895XCC Series CHAP Counter  
23b2 DH895XCC Series Thermal Management Controller  
23b4 DH895XCC Series USB2 Enhanced Host Controller #1  
23b5 DH895XCC Series USB2 Enhanced Host Controller #1  
23c2 DH895XCC Series PCI Express Root Port #1  
23c3 DH895XCC Series PCI Express Root Port #1  
23c4 DH895XCC Series PCI Express Root Port #2  
23c5 DH895XCC Series PCI Express Root Port #2  
23c6 CDH895XCC Series PCI Express Root Port #3  
23c7 DH895XCC Series PCI Express Root Port #3  
23c8 DH895XCC Series PCI Express Root Port #4  
23c9 DH895XCC Series PCI Express Root Port #4  
23e0 DH895XCC  
Series Watchdog Timer  
23e4 DH895XCC Series MEI Controller #1  
23e5 DH895XCC Series MEI Controller #2  
2410 82801AA ISA Bridge (LPC)  
2411 82801AA IDE Controller  
2412 82801AA USB Controller  
2413 82801AA SMBus Controller  
2415 82801AA AC'97 Audio Controller  
1028 0095 Precision Workstation 220 Integrated Digital Audio  
1028 00b4 OptiPlex GX110  
110a 0051 Activy 2xx  
11d4 0040 SoundMAX Integrated Digital Audio  
11d4 0048 SoundMAX Integrated Digital Audio  
11d4 5340 SoundMAX Integrated Digital Audio  
1734 1025 Activy 3xx  
1af4 1100 QEMU Virtual Machine  
2416 82801AA AC'97 Modem Controller  
2418 82801AA PCI Bridge  
2420 82801AB ISA Bridge (LPC)  
2421 82801AB IDE Controller  
2422 82801AB USB Controller  
2423 82801AB SMBus Controller  
2425 82801AB AC'97 Audio Controller  
11d4 0040 SoundMAX Integrated Digital Audio  
11d4 0048 SoundMAX Integrated Digital Audio  
2426 82801AB AC'97 Modem Controller  
2428 82801AB PCI Bridge  
2440 82801BA ISA Bridge (LPC)  
8086

5744 S845WD1-E  
2442 82801BA/BAM UHCI USB 1.1 Controller #1  
1014 01c6 Netvista A40/A40p  
1025 1016 Travelmate 612 TX  
1028 00c7 Dimension 8100  
1028 00d8 Precision 530  
1028 010e Optiplex GX240  
103c 126f e-pc 40  
1043 8027 CUSL2-C/TUSL2-C Mainboard  
104d 80df Vaio PCG-FX403  
147b 0505 BL7 motherboard  
147b 0507 TH7II-RAID  
8086 4532 Desktop Board D815EEA2/D815EFV  
8086 4557 D815EGEW Mainboard  
8086 4d44 D850EMV2 motherboard  
8086 5744 S845WD1-E mainboard  
2443 82801BA/BAM SMBus Controller  
1014 01c6 Netvista A40/A40p  
1025 1016 Travelmate 612 TX  
1028 00c7 Dimension 8100  
1028 00d8 Precision 530  
1028 010e Optiplex GX240  
103c 126f e-pc 40  
1043 8027 CUSL2-C/TUSL2-C Mainboard  
104d 80df Vaio PCG-FX403  
147b 0505 BL7 motherboard  
147b 0507 TH7II-RAID  
15d9 3280 Supermicro P4SBE Mainboard  
8086 4532 Desktop Board D815EEA2/D815EFV  
8086 4557 D815EGEW Mainboard  
8086 5744 S845WD1-E mainboard  
2444 82801BA/BAM UHCI USB  
1.1 Controller #2  
1025 1016 Travelmate 612 TX  
1028 00c7 Dimension 8100  
1028 00d8 Precision 530  
1028 010e Optiplex GX240  
103c 126f e-pc 40  
1043 8027 CUSL2-C/TUSL2-C Mainboard  
104d 80df Vaio PCG-FX403  
147b 0505 BL7 motherboard  
147b 0507 TH7II-RAID  
8086 4532 Desktop Board D815EEA2/D815EFV  
8086 5744 S845WD1-E mainboard  
2445 82801BA/BAM AC'97 Audio Controller  
0e11 000b Compaq Deskpro EN Audio  
0e11 0088 Evo D500  
1014 01c6 Netvista A40/A40p

1025 1016 Travelmate 612 TX  
1028 00d8 Precision 530  
103c 126f e-pc 40  
104d 80df Vaio PCG-FX403  
11d4 5340 AD1885 AC97 codec  
1462 3370 STAC9721 AC  
147b 0505 BL7 motherboard  
147b 0507 TH7II-RAID  
8086 4557 D815EGEW Mainboard  
8086 4656 Desktop Board D815EFV  
8086 4d44 D850EMV2 motherboard  
2446 82801BA/BAM AC'97 Modem Controller  
1025 1016 Travelmate 612 TX  
104d 80df Vaio PCG-FX403  
2448 82801 Mobile PCI Bridge  
1028 040a Latitude E6410  
1028 040b Latitude E6510  
103c 0934  
Compaq nw8240 Mobile Workstation  
103c 0944 Compaq nc6220 Notebook PC  
103c 099c NX6110/NC6120  
103c 309f Compaq nx9420 Notebook  
103c 30a3 Compaq nw8440  
103c 30c1 Compaq 6910p  
1043 1017 X58LE  
104d 902d VAIO VGN-NR120E  
105b 0d7c D270S/D250S Motherboard  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
144d c00c P30 notebook  
144d c06a R730 Laptop  
144d c072 Notebook N150P  
1458 5000 GA-D525TUD  
1734 1055 Amilo M1420  
17aa 2013 ThinkPad R60e  
17aa 20ae ThinkPad T61/R61  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
8086 544b Desktop Board D425KT  
e4bf cc47 CCG-RUMBA  
2449 82801BA/BAM/CA/CAM Ethernet Controller  
0e11 0012 EtherExpress PRO/100 VM  
0e11 0091 EtherExpress PRO/100 VE  
1014 01ce EtherExpress PRO/100 VE  
1014 01dc EtherExpress PRO/100 VE  
1014 01eb EtherExpress PRO/100 VE  
1014 01ec EtherExpress PRO/100 VE  
1014 0202 EtherExpress PRO/100 VE  
1014 0205 EtherExpress

PRO/100 VE  
1014 0217 EtherExpress PRO/100 VE  
1014 0234 EtherExpress PRO/100 VE  
1014 023d EtherExpress PRO/100 VE  
1014 0244 EtherExpress PRO/100 VE  
1014 0245 EtherExpress PRO/100 VE  
1014 0265 PRO/100 VE Desktop Connection  
1014 0267 PRO/100 VE Desktop Connection  
1014 026a PRO/100 VE Desktop Connection  
109f 315d EtherExpress PRO/100 VE  
109f 3181 EtherExpress PRO/100 VE  
1179 ff01 PRO/100 VE Network Connection  
1186 7801 EtherExpress PRO/100 VE  
144d 2602 HomePNA 1M CNR  
1af4 1100 QEMU Virtual Machine  
8086 3010 EtherExpress PRO/100 VE  
8086 3011 EtherExpress PRO/100 VM  
8086 3012 82562EH based Phonenumber  
8086 3013 EtherExpress PRO/100 VE  
8086 3014 EtherExpress PRO/100 VM  
8086 3015 82562EH based Phonenumber  
8086 3016 EtherExpress PRO/100 P Mobile Combo  
8086 3017 EtherExpress PRO/100 P Mobile  
8086 3018 EtherExpress PRO/100  
244a 82801BAM IDE U100 Controller  
1025 1016 Travelmate 612TX  
104d 80df Vaio PCG-FX403  
244b 82801BA  
IDE U100 Controller  
1014 01c6 Netvista A40/A40p  
1028 00c7 Dimension 8100  
1028 00d8 Precision 530  
1028 010e Optiplex GX240  
103c 126f e-pc 40  
1043 8027 CUSL2-C/TUSL2-C Mainboard  
147b 0505 BL7 motherboard  
147b 0507 TH7II-RAID  
15d9 3280 Supermicro P4SBE Mainboard  
8086 4532 Desktop Board D815EEA2/D815EFV  
8086 4557 D815EGEW Mainboard  
8086 4d44 D850EMV2 motherboard  
8086 5744 S845WD1-E mainboard  
244c 82801BAM ISA Bridge (LPC)  
244e 82801 PCI Bridge  
1014 0267 NetVista A30p  
1028 020d Inspiron 530  
1028 0211 Optiplex 755  
1028 02da OptiPlex 980

1028 04f7 PowerEdge R320 server  
103c 130a Z600 Workstation  
103c 2a3b Pavilion A1512X  
103c 2a6f Asus IPIBL-LB Motherboard  
103c 31fe ProLiant DL140 G3  
103c 330b ProLiant ML150 G6 Server  
1043 81ec P5B Motherboard  
# same ID possibly also on other ASUS boards  
1043 8277 P5K PRO Motherboard  
1043 844d P8 series motherboard  
1043 8534 ASUS B85-PLUS  
1458 5000 Motherboard  
1462 7345  
MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
1462 7418 Wind PC MS-7418  
15d9 060d C7SIM-Q Motherboard  
15d9 9680 X7DBN Motherboard  
1734 11d6 B75 [Ivy Bridge] chipset on Esprimo P510 D3171 motherboard  
1775 11cc CC11/CL11  
17aa 3070 ThinkCentre M91p  
8086 7270 Server Board S1200BTS  
2450 82801E ISA Bridge (LPC)  
2452 82801E USB Controller  
2453 82801E SMBus Controller  
2459 82801E Ethernet Controller 0  
245b 82801E IDE U100 Controller  
245d 82801E Ethernet Controller 1  
245e 82801E PCI Bridge  
2480 82801CA LPC Interface Controller  
2482 82801CA/CAM USB Controller #1  
0e11 0030 Evo N600c  
1014 0220 ThinkPad A/T/X Series  
104d 80e7 VAIO PCG-GR214EP/GR214MP/GR215MP/GR314MP/GR315MP  
15d9 3480 P4DP6  
8086 1958 vpr Matrix 170B4  
8086 3424 SE7501HG2 Mainboard  
8086 4541 Latitude C640  
2483 82801CA/CAM SMBus Controller  
1014 0220 ThinkPad A/T/X Series  
104d 80e7 VAIO PCG-GR214EP/GR214MP/GR215MP/GR314MP/GR315MP  
15d9 3480 P4DP6  
8086 1958 vpr  
Matrix 170B4  
2484 82801CA/CAM USB Controller #2  
0e11 0030 Evo N600c  
1014 0220 ThinkPad A/T/X Series  
104d 80e7 VAIO PCG-GR214EP/GR214MP/GR215MP/GR314MP/GR315MP  
15d9 3480 P4DP6

8086 1958 vpr Matrix 170B4  
2485 82801CA/CAM AC'97 Audio Controller  
1013 5959 Crystal WMD Audio Codec  
1014 0222 ThinkPad A30/A30p/T23  
1014 0508 ThinkPad T30  
1014 051c ThinkPad A/T/X Series  
1043 1583 L3C (SPDIF)  
1043 1623 L2B (no SPDIF)  
1043 1643 L3F  
104d 80e7 VAIO PCG-GR214EP/GR214MP/GR215MP/GR314MP/GR315MP  
144d c006 vpr Matrix 170B4  
2486 82801CA/CAM AC'97 Modem Controller  
1014 0223 ThinkPad A/T/X Series  
1014 0503 ThinkPad R31  
1014 051a ThinkPad A/T/X Series  
101f 1025 620 Series  
1043 1496 PCtel HSP56 MR  
104d 80e7 VAIO PCG-GR214EP/GR214MP/GR215MP/GR314MP/GR315MP  
134d 4c21 Dell Inspiron 2100 internal modem  
144d 2115 vpr Matrix 170B4 internal modem  
14f1 5421 MD56ORD V.92 MDC Modem  
2487 82801CA/CAM USB Controller #3  
0e11 0030 Evo N600c  
1014  
0220 ThinkPad A/T/X Series  
104d 80e7 VAIO PCG-GR214EP/GR214MP/GR215MP/GR314MP/GR315MP  
15d9 3480 P4DP6  
8086 1958 vpr Matrix 170B4  
248a 82801CAM IDE U100 Controller  
0e11 0030 Evo N600c  
1014 0220 ThinkPad A/T/X Series  
104d 80e7 VAIO PCG-GR214EP/GR214MP/GR215MP/GR314MP/GR315MP  
8086 1958 vpr Matrix 170B4  
8086 4541 Latitude C640  
248b 82801CA Ultra ATA Storage Controller  
15d9 3480 P4DP6  
248c 82801CAM ISA Bridge (LPC)  
24c0 82801DB/DBL (ICH4/ICH4-L) LPC Interface Bridge  
1014 0267 NetVista A30p  
1462 5800 845PE Max (MS-6580)  
24c1 82801DBL (ICH4-L) IDE Controller  
24c2 82801DB/DBL/DBM (ICH4/ICH4-L/ICH4-M) USB UHCI Controller #1  
1014 0267 NetVista A30p  
1014 052d ThinkPad  
1025 005a TravelMate 290  
1025 0064 Extensa 3000 series laptop: Intel 82801DBM (ICH4-M)  
1028 0126 Optiplex GX260  
1028 0160 Dimension 2400

1028 0163 Latitude D505  
1028 018d Inspiron 700m/710m  
1028 0196 Inspiron 5160  
103c 088c NC8000 laptop  
103c 0890 NC6000  
laptop  
103c 08b0 tc1100 tablet  
1043 8089 P4B533  
1071 8160 MIM2000  
114a 0582 PC8 onboard USB 1.x  
144d c005 X10 Laptop  
144d c00c P30/P35 notebook  
1462 5800 845PE Max (MS-6580)  
1509 2990 Averatec 5110H laptop  
1734 1004 D1451 Mainboard (SCENIC N300, i845GV)  
1734 1055 Amilo M1420  
4c53 1090 Cx9 / Vx9 mainboard  
8086 24c2 Latitude X300  
8086 4541 Latitude D400/D500  
e4bf 0cc9 CC9-SAMBA  
e4bf 0cd2 CD2-BEBOP  
24c3 82801DB/DBL/DBM (ICH4/ICH4-L/ICH4-M) SMBus Controller  
1014 0267 NetVista A30p  
1014 052d ThinkPad  
1025 005a TravelMate 290  
1025 0064 Extensa 3000 series laptop: Intel 82801DBM (ICH4-M)  
1028 0126 Optiplex GX260  
1028 014f Latitude X300  
1028 0160 Dimension 2400  
1028 018d Inspiron 700m/710m  
103c 088c NC8000 laptop  
103c 0890 NC6000 laptop  
103c 08b0 tc1100 tablet  
1071 8160 MIM2000  
114a 0582 PC8 onboard SMBus  
144d c005 X10 Laptop  
144d c00c P30/P35 notebook  
1458 24c2 GA-8PE667 Ultra  
1462 5800 845PE  
Max (MS-6580)  
1734 1004 D1451 Mainboard (SCENIC N300, i845GV)  
1734 1055 Amilo M1420  
4c53 1090 Cx9 / Vx9 mainboard  
e4bf 0cc9 CC9-SAMBA  
e4bf 0cd2 CD2-BEBOP  
24c4 82801DB/DBL/DBM (ICH4/ICH4-L/ICH4-M) USB UHCI Controller #2  
1014 0267 NetVista A30p  
1014 052d ThinkPad

1025 005a TravelMate 290  
1025 0064 Extensa 3000 series laptop: Intel 82801DBM (ICH4-M)  
1028 0126 Optiplex GX260  
1028 0160 Dimension 2400  
1028 0163 Latitude D505  
1028 018d Inspiron 700m/710m  
1028 0196 Inspiron 5160  
103c 088c NC8000 laptop  
103c 0890 NC6000 laptop  
103c 08b0 tc1100 tablet  
1043 8089 P4B533  
1071 8160 MIM2000  
144d c00c P30/P35 notebook  
1462 5800 845PE Max (MS-6580)  
1509 2990 Averatec 5110H  
1734 1004 D1451 Mainboard (SCENIC N300, i845GV)  
4c53 1090 Cx9 / Vx9 mainboard  
8086 24c2 Latitude X300  
8086 4541 Latitude D400/D500  
e4bf 0cc9 CC9-SAMBA  
e4bf 0cd2 CD2-BEBOP  
24c5 82801DB/DBL/DBM (ICH4/ICH4-L/ICH4-M) AC'97 Audio Controller  
0e11 00b8  
Analog Devices Inc. codec [SoundMAX]  
1014 0267 NetVista A30p  
1014 0537 ThinkPad T4x Series  
1014 055f Thinkpad R50e model 1634  
1025 005a TravelMate 290  
1025 0064 Extensa 3000 series laptop: Intel 82801DBM (ICH4-M)  
1028 0139 Latitude D400  
1028 014f Latitude X300  
1028 0152 Latitude D500  
1028 0160 Dimension 2400  
1028 0163 Latitude D505  
1028 018d Inspiron 700m/710m [SigmaTel STAC9750,51]  
1028 0196 Inspiron 5160  
103c 088c NC8000 laptop  
103c 0890 NC6000 laptop  
103c 08b0 tc1100 tablet  
1043 1713 M2400N/M6800N laptop  
1043 80b0 P4B533  
1071 8160 MIM2000  
1179 0201 Toshiba Tecra M1  
144d c005 X10 Laptop  
144d c00c P30/P35 notebook  
1458 a002 GA-8PE667 Ultra  
1462 5800 845PE Max (MS-6580)  
1734 1005 D1451 (SCENIC N300, i845GV) Sigmatel STAC9750T



1734 1055 Amilo M1420  
24c6 82801DB/DBL/DBM (ICH4/ICH4-L/ICH4-M) AC'97 Modem Controller  
1014 0524 ThinkPad T4x Series  
1014 0525 ThinkPad  
1014 0559 ThinkPad R50e  
1025 003c  
Aspire 2001WLCi (Compal CL50 motherboard) implementation  
1025 005a TravelMate 290  
1025 0064 Extensa 3000 series laptop: Intel 82801DBM (ICH4-M)  
1028 0196 Inspiron 5160  
103c 088c NC8000 laptop  
103c 0890 NC6000 laptop  
103c 08b0 tc1100 tablet  
1043 1716 M2400N laptop  
1043 1826 M6800N  
1071 8160 MIM2000  
134d 4c21 Latitude D500  
144d 2115 X10 Laptop  
144d c00c P30/P35 notebook  
# Conexant HSF Softmodem (CXT22)  
14f1 5422 D480 MDC V.9x Modem  
24c7 82801DB/DBL/DBM (ICH4/ICH4-L/ICH4-M) USB UHCI Controller #3  
1014 0267 NetVista A30p  
1014 052d ThinkPad  
1025 005a TravelMate 290  
1025 0064 Extensa 3000 series laptop: Intel 82801DBM (ICH4-M)  
1028 0126 Optiplex GX260  
1028 0160 Dimension 2400  
1028 0163 Latitude D505  
1028 018d Inspiron 700m/710m  
1028 0196 Inspiron 5160  
103c 088c NC8000 laptop  
103c 0890 NC6000 laptop  
103c 08b0 tc1100 tablet  
1043 8089 P4B533  
1071 8160 MIM2000  
144d c00c P30/P35 notebook  
1462 5800 845PE Max (MS-6580)  
1509  
2990 Averatec 5110H  
1734 1004 D1451 Mainboard (SCENIC N300, i845GV)  
4c53 1090 Cx9 / Vx9 mainboard  
8086 24c2 Latitude X300  
8086 4541 Latitude D400/D500  
e4bf 0cc9 CC9-SAMBA  
e4bf 0cd2 CD2-BEBOP  
24ca 82801DBM (ICH4-M) IDE Controller  
1014 052d ThinkPad

1025 005a TravelMate 290  
1025 0064 Extensa 3000 series laptop: Intel 82801DBM (ICH4-M)  
1028 014f Latitude X300  
1028 0163 Latitude D505  
1028 018d Inspiron 700m/710m  
1028 0196 Inspiron 5160  
103c 088c NC8000 laptop  
103c 0890 NC6000 laptop  
103c 08b0 tc1100 tablet  
1071 8160 MIM2000  
144d c005 X10 Laptop  
144d c00c P30/P35 notebook  
1734 1055 Amilo M1420  
8086 4541 Latitude D400/D500  
24cb 82801DB (ICH4) IDE Controller  
1014 0267 NetVista A30p  
1028 0126 Optiplex GX260  
1028 0160 Dimension 2400  
1043 8089 P4B533  
114a 0582 PC8 onboard IDE  
1458 24c2 GA-8PE667 Ultra  
1462 5800 845PE Max (MS-6580)  
1734 1004 D1451 Mainboard (SCENIC N300, i845GV)  
4c53 1090  
Cx9 / Vx9 mainboard  
e4bf 0cc9 CC9-SAMBA  
e4bf 0cd2 CD2-BEBOP  
24cc 82801DBM (ICH4-M) LPC Interface Bridge  
144d c00c P30 notebook  
1734 1055 Amilo M1420  
24cd 82801DB/DBM (ICH4/ICH4-M) USB2 EHCI Controller  
1014 0267 NetVista A30p  
1014 052e ThinkPad  
1025 005a TravelMate 290  
1025 0064 Extensa 3000 series laptop: Intel 82801DBM (ICH4-M)  
1028 011d Latitude D600  
1028 0126 Optiplex GX260  
1028 0139 Latitude D400  
1028 0152 Latitude D500  
1028 0160 Dimension 2400  
1028 0163 Latitude D505  
1028 018d Inspiron 700m/710m  
1028 0196 Inspiron 5160  
103c 088c NC8000 laptop  
103c 0890 NC6000 laptop  
103c 08b0 tc1100 tablet  
1043 8089 P4B533  
1071 8160 MIM2000

114a 0582 PC8 onboard USB 2.0  
1179 ff00 Satellite 2430  
144d c005 X10 Laptop  
144d c00c P30/P35 notebook  
1462 3981 845PE Max (MS-6580)  
1509 1968 Averatec 5110H  
1734 1004 D1451 Mainboard (SCENIC N300, i845GV)  
1734 1055 Amilo M1420  
1af4 1100 QEMU Virtual Machine  
4c53 1090  
Cx9 / Vx9 mainboard  
8086 24c2 Latitude X300  
e4bf 0cc9 CC9-SAMBA  
e4bf 0cd2 CD2-BEBOP  
24d0 82801EB/ER (ICH5/ICH5R) LPC Interface Bridge  
24d1 82801EB (ICH5) SATA Controller  
1028 0168 Precision Workstation 670 Mainboard  
1028 0169 Precision 470  
1028 019a PowerEdge SC1425  
103c 12bc d530 CMT (DG746A)  
103c 3208 ProLiant DL140 G2  
1043 80a6 P4P800 series motherboard  
1458 24d1 GA-8IPE1000 Pro2 motherboard (865PE)  
1462 7280 865PE Neo2 (MS-6728)  
1462 7650 Hetis 865GV-E (MS-7065)  
1565 5200 P4TSV Motherboard (865G)  
15d9 4580 P4SCE Mainboard  
8086 3427 S875WP1-E mainboard  
8086 4246 Desktop Board D865GBF  
8086 4c43 Desktop Board D865GLC  
8086 524c D865PERL mainboard  
24d2 82801EB/ER (ICH5/ICH5R) USB UHCI Controller #1  
1014 0287 ThinkCentre S50  
1014 02dd eServer xSeries server mainboard  
1014 02ed eServer xSeries server mainboard  
1028 0168 Precision Workstation 670 Mainboard  
1028 0169 Precision 470  
1028 016c PowerEdge 1850 onboard  
UHCI  
1028 016d PowerEdge 2850 onboard UHCI  
1028 0170 PowerEdge 6850 onboard UHCI  
1028 0183 PowerEdge 1800  
1028 019a PowerEdge SC1425  
103c 006a NX9500  
103c 12bc d530 CMT (DG746A)  
103c 3208 ProLiant DL140 G2  
1043 80a6 P4P800/P5P800 series motherboard  
1458 24d2 GA-8IPE1000/8KNXP motherboard

1462 7280 865PE Neo2 (MS-6728)  
1565 3101 P4TSV Motherboard (865G)  
15d9 4580 P4SCE Mainboard  
1734 101c PRIMERGY RX/TX series onboard UHCI  
8086 3427 S875WP1-E mainboard  
8086 4246 Desktop Board D865GBF  
8086 4c43 Desktop Board D865GLC  
8086 524c D865PERL mainboard  
24d3 82801EB/ER (ICH5/ICH5R) SMBus Controller  
1014 0287 ThinkCentre S50  
1014 02dd eServer xSeries server mainboard  
1014 02ed eServer xSeries server mainboard  
1028 0156 Precision 360  
1028 0168 Precision Workstation 670 Mainboard  
1028 0169 Precision 470  
103c 12bc d330 uT  
103c 3208 ProLiant DL140 G2  
1043 80a6 P4P800/P5P800 series motherboard  
1458 24d2 GA-8IPE1000  
Pro2 motherboard (865PE)  
1462 7280 865PE Neo2 (MS-6728)  
1462 7650 Hetis 865GV-E (MS-7065)  
1565 3101 P4TSV Motherboard (865G)  
15d9 4580 P4SCE Mainboard  
1734 101c PRIMERGY RX/TX S2 series SMBus  
8086 3427 S875WP1-E mainboard  
8086 4246 Desktop Board D865GBF  
8086 4c43 Desktop Board D865GLC  
8086 524c D865PERL mainboard  
24d4 82801EB/ER (ICH5/ICH5R) USB UHCI Controller #2  
1014 0287 ThinkCentre S50  
1014 02dd eServer xSeries server mainboard  
1014 02ed eServer xSeries server mainboard  
1028 0168 Precision Workstation 670 Mainboard  
1028 0169 Precision 470  
1028 016c PowerEdge 1850 onboard UHCI  
1028 016d PowerEdge 2850 onboard UHCI  
1028 0170 PowerEdge 6850 onboard UHCI  
1028 0183 PowerEdge 1800  
1028 019a PowerEdge SC1425  
103c 006a NX9500  
103c 12bc d530 CMT (DG746A)  
103c 3208 ProLiant DL140 G2  
1043 80a6 P4P800/P5P800 series motherboard  
1458 24d2 GA-8IPE1000 Pro2 motherboard (865PE)  
1462 7280 865PE Neo2 (MS-6728)  
1462 7650 Hetis

865GV-E (MS-7065)  
1565 3101 P4TSV Motherboard (865G)  
15d9 4580 P4SCE Mainboard  
1734 101c PRIMERGY RX/TX S2 series onboard UHCI  
8086 3427 S875WP1-E mainboard  
8086 4246 Desktop Board D865GBF  
8086 4c43 Desktop Board D865GLC  
8086 524c D865PERL mainboard  
24d5 82801EB/ER (ICH5/ICH5R) AC'97 Audio Controller  
100a 147b Abit IS7-E motherboard  
1014 0287 ThinkCentre S50  
1028 0168 Precision Workstation 670 Mainboard  
1028 0169 Precision 470  
103c 006a NX9500  
103c 12bc d330 uT  
1043 80f3 P4P800 series motherboard  
1043 810f P5P800-MX Mainboard  
1458 a002 GA-8IPE1000/8KNXP motherboard  
1462 0080 865PE Neo2-V (MS-6788) Mainboard  
1462 7280 865PE Neo2 (MS-6728)  
1462 7650 Hetis 865GV-E (MS-7065)  
8086 a000 D865PERL mainboard  
8086 e000 D865PERL mainboard  
8086 e001 Desktop Board D865GBF  
8086 e002 SoundMax Integrated Digital Audio  
24d6 82801EB/ER (ICH5/ICH5R) AC'97 Modem Controller  
103c 006a NX9500  
24d7 82801EB/ER (ICH5/ICH5R) USB UHCI  
Controller #3  
1014 0287 ThinkCentre S50  
1014 02ed xSeries server mainboard  
1028 0168 Precision Workstation 670 Mainboard  
1028 0169 Precision 470  
1028 016c PowerEdge 1850 onboard UHCI  
1028 016d PowerEdge 2850 onboard UHCI  
1028 0170 PowerEdge 6850 onboard UHCI  
1028 0183 PowerEdge 1800  
103c 006a NX9500  
103c 12bc d530 CMT (DG746A)  
1043 80a6 P4P800/P5P800 series motherboard  
1458 24d2 GA-8IPE1000 Pro2 motherboard (865PE)  
1462 7280 865PE Neo2 (MS-6728)  
1462 7650 Hetis 865GV-E (MS-7065)  
1565 3101 P4TSV Motherboard (865G)  
15d9 4580 P4SCE Mainboard  
1734 101c PRIMERGY RX/TX S2 series onboard UHCI  
8086 3427 S875WP1-E mainboard  
8086 4246 Desktop Board D865GBF

8086 4c43 Desktop Board D865GLC  
8086 524c D865PERL mainboard  
24db 82801EB/ER (ICH5/ICH5R) IDE Controller  
1014 0287 ThinkCentre S50  
1014 02dd eServer xSeries server mainboard  
1014 02ed eServer xSeries server mainboard  
1028 0168 Precision Workstation 670 Mainboard  
1028  
0169 Precision 470  
1028 016c PowerEdge 1850 IDE Controller  
1028 016d PowerEdge 2850 IDE Controller  
1028 0170 PowerEdge 6850 IDE Controller  
1028 019a PowerEdge SC1425  
103c 006a NX9500  
103c 12bc d530 CMT (DG746A)  
1043 80a6 P4P800/P5P800 series motherboard  
1458 24d2 GA-8IPE1000 Pro2 motherboard (865PE)  
1462 7280 865PE Neo2 (MS-6728)  
1462 7580 MSI 875P  
1462 7650 Hetis 865GV-E (MS-7065)  
1565 3101 P4TSV Motherboard (865G)  
15d9 4580 P4SCE Mainboard  
1734 101c PRIMERGY RX/TX S2 series onboard IDE  
8086 24db P4C800 Mainboard  
8086 3427 S875WP1-E mainboard  
8086 4246 Desktop Board D865GBF  
8086 4c43 Desktop Board D865GLC  
8086 524c D865PERL mainboard  
24dc 82801EB (ICH5) LPC Interface Bridge  
24dd 82801EB/ER (ICH5/ICH5R) USB2 EHCI Controller  
1014 0287 ThinkCentre S50  
1014 02dd eServer xSeries server mainboard  
1014 02ed eServer xSeries server mainboard  
1028 0168 Precision Workstation 670 Mainboard  
1028 0169 Precision 470  
1028  
016c PowerEdge 1850 onboard EHCI  
1028 016d PowerEdge 2850 onboard EHCI  
1028 0170 PowerEdge 6850 onboard EHCI  
1028 0183 PowerEdge 1800  
1028 019a PowerEdge SC1425  
103c 006a NX9500  
103c 12bc d530 CMT (DG746A)  
103c 3208 ProLiant DL140 G2  
1043 80a6 P4P800/P5P800 series motherboard  
1458 5006 GA-8IPE1000 Pro2 motherboard (865PE)  
1462 7280 865PE Neo2 (MS-6728)  
1462 7650 Hetis 865GV-E (MS-7065)

8086 3427 S875WP1-E mainboard  
8086 4246 Desktop Board D865GBF  
8086 4c43 Desktop Board D865GLC  
8086 524c D865PERL mainboard  
24de 82801EB/ER (ICH5/ICH5R) USB UHCI Controller #4  
1014 0287 ThinkCentre S50  
1014 02ed xSeries server mainboard  
1028 0168 Precision Workstation 670 Mainboard  
1028 0169 Precision 470  
1043 80a6 P4P800/P5P800 series motherboard  
1458 24d2 GA-8IPE1000 Pro2 motherboard (865PE)  
1462 7280 865PE Neo2 (MS-6728)  
1462 7650 Hetis 865GV-E (MS-7065)  
1565 3101 P4TSV Motherboard (865G)  
15d9 4580 P4SCE Mainboard  
1734  
101c PRIMERGY RX/TX S2 series onboard UHCI  
8086 3427 S875WP1-E mainboard  
8086 4246 Desktop Board D865GBF  
8086 4c43 Desktop Board D865GLC  
8086 524c D865PERL mainboard  
24df 82801ER (ICH5R) SATA Controller  
1028 0168 Precision Workstation 670 Mainboard  
24f0 Omni-Path HFI Silicon 100 Series [discrete]  
10a9 802e Omni-path HFI 100 Series, 1-port A-board  
10a9 802f Omni-path HFI 100 Series, 2-port A-board  
10a9 8030 Omni-path HFI 100 Series, 1-port B-board  
10a9 8031 Omni-path HFI 100 Series, 2-port B-board  
1590 00e7 100Gb 1-port OP101 QSFP28 x8 PCIe Gen3 with Intel Omni-Path Adapter  
1590 00e8 100Gb 1-port OP101 QSFP28 x16 PCIe Gen3 with Intel Omni-Path Adapter  
1590 021c Apollo 100Gb 1-port Intel Omni-Path Architecture 860z Mezzanine FIO Adapter  
15d9 0934 Omni-Path HFI Adapter 100 Series, 1 Port, PCIe x16, SIOM Module  
15d9 099b Omni-path HFI Mezz AOC, 1 Port, PCIe x16.  
1cb8 0001 Omni-Path HFI Adapter 100 Series, 1 Port, PCIe x16, TC4600 QSFP28  
1cb8  
0002 Omni-Path HFI Adapter 100 Series, 1 Port, PCIe x16, TC6600 Fixed Port  
1cb8 0003 Omni-Path HFI Adapter 100 Series, 2 Port, 2 PCIe x16, Earth Simulation QSFP28  
1cb8 0004 Omni-Path HFI Adapter 100 Series, 1 Port, PCIe x16, TC4600E QSFP28  
434e 0001 Omni-Path HFI Adapter 100 Series, 1 Port, OCP 3.0  
434e 2628 Omni-Path HFI Adapter 100 Series, 1 Port, PCIe x16  
8086 2628 Omni-Path HFI Adapter 100 Series, 1 Port, PCIe x16  
8086 2629 Omni-Path HFI Adapter 100 Series, 1 Port, PCIe x8  
8086 262a Omni-Path HFI Adapter 100 Series, 2 Ports, Split PCIe x16  
8086 262d Omni-Path HFI Adapter 100 Series, 1 Port, PCIe x16, IO Module AHWKPTP100HF  
24f1 Omni-Path HFI Silicon 100 Series [integrated]  
24f3 Wireless 8260  
8086 0010 Dual Band Wireless-AC 8260 [Snow Field Peak AC]  
8086 1010 Dual Band Wireless-AC 8260

24f4 Wireless 8260  
8086 0030 Dual Band Wireless-AC 8260 [Snow Field Peak AC]  
24fb Dual Band Wireless-AC 3168NGW [Stone Peak]  
24fd Wireless 8265 / 8275  
8086  
0010 Dual Band Wireless-AC 8265 [Windstorm Peak]  
8086 0150 Dual Band Wireless-AC 8265  
8086 1010 Dual Band Wireless-AC 8265  
8086 1130 Dual Band Wireless-AC 8265  
2500 82820 820 (Camino) Chipset Host Bridge (MCH)  
1028 0095 Precision Workstation 220 Chipset  
1043 801c P3C-2000 system chipset  
2501 82820 820 (Camino) Chipset Host Bridge (MCH)  
1043 801c P3C-2000 system chipset  
250b 82820 820 (Camino) Chipset Host Bridge  
250f 82820 820 (Camino) Chipset AGP Bridge  
2520 82805AA MTH Memory Translator Hub  
2521 82804AA MRH-S Memory Repeater Hub for SDRAM  
2522 NVMe Optane Memory Series  
8086 3806 Optane Memory 16GB  
8086 3810 Optane Memory M10 16GB  
2525 Optane NVME SSD P1600X Series  
2526 Wi-Fi 5(802.11ac) Wireless-AC 9x6x [Thunder Peak]  
8086 0014 Dual Band Wi-Fi 5 Wireless-AC 9260 160MHz 2x2  
8086 0210 Dual Band Wi-Fi 5 Wireless-AC 9260 80MHz 2x2  
8086 0214 Dual Band Wi-Fi 5 Wireless-AC 9260 80MHz 2x2  
8086 0230 Dual Band Wi-Fi 5 Wireless-AC 9560  
80MHz 2x2  
8086 0234 Dual Band Wi-Fi 5 Wireless-AC 9560 80MHz 2x2  
8086 0238 Dual Band Wi-Fi 5 Wireless-AC 9560 80MHz 2x2  
8086 023c Dual Band Wi-Fi 5 Wireless-AC 9560 80MHz 2x2  
8086 0260 Dual Band Wi-Fi 5 Wireless-AC 9461 80MHz 1x1  
8086 0264 Dual Band Wi-Fi 5 Wireless-AC 9461 80MHz 1x1  
8086 02a0 Dual Band Wi-Fi 5 Wireless-AC 9462 80MHz 1x1  
8086 02a4 Dual Band Wi-Fi 5 Wireless-AC 9462 80MHz 1x1  
2530 82850 850 (Tehama) Chipset Host Bridge (MCH)  
1028 00c7 Dimension 8100  
147b 0507 TH7II-RAID  
2531 82860 860 (Wombat) Chipset Host Bridge (MCH)  
1028 00d8 Precision 530  
2532 82850 850 (Tehama) Chipset AGP Bridge  
2533 82860 860 (Wombat) Chipset AGP Bridge  
2534 82860 860 (Wombat) Chipset PCI Bridge  
2540 E7500 Memory Controller Hub  
15d9 3480 P4DP6  
2541 E7500/E7501 Host RASUM Controller  
15d9 3480 P4DP6  
4c53 1090 Cx9 / Vx9 mainboard



8086 3424 SE7501HG2 Mainboard  
2543 E7500/E7501 Hub Interface B PCI-to-PCI Bridge  
2544 E7500/E7501 Hub Interface  
B RASUM Controller  
4c53 1090 Cx9 / Vx9 mainboard  
2545 E7500/E7501 Hub Interface C PCI-to-PCI Bridge  
2546 E7500/E7501 Hub Interface C RASUM Controller  
2547 E7500/E7501 Hub Interface D PCI-to-PCI Bridge  
2548 E7500/E7501 Hub Interface D RASUM Controller  
254c E7501 Memory Controller Hub  
4c53 1090 Cx9 / Vx9 mainboard  
8086 3424 SE7501HG2 Mainboard  
2550 E7505 Memory Controller Hub  
2551 E7505/E7205 Series RAS Controller  
2552 E7505/E7205 PCI-to-AGP Bridge  
2553 E7505 Hub Interface B PCI-to-PCI Bridge  
2554 E7505 Hub Interface B PCI-to-PCI Bridge RAS Controller  
255d E7205 Memory Controller Hub  
2560 82845G/GL[Brookdale-G]/GE/PE DRAM Controller/Host-Hub Interface  
1028 0126 Optiplex GX260  
1458 2560 GA-8PE667 Ultra  
1462 5800 845PE Max (MS-6580)  
2561 82845G/GL[Brookdale-G]/GE/PE Host-to-AGP Bridge  
2562 82845G/GL[Brookdale-G]/GE Chipset Integrated Graphics Device  
0e11 00b9 Evo D510 SFF  
1014 0267 NetVista A30p  
1028 0160 Dimension 2400  
1734 1003  
D1521 Mainboard (Fujitsu-Siemens)  
1734 1004 D1451 Mainboard (SCENIC N300, i845GV)  
2570 82865G/PE/P DRAM Controller/Host-Hub Interface  
103c 006a NX9500  
103c 12bc d330 uT  
1043 80f2 P4P800/P5P800 series motherboard  
1458 2570 GA-8IPE1000 Pro2 motherboard (865PE)  
2571 82865G/PE/P AGP Bridge  
2572 82865G Integrated Graphics Controller  
1014 0287 ThinkCentre S50  
1028 019d Dimension 3000  
103c 12bc D530 sff(dc578av)  
1043 80a5 P5P800-MX Mainboard  
1462 7650 Hetis 865GV-E (MS-7065)  
1734 101b Fujitsu-Siemens Scenic E300 i865GV  
8086 4246 Desktop Board D865GBF  
8086 4c43 Desktop Board D865GLC  
2573 82865G/PE/P PCI to CSA Bridge  
2576 82865G/PE/P Processor to I/O Memory Interface  
2578 82875P/E7210 Memory Controller Hub

1458 2578 GA-8KNXP motherboard (875P)  
1462 7580 MS-6758 (875P Neo)  
15d9 4580 P4SCE Motherboard  
2579 82875P Processor to AGP Controller  
257b 82875P/E7210 Processor to PCI to CSA Bridge  
257e 82875P/E7210 Processor to I/O Memory  
Interface  
2580 82915G/P/GV/GL/PL/910GL Memory Controller Hub  
1458 2580 GA-8I915ME-G Mainboard  
1462 7028 915P/G Neo2  
1734 105b Scenic W620  
2581 82915G/P/GV/GL/PL/910GL PCI Express Root Port  
2582 82915G/GV/910GL Integrated Graphics Controller  
1028 1079 Optiplex GX280  
103c 3006 DC7100 SFF(DX878AV)  
1043 2582 P5GD1-VW Mainboard  
1458 2582 GA-8I915ME-G Mainboard  
1734 105b Scenic W620  
1849 2582 ASRock P4Dual-915GL  
2584 82925X/XE Memory Controller Hub  
1028 0177 Dimension 8400  
2585 82925X/XE PCI Express Root Port  
2588 E7220/E7221 Memory Controller Hub  
2589 E7220/E7221 PCI Express Root Port  
258a E7221 Integrated Graphics Controller  
2590 Mobile 915GM/PM/GMS/910GML Express Processor to DRAM Controller  
1014 0575 ThinkPad X41 / Z60t  
1028 0182 Latitude C610  
103c 0934 Compaq nw8240/nx8220  
103c 0944 Compaq nc6220 Notebook PC  
103c 099c NX6110/NC6120  
1043 82d9 Asus Eee PC 900  
104d 81b7 Vaio VGN-S3XP  
a304 81b7 Vaio VGN-S3XP  
e4bf 0ccd  
CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
2591 Mobile 915GM/PM Express PCI Express Root Port  
103c 0934 Compaq nw8240 Mobile Workstation  
2592 Mobile 915GM/GMS/910GML Express Graphics Controller  
1014 0582 ThinkPad X41  
103c 099c NX6110/NC6120  
103c 308a NC6220  
1043 1881 GMA 900 915GM Integrated Graphics  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1

25a1 6300ESB LPC Interface Controller  
25a2 6300ESB PATA Storage Controller  
1734 1073 Primergy Econel 200 D2020 mainboard  
1775 10d0 V5D Single Board Computer IDE  
1775 1100 CR11/VR11 Single Board Computer  
1775 ce90 CE9  
4c53 10b0 CL9 mainboard  
4c53 10e0 PSL09 PrPMC  
25a3 6300ESB SATA Storage Controller  
1734 1073 Primergy Econel 200 D2020 mainboard  
1775 1100 CR11/VR11 Single Board Computer  
1775 ce90 CE9  
4c53 10b0 CL9 mainboard  
4c53 10d0 Telum ASLP10 Processor AMC  
4c53 10e0 PSL09 PrPMC  
25a4 6300ESB SMBus Controller  
1734 1073 Primergy Econel 200 D2020 mainboard  
1775  
10d0 V5D Single Board Computer  
1775 1100 CR11/VR11 Single Board Computer  
1775 ce90 CE9  
4c53 10b0 CL9 mainboard  
4c53 10d0 Telum ASLP10 Processor AMC  
4c53 10e0 PSL09 PrPMC  
25a6 6300ESB AC'97 Audio Controller  
1775 1100 CR11/VR11 Single Board Computer  
1775 ce90 CE9  
4c53 10b0 CL9 mainboard  
25a7 6300ESB AC'97 Modem Controller  
25a9 6300ESB USB Universal Host Controller  
1734 1073 Primergy Econel 200 D2020 mainboard  
1775 10d0 V5D Single Board Computer USB  
1775 1100 CR11/VR11 Single Board Computer  
1775 ce90 CE9  
4c53 10b0 CL9 mainboard  
4c53 10d0 Telum ASLP10 Processor AMC  
4c53 10e0 PSL09 PrPMC  
25aa 6300ESB USB Universal Host Controller  
1734 1073 Primergy Econel 200 D2020 mainboard  
1775 1100 CR11/VR11 Single Board Computer  
1775 ce90 CE9  
4c53 10b0 CL9 mainboard  
4c53 10d0 Telum ASLP10 Processor AMC  
4c53 10e0 PSL09 PrPMC  
25ab 6300ESB Watchdog Timer  
1734 1073 Primergy Econel 200 D2020 mainboard  
1775 10d0 V5D Single

## Board Computer

1775 1100 CR11/VR11 Single Board Computer  
1775 ce90 CE9  
1af4 1100 QEMU Virtual Machine  
4c53 10b0 CL9 mainboard  
4c53 10d0 Telum ASLP10 Processor AMC  
4c53 10e0 PSL09 PrPMC  
25ac 6300ESB I/O Advanced Programmable Interrupt Controller  
1734 1073 Primergy Econel 200 D2020 mainboard  
1775 10d0 V5D Single Board Computer  
1775 1100 CR11/VR11 Single Board Computer  
1775 ce90 CE9  
4c53 10b0 CL9 mainboard  
4c53 10d0 Telum ASLP10 Processor AMC  
4c53 10e0 PSL09 PrPMC  
25ad 6300ESB USB2 Enhanced Host Controller  
1734 1073 Primergy Econel 200 D2020 mainboard  
1775 10d0 V5D Single Board Computer USB 2.0  
1775 1100 CR11/VR11 Single Board Computer  
1775 ce90 CE9  
4c53 10b0 CL9 mainboard  
4c53 10d0 Telum ASLP10 Processor AMC  
4c53 10e0 PSL09 PrPMC  
25ae 6300ESB 64-bit PCI-X Bridge  
25b0 6300ESB SATA RAID Controller  
1775 1100 CR11/VR11 Single Board Computer  
4c53 10d0 Telum ASLP10 Processor AMC  
4c53 10e0 PSL09 PrPMC  
25c0 5000X  
Chipset Memory Controller Hub  
25d0 5000Z Chipset Memory Controller Hub  
25d4 5000V Chipset Memory Controller Hub  
15d9 8680 X7DVL-E-O motherboard  
25d8 5000P Chipset Memory Controller Hub  
103c 31fd ProLiant DL360 G5  
15d9 9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server Board  
25e2 5000 Series Chipset PCI Express x4 Port 2  
25e3 5000 Series Chipset PCI Express x4 Port 3  
25e4 5000 Series Chipset PCI Express x4 Port 4  
25e5 5000 Series Chipset PCI Express x4 Port 5  
25e6 5000 Series Chipset PCI Express x4 Port 6  
25e7 5000 Series Chipset PCI Express x4 Port 7  
25f0 5000 Series Chipset FSB Registers  
1028 01bb PowerEdge 1955 FSB Registers  
103c 31fd ProLiant DL140 G3, DL360 G5  
15d9 8680 X7DVL-E-O motherboard  
15d9 9680 X7DBN Motherboard

8086 3476 S5000PSLSATA Server Board  
25f1 5000 Series Chipset Reserved Registers  
103c 31fd ProLiant DL140 G3, DL360 G5  
15d9 8680 X7DVL-E-O motherboard  
15d9 9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server  
Board  
25f3 5000 Series Chipset Reserved Registers  
103c 31fd ProLiant DL140 G3, DL360 G5  
15d9 8680 X7DVL-E-O motherboard  
15d9 9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server Board  
25f5 5000 Series Chipset FBD Registers  
103c 31fd ProLiant DL140 G3, DL360 G5  
15d9 8680 X7DVL-E-O motherboard  
15d9 9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server Board  
25f6 5000 Series Chipset FBD Registers  
103c 31fd ProLiant DL140 G3, DL360 G5  
15d9 8680 X7DVL-E-O motherboard  
15d9 9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server Board  
25f7 5000 Series Chipset PCI Express x8 Port 2-3  
25f8 5000 Series Chipset PCI Express x8 Port 4-5  
25f9 5000 Series Chipset PCI Express x8 Port 6-7  
25fa 5000X Chipset PCI Express x16 Port 4-7  
2600 E8500/E8501 Hub Interface 1.5  
1028 0170 PowerEdge 6850 Hub Interface  
2601 E8500/E8501 PCI Express x4 Port D  
2602 E8500/E8501 PCI Express x4 Port C0  
2603 E8500/E8501 PCI Express x4 Port C1  
2604 E8500/E8501 PCI  
Express x4 Port B0  
2605 E8500/E8501 PCI Express x4 Port B1  
2606 E8500/E8501 PCI Express x4 Port A0  
2607 E8500/E8501 PCI Express x4 Port A1  
2608 E8500/E8501 PCI Express x8 Port C  
2609 E8500/E8501 PCI Express x8 Port B  
260a E8500/E8501 PCI Express x8 Port A  
260c E8500/E8501 IMI Registers  
2610 E8500/E8501 FSB Registers  
2611 E8500/E8501 Address Mapping Registers  
2612 E8500/E8501 RAS Registers  
2613 E8500/E8501 Reserved Registers  
2614 E8500/E8501 Reserved Registers  
2615 E8500/E8501 Miscellaneous Registers  
2617 E8500/E8501 Reserved Registers  
2618 E8500/E8501 Reserved Registers

2619 E8500/E8501 Reserved Registers  
261a E8500/E8501 Reserved Registers  
261b E8500/E8501 Reserved Registers  
261c E8500/E8501 Reserved Registers  
261d E8500/E8501 Reserved Registers  
261e E8500/E8501 Reserved Registers  
2620 E8500/E8501 eXternal Memory Bridge  
1028 0170 PowerEdge 6850 Memory Bridge  
2621 E8500/E8501 XMB Miscellaneous Registers  
1028 0170 PowerEdge 6850 XMB  
Registers  
2622 E8500/E8501 XMB Memory Interleaving Registers  
1028 0170 PowerEdge 6850 Memory Interleaving Registers  
2623 E8500/E8501 XMB DDR Initialization and Calibration  
1028 0170 PowerEdge 6850 DDR Initialization and Calibration  
2624 E8500/E8501 XMB Reserved Registers  
1028 0170 PowerEdge 6850 Reserved Registers  
2625 E8500/E8501 XMB Reserved Registers  
1028 0170 PowerEdge 6850 Reserved Registers  
2626 E8500/E8501 XMB Reserved Registers  
1028 0170 PowerEdge 6850 Reserved Registers  
2627 E8500/E8501 XMB Reserved Registers  
1028 0170 PowerEdge 6850 Reserved Registers  
2640 82801FB/FR (ICH6/ICH6R) LPC Interface Bridge  
1462 7028 915P/G Neo2  
1734 105c Scenic W620  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
2641 82801FBM (ICH6M) LPC Interface Bridge  
1014 0568 ThinkPad X41  
103c 0934 Compaq nw8240/nx8220  
103c 0944 Compaq nc6220 Notebook PC  
103c 099c NX6110/NC6120  
2642 82801FW/FRW (ICH6W/ICH6RW) LPC Interface Bridge  
2651 82801FB/FW  
(ICH6/ICH6W) SATA Controller  
1028 0179 Optiplex GX280  
1043 2601 P5GD1-VW Mainboard  
1734 105c Scenic W620  
8086 4147 D915GAG Motherboard  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
2652 82801FR/FRW (ICH6R/ICH6RW) SATA Controller  
1028 0177 Dimension 8400  
1462 7028 915P/G Neo2  
2653 82801FBM (ICH6M) SATA Controller

1014 056a ThinkPad X41  
2658 82801FB/FBM/FR/FW/FRW (ICH6 Family) USB UHCI #1  
1014 0565 ThinkPad X41  
1028 0177 Dimension 8400  
1028 0179 Optiplex GX280  
103c 0934 Compaq nw8240/nx8220  
103c 0944 Compaq nc6220 Notebook PC  
103c 099c NX6110/NC6120  
1043 80a6 P5GD1-VW Mainboard  
1458 2558 GA-8I915ME-G Mainboard  
1462 7028 915P/G Neo2  
1734 105c Scenic W620  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
2659 82801FB/FBM/FR/FW/FRW (ICH6 Family) USB UHCI #2  
1014 0565 ThinkPad X41  
1028 0177 Dimension 8400  
1028 0179 Optiplex GX280  
103c 0934 Compaq nw8240/nx8220  
103c 0944 Compaq nc6220  
Notebook PC  
103c 099c NX6110/NC6120  
1043 80a6 P5GD1-VW Mainboard  
1458 2659 GA-8I915ME-G Mainboard  
1462 7028 915P/G Neo2  
1734 105c Scenic W620  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
265a 82801FB/FBM/FR/FW/FRW (ICH6 Family) USB UHCI #3  
1014 0565 ThinkPad X41  
1028 0177 Dimension 8400  
1028 0179 Optiplex GX280  
103c 0934 Compaq nw8240/nx8220  
103c 0944 Compaq nc6220 Notebook PC  
103c 099c NX6110/NC6120  
1043 80a6 P5GD1-VW Mainboard  
1458 265a GA-8I915ME-G Mainboard  
1462 7028 915P/G Neo2  
1734 105c Scenic W620  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
265b 82801FB/FBM/FR/FW/FRW (ICH6 Family) USB UHCI #4  
1014 0565 ThinkPad X41  
1028 0177 Dimension 8400  
1028 0179 Optiplex GX280

103c 099c NX6110/NC6120  
1043 80a6 P5GD1-VW Mainboard  
1458 265a GA-8I915ME-G Mainboard  
1462 7028 915P/G Neo2  
1734 105c Scenic W620  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
265c 82801FB/FBM/FR/FW/FRW  
(ICH6 Family) USB2 EHCI Controller  
1014 0566 ThinkPad X41  
1028 0177 Dimension 8400  
1028 0179 Optiplex GX280  
103c 0934 Compaq nw8240/nx8220  
103c 0944 Compaq nc6220 Notebook PC  
103c 099c NX6110/NC6120  
1043 80a6 P5GD1-VW Mainboard  
1458 5006 GA-8I915ME-G Mainboard  
1462 7028 915P/G Neo2  
1734 105c Scenic W620  
8086 265c Dimension 3100  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
2660 82801FB/FBM/FR/FW/FRW (ICH6 Family) PCI Express Port 1  
103c 0934 Compaq nw8240 Mobile Workstation  
103c 0944 Compaq nc6220 Notebook PC  
103c 099c NX6110/NC6120  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
2662 82801FB/FBM/FR/FW/FRW (ICH6 Family) PCI Express Port 2  
103c 0934 Compaq nw8240 Mobile Workstation  
103c 0944 Compaq nc6220 Notebook PC  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
2664 82801FB/FBM/FR/FW/FRW (ICH6 Family) PCI Express Port 3  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf  
58b1 XB1  
2666 82801FB/FBM/FR/FW/FRW (ICH6 Family) PCI Express Port 4  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
2668 82801FB/FBM/FR/FW/FRW (ICH6 Family) High Definition Audio Controller  
1014 05b7 ThinkPad Z60t



# based on the PTGD1-LA motherboard  
103c 2a09 PufferM-UL8E  
1043 1173 A6VC  
1043 814e P5GD1-VW Mainboard  
1462 7028 915P/G Neo2  
1af4 1100 QEMU Virtual Machine  
266a 82801FB/FBM/FR/FW/FRW (ICH6 Family) SMBus Controller  
1014 056b ThinkPad X41  
1028 0177 Dimension 8400  
1028 0179 Optiplex GX280  
1043 80a6 P5GD1-VW Mainboard  
1458 266a GA-8I915ME-G Mainboard  
1462 7028 915P/G Neo2  
1734 105c Scenic W620  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
266c 82801FB/FBM/FR/FW/FRW (ICH6 Family) LAN Controller  
266d 82801FB/FBM/FR/FW/FRW (ICH6 Family) AC'97 Modem Controller  
1025 006a Conexant AC'97 CoDec (in Acer TravelMate 2410 serie laptop)  
103c 0934 Compaq nw8240/nx8220  
103c 099c NX6110/NC6120  
266e  
82801FB/FBM/FR/FW/FRW (ICH6 Family) AC'97 Audio Controller  
1014 0581 ThinkPad X41 (Analog Devices AD1981B codec)  
1025 006a Realtek ALC 655 codec (in Acer TravelMate 2410 serie laptop)  
1028 0177 Dimension 8400  
1028 0179 Optiplex GX280  
1028 0182 Latitude D610 Laptop  
1028 0187 Precision M70 Laptop  
1028 0188 Inspiron 6000 laptop  
103c 0934 Compaq nw8240/nx8220  
103c 0944 Compaq NC6220  
103c 099c NX6110/NC6120  
103c 3006 DC7100 SFF(DX878AV)  
1458 a002 GA-8I915ME-G Mainboard  
152d 0745 Packard Bell A8550 Laptop  
1734 105a Scenic W620  
266f 82801FB/FBM/FR/FW/FRW (ICH6 Family) IDE Controller  
1028 0177 Dimension 8400  
103c 0934 Compaq nw8240/nx8220  
103c 0944 Compaq nc6220 Notebook PC  
103c 099c NX6110/NC6120  
1043 80a6 P5GD1-VW Mainboard  
1458 266f GA-8I915ME-G Mainboard  
1462 7028 915P/G Neo2  
1734 105c Scenic W620  
e4bf 0ccd CCD-CALYPSO

e4bf 0cd3 CD3-JIVE  
e4bf 58b1 XB1  
2670 631xESB/632xESB/3100 Chipset LPC Interface Controller  
103c  
31fe ProLiant DL140 G3  
15d9 8680 X7DVL-E-O motherboard  
15d9 9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server Board  
2680 631xESB/632xESB/3100 Chipset SATA IDE Controller  
2681 631xESB/632xESB SATA AHCI Controller  
103c 31fe ProLiant DL140 G3  
15d9 8680 X7DVL-E-O motherboard  
15d9 9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server Board  
2682 631xESB/632xESB SATA RAID Controller  
103c 31fe Adaptec Serial ATA HostRAID  
2683 631xESB/632xESB SATA RAID Controller  
2688 631xESB/632xESB/3100 Chipset UHCI USB Controller #1  
1028 01bb PowerEdge 1955 onboard USB  
1028 01f0 PowerEdge R900 onboard USB  
103c 31fe ProLiant DL140 G3, DL360 G5  
15d9 8680 X7DVL-E-O motherboard  
15d9 9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server Board  
2689 631xESB/632xESB/3100 Chipset UHCI USB Controller #2  
1028 01bb PowerEdge 1955 onboard USB  
1028 01f0 PowerEdge R900 onboard USB  
103c 31fe ProLiant DL140 G3, DL360 G5  
15d9 8680 X7DVL-E-O motherboard  
15d9  
9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server Board  
268a 631xESB/632xESB/3100 Chipset UHCI USB Controller #3  
1028 01f0 PowerEdge R900 onboard USB  
103c 31fe ProLiant DL140 G3, DL360 G5  
15d9 8680 X7DVL-E-O motherboard  
15d9 9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server Board  
268b 631xESB/632xESB/3100 Chipset UHCI USB Controller #4  
1028 01f0 PowerEdge R900 onboard USB  
103c 31fe ProLiant DL360 G5  
15d9 8680 X7DVL-E-O motherboard  
8086 3476 S5000PSLSATA Server Board  
268c 631xESB/632xESB/3100 Chipset EHCI USB2 Controller  
1028 01bb PowerEdge 1955 onboard USB  
1028 01f0 PowerEdge R900 onboard USB  
103c 31fe ProLiant DL140 G3, DL360 G5  
15d9 8680 X7DVL-E-O motherboard

15d9 9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server Board  
2690 631xESB/632xESB/3100 Chipset PCI Express Root Port 1  
103c 31fe ProLiant DL140 G3  
15d9 9680 X7DBN Motherboard  
2692 631xESB/632xESB/3100 Chipset PCI Express Root Port 2  
103c  
31fe ProLiant DL140 G3  
2694 631xESB/632xESB/3100 Chipset PCI Express Root Port 3  
2696 631xESB/632xESB/3100 Chipset PCI Express Root Port 4  
2698 631xESB/632xESB AC '97 Audio Controller  
2699 631xESB/632xESB AC '97 Modem Controller  
269a 631xESB/632xESB High Definition Audio Controller  
269b 631xESB/632xESB/3100 Chipset SMBus Controller  
103c 31fe ProLiant DL140 G3  
15d9 8680 X7DVL-E-O motherboard  
15d9 9680 X7DBN Motherboard  
8086 3476 S5000PSLSATA Server Board  
269e 631xESB/632xESB IDE Controller  
103c 31fe ProLiant DL140 G3, DL360 G5  
15d9 8680 X7DVL-E-O motherboard  
15d9 9680 X7DBN Motherboard  
2700 Optane SSD 900P Series  
8086 3900 900P Series [Add-in Card]  
8086 3901 900P Series [2.5" SFF]  
2701 NVMe Datacenter SSD [Optane]  
1028 2000 Express Flash NVMe [Optane] 375GB 2.5" U.2 (P4800X)  
1028 2001 Express Flash NVMe [Optane] 750GB 2.5" U.2 (P4800X)  
1028 2002 Express Flash NVMe [Optane] 750GB AIC (P4800X)  
1028 200a Express Flash NVMe [Optane]  
375GB AIC (P4800X)  
8086 3904 NVMe Datacenter SSD [Optane] x4 AIC (P4800X)  
8086 3905 NVMe Datacenter SSD [Optane] 15mm 2.5" U.2 (P4800X)  
2723 Wi-Fi 6 AX200  
1a56 1654 Killer Wi-Fi 6 AX1650x (AX200NGW)  
8086 0084 Wi-Fi 6 AX200NGW  
2725 Wi-Fi 6E(802.11ax) AX210/AX1675\* 2x2 [Typhoon Peak]  
1a56 1673 Killer AX1675w 160MHz  
1a56 1674 Killer Wi-Fi 6E AX1675x 160MHz  
8086 0020 Wi-Fi 6 AX210 160MHz  
8086 0024 Wi-Fi 6 AX210 160MHz  
8086 0310 Wi-Fi 6 AX210 160MHz  
8086 0510 Wi-Fi 6 AX210 160MHz  
8086 0a10 Wi-Fi 6 AX210 160MHz  
8086 2020 Wi-Fi 6 AX210 160MHz  
8086 4020 Wi-Fi 6 AX210 160MHz  
8086 6020 Wi-Fi 6 AX210 160MHz  
8086 6024 Wi-Fi 6 AX210 160MHz

8086 e020 Wi-Fi 6 AX210 160MHz  
8086 e024 Wi-Fi 6 AX210 160MHz  
272b Wi-Fi 7(802.11be) AX1775\*/AX1790\*/BE20\*/BE401/BE1750\* 2x2  
8086 00f0 BE200 320MHz [Gale Peak]  
8086 00f4 BE200 320MHz [Gale Peak]  
8086 02f4 BE202 160MHz [Misty Peak]  
8086 40f0 BE200 320MHz [Gale Peak]  
8086 42f4 BE202 160MHz [Misty  
Peak]  
8086 e0f4 BE200 320MHz [Gale Peak]  
2770 82945G/GZ/P/PL Memory Controller Hub  
1028 01ad OptiPlex GX620  
103c 2a3b Pavilion A1512X  
1043 817a P5LD2-VM Mainboard  
107b 5048 E4500  
1462 7418 Wind PC MS-7418  
1849 2770 ConRoe1333-D667  
8086 544e DeskTop Board D945GTP  
2771 82945G/GZ/P/PL PCI Express Root Port  
2772 82945G/GZ Integrated Graphics Controller  
103c 2a3b Pavilion A1512X  
1462 7418 Wind PC MS-7418  
1849 2772 ConRoe1333-D667  
8086 544e DeskTop Board D945GTP  
8086 d605 Desktop Board D945GCCR  
2774 82955X Memory Controller Hub  
2775 82955X PCI Express Root Port  
2776 82945G/GZ Integrated Graphics Controller  
2778 E7230/3000/3010 Memory Controller Hub  
1028 01df PowerEdge SC440  
1028 01e6 PowerEdge 860  
2779 E7230/3000/3010 PCI Express Root Port  
277a 82975X/3010 PCI Express Root Port  
277c 82975X Memory Controller Hub  
1043 8178 P5WDG2 WS Professional motherboard  
277d 82975X PCI Express Root Port  
2780 82915G/GV/GL/910GL [Grantsdale]  
Graphics Device  
2782 82915G Integrated Graphics Controller  
1043 2582 P5GD1-VW Mainboard  
1734 105b Scenic W620  
2792 Mobile 915GM/GMS/910GML Express Graphics Controller  
1014 0582 ThinkPad X41  
103c 099c NX6110/NC6120  
103c 308a Compaq nc6220 Notebook PC  
1043 1881 GMA 900 915GM Integrated Graphics  
e4bf 0ccd CCD-CALYPSO  
e4bf 0cd3 CD3-JIVE

e4bf 58b1 XB1  
27a0 Mobile 945GM/PM/GMS, 943/940GML and 945GT Express Memory Controller Hub  
1025 006c 9814 WKMI  
1028 01d7 XPS M1210  
103c 309f Compaq nx9420 Notebook  
103c 30a1 NC2400  
103c 30a3 Compaq nw8440  
103c 30d5 530 Laptop  
1043 1237 A6J-Q008  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
17aa 2015 ThinkPad T60  
17aa 2017 ThinkPad R60/T60/X60 series  
27a1 Mobile 945GM/PM/GMS, 943/940GML and 945GT Express PCI Express Root Port  
103c 309f Compaq nx9420 Notebook  
103c 30a3 Compaq nw8440  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
27a2 Mobile 945GM/GMS, 943/940GML Express Integrated  
Graphics Controller  
103c 30a1 NC2400  
103c 30d5 530 Laptop  
17aa 201a ThinkPad R60/T60/X60 series  
9902 1584 CCE MPL-D10H120F  
27a6 Mobile 945GM/GMS/GME, 943/940GML Express Integrated Graphics Controller  
103c 30a1 NC2400  
103c 30d5 530 Laptop  
1775 11cc CC11/CL11 integrated graphics (secondary)  
17aa 201a ThinkPad R60/T60/X60 series  
27ac Mobile 945GSE Express Memory Controller Hub  
1775 11cc CC11/CL11  
27ad Mobile 945GSE Express PCI Express Root Port  
27ae Mobile 945GSE Express Integrated Graphics Controller  
1775 11cc CC11/CL11 integrated graphics (primary)  
27b0 82801GH (ICH7DH) LPC Interface Bridge  
103c 2a3b Pavilion A1512X  
8086 544e DeskTop Board D945GTP  
27b8 82801GB/GR (ICH7 Family) LPC Interface Bridge  
1028 01e6 PowerEdge 860  
103c 2a8c Compaq 500B Microtower  
1043 8179 P5B-MX/WiFi-AP, P5KPL-VM Motherboard  
107b 5048 E4500  
1462 7418 Wind PC MS-7418  
1775 11cc CC11/CL11  
8086 544e DeskTop Board D945GTP  
27b9 82801GBM (ICH7-M)  
LPC Interface Bridge  
1028 01d7 XPS M1210  
103c 309f Compaq nx9420 Notebook  
103c 30a1 NC2400

103c 30a3 Compaq nw8440  
103c 30d5 530 Laptop  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
10f7 8338 Panasonic CF-Y5 laptop  
17aa 2009 ThinkPad R60/T60/X60 series  
27bc NM10 Family LPC Controller  
1043 83ad Eee PC 1015PX  
105b 0d7c D270S/D250S Motherboard  
144d c072 Notebook N150P  
1458 5001 GA-D525TUD  
8086 4f4d DeskTop Board D510MO  
8086 544b Desktop Board D425KT  
27bd 82801GHM (ICH7-M DH) LPC Interface Bridge  
1025 006c 9814 WKMI  
27c0 NM10/ICH7 Family SATA Controller [IDE mode]  
1028 01ad OptiPlex GX620  
1028 01df PowerEdge SC440  
1028 01e6 PowerEdge 860  
103c 2a8c Compaq 500B Microtower  
1043 8179 P5B-MX/WiFi-AP, P5KPL-VM Motherboard  
107b 5048 E4500  
1462 2310 MSI Hetis 945  
1462 7236 945P Neo3-F Rev. 2.2 motherboard  
1462 7418 Wind PC MS-7418  
1775 11cc CC11/CL11  
8086 544b Desktop Board D425KT  
8086 544e DeskTop Board  
D945GTP  
27c1 NM10/ICH7 Family SATA Controller [AHCI mode]  
1028 01df PowerEdge SC440  
103c 2a3b Pavilion A1512X  
1043 83ad Eee PC 1015PX  
105b 0d7c D270S/D250S Motherboard  
144d c072 Notebook N150P  
1458 b005 GA-D525TUD  
1775 11cc CC11/CL11  
8086 4f4d DeskTop Board D510MO  
8086 5842 DeskTop Board D975XBX  
27c3 82801GR/GDH (ICH7R/ICH7DH) SATA Controller [RAID mode]  
1775 11cc CC11/CL11  
8086 544e DeskTop Board D945GTP  
27c4 82801GBM/GHM (ICH7-M Family) SATA Controller [IDE mode]  
1025 006c 9814 WKMI  
1028 01d7 XPS M1210  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
17aa 200e ThinkPad T60  
27c5 82801GBM/GHM (ICH7-M Family) SATA Controller [AHCI mode]  
103c 309f Compaq nx9420 Notebook

103c 30a3 Compaq nw8440  
103c 30d5 530 Laptop  
17aa 200d ThinkPad R60/T60/X60 series  
27c6 82801GHM (ICH7-M DH) SATA Controller [RAID mode]  
27c8 NM10/ICH7 Family USB UHCI Controller #1  
1025 006c 9814 WKMI  
1028 01ad OptiPlex GX620  
1028 01d7 XPS M1210  
1028  
01df PowerEdge SC440  
1028 01e6 PowerEdge 860  
103c 2a3b Pavilion A1512X  
103c 2a8c Compaq 500B Microtower  
103c 309f Compaq nx9420 Notebook  
103c 30a1 NC2400  
103c 30a3 Compaq nw8440  
103c 30d5 530 Laptop  
1043 1237 A6J-Q008  
1043 8179 P5B-MX/WiFi-AP, P5KPL-VM, P5LD2-VM Mainboard  
1043 83ad Eee PC 1015PX  
105b 0d7c D270S/D250S Motherboard  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
107b 5048 E4500  
144d c072 Notebook N150P  
1458 5004 GA-D525TUD  
1462 7418 Wind PC MS-7418  
1775 11cc CC11/CL11  
17aa 200a ThinkPad R60/T60/X60 series  
8086 4f4d DeskTop Board D510MO  
8086 544b Desktop Board D425KT  
8086 544e DeskTop Board D945GTP  
27c9 NM10/ICH7 Family USB UHCI Controller #2  
1025 006c 9814 WKMI  
1028 01ad OptiPlex GX620  
1028 01d7 XPS M1210  
1028 01df PowerEdge SC440  
1028 01e6 PowerEdge 860  
103c 2a3b Pavilion A1512X  
103c 2a8c Compaq 500B Microtower  
103c 309f Compaq nx9420 Notebook  
103c 30a1 NC2400  
103c 30a3  
Compaq nw8440  
1043 1237 A6J-Q008  
1043 8179 P5B-MX/WiFi-AP, P5KPL-VM, P5LD2-VM Mainboard  
1043 83ad Eee PC 1015PX  
105b 0d7c D270S/D250S Motherboard  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]

107b 5048 E4500  
144d c072 Notebook N150P  
1458 5004 GA-D525TUD  
1462 7418 Wind PC MS-7418  
1775 11cc CC11/CL11  
17aa 200a ThinkPad R60/T60/X60 series  
8086 4f4d DeskTop Board D510MO  
8086 544b Desktop Board D425KT  
8086 544e DeskTop Board D945GTP  
27ca NM10/ICH7 Family USB UHCI Controller #3  
1025 006c 9814 WKMI  
1028 01ad OptiPlex GX620  
1028 01d7 XPS M1210  
1028 01df PowerEdge SC440  
1028 01e6 PowerEdge 860  
103c 2a3b Pavilion A1512X  
103c 2a8c Compaq 500B Microtower  
103c 309f Compaq nx9420 Notebook  
103c 30a1 NC2400  
103c 30a3 Compaq nw8440  
1043 1237 A6J-Q008  
1043 8179 P5B-MX/WiFi-AP, P5KPL-VM, P5LD2-VM Mainboard  
1043 83ad Eee PC 1015PX  
105b 0d7c D270S/D250S Motherboard  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
107b  
5048 E4500  
144d c072 Notebook N150P  
1458 5004 GA-D525TUD  
1462 7418 Wind PC MS-7418  
1775 11cc CC11/CL11  
17aa 200a ThinkPad R60/T60/X60 series  
8086 4f4d DeskTop Board D510MO  
8086 544e DeskTop Board D945GTP  
27cb NM10/ICH7 Family USB UHCI Controller #4  
1025 006c 9814 WKMI  
1028 01ad OptiPlex GX620  
1028 01d7 XPS M1210  
1028 01df PowerEdge SC440  
103c 2a3b Pavilion A1512X  
103c 2a8c Compaq 500B Microtower  
103c 309f Compaq nx9420 Notebook  
103c 30a1 NC2400  
103c 30a3 Compaq nw8440  
1043 1237 A6J-Q008  
1043 8179 P5B-MX/WiFi-AP, P5KPL-VM, P5LD2-VM Mainboard  
1043 83ad Eee PC 1015PX  
105b 0d7c D270S/D250S Motherboard



1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
107b 5048 E4500  
144d c072 Notebook N150P  
1458 5004 GA-D525TUD  
1462 7418 Wind PC MS-7418  
1775 11cc CC11/CL11  
17aa 200a ThinkPad R60/T60/X60 series  
8086 4f4d DeskTop Board D510MO  
8086 544e DeskTop Board D945GTP  
27cc NM10/ICH7 Family USB2 EHCI Controller  
1025  
006c 9814 WKMI  
1028 01ad OptiPlex GX620  
1028 01d7 XPS M1210  
1028 01df PowerEdge SC440  
1028 01e6 PowerEdge 860  
103c 2a3b Pavilion A1512X  
103c 2a8c Compaq 500B Microtower  
103c 309f Compaq nx9420 Notebook  
103c 30a1 NC2400  
103c 30a3 Compaq nw8440  
103c 30d5 530 Laptop  
1043 1237 A6J-Q008  
1043 8179 P5B-MX/WiFi-AP, P5KPL-VM, P5LD2-VM Mainboard  
1043 83ad Eee PC 1015PX  
105b 0d7c D270S/D250S Motherboard  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
144d c072 Notebook N150P  
1458 5006 GA-D525TUD  
1462 7418 Wind PC MS-7418  
1775 11cc CC11/CL11  
17aa 200b ThinkPad R60/T60/X60 series  
8086 4f4d DeskTop Board D510MO  
8086 544b Desktop Board D425KT  
8086 544e DeskTop Board D945GTP  
27d0 NM10/ICH7 Family PCI Express Port 1  
103c 309f Compaq nx9420 Notebook  
103c 30a3 Compaq nw8440  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
144d c072 Notebook N150P  
1458 5001 GA-D525TUD  
1462 7418 Wind PC MS-7418  
1775 11cc  
CC11/CL11  
17aa 2011 ThinkPad R60e  
8086 544b Desktop Board D425KT  
27d2 NM10/ICH7 Family PCI Express Port 2  
103c 309f Compaq nx9420 Notebook

103c 30a3 Compaq nw8440  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
144d c072 Notebook N150P  
1462 7418 Wind PC MS-7418  
1775 11cc CC11/CL11  
17aa 2011 ThinkPad R60e  
8086 544b Desktop Board D425KT  
27d4 NM10/ICH7 Family PCI Express Port 3  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
144d c072 Notebook N150P  
1462 7418 Wind PC MS-7418  
1775 11cc CC11/CL11  
17aa 2011 ThinkPad R60e  
8086 544b Desktop Board D425KT  
27d6 NM10/ICH7 Family PCI Express Port 4  
103c 30a3 Compaq nw8440  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
144d c072 Notebook N150P  
1462 7418 Wind PC MS-7418  
1775 11cc CC11/CL11  
17aa 2011 ThinkPad R60e  
8086 544b Desktop Board D425KT  
27d8 NM10/ICH7 Family High Definition Audio Controller  
1025 006c 9814 WKMI  
1028 01d7 XPS M1210  
103c 2a3b Pavilion A1512X  
103c  
2a8c Compaq 500B Microtower  
103c 309f Compaq nx9420 Notebook  
103c 30a1 NC2400  
103c 30a3 Compaq nw8440  
103c 30d5 530 Laptop  
1043 1123 A6J-Q008  
1043 13c4 G2P  
1043 817f P5LD2-VM Mainboard (Realtek ALC 882 codec)  
1043 8249 P5B-MX/WiFi-AP  
1043 8290 P5KPL-VM Motherboard  
1043 82ea P5KPL-CM Motherboard  
1043 8437 Eee PC 1015PX  
105b 0d7c D270S/D250S Motherboard  
1071 8207 Medion MIM 2240 Notebook PC [MD98100]  
107b 5048 E4500  
10f7 8338 Panasonic CF-Y5 laptop  
1179 ff10 Toshiba Satellite A100-796 audio (Realtek ALC861)  
1179 ff31 AC97 Data Fax SoftModem with SmartCP  
1447 1043 Asus A8JP (Analog Devices AD1986A)  
144d c072 Notebook N150P  
1458 a002 GA-D525TUD (Realtek ALC887)

1458 a102 GA-8I945PG-RH Mainboard  
1462 7418 Wind PC MS-7418  
152d 0753 Softmodem  
1734 10ad Conexant softmodem SmartCP  
17aa 2010 ThinkPad R60/T60/X60 series  
17aa 3802 3000 C200 audio [Realtek ALC861VD]  
8086 1112 DeskTop Board D945GTP  
8086 27d8 DeskTop  
Board D945GTP  
8086 d618 DeskTop Board D510MO  
8384 7680 STAC9221 HD Audio Codec  
27da NM10/ICH7 Family SMBus Controller  
1025 006c 9814 WKMI  
1028 01ad OptiPlex GX620  
1028 01d7 XPS M1210  
1028 01df PowerEdge SC440  
1028 01e6 PowerEdge 860  
103c 2a3b Pavilion A1512X  
103c 2a8c Compaq 500B Microtower  
1043 8179 P5B-MX/WiFi-AP, P5KPL-VM Motherboard  
105b 0d7c D270S/D250S Motherboard  
1071 8209 Medion MIM 2240 Notebook PC [MD98100]  
10f7 8338 Panasonic CF-Y5 laptop  
144d c072 Notebook N150P  
1458 5001 GA-8I945PG-RH/GA-D525TUD Mainboard  
1462 7418 Wind PC MS-7418  
1775 11cc CC11/CL11  
17aa 200f ThinkPad R60/T60/X60 series  
8086 4f4d DeskTop Board D510MO  
8086 544b Desktop Board D425KT  
8086 544e DeskTop Board D945GTP  
8086 5842 DeskTop Board D975XBX  
27dc NM10/ICH7 Family LAN Controller  
103c 2a3b Pavilion A1512X  
8086 308d DeskTop Board D945GTP  
27dd 82801G (ICH7 Family) AC'97 Modem Controller  
27de 82801G (ICH7 Family) AC'97 Audio  
Controller  
1028 01ad OptiPlex GX620  
1462 7267 Realtek ALC883 Audio Controller  
1775 11cc CC11 integrated audio (AD1981BL codec)  
27df 82801G (ICH7 Family) IDE Controller  
1028 01df PowerEdge SC440  
1028 01e6 PowerEdge 860  
103c 2a3b Pavilion A1512X  
103c 2a8c Compaq 500B Microtower  
103c 309f Compaq nx9420 Notebook  
103c 30a1 NC2400

103c 30a3 Compaq nw8440  
103c 30d5 530 Laptop  
1043 1237 A6J-Q008  
1043 8179 P5B-MX/WiFi-AP, P5KPL-VM Motherboard  
107b 5048 E4500  
10f7 8338 Panasonic CF-Y5 laptop  
1462 7418 Wind PC MS-7418  
1775 11cc CC11/CL11  
17aa 200c ThinkPad R60/T60/X60 series  
8086 544e DeskTop Board D945GTP  
27e0 82801GR/GH/GHM (ICH7 Family) PCI Express Port 5  
1775 11cc CC11/CL11  
27e2 82801GR/GH/GHM (ICH7 Family) PCI Express Port 6  
1775 11cc CC11/CL11  
2810 82801HB/HR (ICH8/R) LPC Interface Controller  
1043 81ec P5B  
2811 82801HEM (ICH8M-E) LPC Interface Controller  
103c 30c1 Compaq 6910p  
17aa 20b6 ThinkPad T61/R61  
e4bf  
cc47 CCG-RUMBA  
2812 82801HH (ICH8DH) LPC Interface Controller  
2814 82801HO (ICH8DO) LPC Interface Controller  
2815 82801HM (ICH8M) LPC Interface Controller  
1025 0121 Aspire 5920G  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30cc Pavilion dv6700  
103c 30d9 Presario C700  
1043 1017 X58LE  
104d 9005 Vaio VGN-FZ260E  
104d 902d VAIO VGN-NR120E  
17aa 20a5 ThinkPad R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
2820 82801H (ICH8 Family) 4 port SATA Controller [IDE mode]  
1028 01da OptiPlex 745  
1462 7235 P965 Neo MS-7235 mainboard  
2821 82801HR/HO/HH (ICH8R/DO/DH) 6 port SATA Controller [AHCI mode]  
2822 SATA Controller [RAID mode]  
1028 020d Inspiron 530  
103c 2a6f Asus IPIBL-LB Motherboard  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
2823 sSATA Controller [RAID Mode]  
2824 82801HB (ICH8) 4 port SATA Controller [AHCI mode]  
1043 81ec P5B  
2825

82801HR/HO/HH (ICH8R/DO/DH) 2 port SATA Controller [IDE mode]  
1028 01da OptiPlex 745  
1462 7235 P965 Neo MS-7235 mainboard  
2826 SATA Controller [RAID Mode]  
1d49 0100 Intel RSTe SATA Software RAID  
1d49 0101 Intel RSTe SATA Software RAID  
1d49 0102 Intel RSTe SATA Software RAID  
1d49 0103 Intel RSTe SATA Software RAID  
1d49 0104 Intel RSTe SATA Software RAID  
1d49 0105 Intel RSTe SATA Software RAID  
2827 sSATA Controller [RAID Mode]  
2828 82801HM/HEM (ICH8M/ICH8M-E) SATA Controller [IDE mode]  
1028 01f3 Inspiron 1420  
103c 30c0 Compaq 6710b  
17aa 20a8 ThinkPad R61  
e4bf cc47 CCG-RUMBA  
2829 82801HM/HEM (ICH8M/ICH8M-E) SATA Controller [AHCI mode]  
1025 0121 Aspire 5920G  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30c1 Compaq 6910p  
103c 30cc Pavilion dv6700  
103c 30d9 Presario C700  
1043 1017 X58LE  
104d 9005 Vaio VGN-FZ260E  
104d 902d VAIO VGN-NR120E  
17aa 20a7 ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook  
PC [MD96850]  
e4bf cc47 CCG-RUMBA  
282a 82801 Mobile SATA Controller [RAID mode]  
1028 040b Latitude E6510  
e4bf 50c1 PC1-GROOVE  
282f tSATA Controller [RAID Mode]  
2830 82801H (ICH8 Family) USB UHCI Controller #1  
1025 0121 Aspire 5920G  
1028 01da OptiPlex 745  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30c1 Compaq 6910p  
103c 30cc Pavilion dv6700  
103c 30d9 Presario C700  
1043 1017 X58LE  
1043 81ec P5B  
104d 9005 Vaio VGN-FZ260E  
104d 902d VAIO VGN-NR120E  
1462 7235 P965 Neo MS-7235 mainboard

17aa 20aa ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
e4bf cc47 CCG-RUMBA  
2831 82801H (ICH8 Family) USB UHCI Controller #2  
1025 0121 Aspire 5920G  
1028 01da OptiPlex 745  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30c1 Compaq 6910p  
103c 30cc Pavilion dv6700  
103c 30d9 Presario C700  
1043 1017 X58LE  
1043 81ec P5B  
104d 9005 Vaio VGN-FZ260E  
104d  
902d VAIO VGN-NR120E  
1462 7235 P965 Neo MS-7235 mainboard  
17aa 20aa ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
e4bf cc47 CCG-RUMBA  
2832 82801H (ICH8 Family) USB UHCI Controller #3  
1025 0121 Aspire 5920G  
1028 01da OptiPlex 745  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30c1 Compaq 6910p  
103c 30cc Pavilion dv6700  
103c 30d9 Presario C700  
1043 1017 X58LE  
1043 81ec P5B  
104d 9005 Vaio VGN-FZ260E  
104d 902d VAIO VGN-NR120E  
17aa 20aa ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
e4bf cc47 CCG-RUMBA  
2833 82801H (ICH8 Family) USB UHCI Controller #4  
1043 81ec P5B  
2834 82801H (ICH8 Family) USB UHCI Controller #4  
1025 0121 Aspire 5920G  
1028 01da OptiPlex 745  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30c1 Compaq 6910p  
103c 30cc Pavilion dv6700  
1043 1017 X58LE

1043 81ec P5B  
104d 9005 Vaio  
VGN-FZ260E  
104d 902d VAIO VGN-NR120E  
1462 7235 P965 Neo MS-7235 mainboard  
17aa 20aa ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
e4bf cc47 CCG-RUMBA  
2835 82801H (ICH8 Family) USB UHCI Controller #5  
1025 0121 Aspire 5920G  
1028 01da OptiPlex 745  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30c1 Compaq 6910p  
103c 30cc Pavilion dv6700  
1043 1017 X58LE  
1043 81ec P5B  
104d 9005 Vaio VGN-FZ260E  
104d 902d VAIO VGN-NR120E  
17aa 20aa Thinkpad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
e4bf cc47 CCG-RUMBA  
2836 82801H (ICH8 Family) USB2 EHCI Controller #1  
1025 0121 Aspire 5920G  
1028 01da OptiPlex 745  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30c1 Compaq 6910p  
103c 30cc Pavilion dv6700  
103c 30d9 Presario C700  
1043 1017 X58LE  
1043 81ec P5B  
104d 9005 Vaio VGN-FZ260E  
104d 902d VAIO VGN-NR120E  
1462 7235 P965 Neo  
MS-7235 mainboard  
17aa 20ab ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
e4bf cc47 CCG-RUMBA  
283a 82801H (ICH8 Family) USB2 EHCI Controller #2  
1025 0121 Aspire 5920G  
1028 01da OptiPlex 745  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30c1 Compaq 6910p

103c 30cc Pavilion dv6700  
1043 1017 X58LE  
1043 81ec P5B  
104d 9005 Vaio VGN-FZ260E  
104d 902d VAIO VGN-NR120E  
17aa 20ab ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
e4bf cc47 CCG-RUMBA  
283e 82801H (ICH8 Family) SMBus Controller  
1025 0121 Aspire 5920G  
1028 01da OptiPlex 745  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 30d9 Presario C700  
1043 1017 X58LE  
1043 81ec P5B  
104d 9005 Vaio VGN-FZ260E  
104d 9008 Vaio VGN-SZ79SN\_C  
104d 902d VAIO VGN-NR120E  
1462 7235 P965 Neo MS-7235 mainboard  
17aa 20a9 ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
e4bf cc47 CCG-RUMBA  
283f  
82801H (ICH8 Family) PCI Express Port 1  
1028 01da OptiPlex 745  
103c 30c1 Compaq 6910p  
1043 1017 X58LE  
1043 81ec P5B  
104d 902d VAIO VGN-NR120E  
17aa 20ad ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
2841 82801H (ICH8 Family) PCI Express Port 2  
103c 30c1 Compaq 6910p  
1043 1017 X58LE  
1043 81ec P5B  
104d 902d VAIO VGN-NR120E  
17aa 20ad ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
2843 82801H (ICH8 Family) PCI Express Port 3  
1043 1017 X58LE  
1043 81ec P5B  
104d 902d VAIO VGN-NR120E  
17aa 20ad ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
2845 82801H (ICH8 Family) PCI Express Port 4  
1043 1017 X58LE  
1043 81ec P5B



17aa 20ad ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
2847 82801H (ICH8 Family) PCI Express Port 5  
1028 01da OptiPlex 745  
103c 30c1 Compaq 6910p  
1043 81ec P5B  
17aa 20ad ThinkPad T61/R61  
17c0 4083 Medion WIM  
2210 Notebook PC [MD96850]  
2849 82801H (ICH8 Family) PCI Express Port 6  
284b 82801H (ICH8 Family) HD Audio Controller  
1025 011f Realtek ALC268 audio codec  
1025 0121 Aspire 5920G  
1025 0145 Realtek ALC889 (Aspire 8920G w. Dolby Theater)  
1028 01da OptiPlex 745  
1028 01f3 Inspiron 1420  
1028 01f9 Latitude D630  
1028 01ff Precision M4300  
1028 022f Inspiron 1525  
1028 0256 Studio 1735  
103c 2802 Compaq dc7700p  
103c 30c0 Compaq 6710b  
103c 30c1 Compaq 6910p  
103c 30cc Pavilion dv6700  
1043 1339 M51S series  
1043 17f3 X58LE  
1043 81ec P5B  
104d 9005 Vaio VGN-FZ260E  
104d 9008 Vaio VGN-SZ79SN\_C  
104d 9016 Sony VAIO VGN-AR51M  
104d 902d VAIO VGN-NR120E  
14f1 5051 Presario C700  
17aa 20ac ThinkPad T61/R61  
17c0 4088 Medion WIM 2210 Notebook PC [MD96850]  
8384 7616 Dell Vostro 1400  
e4bf cc47 CCG-RUMBA  
284f 82801H (ICH8 Family) Thermal Reporting Device  
2850 82801HM/HEM (ICH8M/ICH8M-E) IDE Controller  
1025 0121 Aspire 5920G  
1028 01f3  
Inspiron 1420  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30c1 Compaq 6910p  
103c 30cc Pavilion dv6700  
103c 30d9 Presario C700  
1043 1017 X58LE  
104d 9005 Vaio VGN-FZ260E

104d 902d VAIO VGN-NR120E  
17aa 20a6 ThinkPad T61/R61  
17c0 4083 Medion WIM 2210 Notebook PC [MD96850]  
e4bf cc47 CCG-RUMBA  
28c0 Volume Management Device NVMe RAID Controller  
2912 82801IH (ICH9DH) LPC Interface Controller  
2914 82801IO (ICH9DO) LPC Interface Controller  
1028 0211 Optiplex 755  
2916 82801IR (ICH9R) LPC Interface Controller  
1028 020d Inspiron 530  
103c 2a6f Asus IPIBL-LB Motherboard  
1043 8277 P5K PRO Motherboard  
1462 7345 MS-7345 Motherboard  
8086 5044 Desktop Board DP35DP  
2917 ICH9M-E LPC Interface Controller  
17aa 20f5 ThinkPad T400  
e4bf cc4d CCM-BOOGIE  
2918 82801IB (ICH9) LPC Interface Controller  
1028 0236 PowerEdge R610 82801IB (ICH9) LPC Interface Controller  
1462 7360 G33/P35 Neo  
1af4 1100 QEMU Virtual Machine  
2919 ICH9M  
LPC Interface Controller  
2920 82801IR/IO/IH (ICH9R/DO/DH) 4 port SATA Controller [IDE mode]  
1028 020d Inspiron 530  
1028 020f PowerEdge R300 onboard SATA Controller  
1028 0210 PowerEdge T300 onboard SATA Controller  
1028 0211 Optiplex 755  
1028 023c PowerEdge R200 onboard SATA Controller  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801IR [ICH9R]  
2921 82801IB (ICH9) 2 port SATA Controller [IDE mode]  
1028 0235 PowerEdge R710 SATA IDE Controller  
1028 0236 PowerEdge R610 SATA IDE Controller  
1028 0237 PowerEdge T610 SATA IDE Controller  
1462 7360 G33/P35 Neo  
2922 82801IR/IO/IH (ICH9R/DO/DH) 6 port SATA Controller [AHCI mode]  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801IR [ICH9R]  
1af4 1100 QEMU Virtual Machine  
8086 5044 Desktop Board DP35DP  
2923 82801IB (ICH9) 4 port SATA Controller [AHCI mode]  
2925 82801IR/IO (ICH9R/DO) SATA Controller [RAID mode]  
1734  
10e0 System Board D2542  
8086 2925 System Board D2542  
2926 82801I (ICH9 Family) 2 port SATA Controller [IDE mode]  
1028 020d Inspiron 530

1028 020f PowerEdge R300 onboard SATA Controller  
1028 0210 PowerEdge T300 onboard SATA Controller  
1028 0211 Optiplex 755  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801IR [ICH9R]  
1462 7360 G33/P35 Neo  
2928 82801IBM/IEM (ICH9M/ICH9M-E) 2 port SATA Controller [IDE mode]  
2929 82801IBM/IEM (ICH9M/ICH9M-E) 4 port SATA Controller [AHCI mode]  
103c 3628 dv6-1190en  
17aa 20f8 ThinkPad T400  
e4bf cc4d CCM-BOOGIE  
292c 82801IEM (ICH9M-E) SATA Controller [RAID mode]  
292d 82801IBM/IEM (ICH9M/ICH9M-E) 2 port SATA Controller [IDE mode]  
e4bf cc4d CCM-BOOGIE  
2930 82801I (ICH9 Family) SMBus Controller  
1028 020d Inspiron 530  
1028 0211 Optiplex 755  
103c 2a6f Asus IPIBL-LB Motherboard  
103c 3628 dv6-1190en  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345  
Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
1462 7360 G33/P35 Neo  
17aa 20f9 ThinkPad T400  
1af4 1100 QEMU Virtual Machine  
8086 5044 Desktop Board DP35DP  
e4bf cc4d CCM-BOOGIE  
2932 82801I (ICH9 Family) Thermal Subsystem  
103c 3628 dv6-1190en  
2934 82801I (ICH9 Family) USB UHCI Controller #1  
1028 020d Inspiron 530  
1028 020f PowerEdge R300 onboard UHCI  
1028 0210 PowerEdge T300 onboard UHCI  
1028 0211 Optiplex 755  
1028 0235 PowerEdge R710 USB UHCI Controller  
1028 0236 PowerEdge R610 USB UHCI Controller  
1028 0237 PowerEdge T610 USB UHCI Controller  
1028 023c PowerEdge R200 onboard UHCI  
1028 0287 PowerEdge M610 onboard UHCI  
1028 029c PowerEdge M710 USB UHCI Controller  
1028 2011 Optiplex 755  
103c 2a6f Asus IPIBL-LB Motherboard  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
1462 7360 G33/P35 Neo  
17aa 20f0 ThinkPad T400  
1af4 1100 QEMU Virtual Machine  
8086 5044 Desktop

Board DP35DP  
e4bf cc4d CCM-BOOGIE  
2935 82801I (ICH9 Family) USB UHCI Controller #2  
1028 020d Inspiron 530  
1028 020f PowerEdge R300 onboard UHCI  
1028 0210 PowerEdge T300 onboard UHCI  
1028 0211 Optiplex 755  
1028 0235 PowerEdge R710 USB UHCI Controller  
1028 0236 PowerEdge R610 USB UHCI Controller  
1028 0237 PowerEdge T610 USB UHCI Controller  
1028 023c PowerEdge R200 onboard UHCI  
1028 0287 PowerEdge M610 onboard UHCI  
1028 029c PowerEdge M710 USB UHCI Controller  
103c 2a6f Asus IPIBL-LB Motherboard  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
1462 7360 G33/P35 Neo  
17aa 20f0 ThinkPad T400  
1af4 1100 QEMU Virtual Machine  
8086 5044 Desktop Board DP35DP  
e4bf cc4d CCM-BOOGIE  
2936 82801I (ICH9 Family) USB UHCI Controller #3  
1028 020d Inspiron 530  
1028 020f PowerEdge R300 onboard UHCI  
1028 0210 PowerEdge T300 onboard UHCI  
1028 0211 Optiplex 755  
1028 0237 PowerEdge  
T610 USB UHCI Controller  
1028 023c PowerEdge R200 onboard UHCI  
1028 0287 PowerEdge M610 onboard UHCI  
1028 029c PowerEdge M710 USB UHCI Controller  
103c 2a6f Asus IPIBL-LB Motherboard  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
1462 7360 G33/P35 Neo  
17aa 20f0 ThinkPad T400  
1af4 1100 QEMU Virtual Machine  
8086 5044 Desktop Board DP35DP  
e4bf cc4d CCM-BOOGIE  
2937 82801I (ICH9 Family) USB UHCI Controller #4  
1028 020d Inspiron 530  
1028 0211 Optiplex 755  
1028 0235 PowerEdge R710 USB UHCI Controller  
1028 0236 PowerEdge R610 USB UHCI Controller  
1028 0237 PowerEdge T610 USB UHCI Controller  
1028 0287 PowerEdge M610 onboard UHCI  
1028 029c PowerEdge M710 USB UHCI Controller  
1028 2011 Optiplex 755

103c 2a6f Asus IPIBL-LB Motherboard  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
1462 7360 G33/P35 Neo  
17aa 20f0  
ThinkPad T400  
1af4 1100 QEMU Virtual Machine  
8086 2937 Optiplex 755  
8086 2942 828011 (ICH9 Family ) USB UHCI Controller  
8086 5044 Desktop Board DP35DP  
e4bf cc4d CCM-BOOGIE  
2938 82801I (ICH9 Family) USB UHCI Controller #5  
1028 020d Inspiron 530  
1028 0211 Optiplex 755  
1028 0235 PowerEdge R710 USB UHCI Controller  
1028 0236 PowerEdge R610 USB UHCI Controller  
1028 0237 PowerEdge T610 USB UHCI Controller  
1028 0287 PowerEdge M610 onboard UHCI  
1028 029c PowerEdge M710 USB UHCI Controller  
103c 2a6f Asus IPIBL-LB Motherboard  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
1462 7360 G33/P35 Neo  
17aa 20f0 ThinkPad T400  
1af4 1100 QEMU Virtual Machine  
8086 2938 Optiplex 755  
8086 5044 Desktop Board DP35DP  
e4bf cc4d CCM-BOOGIE  
2939 82801I (ICH9 Family) USB UHCI Controller #6  
1028 020d Inspiron 530  
1028 0210 PowerEdge T300 onboard UHCI  
1028 0237 PowerEdge T610 USB UHCI  
Controller  
103c 2a6f Asus IPIBL-LB Motherboard  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
1462 7360 G33/P35 Neo  
17aa 20f0 ThinkPad T400  
1af4 1100 QEMU Virtual Machine  
8086 5044 Desktop Board DP35DP  
e4bf cc4d CCM-BOOGIE  
293a 82801I (ICH9 Family) USB2 EHCI Controller #1  
1028 020d Inspiron 530  
1028 020f PowerEdge R300 onboard EHCI  
1028 0210 PowerEdge T300 onboard EHCI  
1028 0211 Optiplex 755  
1028 0235 PowerEdge R710 USB EHCI Controller  
1028 0236 PowerEdge R610 USB EHCI Controller

1028 0237 PowerEdge T610 USB EHCI Controller  
1028 023c PowerEdge R200 onboard EHCI  
1028 0287 PowerEdge M610 onboard EHCI  
1028 029c PowerEdge M710 USB EHCI Controller  
103c 2a6f Asus IPIBL-LB Motherboard  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
1462 7360 G33/P35 Neo  
17aa 20f1 ThinkPad T400  
1af4 1100 QEMU Virtual  
Machine  
8086 5044 Desktop Board DP35DP  
e4bf cc4d CCM-BOOGIE  
293c 82801I (ICH9 Family) USB2 EHCI Controller #2  
1028 020d Inspiron 530  
1028 0211 Optiplex 755  
1028 0235 PowerEdge R710 USB EHCI Controller  
1028 0236 PowerEdge R610 USB EHCI Controller  
1028 0237 PowerEdge T610 USB EHCI Controller  
1028 0287 PowerEdge M610 onboard EHCI  
1028 029c PowerEdge M710 USB EHCI Controller  
103c 2a6f Asus IPIBL-LB Motherboard  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
1462 7360 G33/P35 Neo  
17aa 20f1 ThinkPad T400  
1af4 1100 QEMU Virtual Machine  
8086 293c Optiplex 755  
8086 5044 Desktop Board DP35DP  
e4bf cc4d CCM-BOOGIE  
293e 82801I (ICH9 Family) HD Audio Controller  
1028 020d Inspiron 530  
1028 0211 Optiplex 755  
103c 2a6f Asus IPIBL-LB Motherboard  
103c 3628 dv6-1190en  
1043 829f P5K PRO Motherboard: 82801IR [ICH9R]  
1462 735a MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
1462  
7360 G33/P35 Neo  
17aa 20f2 ThinkPad T400  
1af4 1100 QEMU Virtual Machine  
8086 293e Optiplex 755  
8086 2940 Optiplex 755  
e4bf cc4d CCM-BOOGIE  
2940 82801I (ICH9 Family) PCI Express Port 1  
1028 020d Inspiron 530  
1028 0211 Optiplex 755  
103c 2a6f Asus IPIBL-LB Motherboard

1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
8086 2940 Optiplex 755  
2942 82801I (ICH9 Family) PCI Express Port 2  
1028 020d Inspiron 530  
2944 82801I (ICH9 Family) PCI Express Port 3  
1028 020d Inspiron 530  
103c 2a6f Asus IPIBL-LB Motherboard  
2946 82801I (ICH9 Family) PCI Express Port 4  
1028 020d Inspiron 530  
2948 82801I (ICH9 Family) PCI Express Port 5  
1028 020d Inspiron 530  
1043 8277 P5K PRO Motherboard: 82801IR [ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
294a 82801I (ICH9 Family) PCI Express Port 6  
1028 020d Inspiron 530  
1043 8277 P5K PRO Motherboard: 82801IR  
[ICH9R]  
1462 7345 MS-7345 Motherboard: Intel 82801I/IR [ICH9/ICH9R]  
294c 82566DC-2 Gigabit Network Connection  
17aa 302e 82566DM-2 Gigabit Network Connection  
2970 82946GZ/PL/GL Memory Controller Hub  
1043 823b P5B-MX/WiFi-AP  
2971 82946GZ/PL/GL PCI Express Root Port  
2972 82946GZ/GL Integrated Graphics Controller  
1043 823b P5B-MX/WiFi-AP  
2973 82946GZ/GL Integrated Graphics Controller  
2974 82946GZ/GL HECI Controller  
2975 82946GZ/GL HECI Controller  
2976 82946GZ/GL PT IDER Controller  
2977 82946GZ/GL KT Controller  
2980 82G35 Express DRAM Controller  
2981 82G35 Express PCI Express Root Port  
2982 82G35 Express Integrated Graphics Controller  
2983 82G35 Express Integrated Graphics Controller  
2984 82G35 Express HECI Controller  
2990 82Q963/Q965 Memory Controller Hub  
1028 01da OptiPlex 745  
2991 82Q963/Q965 PCI Express Root Port  
2992 82Q963/Q965 Integrated Graphics Controller  
2993 82Q963/Q965 Integrated Graphics Controller  
2994 82Q963/Q965 HECI Controller  
2995  
82Q963/Q965 HECI Controller  
2996 82Q963/Q965 PT IDER Controller  
2997 82Q963/Q965 KT Controller  
29a0 82P965/G965 Memory Controller Hub  
1043 81ea P5B

1462 7276 MS-7276 [G965MDH]  
29a1 82P965/G965 PCI Express Root Port  
29a2 82G965 Integrated Graphics Controller  
1462 7276 MS-7276 [G965MDH]  
29a3 82G965 Integrated Graphics Controller  
29a4 82P965/G965 HECI Controller  
29a5 82P965/G965 HECI Controller  
29a6 82P965/G965 PT IDER Controller  
29a7 82P965/G965 KT Controller  
29b0 82Q35 Express DRAM Controller  
1028 0211 OptiPlex 755  
29b1 82Q35 Express PCI Express Root Port  
1028 0211 OptiPlex 755  
29b2 82Q35 Express Integrated Graphics Controller  
1028 0211 OptiPlex 755  
29b3 82Q35 Express Integrated Graphics Controller  
1028 0211 OptiPlex 755  
29b4 82Q35 Express MEI Controller  
1028 0211 OptiPlex 755  
29b5 82Q35 Express MEI Controller  
29b6 82Q35 Express PT IDER Controller  
1028 0211 OptiPlex 755  
29b7 82Q35 Express Serial KT Controller  
1028  
0211 OptiPlex 755  
29c0 82G33/G31/P35/P31 Express DRAM Controller  
1028 020d Inspiron 530  
103c 2a6f Asus IPIBL-LB Motherboard  
1043 8276 P5K PRO Motherboard: Intel 82P35 Northbridge  
1043 82b0 P5KPL-VM Motherboard  
1462 7345 MS-7345 Motherboard: Intel 82G33/P35 Northbridge  
1462 7360 G33/P35 Neo  
1af4 1100 QEMU Virtual Machine  
8086 5044 Desktop Board DP35DP  
29c1 82G33/G31/P35/P31 Express PCI Express Root Port  
1028 020d Inspiron 530  
1043 8276 P5K PRO Motherboard: Intel 82P35 Northbridge  
29c2 82G33/G31 Express Integrated Graphics Controller  
1028 020d Inspiron 530  
1043 82b0 P5KPL-VM Motherboard  
29c3 82G33/G31 Express Integrated Graphics Controller  
1028 020d Inspiron 530  
1043 82b0 P5KPL-VM Motherboard  
29c4 82G33/G31/P35/P31 Express MEI Controller  
8086 5044 Desktop Board DP35DP  
29c5 82G33/G31/P35/P31 Express MEI Controller  
29c6 82G33/G31/P35/P31 Express PT IDER Controller  
29c7 82G33/G31/P35/P31 Express Serial KT Controller



29cf Virtual  
HECI Controller  
29d0 82Q33 Express DRAM Controller  
29d1 82Q33 Express PCI Express Root Port  
29d2 82Q33 Express Integrated Graphics Controller  
29d3 82Q33 Express Integrated Graphics Controller  
29d4 82Q33 Express MEI Controller  
29d5 82Q33 Express MEI Controller  
29d6 82Q33 Express PT IDER Controller  
29d7 82Q33 Express Serial KT Controller  
29e0 82X38/X48 Express DRAM Controller  
29e1 82X38/X48 Express Host-Primary PCI Express Bridge  
29e4 82X38/X48 Express MEI Controller  
29e5 82X38/X48 Express MEI Controller  
29e6 82X38/X48 Express PT IDER Controller  
29e7 82X38/X48 Express Serial KT Controller  
29e9 82X38/X48 Express Host-Secondary PCI Express Bridge  
29f0 3200/3210 Chipset DRAM Controller  
29f1 3200/3210 Chipset Host-Primary PCI Express Bridge  
29f4 3200/3210 Chipset MEI Controller  
29f5 3200/3210 Chipset MEI Controller  
29f6 3200/3210 Chipset PT IDER Controller  
29f7 3200/3210 Chipset Serial KT Controller  
29f9 3210 Chipset Host-Secondary PCI Express  
Bridge  
2a00 Mobile PM965/GM965/GL960 Memory Controller Hub  
1025 0121 Aspire 5920G  
1028 01f3 Inspiron 1420  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30c1 Compaq 6910p  
103c 30c5 Compaq 8510p  
103c 30cc Pavilion dv6700  
103c 30d9 Presario C700  
1043 1017 X58LE  
104d 9005 Vaio VGN-FZ260E  
104d 902d VAIO VGN-NR120E  
17aa 20b1 ThinkPad T61  
17aa 20b3 ThinkPad T61/R61  
17c0 4082 Medion WIM 2210 Notebook PC [MD96850]  
e4bf cc47 CCG-RUMBA  
2a01 Mobile PM965/GM965/GL960 PCI Express Root Port  
2a02 Mobile GM965/GL960 Integrated Graphics Controller (primary)  
1028 01f3 Inspiron 1420  
1028 01f9 Latitude D630  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30d9 Presario C700

1043 14e2 X58LE  
104d 902d VAIO VGN-NR120E  
17aa 20b5 GM965 [X3100] on ThinkPad T61/R61  
17c0 4082 GM965 on Medion WIM 2210 Notebook PC [MD96850]  
e4bf cc47 CCG-RUMBA  
2a03 Mobile GM965/GL960 Integrated Graphics Controller (secondary)  
1028 01f3  
Inspiron 1420  
1028 022f Inspiron 1525  
103c 30c0 Compaq 6710b  
103c 30d9 Presario C700  
1043 14e2 X58LE  
104d 902d VAIO VGN-NR120E  
17aa 20b5 GM965 [X3100] on ThinkPad T61/R61  
17c0 4082 GM965 on Medion WIM 2210 Notebook PC [MD96850]  
e4bf cc47 CCG-RUMBA  
2a04 Mobile PM965/GM965 MEI Controller  
103c 30c1 Compaq 6910p  
2a05 Mobile PM965/GM965 MEI Controller  
2a06 Mobile PM965/GM965 PT IDER Controller  
103c 30c1 Compaq 6910p  
2a07 Mobile PM965/GM965 KT Controller  
103c 30c1 Compaq 6910p  
2a10 Mobile GME965/GLE960 Memory Controller Hub  
e4bf cc47 CCG-RUMBA  
2a11 Mobile GME965/GLE960 PCI Express Root Port  
2a12 Mobile GME965/GLE960 Integrated Graphics Controller  
e4bf cc47 CCG-RUMBA  
2a13 Mobile GME965/GLE960 Integrated Graphics Controller  
e4bf cc47 CCG-RUMBA  
2a14 Mobile GME965/GLE960 MEI Controller  
2a15 Mobile GME965/GLE960 MEI Controller  
2a16 Mobile GME965/GLE960 PT IDER Controller  
2a17 Mobile GME965/GLE960 KT Controller  
2a40 Mobile 4 Series  
Chipset Memory Controller Hub  
17aa 20e0 ThinkPad T400  
e4bf cc4d CCM-BOOGIE  
2a41 Mobile 4 Series Chipset PCI Express Graphics Port  
e4bf cc4d CCM-BOOGIE  
2a42 Mobile 4 Series Chipset Integrated Graphics Controller  
1028 02aa Dell Inspiron 1545  
17aa 2112 ThinkPad T400  
e4bf cc4d CCM-BOOGIE  
2a43 Mobile 4 Series Chipset Integrated Graphics Controller  
17aa 2112 ThinkPad T400  
e4bf cc4d CCM-BOOGIE  
2a44 Mobile 4 Series Chipset MEI Controller

17aa 20e6 ThinkPad T400  
2a45 Mobile 4 Series Chipset MEI Controller  
2a46 Mobile 4 Series Chipset PT IDER Controller  
2a47 Mobile 4 Series Chipset AMT SOL Redirection  
2a50 Cantiga MEI Controller  
2a51 Cantiga MEI Controller  
2a52 Cantiga PT IDER Controller  
2a53 Cantiga AMT SOL Redirection  
2b00 Xeon Processor E7 Product Family System Configuration Controller 1  
2b02 Xeon Processor E7 Product Family System Configuration Controller 2  
2b04 Xeon Processor E7 Product Family Power Controller  
2b08 Xeon Processor E7  
Product Family Caching Agent 0  
2b0c Xeon Processor E7 Product Family Caching Agent 1  
2b10 Xeon Processor E7 Product Family QPI Home Agent 0  
2b13 Xeon Processor E7 Product Family Memory Controller 0c  
2b14 Xeon Processor E7 Product Family Memory Controller 0a  
2b16 Xeon Processor E7 Product Family Memory Controller 0b  
2b18 Xeon Processor E7 Product Family QPI Home Agent 1  
2b1b Xeon Processor E7 Product Family Memory Controller 1c  
2b1c Xeon Processor E7 Product Family Memory Controller 1a  
2b1e Xeon Processor E7 Product Family Memory Controller 1b  
2b20 Xeon Processor E7 Product Family Last Level Cache Coherence Engine 0  
2b22 Xeon Processor E7 Product Family System Configuration Controller 3  
2b24 Xeon Processor E7 Product Family Last Level Cache Coherence Engine 1  
2b28 Xeon Processor E7 Product Family Last Level Cache Coherence Engine 2  
2b2a Xeon Processor E7 Product Family System Configuration Controller 4  
2b2c Xeon Processor E7 Product Family Last Level Cache  
Coherence Engine 3  
2b30 Xeon Processor E7 Product Family Last Level Cache Coherence Engine 4  
2b34 Xeon Processor E7 Product Family Last Level Cache Coherence Engine 5  
2b38 Xeon Processor E7 Product Family Last Level Cache Coherence Engine 6  
2b3c Xeon Processor E7 Product Family Last Level Cache Coherence Engine 7  
2b40 Xeon Processor E7 Product Family QPI Router Port 0-1  
2b42 Xeon Processor E7 Product Family QPI Router Port 2-3  
2b44 Xeon Processor E7 Product Family QPI Router Port 4-5  
2b46 Xeon Processor E7 Product Family QPI Router Port 6-7  
2b48 Xeon Processor E7 Product Family Test and Debug 0  
2b4c Xeon Processor E7 Product Family Test and Debug 1  
2b50 Xeon Processor E7 Product Family QPI Physical Port 0: REUT control/status  
2b52 Xeon Processor E7 Product Family QPI Physical Port 0: Misc. control/status  
2b54 Xeon Processor E7 Product Family QPI Physical Port 1: REUT control/status  
2b56 Xeon Processor E7 Product Family QPI Physical Port 1: Misc. control/status  
2b58  
Xeon Processor E7 Product Family QPI Physical Port 2: REUT control/status  
2b5a Xeon Processor E7 Product Family QPI Physical Port 2: Misc. control/status  
2b5c Xeon Processor E7 Product Family QPI Physical Port 3: REUT control/status  
2b5e Xeon Processor E7 Product Family QPI Physical Port 3: Misc. control/status

2b60 Xeon Processor E7 Product Family SMI Physical Port 0: REUT control/status  
2b62 Xeon Processor E7 Product Family SMI Physical Port 0: Misc control/status  
2b64 Xeon Processor E7 Product Family SMI Physical Port 1: REUT control/status  
2b66 Xeon Processor E7 Product Family SMI Physical Port 1: Misc control/status  
2b68 Xeon Processor E7 Product Family Last Level Cache Coherence Engine 8  
2b6c Xeon Processor E7 Product Family Last Level Cache Coherence Engine 9  
2b80 Atom CE2700 Series [Puma 7]  
2b98 Puma 7 Trusted Execution Engine  
2bb5 Puma 7 xHCI Controller  
# Synopsys DesignWare Core SuperSpeed USB 3.0 Controller  
2bb7 Puma 7 USB Device Controller  
(OTG)  
2bdc Puma 7 Thermal  
2be2 Puma 7 Security Processor  
2c01 Xeon 5500/Core i7 QuickPath Architecture System Address Decoder  
2c10 Xeon 5500/Core i7 QPI Link 0  
2c11 Xeon 5500/Core i7 QPI Physical 0  
2c14 Xeon 5500/Core i7 QPI Link 1  
2c15 Xeon 5500/Core i7 QPI Physical 1  
2c18 Xeon 5500/Core i7 Integrated Memory Controller  
2c19 Xeon 5500/Core i7 Integrated Memory Controller Target Address Decoder  
2c1a Xeon 5500/Core i7 Integrated Memory Controller RAS Registers  
2c1c Xeon 5500/Core i7 Integrated Memory Controller Test Registers  
2c20 Xeon 5500/Core i7 Integrated Memory Controller Channel 0 Control Registers  
2c21 Xeon 5500/Core i7 Integrated Memory Controller Channel 0 Address Registers  
2c22 Xeon 5500/Core i7 Integrated Memory Controller Channel 0 Rank Registers  
2c23 Xeon 5500/Core i7 Integrated Memory Controller Channel 0 Thermal Control Registers  
2c28 Xeon 5500/Core i7 Integrated Memory Controller Channel 1 Control Registers  
2c29 Xeon 5500/Core i7 Integrated  
Memory Controller Channel 1 Address Registers  
2c2a Xeon 5500/Core i7 Integrated Memory Controller Channel 1 Rank Registers  
2c2b Xeon 5500/Core i7 Integrated Memory Controller Channel 1 Thermal Control Registers  
2c30 Xeon 5500/Core i7 Integrated Memory Controller Channel 2 Control Registers  
2c31 Xeon 5500/Core i7 Integrated Memory Controller Channel 2 Address Registers  
2c32 Xeon 5500/Core i7 Integrated Memory Controller Channel 2 Rank Registers  
2c33 Xeon 5500/Core i7 Integrated Memory Controller Channel 2 Thermal Control Registers  
2c40 Xeon 5500/Core i7 QuickPath Architecture Generic Non-Core Registers  
2c41 Xeon 5500/Core i7 QuickPath Architecture Generic Non-Core Registers  
2c50 Core Processor QuickPath Architecture Generic Non-Core Registers  
2c51 Core Processor QuickPath Architecture Generic Non-Core Registers  
2c52 Core Processor QuickPath Architecture Generic Non-Core Registers  
2c53 Core Processor QuickPath Architecture Generic Non-Core Registers  
2c54 Core  
Processor QuickPath Architecture Generic Non-Core Registers  
2c55 Core Processor QuickPath Architecture Generic Non-Core Registers  
2c56 Core Processor QuickPath Architecture Generic Non-Core Registers  
2c57 Core Processor QuickPath Architecture Generic Non-Core Registers  
2c58 Xeon C5500/C3500 QPI Generic Non-core Registers

2c59 Xeon C5500/C3500 QPI Generic Non-core Registers  
2c5a Xeon C5500/C3500 QPI Generic Non-core Registers  
2c5b Xeon C5500/C3500 QPI Generic Non-core Registers  
2c5c Xeon C5500/C3500 QPI Generic Non-core Registers  
2c5d Xeon C5500/C3500 QPI Generic Non-core Registers  
2c5e Xeon C5500/C3500 QPI Generic Non-core Registers  
2c5f Xeon C5500/C3500 QPI Generic Non-core Registers  
2c61 Core Processor QuickPath Architecture Generic Non-core Registers  
2c62 Core Processor QuickPath Architecture Generic Non-core Registers  
2c70 Xeon 5600 Series QuickPath Architecture Generic Non-core Registers  
2c81 Core Processor QuickPath Architecture System Address Decoder  
2c90  
Core Processor QPI Link 0  
2c91 Core Processor QPI Physical 0  
2c98 Core Processor Integrated Memory Controller  
2c99 Core Processor Integrated Memory Controller Target Address Decoder  
2c9a Core Processor Integrated Memory Controller Test Registers  
2c9c Core Processor Integrated Memory Controller Test Registers  
2ca0 Core Processor Integrated Memory Controller Channel 0 Control Registers  
2ca1 Core Processor Integrated Memory Controller Channel 0 Address Registers  
2ca2 Core Processor Integrated Memory Controller Channel 0 Rank Registers  
2ca3 Core Processor Integrated Memory Controller Channel 0 Thermal Control Registers  
2ca8 Core Processor Integrated Memory Controller Channel 1 Control Registers  
2ca9 Core Processor Integrated Memory Controller Channel 1 Address Registers  
2caa Core Processor Integrated Memory Controller Channel 1 Rank Registers  
2cab Core Processor Integrated Memory Controller Channel 1 Thermal Control Registers  
2cc1 Xeon C5500/C3500 QPI  
System Address Decoder  
2cd0 Xeon C5500/C3500 QPI Link 0  
2cd1 Xeon C5500/C3500 QPI Physical 0  
2cd4 Xeon C5500/C3500 QPI Link 1  
2cd5 Xeon C5500/C3500 QPI Physical 1  
2cd8 Xeon C5500/C3500 Integrated Memory Controller Registers  
2cd9 Xeon C5500/C3500 Integrated Memory Controller Target Address Decoder  
2cda Xeon C5500/C3500 Integrated Memory Controller RAS Registers  
2cdc Xeon C5500/C3500 Integrated Memory Controller Test Registers  
2ce0 Xeon C5500/C3500 Integrated Memory Controller Channel 0 Control  
2ce1 Xeon C5500/C3500 Integrated Memory Controller Channel 0 Address  
2ce2 Xeon C5500/C3500 Integrated Memory Controller Channel 0 Rank  
2ce3 Xeon C5500/C3500 Integrated Memory Controller Channel 0 Thermal Control  
2ce8 Xeon C5500/C3500 Integrated Memory Controller Channel 1 Control  
2ce9 Xeon C5500/C3500 Integrated Memory Controller Channel 1 Address  
2cea Xeon C5500/C3500 Integrated Memory Controller Channel 1 Rank  
2ceb Xeon C5500/C3500 Integrated Memory Controller  
Channel 1 Thermal Control  
2cf0 Xeon C5500/C3500 Integrated Memory Controller Channel 2 Control  
2cf1 Xeon C5500/C3500 Integrated Memory Controller Channel 2 Address  
2cf2 Xeon C5500/C3500 Integrated Memory Controller Channel 2 Rank

2cf3 Xeon C5500/C3500 Integrated Memory Controller Channel 2 Thermal Control  
2d01 Core Processor QuickPath Architecture System Address Decoder  
2d10 Core Processor QPI Link 0  
2d11 1st Generation Core i3/5/7 Processor QPI Physical 0  
2d12 1st Generation Core i3/5/7 Processor Reserved  
2d13 1st Generation Core i3/5/7 Processor Reserved  
2d81 Xeon 5600 Series QuickPath Architecture System Address Decoder  
2d90 Xeon 5600 Series QPI Link 0  
2d91 Xeon 5600 Series QPI Physical 0  
2d92 Xeon 5600 Series Mirror Port Link 0  
2d93 Xeon 5600 Series Mirror Port Link 1  
2d94 Xeon 5600 Series QPI Link 1  
2d95 Xeon 5600 Series QPI Physical 1  
2d98 Xeon 5600 Series Integrated Memory Controller Registers  
2d99 Xeon 5600 Series Integrated Memory Controller  
Target Address Decoder  
2d9a Xeon 5600 Series Integrated Memory Controller RAS Registers  
2d9c Xeon 5600 Series Integrated Memory Controller Test Registers  
2da0 Xeon 5600 Series Integrated Memory Controller Channel 0 Control  
2da1 Xeon 5600 Series Integrated Memory Controller Channel 0 Address  
2da2 Xeon 5600 Series Integrated Memory Controller Channel 0 Rank  
2da3 Xeon 5600 Series Integrated Memory Controller Channel 0 Thermal Control  
2da8 Xeon 5600 Series Integrated Memory Controller Channel 1 Control  
2da9 Xeon 5600 Series Integrated Memory Controller Channel 1 Address  
2daa Xeon 5600 Series Integrated Memory Controller Channel 1 Rank  
2dab Xeon 5600 Series Integrated Memory Controller Channel 1 Thermal Control  
2db0 Xeon 5600 Series Integrated Memory Controller Channel 2 Control  
2db1 Xeon 5600 Series Integrated Memory Controller Channel 2 Address  
2db2 Xeon 5600 Series Integrated Memory Controller Channel 2 Rank  
2db3 Xeon 5600 Series Integrated Memory Controller  
Channel 2 Thermal Control  
2e00 4 Series Chipset DRAM Controller  
2e01 4 Series Chipset PCI Express Root Port  
2e02 4 Series Chipset Integrated Graphics Controller  
2e03 4 Series Chipset Integrated Graphics Controller  
2e04 4 Series Chipset HECI Controller  
2e05 4 Series Chipset HECI Controller  
2e06 4 Series Chipset PT IDER Controller  
2e07 4 Series Chipset Serial KT Controller  
2e10 4 Series Chipset DRAM Controller  
2e11 4 Series Chipset PCI Express Root Port  
2e12 4 Series Chipset Integrated Graphics Controller  
17aa 3048 ThinkCentre M6258  
2e13 4 Series Chipset Integrated Graphics Controller  
2e14 4 Series Chipset HECI Controller  
2e15 4 Series Chipset HECI Controller  
2e16 4 Series Chipset PT IDER Controller  
2e17 4 Series Chipset Serial KT Controller

2e20 4 Series Chipset DRAM Controller  
1028 0283 Vostro 220  
1043 82d3 P5Q Deluxe Motherboard  
1458 5000 GA-EP45-DS5/GA-EG45M-DS2H Motherboard

2e21 4 Series Chipset PCI Express Root Port  
1043 82d3 P5Q Deluxe  
Motherboard  
1458 5000 GA-EP45-DS5 Motherboard

2e22 4 Series Chipset Integrated Graphics Controller  
1458 d000 GA-EG45M-DS2H Mainboard

2e23 4 Series Chipset Integrated Graphics Controller  
1458 d000 GA-EG45M-DS2H Mainboard

2e24 4 Series Chipset HECI Controller

2e25 4 Series Chipset HECI Controller

2e26 4 Series Chipset PT IDER Controller

2e27 4 Series Chipset Serial KT Controller

2e29 4 Series Chipset PCI Express Root Port

2e30 4 Series Chipset DRAM Controller  
103c 2a8c Compaq 500B Microtower

2e31 4 Series Chipset PCI Express Root Port

2e32 4 Series Chipset Integrated Graphics Controller  
103c 2a8c Compaq 500B Microtower

2e33 4 Series Chipset Integrated Graphics Controller

2e34 4 Series Chipset HECI Controller

2e35 4 Series Chipset HECI Controller

2e36 4 Series Chipset PT IDER Controller

2e37 4 Series Chipset Serial KT Controller

2e40 4 Series Chipset DRAM Controller

2e41 4 Series Chipset PCI Express Root Port

2e42 4 Series Chipset Integrated  
Graphics Controller

2e43 4 Series Chipset Integrated Graphics Controller

2e44 4 Series Chipset HECI Controller

2e45 4 Series Chipset HECI Controller

2e46 4 Series Chipset PT IDER Controller

2e47 4 Series Chipset Serial KT Controller

2e50 CE Media Processor CE3100

2e52 CE Media Processor Clock and Reset Controller

2e58 CE Media Processor Interrupt Controller

2e5a CE Media Processor CE3100 A/V Bridge

2e5b Graphics Media Accelerator 500 Graphics

2e5c CE Media Processor Video Decoder

2e5d CE Media Processor Transport Stream Interface

2e5e CE Media Processor Transport Stream Processor 0

2e5f CE Media Processor Audio DSP

2e60 CE Media Processor Audio Interfaces

2e61 CE Media Processor Video Display Controller

2e62 CE Media Processor Video Processing Unit

2e63 CE Media Processor HDMI Tx Interface  
2e64 Atom CE2600/3100/4100/4200/5300 Security Processor  
2e65 CE Media Processor Expansion Bus Interface  
2e66 CE Media Processor UART  
2e67 CE Media  
Processor General Purpose I/Os  
2e68 CE Media Processor I2C Interface  
2e69 CE Media Processor Smart Card Interface  
2e6a CE Media Processor SPI Master Interface  
2e6e CE Media Processor Gigabit Ethernet Controller  
2e6f CE Media Processor Media Timing Unit  
2e70 CE Media Processor USB  
2e71 CE Media Processor SATA  
2e73 CE Media Processor CE3100 PCI Express  
2e90 4 Series Chipset DRAM Controller  
2e91 4 Series Chipset PCI Express Root Port  
2e92 4 Series Chipset Integrated Graphics Controller  
2e93 4 Series Chipset Integrated Graphics Controller  
2e94 4 Series Chipset HECI Controller  
2e95 4 Series Chipset HECI Controller  
2e96 4 Series Chipset PT IDER Controller  
2f00 Xeon E7 v3/Xeon E5 v3/Core i7 DMI2  
2f01 Xeon E7 v3/Xeon E5 v3/Core i7 PCI Express Root Port 0  
2f02 Xeon E7 v3/Xeon E5 v3/Core i7 PCI Express Root Port 1  
2f03 Xeon E7 v3/Xeon E5 v3/Core i7 PCI Express Root Port 1  
2f04 Xeon E7 v3/Xeon E5 v3/Core i7 PCI Express Root Port 2  
2f05 Xeon E7 v3/Xeon E5  
v3/Core i7 PCI Express Root Port 2  
2f06 Xeon E7 v3/Xeon E5 v3/Core i7 PCI Express Root Port 2  
2f07 Xeon E7 v3/Xeon E5 v3/Core i7 PCI Express Root Port 2  
2f08 Xeon E7 v3/Xeon E5 v3/Core i7 PCI Express Root Port 3  
2f09 Xeon E7 v3/Xeon E5 v3/Core i7 PCI Express Root Port 3  
2f0a Xeon E7 v3/Xeon E5 v3/Core i7 PCI Express Root Port 3  
2f0b Xeon E7 v3/Xeon E5 v3/Core i7 PCI Express Root Port 3  
2f0d Haswell Xeon Non-Transparent Bridge (Back-to-back)  
2f0e Haswell Xeon Non-Transparent Bridge (Primary Side)  
2f0f Haswell Xeon Non-Transparent Bridge (Secondary Side)  
2f10 Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f11 Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f12 Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f13 Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f14 Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f15 Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f16 Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f17 Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f18 Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f19



Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f1a Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f1b Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f1c Xeon E7 v3/Xeon E5 v3/Core i7 IIO Debug  
2f1d Xeon E7 v3/Xeon E5 v3/Core i7 PCIe Ring Interface  
2f1e Xeon E7 v3/Xeon E5 v3/Core i7 Scratchpad & Semaphore Registers  
2f1f Xeon E7 v3/Xeon E5 v3/Core i7 Scratchpad & Semaphore Registers  
2f20 Xeon E7 v3/Xeon E5 v3/Core i7 DMA Channel 0  
2f21 Xeon E7 v3/Xeon E5 v3/Core i7 DMA Channel 1  
2f22 Xeon E7 v3/Xeon E5 v3/Core i7 DMA Channel 2  
2f23 Xeon E7 v3/Xeon E5 v3/Core i7 DMA Channel 3  
2f24 Xeon E7 v3/Xeon E5 v3/Core i7 DMA Channel 4  
2f25 Xeon E7 v3/Xeon E5 v3/Core i7 DMA Channel 5  
2f26 Xeon E7 v3/Xeon E5 v3/Core i7 DMA Channel 6  
2f27 Xeon E7 v3/Xeon E5 v3/Core i7 DMA Channel 7  
2f28 Xeon E7 v3/Xeon E5 v3/Core i7 Address Map, VTd\_Misc, System Management  
2f29 Xeon E7 v3/Xeon E5 v3/Core i7 Hot Plug  
2f2a Xeon E7 v3/Xeon E5 v3/Core i7 RAS, Control Status and Global Errors  
2f2c  
Xeon E7 v3/Xeon E5 v3/Core i7 I/O APIC  
2f2e Xeon E7 v3/Xeon E5 v3/Core i7 RAID 5/6  
2f2f Xeon E7 v3/Xeon E5 v3/Core i7 RAID 5/6  
2f30 Xeon E7 v3/Xeon E5 v3/Core i7 Home Agent 0  
2f32 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 0  
2f33 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 1  
2f34 Xeon E7 v3/Xeon E5 v3/Core i7 PCIe Ring Interface  
2f36 Xeon E7 v3/Xeon E5 v3/Core i7 R3 QPI Link 0 & 1 Monitoring  
2f37 Xeon E7 v3/Xeon E5 v3/Core i7 R3 QPI Link 0 & 1 Monitoring  
2f38 Xeon E7 v3/Xeon E5 v3/Core i7 Home Agent 1  
2f39 Xeon E7 v3/Xeon E5 v3/Core i7 I/O Performance Monitoring  
2f3a Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 2  
2f3e Xeon E7 v3/Xeon E5 v3/Core i7 R3 QPI Link 2 Monitoring  
2f3f Xeon E7 v3/Xeon E5 v3/Core i7 R3 QPI Link 2 Monitoring  
2f40 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 2  
2f41 Xeon E7 v3/Xeon E5 v3/Core i7 R3 QPI Link 2 Monitoring  
2f43 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 2  
2f45 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 2 Debug  
2f46 Xeon E7 v3/Xeon E5 v3/Core i7  
QPI Link 2 Debug  
2f47 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 2 Debug  
2f60 Xeon E7 v3/Xeon E5 v3/Core i7 Home Agent 1  
2f68 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Target Address, Thermal & RAS Registers  
2f6a Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Channel Target Address Decoder  
2f6b Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Channel Target Address Decoder  
2f6c Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Channel Target Address Decoder  
2f6d Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Channel Target Address Decoder  
2f6e Xeon E7 v3/Xeon E5 v3/Core i7 DDRIO Channel 2/3 Broadcast  
2f6f Xeon E7 v3/Xeon E5 v3/Core i7 DDRIO Global Broadcast

2f70 Xeon E7 v3/Xeon E5 v3/Core i7 Home Agent 0 Debug  
2f71 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Target Address, Thermal & RAS Registers  
2f76 Xeon E7 v3/Xeon E5 v3/Core i7 E3 QPI Link Debug  
2f78 Xeon E7 v3/Xeon E5 v3/Core  
i7 Home Agent 1 Debug  
2f79 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Target Address, Thermal & RAS Registers  
2f7d Xeon E7 v3/Xeon E5 v3/Core i7 Scratchpad & Semaphore Registers  
2f7e Xeon E7 v3/Xeon E5 v3/Core i7 E3 QPI Link Debug  
2f80 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 0  
2f81 Xeon E7 v3/Xeon E5 v3/Core i7 R3 QPI Link 0 & 1 Monitoring  
2f83 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 0  
2f85 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 0 Debug  
2f86 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 0 Debug  
2f87 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 0 Debug  
2f88 Xeon E7 v3/Xeon E5 v3/Core i7 VCU  
2f8a Xeon E7 v3/Xeon E5 v3/Core i7 VCU  
2f90 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 1  
2f93 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 1  
2f95 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 1 Debug  
2f96 Xeon E7 v3/Xeon E5 v3/Core i7 QPI Link 1 Debug  
2f98 Xeon E7 v3/Xeon E5 v3/Core i7 Power Control Unit  
2f99 Xeon E7 v3/Xeon E5 v3/Core i7 Power Control Unit  
2f9a Xeon E7 v3/Xeon  
E5 v3/Core i7 Power Control Unit  
2f9c Xeon E7 v3/Xeon E5 v3/Core i7 Power Control Unit  
2fa0 Xeon E7 v3/Xeon E5 v3/Core i7 Home Agent 0  
2fa8 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Target Address, Thermal & RAS Registers  
2faa Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Channel Target Address Decoder  
2fab Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Channel Target Address Decoder  
2fac Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Channel Target Address Decoder  
2fad Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Channel Target Address Decoder  
2fae Xeon E7 v3/Xeon E5 v3/Core i7 DDRIO Channel 0/1 Broadcast  
2faf Xeon E7 v3/Xeon E5 v3/Core i7 DDRIO Global Broadcast  
2fb0 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Channel 0 Thermal Control  
2fb1 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Channel 1 Thermal Control  
2fb2 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated  
Memory Controller 0 Channel 0 ERROR Registers  
2fb3 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Channel 1 ERROR Registers  
2fb4 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Channel 2 Thermal Control  
2fb5 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Channel 3 Thermal Control  
2fb6 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Channel 2 ERROR Registers  
2fb7 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 0 Channel 3 ERROR Registers  
2fb8 Xeon E7 v3/Xeon E5 v3/Core i7 DDRIO (VMSE) 2 & 3  
2fb9 Xeon E7 v3/Xeon E5 v3/Core i7 DDRIO (VMSE) 2 & 3  
2fba Xeon E7 v3/Xeon E5 v3/Core i7 DDRIO (VMSE) 2 & 3  
2fbb Xeon E7 v3/Xeon E5 v3/Core i7 DDRIO (VMSE) 2 & 3  
2fbc Xeon E7 v3/Xeon E5 v3/Core i7 DDRIO (VMSE) 0 & 1  
2fbd Xeon E7 v3/Xeon E5 v3/Core i7 DDRIO (VMSE) 0 & 1

2fbe Xeon E7 v3/Xeon E5 v3/Core i7 DDRIO (VMSE) 0 & 1  
 2fbf Xeon E7 v3/Xeon E5 v3/Core i7 DDRIO (VMSE) 0 & 1  
 2fc0 Xeon E7 v3/Xeon E5 v3/Core  
 i7 Power Control Unit  
 2fc1 Xeon E7 v3/Xeon E5 v3/Core i7 Power Control Unit  
 2fc2 Xeon E7 v3/Xeon E5 v3/Core i7 Power Control Unit  
 2fc3 Xeon E7 v3/Xeon E5 v3/Core i7 Power Control Unit  
 2fc4 Xeon E7 v3/Xeon E5 v3/Core i7 Power Control Unit  
 2fc5 Xeon E7 v3/Xeon E5 v3/Core i7 Power Control Unit  
 2fd0 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Channel 0 Thermal Control  
 2fd1 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Channel 1 Thermal Control  
 2fd2 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Channel 0 ERROR Registers  
 2fd3 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Channel 1 ERROR Registers  
 2fd4 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Channel 2 Thermal Control  
 2fd5 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Channel 3 Thermal Control  
 2fd6 Xeon E7 v3/Xeon E5 v3/Core i7 Integrated Memory Controller 1 Channel 2 ERROR Registers  
 2fd7 Xeon E7 v3/Xeon E5 v3/Core  
 i7 Integrated Memory Controller 1 Channel 3 ERROR Registers  
 2fe0 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fe1 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fe2 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fe3 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fe4 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fe5 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fe6 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fe7 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fe8 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fe9 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fea Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2feb Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fec Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fed Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fee Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2fef Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2ff0 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2ff1  
 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2ff2 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2ff3 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2ff4 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2ff5 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2ff6 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2ff7 Xeon E7 v3/Xeon E5 v3/Core i7 Unicast Registers  
 2ff8 Xeon E7 v3/Xeon E5 v3/Core i7 Buffered Ring Agent  
 2ff9 Xeon E7 v3/Xeon E5 v3/Core i7 Buffered Ring Agent  
 2ffa Xeon E7 v3/Xeon E5 v3/Core i7 Buffered Ring Agent  
 2ffb Xeon E7 v3/Xeon E5 v3/Core i7 Buffered Ring Agent  
 2ffc Xeon E7 v3/Xeon E5 v3/Core i7 System Address Decoder & Broadcast Registers

2ffd Xeon E7 v3/Xeon E5 v3/Core i7 System Address Decoder & Broadcast Registers  
2ffe Xeon E7 v3/Xeon E5 v3/Core i7 System Address Decoder & Broadcast Registers  
3101 Killer E3100X 2.5 Gigabit Ethernet Controller  
3140 Easel/Monette Hill Image Processor [Pixel Visual Core]  
3165 Wireless 3165  
8086 4010  
Dual Band Wireless AC 3165 [Stone Peak 1x1]  
8086 4210 Dual Band Wireless AC 3165 [Stone Peak 1x1]  
3166 Dual Band Wireless-AC 3165 Plus Bluetooth  
8086 4210 Dual Band Wireless-AC 3165  
3184 GeminiLake [UHD Graphics 605]  
3185 GeminiLake [UHD Graphics 600]  
318c Celeron/Pentium Silver Processor Dynamic Platform and Thermal Framework Processor Participant  
318e Celeron/Pentium Silver Processor NorthPeak  
3190 Celeron/Pentium Silver Processor Gaussian Mixture Model  
3192 Gemini Lake P2SB  
3197 Celeron/Pentium Silver Processor PCI-default ISA-bridge  
3198 Celeron/Pentium Silver Processor High Definition Audio  
17aa 380b V130-15IGM Laptop (Lenovo) - Type 81HL  
319a Celeron/Pentium Silver Processor Trusted Execution Engine Interface  
31a2 Celeron/Pentium Silver Processor Integrated Sensor Solution  
31a8 Celeron/Pentium Silver Processor USB 3.0 xHCI Controller  
1849 31a8 Celeron/Pentium Silver Processor USB 3.0 xHCI Controller  
31ac Celeron/Pentium Silver Processor I2C  
0  
31ae Celeron/Pentium Silver Processor I2C 1  
31b0 Celeron/Pentium Silver Processor I2C 2  
31b2 Celeron/Pentium Silver Processor I2C 3  
31b4 Celeron/Pentium Silver Processor I2C 4  
31b6 Celeron/Pentium Silver Processor I2C 5  
31b8 Celeron/Pentium Silver Processor I2C 6  
31ba Celeron/Pentium Silver Processor I2C 7  
31bc Celeron/Pentium Silver Processor Serial IO UART Host Controller  
31be Celeron/Pentium Silver Processor Serial IO UART Host Controller  
31c0 Celeron/Pentium Silver Processor Serial IO UART Host Controller  
31c2 Celeron/Pentium Silver Processor Serial IO SPI Host Controller  
31c4 Celeron/Pentium Silver Processor Serial IO SPI Host Controller  
31c6 Celeron/Pentium Silver Processor Serial IO SPI Host Controller  
31cc Celeron/Pentium Silver Processor SDA Standard Compliant SD Host Controller  
31d4 Celeron/Pentium Silver Processor Gaussian Mixture Model  
31d6 Gemini Lake PCI Express Root Port  
31d7 Gemini Lake PCI Express Root Port  
31d8 Gemini Lake PCI  
Express Root Port  
31d9 Gemini Lake PCI Express Root Port  
31da Gemini Lake PCI Express Root Port  
31db Gemini Lake PCI Express Root Port  
31dc Gemini Lake PCH CNVi WiFi

1a56 1552 Killer(R) Wireless-AC 1550i Wireless Network Adapter (9560NGW)  
8086 0034 Wireless-AC 9560  
31e3 Celeron/Pentium Silver Processor SATA Controller  
31e8 Celeron/Pentium Silver Processor LPC Controller  
31ee Celeron/Pentium Silver Processor Serial IO UART Host Controller  
31f0 Gemini Lake Host Bridge  
3200 GD31244 PCI-X SATA HBA  
1775 c200 C2K onboard SATA host bus adapter  
3310 IOP348 I/O Processor  
1054 3030 HRA380 Hitachi RAID Adapter to PCIe  
1054 3034 HRA381 Hitachi RAID Adapter to PCIe  
3313 IOP348 I/O Processor (SL8e) in IOC Mode SAS/SATA  
331b IOP348 I/O Processor (SL8x) in IOC Mode SAS/SATA  
3331 IOC340 I/O Controller (VV8e) SAS/SATA  
3339 IOC340 I/O Controller (VV8x) SAS/SATA  
3340 82855PM Processor to I/O Controller  
1014 0529 Thinkpad T40 series  
1025 005a TravelMate 290  
103c  
088c NC8000 laptop  
103c 0890 NC6000 laptop  
103c 08b0 tc1100 tablet  
144d c005 X10 Laptop  
144d c00c P30/P35 notebook  
3341 82855PM Processor to AGP Controller  
144d c00c P30 notebook  
3363 IOC340 I/O Controller in IOC Mode SAS/SATA  
3382 81342 [Chevelon] I/O Processor (ATUe)  
33c3 IOP348 I/O Processor (SL8De) in IOC Mode SAS/SATA  
33cb IOP348 I/O Processor (SL8Dx) in IOC Mode SAS/SATA  
3400 5520/5500/X58 I/O Hub to ESI Port  
3401 5520/5500/X58 I/O Hub to ESI Port  
3402 5520/5500/X58 I/O Hub to ESI Port  
3403 5500 I/O Hub to ESI Port  
1028 0236 PowerEdge R610 I/O Hub to ESI Port  
1028 0287 PowerEdge M610 I/O Hub to ESI Port  
1028 028c PowerEdge R410 I/O Hub to ESI Port  
1028 028d PowerEdge T410 I/O Hub to ESI Port  
103c 330b ProLiant ML150 G6 Server  
3404 5520/5500/X58 I/O Hub to ESI Port  
3405 5520/5500/X58 I/O Hub to ESI Port  
3406 5520 I/O Hub to ESI Port  
103c 330b ProLiant G6 series  
3407 5520/5500/X58 I/O Hub to ESI Port  
3408 5520/5500/X58  
I/O Hub PCI Express Root Port 1  
103c 330b ProLiant G6 series  
3409 5520/5500/X58 I/O Hub PCI Express Root Port 2

340a 5520/5500/X58 I/O Hub PCI Express Root Port 3  
103c 330b ProLiant ML150 G6 Server  
340b 5520/X58 I/O Hub PCI Express Root Port 4  
340c 5520/X58 I/O Hub PCI Express Root Port 5  
340d 5520/X58 I/O Hub PCI Express Root Port 6  
340e 5520/5500/X58 I/O Hub PCI Express Root Port 7  
103c 330b ProLiant ML150 G6 Server  
340f 5520/5500/X58 I/O Hub PCI Express Root Port 8  
3410 7500/5520/5500/X58 I/O Hub PCI Express Root Port 9  
3411 7500/5520/5500/X58 I/O Hub PCI Express Root Port 10  
3418 7500/5520/5500/X58 Physical Layer Port 0  
3419 7500/5520/5500 Physical Layer Port 1  
3420 7500/5520/5500/X58 I/O Hub PCI Express Root Port 0  
3421 7500/5520/5500/X58 I/O Hub PCI Express Root Port 0  
3422 7500/5520/5500/X58 I/O Hub GPIO and Scratch Pad Registers  
103c 330b ProLiant G6 series  
3423 7500/5520/5500/X58 I/O Hub Control Status and RAS Registers  
103c  
330b ProLiant G6 series  
3425 7500/5520/5500/X58 Physical and Link Layer Registers Port 0  
3426 7500/5520/5500/X58 Routing and Protocol Layer Registers Port 0  
3427 7500/5520/5500 Physical and Link Layer Registers Port 1  
3428 7500/5520/5500 Routing & Protocol Layer Register Port 1  
3429 5520/5500/X58 Chipset QuickData Technology Device  
342a 5520/5500/X58 Chipset QuickData Technology Device  
342b 5520/5500/X58 Chipset QuickData Technology Device  
342c 5520/5500/X58 Chipset QuickData Technology Device  
342d 7500/5520/5500/X58 I/O Hub I/OxAPIC Interrupt Controller  
342e 7500/5520/5500/X58 I/O Hub System Management Registers  
103c 330b ProLiant G6 series  
342f 7500/5520/5500/X58 Trusted Execution Technology Registers  
3430 5520/5500/X58 Chipset QuickData Technology Device  
3431 5520/5500/X58 Chipset QuickData Technology Device  
3432 5520/5500/X58 Chipset QuickData Technology Device  
3433 5520/5500/X58 Chipset QuickData Technology Device  
3438 7500/5520/5500/X58 I/O Hub  
Throttle Registers  
3440 Ice Lake UPI Misc  
3441 Ice Lake UPI Link/Phy0  
3456 Ice Lake NorthPeak  
347e Ice Lake Xeon Non-Transparent Bridge  
3482 Ice Lake-LP LPC Controller  
34a3 Ice Lake-LP SMBus Controller  
34a4 Ice Lake-LP SPI Controller  
34a8 Ice Lake-LP Serial IO UART Controller #0  
34a9 Ice Lake-LP Serial IO UART Controller #1  
34aa Ice Lake-LP Serial IO SPI Controller #0  
34ab Ice Lake-LP Serial IO SPI Controller #1

34b0 Ice Lake-LP PCI Express Root Port #9  
34b1 Ice Lake-LP PCIe Port #10  
34b4 Ice Lake-LP PCIe Port #13  
34b5 Ice Lake-LP PCIe Port #14  
34b7 Ice Lake-LP PCI Express Root Port #16  
34b8 Ice Lake-LP PCIe Port #1  
34ba Ice Lake-LP PCI Express Root Port #3  
34bb Ice Lake-LP PCIe Port #4  
34bc Ice Lake-LP PCI Express Root Port #5  
34bd Ice Lake-LP PCIe Port #6  
34be Ice Lake-LP PCIe Port #7  
34bf Ice Lake-LP PCIe Port #8  
34c4 Ice Lake-LP SD Host Controller  
34c5 Ice Lake-LP Serial IO I2c Controller #4  
34c6 Ice Lake-LP Serial IO I2c Controller  
#5  
34c8 Ice Lake-LP Smart Sound Technology Audio Controller  
34d3 Ice Lake-LP SATA Controller [AHCI mode]  
34e0 Ice Lake-LP Management Engine  
34e8 Ice Lake-LP Serial IO I2C Controller #0  
34e9 Ice Lake-LP Serial IO I2C Controller #1  
34ea Ice Lake-LP Serial IO I2C Controller #2  
34eb Ice Lake-LP Serial IO I2C Controller #3  
34ed Ice Lake-LP USB 3.1 xHCI Host Controller  
34ef Ice Lake-LP DRAM Controller  
34f0 Ice Lake-LP PCH CNVi WiFi  
1a56 1552 Killer(R) Wireless-AC 1550i Wireless Network Adapter (9560NGW)  
8086 0074 Wi-Fi 6 AX201  
8086 0264 Wireless-AC 9461  
34f8 Ice Lake-LP SD Controller  
34fc Ice Lake-LP Integrated Sensor Solution  
3500 6311ESB/6321ESB PCI Express Upstream Port  
103c 31fe ProLiant DL140 G3  
15d9 9680 X7DBN Motherboard  
3501 6310ESB PCI Express Upstream Port  
3504 6311ESB/6321ESB I/OxAPIC Interrupt Controller  
3505 6310ESB I/OxAPIC Interrupt Controller  
350c 6311ESB/6321ESB PCI Express to PCI-X Bridge  
103c 31fe ProLiant DL140 G3  
15d9  
9680 X7DBN Motherboard  
350d 6310ESB PCI Express to PCI-X Bridge  
3510 6311ESB/6321ESB PCI Express Downstream Port E1  
103c 31fe ProLiant DL140 G3  
15d9 9680 X7DBN Motherboard  
3511 6310ESB PCI Express Downstream Port E1  
3514 6311ESB/6321ESB PCI Express Downstream Port E2  
3515 6310ESB PCI Express Downstream Port E2

3518 6311ESB/6321ESB PCI Express Downstream Port E3  
15d9 9680 X7DBN Motherboard  
3519 6310ESB PCI Express Downstream Port E3  
3575 82830M/MG/MP Host Bridge  
0e11 0030 Evo N600c  
1014 021d ThinkPad A/T/X Series  
104d 80e7 VAIO PCG-GR214EP/GR214MP/GR215MP/GR314MP/GR315MP  
3576 82830M/MP AGP Bridge  
3577 82830M/MG Integrated Graphics Controller  
1014 0513 ThinkPad A/T/X Series  
3578 82830M/MG/MP Host Bridge  
3580 82852/82855 GM/GME/PM/GMV Processor to I/O Controller  
1014 055c ThinkPad R50e  
1025 0064 Extensa 3000 series laptop  
1028 0139 Latitude D400  
1028 014f Latitude X300  
1028 0152 Latitude D500  
1028 0163 Latitude D505  
1028  
018d Inspiron 700m/710m  
1028 0196 Inspiron 5160  
114a 0582 PC8  
1734 1055 Amilo M1420  
1775 10d0 V5D Single Board Computer  
1775 ce90 CE9  
4c53 10b0 CL9 mainboard  
4c53 10e0 PSL09 PrPMC  
e4bf 0cc9 CC9-SAMBA  
e4bf 0cd2 CD2-BEBOP  
3581 82852/82855 GM/GME/PM/GMV Processor to AGP Controller  
1734 1055 Amilo M1420  
3582 82852/855GM Integrated Graphics Device  
1014 0562 ThinkPad R50e  
1028 0139 Latitude D400  
1028 014f Latitude X300  
1028 0152 Latitude D500  
1028 0163 Latitude D505  
1028 018d Inspiron 700m/710m  
114a 0582 PC8 integrated graphics  
1775 10d0 V5D Single Board Computer VGA  
1775 ce90 CE9  
4c53 10b0 CL9 mainboard  
4c53 10e0 PSL09 PrPMC  
e4bf 0cc9 CC9-SAMBA  
e4bf 0cd2 CD2-BEBOP  
3584 82852/82855 GM/GME/PM/GMV Processor to I/O Controller  
1014 055d ThinkPad R50e  
1025 0064 Extensa 3000 series laptop



1028 0139 Latitude D400  
1028 014f Latitude X300  
1028 0152 Latitude D500  
1028 0163 Latitude D505  
1028 018d Inspiron  
700m/710m  
1028 0196 Inspiron 5160  
114a 0582 PC8  
1734 1055 Amilo M1420  
1775 10d0 V5D Single Board Computer  
1775 ce90 CE9  
4c53 10b0 CL9 mainboard  
4c53 10e0 PSL09 PrPMC  
3585 82852/82855 GM/GME/PM/GMV Processor to I/O Controller  
1014 055e ThinkPad R50e  
1025 0064 Extensa 3000 series laptop  
1028 0139 Latitude D400  
1028 014f Latitude X300  
1028 0152 Latitude D500  
1028 0163 Latitude D505  
1028 018d Inspiron 700m/710m  
1028 0196 Inspiron 5160  
114a 0582 PC8  
1734 1055 Amilo M1420  
1775 10d0 V5D Single Board Computer  
1775 ce90 CE9  
4c53 10b0 CL9 mainboard  
4c53 10e0 PSL09 PrPMC  
358c 82854 GMCH  
358e 82854 GMCH Integrated Graphics Device  
3590 E7520 Memory Controller Hub  
1014 02dd eServer xSeries server mainboard  
1028 016c PowerEdge 1850 Memory Controller Hub  
1028 016d PowerEdge 2850 Memory Controller Hub  
1028 019a PowerEdge SC1425  
1734 103e PRIMERGY RX/TX S2 series  
1775 1100 CR11/VR11 Single Board Computer  
4c53 10d0  
Telum ASLP10 Processor AMC  
3591 E7525/E7520 Error Reporting Registers  
1014 02dd eServer xSeries server mainboard  
1028 0168 Precision Workstation 670 Mainboard  
1028 0169 Precision 470  
103c 3208 ProLiant DL140 G2  
4c53 10d0 Telum ASLP10 Processor AMC  
3592 E7320 Memory Controller Hub  
1734 1073 Primergy Econel 200 D2020 mainboard  
3593 E7320 Error Reporting Registers

1734 1073 Primergy Econel 200 D2020 mainboard  
3594 E7520 DMA Controller  
1775 1100 CR11/VR11 Single Board Computer  
4c53 10d0 Telum ASLP10 Processor AMC  
3595 E7525/E7520/E7320 PCI Express Port A  
1775 1100 CR11/VR11 Single Board Computer  
3596 E7525/E7520/E7320 PCI Express Port A1  
3597 E7525/E7520 PCI Express Port B  
1775 1100 CR11/VR11 Single Board Computer  
3598 E7520 PCI Express Port B1  
1775 1100 CR11/VR11 Single Board Computer  
3599 E7520 PCI Express Port C  
1775 1100 CR11/VR11 Single Board Computer  
359a E7520 PCI Express Port C1  
359b E7525/E7520/E7320 Extended Configuration

#### Registers

1014 02dd eServer xSeries server mainboard  
359e E7525 Memory Controller Hub  
1028 0168 Precision Workstation 670 Mainboard  
1028 0169 Precision 470  
35b0 3100 Chipset Memory I/O Controller Hub  
35b1 3100 DRAM Controller Error Reporting Registers  
35b5 3100 Chipset Enhanced DMA Controller  
35b6 3100 Chipset PCI Express Port A  
35b7 3100 Chipset PCI Express Port A1  
35c8 3100 Extended Configuration Test Overflow Registers  
3600 7300 Chipset Memory Controller Hub  
3604 7300 Chipset PCI Express Port 1  
3605 7300 Chipset PCI Express Port 2  
3606 7300 Chipset PCI Express Port 3  
3607 7300 Chipset PCI Express Port 4  
3608 7300 Chipset PCI Express Port 5  
3609 7300 Chipset PCI Express Port 6  
360a 7300 Chipset PCI Express Port 7  
360b 7300 Chipset QuickData Technology Device  
360c 7300 Chipset FSB Registers  
1028 01f0 PowerEdge R900 7300 Chipset FSB Registers  
360d 7300 Chipset Snoop Filter Registers  
360e 7300 Chipset Debug and Miscellaneous Registers  
360f  
7300 Chipset FBD Branch 0 Registers  
3610 7300 Chipset FBD Branch 1 Registers  
3700 Xeon C5500/C3500 DMI  
3701 Xeon C5500/C3500 DMI  
3702 Xeon C5500/C3500 DMI  
3703 Xeon C5500/C3500 DMI  
3704 Xeon C5500/C3500 DMI  
3705 Xeon C5500/C3500 DMI

3706 Xeon C5500/C3500 DMI  
3707 Xeon C5500/C3500 DMI  
3708 Xeon C5500/C3500 DMI  
3709 Xeon C5500/C3500 DMI  
370a Xeon C5500/C3500 DMI  
370b Xeon C5500/C3500 DMI  
370c Xeon C5500/C3500 DMI  
370d Xeon C5500/C3500 DMI  
370e Xeon C5500/C3500 DMI  
370f Xeon C5500/C3500 DMI  
3710 Xeon C5500/C3500 CB3 DMA  
3711 Xeon C5500/C3500 CB3 DMA  
3712 Xeon C5500/C3500 CB3 DMA  
3713 Xeon C5500/C3500 CB3 DMA  
3714 Xeon C5500/C3500 CB3 DMA  
3715 Xeon C5500/C3500 CB3 DMA  
3716 Xeon C5500/C3500 CB3 DMA  
3717 Xeon C5500/C3500 CB3 DMA  
3718 Xeon C5500/C3500 CB3 DMA  
3719 Xeon C5500/C3500 CB3 DMA  
371a Xeon C5500/C3500 QPI Link  
371b Xeon C5500/C3500 QPI Routing and Protocol  
371d Xeon C5500/C3500 QPI Routing and Protocol  
3720 Xeon  
C5500/C3500 PCI Express Root Port 0  
3721 Xeon C5500/C3500 PCI Express Root Port 1  
3722 Xeon C5500/C3500 PCI Express Root Port 2  
3723 Xeon C5500/C3500 PCI Express Root Port 3  
3724 Xeon C5500/C3500 PCI Express Root Port 4  
3725 Xeon C5500/C3500 NTB Primary  
3726 Xeon C5500/C3500 NTB Primary  
3727 Xeon C5500/C3500 NTB Secondary  
3728 Xeon C5500/C3500 Core  
3729 Xeon C5500/C3500 Core  
372a Xeon C5500/C3500 Core  
372b Xeon C5500/C3500 Core  
372c Xeon C5500/C3500 Reserved  
373f Xeon C5500/C3500 IOxAPIC  
37c8 C62x Chipset QuickAssist Technology  
8086 0001 QuickAssist Adapter 8960  
8086 0002 QuickAssist Adapter 8970  
37c9 C62x Chipset QuickAssist Technology Virtual Function  
37cc Ethernet Connection X722  
37cd Ethernet Virtual Function 700 Series  
37ce Ethernet Connection X722 for 10GbE backplane  
1590 0215 Ethernet 10Gb 2-port 568i Adapter  
17aa 4023 Intel Ethernet Connection X722 for 10GbE backplane  
17aa 4025 Ethernet Connection X722 for 10GbE backplane

37cf

Ethernet Connection X722 for 10GbE QSFP+

37d0 Ethernet Connection X722 for 10GbE SFP+

17aa 4020 Intel Ethernet Connection X722 for 10G SFP+

17aa 4021 Intel Ethernet Connection X722 for 10G SFP+

17aa 4022 Ethernet Connection X722 for 10GbE SFP+

8086 0001 Ethernet Network Adapter X722-2

8086 0002 Ethernet Network Adapter X722-2

8086 0003 Ethernet Network Adapter X722-4

8086 0004 Ethernet Network Adapter X722-4

37d1 Ethernet Connection X722 for 1GbE

14cd 0010 88E1514 Ethernet OCP 2x1G RJ45 Phy Card [USI-1514-1GbaseT]

1590 0216 Ethernet 1Gb 2-port 368i Adapter

1590 0217 Ethernet 1Gb 2-port 368FLR-MMT Adapter

1590 0247 Ethernet 1Gb 4-port 369i Adapter

17aa 4020 Ethernet Connection X722 for 1GbE

17aa 4021 Ethernet Connection X722 for 1GbE

17aa 4022 Ethernet Connection X722 for 1GbE

17aa 4024 Ethernet Connection X722 for 1GbE

37d2 Ethernet Connection X722 for 10GBASE-T

1059 0180 RD10019 10GbE interface

1170 37d2 Ethernet Connection

X722 for 10GBASE-T

14cd 0030 Ethernet OCP 2x10G RJ45 Phy Card [USI-X557-10GbaseT]

1590 0218 Ethernet 10Gb 2-port 568FLR-MMT Adapter

17aa 4020 Ethernet Connection X722 for 10GBASE-T

17aa 4021 Ethernet Connection X722 for 10GBASE-T

17aa 4022 Ethernet Connection X722 for 10GBASE-T

17aa 4024 Ethernet Connection X722 for 10GBASE-T

17aa 4025 Ethernet Connection X722 for 10GBASE-T

37d3 Ethernet Connection X722 for 10GbE SFP+

1590 0219 Ethernet 10Gb 2-port 568FLR-MMSFP+ Adapter

17aa 4020 Ethernet Connection X722 for 10GbE SFP+

17aa 4021 Ethernet Connection X722 for 10GbE SFP+

17aa 4025 Ethernet Connection X722 for 10GbE SFP+

37d4 Ethernet Connection X722 for 10GbE QSFP+

37d9 X722 Hyper-V Virtual Function

3882 Ice Lake LPC Controller

38a4 Ice Lake SPI Controller

38e0 Ice Lake Management Engine Interface

3a00 82801JD/DO (ICH10 Family) 4-port SATA IDE Controller

3a02 82801JD/DO (ICH10 Family) SATA AHCI Controller

3a05 82801JD/DO (ICH10 Family) SATA

RAID Controller

3a06 82801JD/DO (ICH10 Family) 2-port SATA IDE Controller

3a14 82801JDO (ICH10DO) LPC Interface Controller

3a16 82801JIR (ICH10R) LPC Interface Controller

1028 028c PowerEdge R410 LPC Interface Controller

1028 028d PowerEdge T410 LPC Interface Controller  
103c 330b ProLiant G6 series  
1043 82d4 P5Q Deluxe Motherboard  
1458 5001 GA-EP45-DS5 Motherboard  
3a18 82801JIB (ICH10) LPC Interface Controller  
3a1a 82801JD (ICH10D) LPC Interface Controller  
3a20 82801JI (ICH10 Family) 4 port SATA IDE Controller #1  
1028 028c PowerEdge R410 SATA IDE Controller  
1028 028d PowerEdge T410 SATA IDE Controller  
3a22 82801JI (ICH10 Family) SATA AHCI Controller  
103c 330b ProLiant G6 series  
1043 82d4 P5Q Deluxe Motherboard  
1458 b005 GA-EP45-DS5/GA-EG45M-DS2H Motherboard  
3a25 82801JIR (ICH10R) SATA RAID Controller  
1028 028c PERC S100 Controller (PE R410)  
1028 028d PERC S100 Controller (PE T410)  
1028 02f1 PERC S100 Controller (PE R510)  
3a26  
82801JI (ICH10 Family) 2 port SATA IDE Controller #2  
1028 028c PowerEdge R410 SATA IDE Controller  
1028 028d PowerEdge T410 SATA IDE Controller  
3a30 82801JI (ICH10 Family) SMBus Controller  
1043 82d4 P5Q Deluxe Motherboard  
1458 5001 GA-EP45-DS5/GA-EG45M-DS2H Motherboard  
3a32 82801JI (ICH10 Family) Thermal Subsystem  
3a34 82801JI (ICH10 Family) USB UHCI Controller #1  
1028 028c PowerEdge R410 USB UHCI Controller  
1028 028d PowerEdge T410 USB UHCI Controller  
103c 330b ProLiant G6 series  
1043 82d4 P5Q Deluxe Motherboard  
1458 5004 GA-EP45-DS5 Motherboard  
3a35 82801JI (ICH10 Family) USB UHCI Controller #2  
1028 028c PowerEdge R410 USB UHCI Controller  
1028 028d PowerEdge T410 USB UHCI Controller  
103c 330b ProLiant G6 series  
1043 82d4 P5Q Deluxe Motherboard  
1458 5004 GA-EP45-DS5 Motherboard  
3a36 82801JI (ICH10 Family) USB UHCI Controller #3  
1028 028c PowerEdge R410 USB UHCI Controller  
1028 028d PowerEdge T410 USB UHCI Controller  
103c 330b  
ProLiant G6 series  
1043 82d4 P5Q Deluxe Motherboard  
1458 5004 GA-EP45-DS5 Motherboard  
3a37 82801JI (ICH10 Family) USB UHCI Controller #4  
1028 028c PowerEdge R410 USB UHCI Controller  
1028 028d PowerEdge T410 USB UHCI Controller  
103c 330b ProLiant G6 series

1043 82d4 P5Q Deluxe Motherboard  
1458 5004 Motherboard  
3a38 82801JI (ICH10 Family) USB UHCI Controller #5  
1028 028c PowerEdge R410 USB UHCI Controller  
1028 028d PowerEdge T410 USB UHCI Controller  
103c 330b ProLiant ML150 G6 Server  
1043 82d4 P5Q Deluxe Motherboard  
1458 5004 Motherboard  
3a39 82801JI (ICH10 Family) USB UHCI Controller #6  
1028 028c PowerEdge R410 USB UHCI Controller  
1028 028d PowerEdge T410 USB UHCI Controller  
103c 330b ProLiant ML150 G6 Server  
1043 82d4 P5Q Deluxe Motherboard  
1458 5004 Motherboard  
3a3a 82801JI (ICH10 Family) USB2 EHCI Controller #1  
1028 028c PowerEdge R410 USB EHCI Controller  
1028 028d PowerEdge T410 USB EHCI Controller  
103c 330b ProLiant  
G6 series  
1043 82d4 P5Q Deluxe Motherboard  
1458 5006 GA-EP45-DS5 Motherboard  
3a3c 82801JI (ICH10 Family) USB2 EHCI Controller #2  
1028 028c PowerEdge R410 USB EHCI Controller  
1028 028d PowerEdge T410 USB EHCI Controller  
103c 330b ProLiant G6 series  
1043 82d4 P5Q Deluxe Motherboard  
1458 5006 Motherboard  
3a3e 82801JI (ICH10 Family) HD Audio Controller  
1043 8311 P5Q Deluxe Motherboard  
1458 a002 GA-EP45-UD3R Motherboard  
1458 a102 GA-EP45-DS5/GA-EG45M-DS2H Motherboard  
3a40 82801JI (ICH10 Family) PCI Express Root Port 1  
1028 028c PowerEdge R410 PCI Express Port 1  
1028 028d PowerEdge T410 PCI Express Port 1  
103c 330b ProLiant ML150 G6 Server  
1043 82d4 P5Q Deluxe Motherboard  
1043 82ea P6T DeLuxe Motherboard  
1458 5001 GA-EP45-DS5/GA-EG45M-DS2H Motherboard  
3a42 82801JI (ICH10 Family) PCI Express Port 2  
3a44 82801JI (ICH10 Family) PCI Express Root Port 3  
1043 82ea P6T DeLuxe Motherboard  
3a46 82801JI (ICH10 Family) PCI Express Root  
Port 4  
1043 82ea P6T DeLuxe Motherboard  
1458 5001 GA-EP45-DS5 Motherboard  
3a48 82801JI (ICH10 Family) PCI Express Root Port 5  
103c 330b ProLiant ML150 G6 Server  
1043 82ea P6T Deluxe Motherboard

1458 5001 GA-EP45-DS5 Motherboard  
3a4a 82801JI (ICH10 Family) PCI Express Root Port 6  
103c 330b ProLiant ML150 G6 Server  
1043 82d4 P5Q Deluxe Motherboard  
1043 82ea P6T DeLuxe Motherboard  
1458 5001 GA-EP45-DS5/GA-EG45M-DS2H Motherboard  
3a4c 82801JI (ICH10 Family) Gigabit Ethernet Controller  
3a51 82801JDO (ICH10DO) VECI Controller  
3a55 82801JD/DO (ICH10 Family) Virtual SATA Controller  
3a60 82801JD/DO (ICH10 Family) SMBus Controller  
3a62 82801JD/DO (ICH10 Family) Thermal Subsystem  
3a64 82801JD/DO (ICH10 Family) USB UHCI Controller #1  
3a65 82801JD/DO (ICH10 Family) USB UHCI Controller #2  
3a66 82801JD/DO (ICH10 Family) USB UHCI Controller #3  
3a67 82801JD/DO (ICH10 Family) USB UHCI Controller #4  
3a68 82801JD/DO (ICH10 Family) USB UHCI Controller #5  
3a69  
82801JD/DO (ICH10 Family) USB UHCI Controller #6  
3a6a 82801JD/DO (ICH10 Family) USB2 EHCI Controller #1  
3a6c 82801JD/DO (ICH10 Family) USB2 EHCI Controller #2  
3a6e 82801JD/DO (ICH10 Family) HD Audio Controller  
3a70 82801JD/DO (ICH10 Family) PCI Express Port 1  
3a72 82801JD/DO (ICH10 Family) PCI Express Port 2  
3a74 82801JD/DO (ICH10 Family) PCI Express Port 3  
3a76 82801JD/DO (ICH10 Family) PCI Express Port 4  
3a78 82801JD/DO (ICH10 Family) PCI Express Port 5  
3a7a 82801JD/DO (ICH10 Family) PCI Express Port 6  
3a7c 82801JD/DO (ICH10 Family) Gigabit Ethernet Controller  
3b00 5 Series/3400 Series Chipset LPC Interface Controller  
3b01 Mobile 5 Series Chipset LPC Interface Controller  
3b02 P55 Chipset LPC Interface Controller  
3b03 PM55 Chipset LPC Interface Controller  
3b04 5 Series Chipset LPC Interface Controller  
3b05 Mobile 5 Series Chipset LPC Interface Controller  
3b06 H55 Chipset LPC Interface Controller  
3b07 QM57 Chipset LPC Interface Controller  
1028  
040a Latitude E6410  
1028 040b Latitude E6510  
e4bf 50c1 PC1-GROOVE  
3b08 H57 Chipset LPC Interface Controller  
3b09 HM55 Chipset LPC Interface Controller  
1025 0347 Aspire 7740G  
144d c06a R730 Laptop  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
3b0a Q57 Chipset LPC Interface Controller  
1028 02da OptiPlex 980  
15d9 060d C7SIM-Q Motherboard

3b0b HM57 Chipset LPC Interface Controller  
3b0c 5 Series Chipset LPC Interface Controller  
3b0d 5 Series/3400 Series Chipset LPC Interface Controller  
3b0e 5 Series/3400 Series Chipset LPC Interface Controller  
3b0f QS57 Chipset LPC Interface Controller  
3b10 5 Series/3400 Series Chipset LPC Interface Controller  
3b11 5 Series/3400 Series Chipset LPC Interface Controller  
3b12 3400 Series Chipset LPC Interface Controller  
3b13 5 Series/3400 Series Chipset LPC Interface Controller  
3b14 3420 Chipset LPC Interface Controller  
15d9 0605 X8SIL  
3b15 5 Series/3400 Series Chipset LPC Interface Controller  
3b16 3450  
Chipset LPC Interface Controller  
3b17 5 Series/3400 Series Chipset LPC Interface Controller  
3b18 5 Series/3400 Series Chipset LPC Interface Controller  
3b19 5 Series/3400 Series Chipset LPC Interface Controller  
3b1a 5 Series/3400 Series Chipset LPC Interface Controller  
3b1b 5 Series/3400 Series Chipset LPC Interface Controller  
3b1c 5 Series/3400 Series Chipset LPC Interface Controller  
3b1d 5 Series/3400 Series Chipset LPC Interface Controller  
3b1e 5 Series/3400 Series Chipset LPC Interface Controller  
3b1f 5 Series/3400 Series Chipset LPC Interface Controller  
3b20 5 Series/3400 Series Chipset 4 port SATA IDE Controller  
3b21 5 Series/3400 Series Chipset 2 port SATA IDE Controller  
3b22 5 Series/3400 Series Chipset 6 port SATA AHCI Controller  
1028 02da OptiPlex 980  
15d9 0605 X8SIL  
15d9 060d C7SIM-Q Motherboard  
3b23 5 Series/3400 Series Chipset 4 port SATA AHCI Controller  
3b25 5 Series/3400 Series Chipset SATA RAID Controller  
103c 3118 Smart Array  
B110i SATA RAID Controller  
3b26 5 Series/3400 Series Chipset 2 port SATA IDE Controller  
3b28 5 Series/3400 Series Chipset 4 port SATA IDE Controller  
144d c06a R730 Laptop  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
3b29 5 Series/3400 Series Chipset 4 port SATA AHCI Controller  
1025 0347 Aspire 7740G  
144d c06a R730 Laptop  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
3b2c 5 Series/3400 Series Chipset SATA RAID Controller  
3b2d 5 Series/3400 Series Chipset 2 port SATA IDE Controller  
144d c06a R730 Laptop  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
e4bf 50c1 PC1-GROOVE  
3b2e 5 Series/3400 Series Chipset 4 port SATA IDE Controller  
e4bf 50c1 PC1-GROOVE



3b2f 5 Series/3400 Series Chipset 6 port SATA AHCI Controller  
1028 040a Latitude E6410  
1028 040b Latitude E6510  
e4bf 50c1 PC1-GROOVE

3b30 5 Series/3400 Series Chipset SMBus Controller  
1025 0347 Aspire 7740G  
1028 02da OptiPlex 980  
1028 040a Latitude E6410  
1028 040b  
Latitude E6510  
1043 3838 P7P55-M Motherboard  
1043 8383 P7P55-M Motherboard  
144d c06a R730 Laptop  
15d9 0605 X8SIL  
15d9 060d C7SIM-Q Motherboard  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
e4bf 50c1 PC1-GROOVE

3b32 5 Series/3400 Series Chipset Thermal Subsystem  
1025 0347 Aspire 7740G  
1028 040a Latitude E6410  
144d c06a R730 Laptop  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]

3b34 5 Series/3400 Series Chipset USB2 Enhanced Host Controller  
1025 0347 Aspire 7740G  
1028 02da OptiPlex 980  
1028 040a Latitude E6410  
1028 040b Latitude E6510  
144d c06a R730 Laptop  
15d9 0605 X8SIL  
15d9 060d C7SIM-Q Motherboard  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
e4bf 50c1 PC1-GROOVE

3b36 5 Series/3400 Series Chipset USB Universal Host Controller  
3b37 5 Series/3400 Series Chipset USB Universal Host Controller  
3b38 5 Series/3400 Series Chipset USB Universal Host Controller  
3b39 5 Series/3400 Series Chipset USB Universal  
Host Controller

3b3a 5 Series/3400 Series Chipset USB Universal Host Controller  
3b3b 5 Series/3400 Series Chipset USB Universal Host Controller  
3b3c 5 Series/3400 Series Chipset USB2 Enhanced Host Controller  
1025 0347 Aspire 7740G  
1028 02da OptiPlex 980  
1028 040a Latitude E6410  
1028 040b Latitude E6510  
144d c06a R730 Laptop  
15d9 0605 X8SIL  
15d9 060d C7SIM-Q Motherboard  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]

e4bf 50c1 PC1-GROOVE  
3b3e 5 Series/3400 Series Chipset USB Universal Host Controller  
3b3f 5 Series/3400 Series Chipset USB Universal Host Controller  
3b40 5 Series/3400 Series Chipset USB Universal Host Controller  
3b41 5 Series/3400 Series Chipset LAN Controller  
3b42 5 Series/3400 Series Chipset PCI Express Root Port 1  
1028 02da OptiPlex 980  
1028 040a Latitude E6410  
1028 040b Latitude E6510  
103c 1521 EliteBook 8540p  
144d c06a R730 Laptop  
15d9 060d C7SIM-Q Motherboard  
17c0 10d2 Medion Akoya E7214 Notebook PC  
[MD98410]  
3b44 5 Series/3400 Series Chipset PCI Express Root Port 2  
1028 040a Latitude E6410  
1028 040b Latitude E6510  
15d9 060d C7SIM-Q Motherboard  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
3b46 5 Series/3400 Series Chipset PCI Express Root Port 3  
1028 040a Latitude E6410  
1028 040b Latitude E6510  
144d c06a R730 Laptop  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
3b48 5 Series/3400 Series Chipset PCI Express Root Port 4  
1028 040a Latitude E6410  
1028 040b Latitude E6510  
144d c06a R730 Laptop  
3b4a 5 Series/3400 Series Chipset PCI Express Root Port 5  
1028 02da OptiPlex 980  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
3b4c 5 Series/3400 Series Chipset PCI Express Root Port 6  
3b4e 5 Series/3400 Series Chipset PCI Express Root Port 7  
3b50 5 Series/3400 Series Chipset PCI Express Root Port 8  
3b53 5 Series/3400 Series Chipset VECI Controller  
3b56 5 Series/3400 Series Chipset High Definition Audio  
1025 0347 Aspire 7740G  
1028  
02da OptiPlex 980  
1028 040a Latitude E6410  
1028 040b Latitude E6510  
1043 1373 G73-series gaming laptop  
144d c06a R730 Laptop  
15d9 060d C7SIM-Q Motherboard  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
e4bf 50c1 PC1-GROOVE  
3b57 5 Series/3400 Series Chipset High Definition Audio  
3b64 5 Series/3400 Series Chipset HECI Controller

1025 0347 Aspire 7740G  
15d9 060d C7SIM-Q Motherboard  
17c0 10d2 Medion Akoya E7214 Notebook PC [MD98410]  
e4bf 50c1 PC1-GROOVE  
3b65 5 Series/3400 Series Chipset HECI Controller  
3b66 5 Series/3400 Series Chipset PT IDER Controller  
3b67 5 Series/3400 Series Chipset KT Controller  
e4bf 50c1 PC1-GROOVE  
3c00 Xeon E5/Core i7 DMI2  
3c01 Xeon E5/Core i7 DMI2 in PCI Express Mode  
3c02 Xeon E5/Core i7 IIO PCI Express Root Port 1a  
3c03 Xeon E5/Core i7 IIO PCI Express Root Port 1b  
3c04 Xeon E5/Core i7 IIO PCI Express Root Port 2a  
3c05 Xeon E5/Core i7 IIO PCI Express Root Port 2b  
3c06 Xeon E5/Core i7 IIO  
PCI Express Root Port 2c  
3c07 Xeon E5/Core i7 IIO PCI Express Root Port 2d  
3c08 Xeon E5/Core i7 IIO PCI Express Root Port 3a in PCI Express Mode  
3c09 Xeon E5/Core i7 IIO PCI Express Root Port 3b  
3c0a Xeon E5/Core i7 IIO PCI Express Root Port 3c  
3c0b Xeon E5/Core i7 IIO PCI Express Root Port 3d  
3c0d Xeon E5/Core i7 Non-Transparent Bridge  
3c0e Xeon E5/Core i7 Non-Transparent Bridge  
3c0f Xeon E5/Core i7 Non-Transparent Bridge  
3c20 Xeon E5/Core i7 DMA Channel 0  
3c21 Xeon E5/Core i7 DMA Channel 1  
3c22 Xeon E5/Core i7 DMA Channel 2  
3c23 Xeon E5/Core i7 DMA Channel 3  
3c24 Xeon E5/Core i7 DMA Channel 4  
3c25 Xeon E5/Core i7 DMA Channel 5  
3c26 Xeon E5/Core i7 DMA Channel 6  
3c27 Xeon E5/Core i7 DMA Channel 7  
3c28 Xeon E5/Core i7 Address Map, VTd\_Misc, System Management  
3c2a Xeon E5/Core i7 Control Status and Global Errors  
3c2c Xeon E5/Core i7 I/O APIC  
3c2e Xeon E5/Core i7 DMA  
3c2f Xeon E5/Core i7 DMA  
3c40 Xeon E5/Core i7 IIO Switch and IRP Performance Monitor  
3c43  
Xeon E5/Core i7 Ring to PCI Express Performance Monitor  
3c44 Xeon E5/Core i7 Ring to QuickPath Interconnect Link 0 Performance Monitor  
3c45 Xeon E5/Core i7 Ring to QuickPath Interconnect Link 1 Performance Monitor  
3c46 Xeon E5/Core i7 Processor Home Agent Performance Monitoring  
3c71 Xeon E5/Core i7 Integrated Memory Controller RAS Registers  
3c80 Xeon E5/Core i7 QPI Link 0  
3c83 Xeon E5/Core i7 QPI Link Reut 0  
3c84 Xeon E5/Core i7 QPI Link Reut 0  
3c90 Xeon E5/Core i7 QPI Link 1

3c93 Xeon E5/Core i7 QPI Link Reut 1  
 3c94 Xeon E5/Core i7 QPI Link Reut 1  
 3ca0 Xeon E5/Core i7 Processor Home Agent  
 3ca8 Xeon E5/Core i7 Integrated Memory Controller Registers  
 3caa Xeon E5/Core i7 Integrated Memory Controller Target Address Decoder 0  
 3cab Xeon E5/Core i7 Integrated Memory Controller Target Address Decoder 1  
 3cac Xeon E5/Core i7 Integrated Memory Controller Target Address Decoder 2  
 3cad Xeon E5/Core i7 Integrated Memory Controller Target Address Decoder  
 3  
 3cae Xeon E5/Core i7 Integrated Memory Controller Target Address Decoder 4  
 3cb0 Xeon E5/Core i7 Integrated Memory Controller Channel 0-3 Thermal Control 0  
 3cb1 Xeon E5/Core i7 Integrated Memory Controller Channel 0-3 Thermal Control 1  
 3cb2 Xeon E5/Core i7 Integrated Memory Controller ERROR Registers 0  
 3cb3 Xeon E5/Core i7 Integrated Memory Controller ERROR Registers 1  
 3cb4 Xeon E5/Core i7 Integrated Memory Controller Channel 0-3 Thermal Control 2  
 3cb5 Xeon E5/Core i7 Integrated Memory Controller Channel 0-3 Thermal Control 3  
 3cb6 Xeon E5/Core i7 Integrated Memory Controller ERROR Registers 2  
 3cb7 Xeon E5/Core i7 Integrated Memory Controller ERROR Registers 3  
 3cb8 Xeon E5/Core i7 DDRIO  
 3cc0 Xeon E5/Core i7 Power Control Unit 0  
 3cc1 Xeon E5/Core i7 Power Control Unit 1  
 3cc2 Xeon E5/Core i7 Power Control Unit 2  
 3cd0 Xeon E5/Core i7 Power Control Unit 3  
 3ce0 Xeon E5/Core i7 Interrupt Control Registers  
 3ce3 Xeon E5/Core i7 Semaphore and Scratchpad Configuration  
 Registers  
 3ce4 Xeon E5/Core i7 R2PCIe  
 3ce6 Xeon E5/Core i7 QuickPath Interconnect Agent Ring Registers  
 3ce8 Xeon E5/Core i7 Unicast Register 0  
 3ce9 Xeon E5/Core i7 Unicast Register 5  
 3cea Xeon E5/Core i7 Unicast Register 1  
 3ceb Xeon E5/Core i7 Unicast Register 6  
 3cec Xeon E5/Core i7 Unicast Register 3  
 3ced Xeon E5/Core i7 Unicast Register 7  
 3cee Xeon E5/Core i7 Unicast Register 4  
 3cef Xeon E5/Core i7 Unicast Register 8  
 3cf4 Xeon E5/Core i7 Integrated Memory Controller System Address Decoder 0  
 3cf5 Xeon E5/Core i7 Integrated Memory Controller System Address Decoder 1  
 3cf6 Xeon E5/Core i7 System Address Decoder  
 3e10 8th Gen Core 4-core Processor Host Bridge/DRAM Registers [Coffee Lake H]  
 3e18 8th Gen Core 4-core Workstation Processor Host Bridge/DRAM Registers [Coffee Lake S]  
 3e1f 8th Gen Core 4-core Desktop Processor Host Bridge/DRAM Registers [Coffee Lake S]  
 1458 5000 Z370 AORUS Gaming K3-CF  
 3e30 8th/9th Gen Core 8-core Desktop Processor Host  
 Bridge/DRAM Registers [Coffee Lake S]  
 3e33 8th/9th Gen Core Processor Host Bridge/DRAM Registers [Coffee Lake]  
 3e34 Coffee Lake HOST and DRAM Controller  
 3e35 Coffee Lake Host Bridge/DRAM Registers

3e81 8th Gen Core Processor PCIe Controller (x16)  
3e85 8th Gen Core Processor PCIe Controller (x8)  
3e89 8th Gen Core Processor PCIe Controller (x4)  
3e90 CoffeeLake-S GT1 [UHD Graphics 610]  
3e91 CoffeeLake-S GT2 [UHD Graphics 630]  
3e92 CoffeeLake-S GT2 [UHD Graphics 630]  
1028 0869 Vostro 3470  
3e93 CoffeeLake-S GT1 [UHD Graphics 610]  
3e94 Coffee Lake-S GT2 [UHD Graphics P630]  
3e96 CoffeeLake-S GT2 [UHD Graphics P630]  
3e98 CoffeeLake-S GT2 [UHD Graphics 630]  
3e9a Coffee Lake-S GT2 [UHD Graphics P630]  
3e9b CoffeeLake-H GT2 [UHD Graphics 630]  
3e9c Coffee Lake-S GT1 [UHD Graphics 610]  
3ea0 WhiskeyLake-U GT2 [UHD Graphics 620]  
1028 089e Inspiron 5482  
3ea1 Whiskey Lake-U GT1 [UHD Graphics 610]  
3ea5 CoffeeLake-U GT3e [Iris Plus Graphics 655]  
3ea6 Coffee Lake-U  
GT3 [Iris Plus Graphics 645]  
3ea8 Coffee Lake-U GT3 [Iris Plus Graphics 655]  
3ea9 Coffee Lake-U GT2 [UHD Graphics 620]  
3ec2 8th Gen Core Processor Host Bridge/DRAM Registers  
1028 0869 Vostro 3470  
1043 8694 PRIME H310M-D  
3ec4 8th Gen Core Processor Host Bridge/DRAM Registers  
3ec6 8th Gen Core Processor Host Bridge/DRAM Registers  
3eca 8th Gen Core Processor Host Bridge/DRAM Registers  
3ed0 8th Gen Core Processor Host Bridge/DRAM Registers  
4000 5400 Chipset Memory Controller Hub  
4001 5400 Chipset Memory Controller Hub  
4003 5400 Chipset Memory Controller Hub  
4021 5400 Chipset PCI Express Port 1  
4022 5400 Chipset PCI Express Port 2  
4023 5400 Chipset PCI Express Port 3  
4024 5400 Chipset PCI Express Port 4  
4025 5400 Chipset PCI Express Port 5  
4026 5400 Chipset PCI Express Port 6  
4027 5400 Chipset PCI Express Port 7  
4028 5400 Chipset PCI Express Port 8  
4029 5400 Chipset PCI Express Port 9  
402d 5400 Chipset IBIST Registers  
402e 5400 Chipset IBIST  
Registers  
402f 5400 Chipset QuickData Technology Device  
4030 5400 Chipset FSB Registers  
4031 5400 Chipset CE/SF Registers  
4032 5400 Chipset IOxAPIC

4035 5400 Chipset FBD Registers  
4036 5400 Chipset FBD Registers  
4041 NVMe Datacenter SSD [Optane]  
4100 Moorestown Graphics and Video  
4108 Atom Processor E6xx Integrated Graphics Controller  
4109 Atom Processor E6xx Integrated Graphics Controller  
410a Atom Processor E6xx Integrated Graphics Controller  
410b Atom Processor E6xx Integrated Graphics Controller  
410c Atom Processor E6xx Integrated Graphics Controller  
410d Atom Processor E6xx Integrated Graphics Controller  
410e Atom Processor E6xx Integrated Graphics Controller  
410f Atom Processor E6xx Integrated Graphics Controller  
4114 Atom Processor E6xx PCI Host Bridge #1  
4115 Atom Processor E6xx PCI Host Bridge #2  
4116 Atom Processor E6xx PCI Host Bridge #3  
4117 Atom Processor E6xx PCI Host Bridge #4  
4140 NVMe Datacenter SSD [Optane]  
1028 2134 NVMe  
Datacenter SSD [Optane] SED 400GB 2.5" U.2 (P5800X)  
1028 2135 NVMe Datacenter SSD [Optane] SED 800GB 2.5" U.2 (P5800X)  
1028 2136 NVMe Datacenter SSD [Optane] SED 1.6TB 2.5" U.2 (P5800X)  
1028 2137 NVMe Datacenter SSD [Optane] 400GB 2.5" U.2 (P5800X)  
1028 2138 NVMe Datacenter SSD [Optane] 800GB 2.5" U.2 (P5800X)  
1028 2139 NVMe Datacenter SSD [Optane] 1.6TB 2.5" U.2 (P5800X)  
4220 PRO/Wireless 2200BG [Calexico2] Network Connection  
103c 0934 Compaq nw8240/nx8220  
103c 12f6 nc6120/nc6220/nw8240/nx8220  
8086 2701 WM3B2200BG Mini-PCI Card  
8086 2712 IBM ThinkPad R50e  
8086 2721 Dell B130 laptop integrated WLAN  
8086 2722 Dell Latitude D600  
8086 2731 Samsung P35 integrated WLAN  
4222 PRO/Wireless 3945ABG [Golan] Network Connection  
103c 135c PRO/Wireless 3945ABG [Golan] Network Connection  
8086 1000 PRO/Wireless 3945ABG Network Connection  
8086 1001 WM3945ABG MOW2  
8086 1005 PRO/Wireless 3945BG Network Connection  
8086 1034 PRO/Wireless 3945BG Network  
Connection  
8086 1044 PRO/Wireless 3945BG Network Connection  
8086 1c00 PRO/Wireless 3945ABG Network Connection  
4223 PRO/Wireless 2915ABG [Calexico2] Network Connection  
1000 8086 mPCI 3B Americas/Europe ZZA  
1001 8086 mPCI 3B Europe ZZE  
1002 8086 mPCI 3B Japan ZZJ  
1003 8086 mPCI 3B High-Band ZZH  
103c 1351 Compaq nc6220  
4224 PRO/Wireless 2915ABG [Calexico2] Network Connection

4227 PRO/Wireless 3945ABG [Golan] Network Connection  
8086 1010 ThinkPad R60e  
8086 1011 ThinkPad T60/R60e/X60s/R61  
8086 1014 PRO/Wireless 3945BG Network Connection  
4229 PRO/Wireless 4965 AG or AGN [Kedron] Network Connection  
8086 1100 Vaio VGN-SZ79SN\_C  
8086 1101 PRO/Wireless 4965 AG or AGN  
422b Centrino Ultimate-N 6300  
8086 1101 Centrino Ultimate-N 6300 3x3 AGN  
8086 1121 Centrino Ultimate-N 6300 3x3 AGN  
422c Centrino Advanced-N 6200  
8086 1301 Centrino Advanced-N 6200 2x2 AGN  
8086 1306 Centrino Advanced-N 6200 2x2 ABG  
8086 1307 Centrino Advanced-N 6200 2x2  
BG  
8086 1321 Centrino Advanced-N 6200 2x2 AGN  
8086 1326 Centrino Advanced-N 6200 2x2 ABG  
4230 PRO/Wireless 4965 AG or AGN [Kedron] Network Connection  
8086 1110 Lenovo ThinkPad T51  
8086 1111 Lenovo ThinkPad T61  
4232 WiFi Link 5100  
8086 1201 WiFi Link 5100 AGN  
8086 1204 WiFi Link 5100 AGN  
8086 1205 WiFi Link 5100 BGN  
8086 1206 WiFi Link 5100 ABG  
8086 1221 WiFi Link 5100 AGN  
8086 1224 WiFi Link 5100 AGN  
8086 1225 WiFi Link 5100 BGN  
8086 1226 WiFi Link 5100 ABG  
8086 1301 WiFi Link 5100 AGN  
8086 1304 WiFi Link 5100 AGN  
8086 1305 WiFi Link 5100 BGN  
8086 1306 WiFi Link 5100 ABG  
8086 1321 WiFi Link 5100 AGN  
8086 1324 WiFi Link 5100 AGN  
8086 1325 WiFi Link 5100 BGN  
8086 1326 WiFi Link 5100 ABG  
4235 Ultimate N WiFi Link 5300  
4236 Ultimate N WiFi Link 5300  
4237 PRO/Wireless 5100 AGN [Shiloh] Network Connection  
8086 1211 WiFi Link 5100 AGN  
8086 1214 WiFi Link 5100 AGN  
8086 1215 WiFi Link 5100 BGN  
8086 1216 WiFi Link  
5100 ABG  
8086 1311 WiFi Link 5100 AGN  
8086 1314 WiFi Link 5100 AGN  
8086 1315 WiFi Link 5100 BGN

8086 1316 WiFi Link 5100 ABG  
4238 Centrino Ultimate-N 6300  
8086 1111 Centrino Ultimate-N 6300 3x3 AGN  
4239 Centrino Advanced-N 6200  
8086 1311 Centrino Advanced-N 6200 2x2 AGN  
8086 1316 Centrino Advanced-N 6200 2x2 ABG  
423a PRO/Wireless 5350 AGN [Echo Peak] Network Connection  
423b PRO/Wireless 5350 AGN [Echo Peak] Network Connection  
423c WiMAX/WiFi Link 5150  
8086 1201 WiMAX/WiFi Link 5150 AGN  
8086 1206 WiMAX/WiFi Link 5150 ABG  
8086 1221 WiMAX/WiFi Link 5150 AGN  
8086 1301 WiMAX/WiFi Link 5150 AGN  
8086 1306 WiMAX/WiFi Link 5150 ABG  
8086 1321 WiMAX/WiFi Link 5150 AGN  
423d WiMAX/WiFi Link 5150  
8086 1211 WiMAX/WiFi Link 5150 AGN  
8086 1216 WiMAX/WiFi Link 5150 ABG  
8086 1311 WiMAX/WiFi Link 5150 AGN  
8086 1316 WiMAX/WiFi Link 5150 ABG  
4384 Q570 LPC/eSPI Controller  
4385 Z590 LPC/eSPI Controller  
4386 H570 LPC/eSPI Controller  
4387  
B560 LPC/eSPI Controller  
4388 H510 LPC/eSPI Controller  
4389 WM590 LPC/eSPI Controller  
438a QM580 LPC/eSPI Controller  
438b HM570 LPC/eSPI Controller  
438c C252 LPC/eSPI Controller  
438d C256 LPC/eSPI Controller  
438e H310D LPC/eSPI Controller  
438f W580 LPC/eSPI Controller  
4390 RM590E LPC/eSPI Controller  
4391 R580E LPC/eSPI Controller  
43a3 Tiger Lake-H SMBus Controller  
43a4 Tiger Lake-H SPI Controller  
43b0 Tiger Lake-H PCI Express Root Port #9  
43b8 Tiger Lake-H PCIe Root Port #1  
43ba Tiger Lake-H PCIe Root Port #3  
43bb Tiger Lake-H PCIe Root Port #4  
43bc Tiger Lake-H PCI Express Root Port #5  
43c0 Tiger Lake-H PCIe Root Port #17  
43c7 Tiger Lake-H PCIe Root Port #24  
43c8 Tiger Lake-H HD Audio Controller  
43d3 Tiger Lake SATA AHCI Controller  
43e0 Tiger Lake-H Management Engine Interface  
43e8 Tiger Lake-H Serial IO I2C Controller #0



43e9 Tiger Lake-H Serial IO I2C Controller #1  
43ed Tiger Lake-H USB 3.2 Gen 2x1 xHCI Host Controller  
43ef Tiger  
Lake-H Shared SRAM  
43f0 Tiger Lake PCH CNVi WiFi  
8086 0034 Wireless-AC 9560  
8086 0074 Wi-Fi 6 AX201 160MHz  
8086 0264 Wireless-AC 9461  
8086 02a4 Wireless-AC 9462  
43fc Tiger Lake-H Integrated Sensor Hub  
444e Turbo Memory Controller  
4511 Elkhart Lake Gaussian and Neural Accelerator  
4538 Elkhart Lake PCI-e Root Complex  
4555 Elkhart Lake [UHD Graphics Gen11 16EU]  
4571 Elkhart Lake [UHD Graphics Gen11 32EU]  
# Seems to be different than ID 4602  
4601 Alder Lake-U15 Host and DRAM Controller  
4602 Alder Lake Host and DRAM Controller  
460d 12th Gen Core Processor PCI Express x16 Controller #1  
461d Alder Lake Innovation Platform Framework Processor Participant  
1028 0b10 Precision 3571  
461e Alder Lake-P Thunderbolt 4 USB Controller  
1028 0b10 Precision 3571  
461f Alder Lake-P Thunderbolt 4 PCI Express Root Port #3  
4626 Alder Lake-P Integrated Graphics Controller  
4628 Alder Lake-UP3 GT2 [UHD Graphics]  
4629 12th Gen Core Processor Host Bridge/DRAM Registers  
462a  
AlderLake-P [UHD Graphics]  
462f Alder Lake-P Thunderbolt 4 PCI Express Root Port #2  
4636 AlderLake-P [UHD Graphics]  
4638 AlderLake-P [UHD Graphics]  
463a AlderLake-P [UHD Graphics]  
463d 12th Gen Core Processor PCI Express x4 Controller #2  
463e Alder Lake-P Thunderbolt 4 NHI #0  
1028 0b10 Precision 3571  
463f Alder Lake-P Thunderbolt 4 PCI Express Root Port #1  
4641 12th Gen Core Processor Host Bridge/DRAM Registers  
1028 0b10 Precision 3571  
464d 12th Gen Core Processor PCI Express x4 Controller #0  
464f 12th Gen Core Processor Gaussian & Neural Accelerator  
1028 0b10 Precision 3571  
4650 12th Gen Core Processor Host Bridge  
465d Alder Lake Imaging Signal Processor  
4660 12th Gen Core Processor Host Bridge/DRAM Registers  
4668 12th Gen Core Processor Host Bridge/DRAM Registers  
466d Alder Lake-P Thunderbolt 4 NHI #1  
466e Alder Lake-P Thunderbolt 4 PCI Express Root Port #0

467d Platform Monitoring Technology  
467f Volume Management Device NVMe RAID  
Controller  
4680 AlderLake-S GT1  
4682 Alder Lake-S GT1 [UHD Graphics 730]  
4688 Alder Lake-HX GT1 [UHD Graphics 770]  
468a Alder Lake-S [UHD Graphics]  
468b Alder Lake-S [UHD Graphics]  
4690 Alder Lake-S GT1 [UHD Graphics 770]  
4692 Alder Lake-S GT1 [UHD Graphics 730]  
4693 Alder Lake-S GT1 [UHD Graphics 710]  
46a0 AlderLake-P GT2  
46a1 UHD Graphics  
46a3 Alder Lake-P GT1 [UHD Graphics]  
46a6 Alder Lake-P GT2 [Iris Xe Graphics]  
46a8 Alder Lake-UP3 GT2 [Iris Xe Graphics]  
46aa Alder Lake-UP4 GT2 [Iris Xe Graphics]  
46b0 AlderLake-P [Iris Xe Graphics]  
46b1 AlderLake-P [Iris Xe Graphics]  
46b3 Alder Lake-UP3 GT1 [UHD Graphics]  
46b6 AlderLake-P [Iris Xe Graphics]  
46b8 AlderLake-P [Iris Xe Graphics]  
46ba AlderLake-P [Iris Xe Graphics]  
46c0 AlderLake-M GT1  
46c1 AlderLake-M [Iris Xe Graphics]  
46c3 Alder Lake-UP4 GT1 [UHD Graphics]  
46d0 Alder Lake-N [UHD Graphics]  
46d1 Alder Lake-N [UHD Graphics]  
46d2 Alder Lake-N [UHD Graphics]  
46d3 Alder Lake-N [Intel  
Graphics]  
46d4 Alder Lake-N [Intel Graphics]  
4905 DG1 [Iris Xe MAX Graphics]  
4906 DG1 [Iris Xe Pod]  
4907 SG1 [Server GPU SG-18M]  
193d 4000 UN-GPU-XG310-32GB-FHFL  
4908 DG1 [Iris Xe Graphics]  
4909 DG1 [Iris Xe MAX 100]  
4940 4xxx Series QAT  
4942 4xxx Series QAT  
4944 4xxx Series QAT  
4b00 Elkhart Lake eSPI Controller  
4b23 Elkhart Lake SMBus Controller  
4b24 Elkhart Lake SPI (Flash) Controller  
4b38 Elkhart Lake PCH PCI Express Root Port #0  
4b39 Elkhart Lake PCH PCI Express Root Port #1  
4b3c Elkhart Lake PCIe Root Port #4  
4b3e Elkhart Lake PCH PCI Express Root Port #6

4b4b Elkhart Lake Serial IO I2C Controller #4  
4b4d Elkhart Lake Serial IO UART Controller #2  
4b58 Elkhart Lake High Density Audio bus interface  
4b63 Elkhart Lake SATA AHCI  
4b70 Elkhart Lake Management Engine Interface  
4b7d Elkhart Lake USB 3.10 XHCI  
4b7f Elkhart Lake PMC SRAM  
4c3d Volume Management Device NVMe RAID Controller  
4c8a RocketLake-S GT1 [UHD Graphics 750]  
4c8b RocketLake-S  
GT1 [UHD Graphics 730]  
4c90 RocketLake-S GT1 [UHD Graphics P750]  
4c9a RocketLake-S [UHD Graphics]  
4d87 Jasper Lake eSPI Controller  
4da3 Jasper Lake SMBus  
4da4 Jasper Lake SPI Controller  
4da8 Jasper Lake Serial IO UART Controller #0  
4dab Jasper Lake Serial IO SPI Controller #1  
4db8 Jasper Lake PCIe Root Port #1  
4db9 Jasper Lake PCIe Root Port #2  
4dbc Jasper Lake PCIe Root Port #5  
4dbe Jasper Lake PCIe Root Port #7  
4dc4 Jasper Lake eMMC Controller  
4dc5 Jasper Lake Serial IO I2C Host Controller #4  
4dc6 Jasper Lake Serial IO I2C Host Controller #5  
4dc8 Jasper Lake HD Audio  
4dd3 Jasper Lake SATA AHCI Controller  
4de0 Management Engine Interface  
4de8 Jasper Lake Serial IO I2C Host Controller #0  
4de9 Jasper Lake Serial IO I2C Host Controller #1  
4dea Jasper Lake Serial IO I2C Host Controller #2  
4deb Jasper Lake Serial IO I2C Host Controller #3  
4ded Jasper Lake USB 3.1 xHCI Host Controller  
4def Jasper Lake Shared SRAM  
4df0 Wi-Fi 6 AX201  
160MHz  
4df8 Jasper Lake SD Controller  
4e03 Dynamic Tuning service  
4e19 JasperLake IPU  
4e55 JasperLake [UHD Graphics]  
4e61 JasperLake [UHD Graphics]  
4e71 JasperLake [UHD Graphics]  
4f80 DG2 [Intel Xe Graphics]  
4f81 DG2 [Intel Xe Graphics]  
4f82 DG2 [Intel Xe Graphics]  
4f83 DG2 [Intel Xe Graphics]  
4f84 DG2 [Intel Xe Graphics]  
4f85 DG2 [Intel Xe Graphics]

4f86 DG2 [Intel Xe Graphics]  
4f87 DG2 [Intel Xe Graphics]  
4f88 DG2 [Intel Xe Graphics]  
4f89 ACMP [Xe Graphics]  
4f8c ACMP [Xe Graphics]  
4f90 DG2 Audio Controller  
4f91 DG2 Audio Controller  
4f92 DG2 Audio Controller  
5001 LE80578  
5002 LE80578 Graphics Processor Unit  
5009 LE80578 Video Display Controller  
500d LE80578 Expansion Bus  
500e LE80578 UART Controller  
500f LE80578 General Purpose IO  
5010 LE80578 I2C Controller  
5012 LE80578 Serial Peripheral Interface Bus  
5020 EP80579 Memory Controller Hub  
5021 EP80579 DRAM Error Reporting Registers  
5023 EP80579 EDMA Controller  
5024 EP80579  
PCI Express Port PEA0  
5025 EP80579 PCI Express Port PEA1  
5028 EP80579 S-ATA IDE  
5029 EP80579 S-ATA AHCI  
502a EP80579 S-ATA Reserved  
502b EP80579 S-ATA Reserved  
502c EP80579 Integrated Processor ASU  
502d EP80579 Integrated Processor with QuickAssist ASU  
502e EP80579 Reserved  
502f EP80579 Reserved  
5030 EP80579 Reserved  
5031 EP80579 LPC Bus  
5032 EP80579 SMBus Controller  
5033 EP80579 USB 1.1 Controller  
5035 EP80579 USB 2.0 Controller  
5037 EP80579 PCI-PCI Bridge (transparent mode)  
5039 EP80579 Controller Area Network (CAN) interface #1  
503a EP80579 Controller Area Network (CAN) interface #2  
503b EP80579 Synchronous Serial Port (SPP)  
503c EP80579 IEEE 1588 Hardware Assist  
503d EP80579 Local Expansion Bus  
503e EP80579 Global Control Unit (GCU)  
503f EP80579 Reserved  
5040 EP80579 Integrated Processor Gigabit Ethernet MAC  
5041 EP80579 Integrated Processor with QuickAssist Gigabit Ethernet MAC  
5042 EP80579 Reserved  
5043 EP80579 Reserved  
5044

EP80579 Integrated Processor Gigabit Ethernet MAC  
5045 EP80579 Integrated Processor with QuickAssist Gigabit Ethernet MAC  
5046 EP80579 Reserved  
5047 EP80579 Reserved  
5048 EP80579 Integrated Processor Gigabit Ethernet MAC  
5049 EP80579 Integrated Processor with QuickAssist Gigabit Ethernet MAC  
504a EP80579 Reserved  
504b EP80579 Reserved  
504c EP80579 Integrated Processor with QuickAssist TDM  
5181 Alder Lake PCH-P LPC/eSPI Controller  
5182 Alder Lake PCH eSPI Controller  
1028 0b10 Precision 3571  
5187 Alder Lake LPC Controller  
519d Raptor Lake LPC/eSPI Controller  
1028 0c06 Precision 3580  
51a3 Alder Lake PCH-P SMBus Host Controller  
1028 0b10 Precision 3571  
1028 0c06 Precision 3580  
51a4 Alder Lake-P PCH SPI Controller  
1028 0b10 Precision 3571  
1028 0c06 Precision 3580  
51a8 Alder Lake PCH UART #0  
51a9 Alder Lake PCH UART #1  
51aa Alder Lake SPI Controller  
51ab Alder Lake SPI Controller  
51b0 Alder Lake PCI Express Root Port #9  
51b1 Alder Lake  
PCI Express x1 Root Port #10  
51bb Alder Lake-P PCH PCIe Root Port #4  
51bf Alder Lake PCH-P PCI Express Root Port #9  
51c5 Alder Lake-P Serial IO I2C Controller #0  
51c6 Alder Lake-P Serial IO I2C Controller #1  
51c8 Alder Lake PCH-P High Definition Audio Controller  
1028 0b10 Precision 3571  
51ca Raptor Lake-P/U/H cAVS  
1028 0c06 Precision 3580  
51cc Alder Lake Smart Sound Technology Audio Controller  
51d3 Alder Lake-P SATA AHCI Controller  
1028 0b10 Precision 3571  
51d8 Alder Lake-P Serial IO I2C Controller #2  
51d9 Alder Lake-P Serial IO I2C Controller #3  
51e0 Alder Lake PCH HECI Controller  
1028 0b10 Precision 3571  
1028 0c06 Precision 3580  
51e3 Alder Lake AMT SOL Redirection  
1028 0b10 Precision 3571  
51e8 Alder Lake PCH Serial IO I2C Controller #0  
1028 0b10 Precision 3571

1028 0c06 Precision 3580  
51e9 Alder Lake PCH Serial IO I2C Controller #1  
1028 0b10 Precision 3571  
1028 0c06 Precision 3580  
51ea Alder Lake PCH Serial IO I2C Controller  
#2  
51eb Alder Lake PCH Serial IO I2C Controller #3  
51ed Alder Lake PCH USB 3.2 xHCI Host Controller  
1028 0b10 Precision 3571  
1028 0c06 Precision 3580  
51ef Alder Lake PCH Shared SRAM  
1028 0b10 Precision 3571  
1028 0c06 Precision 3580  
51f0 Alder Lake-P PCH CNVi WiFi  
1a56 1652 Dual Band Wi-Fi 6(802.11ax) Killer AX1650i 160MHz 2x2 [Cyclone Peak]  
1a56 1671 Dual Band Wi-Fi 6E(802.11ax) AX1675s 160MHz 2x2 [Garfield Peak]  
1a56 1672 Dual Band Wi-Fi 6E(802.11ax) AX1675i 160MHz 2x2 [Garfield Peak]  
1a56 1692 Simultaneous Dual Band(Double Connect) Wi-Fi 6E AX1690i 160MHz 2x2 [Garfield Peak]  
8086 0034 Dual Band Wi-Fi 5(802.11ac) Wireless-AC 9560 160MHz 2x2 [Jefferson Peak]  
8086 0070 Dual Band Wi-Fi 6(802.11ax) AX201 160MHz 2x2 [Harrison Peak]  
8086 0074 Dual Band Wi-Fi 6(802.11ax) AX201 160MHz 2x2 [Harrison Peak]  
8086 0094 Dual Band Wi-Fi 6E(802.11ax) AX211 160MHz 2x2 [Garfield Peak]  
8086 00b4 Simultaneous Dual Band(Double Connect) Wi-Fi 6E AX411 160MHz  
2x2 [Garfield Peak]  
8086 0234 Dual Band Wi-Fi 5(802.11ac) Wireless-AC 9560 80MHz 2x2 [Jefferson Peak]  
8086 0244 Single Band Wi-Fi 6(802.11ax) AX101 80MHz 1x1 [Harrison Peak]  
8086 0264 Dual Band Wi-Fi 5(802.11ac) Wireless-AC 9461 80MHz 1x1 [Jefferson Peak]  
8086 0274 Dual Band Wi-Fi E(802.11ax) AX203 80MHz 2x2 [Johnson Peak]  
8086 02a4 Dual Band Wi-Fi 5(802.11ac) Wireless-AC 9462 80MHz 1x1 [Jefferson Peak]  
8086 4070 Dual Band Wi-Fi 6(802.11ax) AX201 160MHz 2x2 [Harrison Peak]  
8086 4090 Dual Band Wi-Fi 6E(802.11ax) AX211 160MHz 2x2 [Garfield Peak]  
8086 42a4 Dual Band Wi-Fi 5(802.11ac) Wireless-AC 9462 80MHz 1x1 [Jefferson Peak]  
51f1 Raptor Lake PCH CNVi WiFi  
8086 4090 Wi-Fi 6E AX211 160MHz  
51fc Alder Lake-P Integrated Sensor Hub  
1028 0b10 Precision 3571  
1028 0c06 Precision 3580  
5200 EtherExpress PRO/100 Intelligent Server PCI Bridge  
5201 EtherExpress PRO/100 Intelligent Server Fast Ethernet Controller  
8086 0001 EtherExpress PRO/100 Server Ethernet  
Adapter  
530d 80310 (IOP) IO Processor  
5481 Alder Lake-N PCH eSPI Controller  
54c8 Alder Lake-N PCH High Definition Audio Controller  
54e0 Alder Lake-N PCH HECI Controller  
54ed Alder Lake-N PCH USB 3.2 xHCI Host Controller  
54ef Alder Lake-N PCH Shared SRAM  
54f0 CNVi: Wi-Fi

8086 0244 Wi-Fi 6 AX101NGW  
5502 Ethernet Controller (2) I225-LMvP  
1ab6 0225 TS4 On-Board 2.5GbE Ethernet Adaptor  
5690 DG2 [Arc A770M]  
5691 DG2 [Arc A730M]  
5692 DG2 [Arc A550M]  
5693 DG2 [Arc A370M]  
5694 DG2 [Arc A350M]  
5695 DG2 [Iris Xe MAX A200M]  
5696 DG2 [Arc A570M]  
5697 DG2 [Arc A530M]  
5698 DG2 [Arc Xe Graphics]  
56a0 DG2 [Arc A770]  
56a1 DG2 [Arc A750]  
56a2 DG2 [Arc A580]  
56a3 DG2 [Arc Xe Graphics]  
56a4 DG2 [Arc Xe Graphics]  
56a5 DG2 [Arc A380]  
56a6 DG2 [Arc A310]  
56a7 DG2 [Arc Xe Graphics]  
56a8 DG2 [Arc Xe Graphics]  
56a9 DG2 [Arc Xe Graphics]  
56b0 DG2 [Arc Pro A30M]  
56b1 DG2 [Arc Pro A40/A50]  
56b2 DG2 [Arc Pro A60M]  
56b3 DG2 [Arc Pro A60]  
56ba DG2  
[Intel Graphics]  
56bb DG2 [Intel Graphics]  
56bc DG2 [Intel Graphics]  
56bd DG2 [Intel Graphics]  
56be DG2 [Arc Graphics A750E]  
56bf DG2 [Arc Graphics A580E]  
56c0 ATS-M [Data Center GPU Flex 170]  
56c1 ATS-M [Data Center GPU Flex 140]  
56c2 ATS-M [Data Center GPU Flex 170G]  
5780 Thunderbolt 80/120G Bridge [Barlow Ridge Host 80G 2023]  
5781 Thunderbolt 80/120G NHI [Barlow Ridge Host 80G 2023]  
5782 Thunderbolt 80/120G USB Controller [Barlow Ridge Host 80G 2023]  
5783 Thunderbolt Bridge [Barlow Ridge Host 40G 2023]  
5784 Thunderbolt NHI [Barlow Ridge Host 40G 2023]  
5785 Thunderbolt USB Controller [Barlow Ridge Host 40G 2023]  
5786 Thunderbolt 80/120G Bridge [Barlow Ridge Hub 80G 2023]  
5787 Thunderbolt 80/120G USB Controller [Barlow Ridge Hub 80G 2023]  
579c Ethernet Connection E825-C for backplane  
579d Ethernet Connection E825-C for QSFP  
579e Ethernet Connection E825-C for SFP  
57a4 Thunderbolt Bridge [Barlow Ridge Hub 40G 2023]

57a5 Thunderbolt USB Controller  
[Barlow Ridge Hub 40G 2023]  
57b1 Ethernet Controller E610 1GBASE T  
8086 0000 Ethernet Converged Network Adapter E610  
5845 QEMU NVM Express Controller  
1af4 1100 QEMU Virtual Machine  
5900 Xeon E3-1200 v6/7th Gen Core Processor Host Bridge/DRAM Registers  
5901 Xeon E3-1200 v6/7th Gen Core Processor PCIe Controller (x16)  
5902 HD Graphics 610  
5904 Xeon E3-1200 v6/7th Gen Core Processor Host Bridge/DRAM Registers  
1025 115f Aspire E5-575G  
17aa 2247 ThinkPad T570  
17aa 224f ThinkPad X1 Carbon 5th Gen  
5905 Xeon E3-1200 v6/7th Gen Core Processor PCIe Controller (x8)  
5906 HD Graphics 610  
5909 Xeon E3-1200 v6/7th Gen Core Processor PCIe Controller (x4)  
590b HD Graphics 610  
590c Xeon E3-1200 v6/7th Gen Core Processor Host Bridge/DRAM Registers  
590f Xeon E3-1200 v6/7th Gen Core Processor Host Bridge/DRAM Registers  
1043 8694 H110I-PLUS Motherboard  
1462 7994 H110M ECO/GAMING  
1462 7a68 B250 KRAIT GAMING (MS-7A68)  
1462 7a72 H270 PC MATE  
5910 Xeon  
E3-1200 v6/7th Gen Core Processor Host Bridge/DRAM Registers  
5911 Xeon E3-1200 v6/7th Gen Core Processor Gaussian Mixture Model  
5912 HD Graphics 630  
1043 8694 H110I-PLUS Motherboard  
1462 7994 H110M ECO/GAMING  
1462 7a72 H270 PC MATE  
5914 Xeon E3-1200 v6/7th Gen Core Processor Host Bridge/DRAM Registers  
17aa 225d ThinkPad T480  
5916 HD Graphics 620  
1025 1094 Aspire E5-575G  
17aa 2248 ThinkPad T570  
17aa 224f ThinkPad X1 Carbon 5th Gen  
5917 UHD Graphics 620  
17aa 225e ThinkPad T480  
5918 Xeon E3-1200 v6/7th Gen Core Processor Host Bridge/DRAM Registers  
591b HD Graphics 630  
591c UHD Graphics 615  
591d HD Graphics P630  
591e HD Graphics 615  
591f Xeon E3-1200 v6/7th Gen Core Processor Host Bridge/DRAM Registers  
5921 HD Graphics 620  
5923 HD Graphics 635  
5926 Iris Plus Graphics 640  
5927 Iris Plus Graphics 650



5a84 Apollo Lake [HD Graphics 505]  
5a85 HD Graphics 500  
5a88 Celeron N3350/Pentium N4200/Atom E3900 Series Imaging Unit  
5a98 Celeron  
N3350/Pentium N4200/Atom E3900 Series Audio Cluster  
5a9a Celeron N3350/Pentium N4200/Atom E3900 Series Trusted Execution Engine  
5aa2 Celeron N3350/Pentium N4200/Atom E3900 Series Integrated Sensor Hub  
5aa8 Celeron N3350/Pentium N4200/Atom E3900 Series USB xHCI  
5aac Celeron N3350/Pentium N4200/Atom E3900 Series I2C Controller #1  
5aae Celeron N3350/Pentium N4200/Atom E3900 Series I2C Controller #2  
5ab0 Celeron N3350/Pentium N4200/Atom E3900 Series I2C Controller #3  
5ab2 Celeron N3350/Pentium N4200/Atom E3900 Series I2C Controller #4  
5ab4 Celeron N3350/Pentium N4200/Atom E3900 Series I2C Controller #5  
5ab6 Celeron N3350/Pentium N4200/Atom E3900 Series I2C Controller #6  
5ab8 Celeron N3350/Pentium N4200/Atom E3900 Series I2C Controller #7  
5aba Celeron N3350/Pentium N4200/Atom E3900 Series I2C Controller #8  
5abc Celeron N3350/Pentium N4200/Atom E3900 Series HSUART Controller #1  
5abe Celeron N3350/Pentium N4200/Atom E3900 Series HSUART Controller #2  
5ac0 Celeron N3350/Pentium  
N4200/Atom E3900 Series HSUART Controller #3  
5ac2 Celeron N3350/Pentium N4200/Atom E3900 Series SPI Controller #1  
5ac4 Celeron N3350/Pentium N4200/Atom E3900 Series SPI Controller #2  
5ac6 Celeron N3350/Pentium N4200/Atom E3900 Series SPI Controller #3  
5ac8 Celeron N3350/Pentium N4200/Atom E3900 Series PWM Pin Controller  
5aca Celeron N3350/Pentium N4200/Atom E3900 Series SDXC/MMC Host Controller  
5acc Celeron N3350/Pentium N4200/Atom E3900 Series eMMC Controller  
5ad0 Celeron N3350/Pentium N4200/Atom E3900 Series SDIO Controller  
5ad4 Celeron N3350/Pentium N4200/Atom E3900 Series SMBus Controller  
5ad6 Celeron N3350/Pentium N4200/Atom E3900 Series PCI Express Port B #1  
5ad7 Celeron N3350/Pentium N4200/Atom E3900 Series PCI Express Port B #2  
5ad8 Celeron N3350/Pentium N4200/Atom E3900 Series PCI Express Port A #1  
5ad9 Celeron N3350/Pentium N4200/Atom E3900 Series PCI Express Port A #2  
5ada Celeron N3350/Pentium N4200/Atom E3900 Series PCI Express Port A  
#3  
5adb Celeron N3350/Pentium N4200/Atom E3900 Series PCI Express Port A #4  
5ae3 Celeron N3350/Pentium N4200/Atom E3900 Series SATA AHCI Controller  
5ae8 Celeron N3350/Pentium N4200/Atom E3900 Series Low Pin Count Interface  
5aee Celeron N3350/Pentium N4200/Atom E3900 Series HSUART Controller #4  
5af0 Celeron N3350/Pentium N4200/Atom E3900 Series Host Bridge  
6420 Lunar Lake [Intel Graphics]  
643e Lunar Lake NPU  
64a0 Lunar Lake [Intel Graphics]  
64b0 Lunar Lake [Intel Graphics]  
65c0 5100 Chipset Memory Controller Hub  
65e2 5100 Chipset PCI Express x4 Port 2  
65e3 5100 Chipset PCI Express x4 Port 3  
65e4 5100 Chipset PCI Express x4 Port 4  
65e5 5100 Chipset PCI Express x4 Port 5

65e6 5100 Chipset PCI Express x4 Port 6  
65e7 5100 Chipset PCI Express x4 Port 7  
65f0 5100 Chipset FSB Registers  
1028 020f PowerEdge R300  
1028 0210 PowerEdge T300  
65f1 5100 Chipset Reserved Registers  
1028 0210 PowerEdge T300  
65f3 5100 Chipset Reserved Registers  
65f5 5100 Chipset  
DDR Channel 0 Registers  
65f6 5100 Chipset DDR Channel 1 Registers  
65f7 5100 Chipset PCI Express x8 Port 2-3  
65f8 5100 Chipset PCI Express x8 Port 4-5  
65f9 5100 Chipset PCI Express x8 Port 6-7  
65fa 5100 Chipset PCI Express x16 Port 4-7  
65ff 5100 Chipset DMA Engine  
6f00 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DMI2  
15d9 0832 X10SRL-F  
6f01 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D PCI Express Root Port 0  
6f02 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D PCI Express Root Port 1  
6f03 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D PCI Express Root Port 1  
6f04 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D PCI Express Root Port 2  
6f05 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D PCI Express Root Port 2  
6f06 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D PCI Express Root Port 2  
6f07 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D PCI Express Root Port 2  
6f08 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D PCI Express Root Port 3  
6f09 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D PCI Express Root Port 3  
6f0a  
Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D PCI Express Root Port 3  
6f0b Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D PCI Express Root Port 3  
6f10 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f11 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f12 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f13 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f14 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f15 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f16 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f17 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f18 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f19 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f1a Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f1b Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f1c Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Debug  
6f1d Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D R2PCIe Agent  
6f1e Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Ubox  
6f1f Xeon  
E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Ubox  
6f20 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Crystal Beach DMA Channel 0

15d9 0832 X10SRL-F  
6f21 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Crystal Beach DMA Channel 1  
15d9 0832 X10SRL-F  
6f22 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Crystal Beach DMA Channel 2  
15d9 0832 X10SRL-F  
6f23 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Crystal Beach DMA Channel 3  
15d9 0832 X10SRL-F  
6f24 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Crystal Beach DMA Channel 4  
15d9 0832 X10SRL-F  
6f25 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Crystal Beach DMA Channel 5  
15d9 0832 X10SRL-F  
6f26 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Crystal Beach DMA Channel 6  
15d9 0832 X10SRL-F  
6f27 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Crystal Beach DMA Channel 7  
15d9 0832 X10SRL-F  
6f28 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Map/VTd\_Misc/System Management  
15d9 0832 X10SRL-F  
6f29 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO Hot Plug  
15d9 0832 X10SRL-F  
6f2a  
Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IIO RAS/Control Status/Global Errors  
15d9 0832 X10SRL-F  
6f2c Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D I/O APIC  
15d9 0832 X10SRL-F  
6f30 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Home Agent 0  
6f32 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 0  
6f33 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 1  
6f34 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D R2PCIe Agent  
6f36 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D R3 QPI Link 0/1  
6f37 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D R3 QPI Link 0/1  
6f38 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Home Agent 1  
6f39 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D IO Performance Monitoring  
6f3a Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 2  
6f3e Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D R3 QPI Link 2  
6f3f Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D R3 QPI Link 2  
6f40 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 2  
6f41 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D R3 QPI Link 2  
6f43 Xeon E7 v4/Xeon  
E5 v4/Xeon E3 v4/Xeon D QPI Link 2  
6f45 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 2 Debug  
6f46 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 2 Debug  
6f47 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 2 Debug  
6f50 Xeon Processor D Family QuickData Technology Register DMA Channel 0  
6f51 Xeon Processor D Family QuickData Technology Register DMA Channel 1  
6f52 Xeon Processor D Family QuickData Technology Register DMA Channel 2  
6f53 Xeon Processor D Family QuickData Technology Register DMA Channel 3  
6f54 Xeon Processor D Family QuickAssist Technology  
6f55 Xeon Processor D Family QuickAssist Technology Virtual Fuction

6f60 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Home Agent 1  
6f68 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Target Address/Thermal/RAS  
6f6a Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Channel Target Address Decoder  
6f6b Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Channel Target Address Decoder  
6f6c Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Channel Target  
Address Decoder  
6f6d Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Channel Target Address Decoder  
6f6e Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DDRIO Channel 2/3 Broadcast  
6f6f Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DDRIO Global Broadcast  
6f70 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Home Agent 0 Debug  
6f71 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Target Address/Thermal/RAS  
6f76 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D R3 QPI Link Debug  
6f78 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Home Agent 1 Debug  
6f79 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Target Address/Thermal/RAS  
6f7d Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Ubox  
6f7e Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D R3 QPI Link Debug  
6f80 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 0  
6f81 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D R3 QPI Link 0/1  
6f83 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 0  
6f85 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 0 Debug  
6f86 Xeon E7 v4/Xeon E5 v4/Xeon  
E3 v4/Xeon D QPI Link 0 Debug  
6f87 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 0 Debug  
6f88 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit  
6f8a Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit  
6f90 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 1  
6f93 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 1  
6f95 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 1 Debug  
6f96 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D QPI Link 1 Debug  
6f98 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit  
6f99 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit  
6f9a Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit  
6f9c Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit  
6fa0 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Home Agent 0  
6fa8 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Target Address/Thermal/RAS  
6faa Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Channel Target Address Decoder  
6fab  
Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Channel Target Address Decoder  
6fac Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Channel Target Address Decoder  
6fad Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Channel Target Address Decoder  
6fae Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DDRIO Channel 0/1 Broadcast  
6faf Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DDRIO Global Broadcast  
6fb0 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Channel 0 Thermal Control  
6fb1 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Channel 1 Thermal Control  
6fb2 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Channel 0 Error  
6fb3 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Channel 1 Error  
6fb4 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Channel 2 Thermal Control  
6fb5 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Channel 3 Thermal Control

6fb6 Xeon

E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Channel 2 Error

6fb7 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 0 - Channel 3 Error

6fb8 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DDRIO Channel 2/3 Interface

6fb9 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DDRIO Channel 2/3 Interface

6fba Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DDRIO Channel 2/3 Interface

6fbb Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DDRIO Channel 2/3 Interface

6fbc Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DDRIO Channel 0/1 Interface

6fbd Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DDRIO Channel 0/1 Interface

6fbe Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DDRIO Channel 0/1 Interface

6fbf Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D DDRIO Channel 0/1 Interface

6fc0 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fc1 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fc2 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fc3 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon

D Power Control Unit

6fc4 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fc5 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fc6 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fc7 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fc8 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fc9 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fca Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fcb Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fcc Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fcd Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fce Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fcf Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Power Control Unit

6fd0 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 1 - Channel 0 Thermal Control

6fd1 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 1 - Channel 1 Thermal Control

6fd2

Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 1 - Channel 0 Error

6fd3 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 1 - Channel 1 Error

6fd4 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 1 - Channel 2 Thermal Control

6fd5 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 1 - Channel 3 Thermal Control

6fd6 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 1 - Channel 2 Error

6fd7 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Memory Controller 1 - Channel 3 Error

6fe0 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent

6fe1 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent

6fe2 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent

6fe3 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent

6fe4 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent

6fe5 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent

6fe6 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent

6fe7 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon

D Caching Agent

6fe8 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent

6fe9 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent

6fea Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6feb Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6fec Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6fed Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6fee Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6fef Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6ff0 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6ff1 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6ff8 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6ff9 Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6ffa Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6ffb Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6ffc Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6ffd Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent  
6ffe

Xeon E7 v4/Xeon E5 v4/Xeon E3 v4/Xeon D Caching Agent

7000 82371SB PIIX3 ISA [Natoma/Triton II]

01de fffd Propolis Virtual PIIX3 ISA Controller

1af4 1100 Qemu virtual machine

7010 82371SB PIIX3 IDE [Natoma/Triton II]

1af4 1100 Qemu virtual machine

7020 82371SB PIIX3 USB [Natoma/Triton II]

1af4 1100 QEMU Virtual Machine

7030 430VX - 82437VX TVX [Triton VX]

7050 Intercast Video Capture Card

7051 PB 642365-003 (Business Video Conferencing Card)

7100 430TX - 82439TX MTXC

7110 82371AB/EB/MB PIIX4 ISA

15ad 1976 Virtual Machine Chipset

7111 82371AB/EB/MB PIIX4 IDE

15ad 1976 Virtual Machine Chipset

7112 82371AB/EB/MB PIIX4 USB

15ad 1976 Virtual Machine Chipset

1af4 1100 QEMU Virtual Machine

7113 82371AB/EB/MB PIIX4 ACPI

01de fffc Propolis Virtual PIIX4 PM Controller

15ad 1976 Virtual Machine Chipset

1af4 1100 Qemu virtual machine

7120 82810 GMCH (Graphics Memory Controller Hub)

4c53 1040 CL7 mainboard

4c53 1060 PC7 mainboard

7121

82810 (CGC) Chipset Graphics Controller

4c53 1040 CL7 mainboard

4c53 1060 PC7 mainboard

8086 4341 Cayman (CA810) Mainboard

7122 82810 DC-100 (GMCH) Graphics Memory Controller Hub

7123 82810 DC-100 (CGC) Chipset Graphics Controller

7124 82810E DC-133 (GMCH) Graphics Memory Controller Hub  
1028 00b4 OptiPlex GX110  
7125 82810E DC-133 (CGC) Chipset Graphics Controller  
1028 00b4 OptiPlex GX110  
7126 82810 DC-133 System and Graphics Controller  
7128 82810-M DC-100 System and Graphics Controller  
712a 82810-M DC-133 System and Graphics Controller  
7180 440LX/EX - 82443LX/EX Host bridge  
7181 440LX/EX - 82443LX/EX AGP bridge  
7190 440BX/ZX/DX - 82443BX/ZX/DX Host bridge  
0e11 0500 Armada 1750 Laptop System Chipset  
0e11 b110 Armada M700/E500  
1028 008e PowerEdge 1300 mainboard  
1043 803b CUBX-L/E Mainboard  
1179 0001 Toshiba Tecra 8100 Laptop System Chipset  
15ad 1976 Virtual Machine Chipset  
4c53 1050 CT7 mainboard  
4c53 1051 CE7 mainboard  
7191  
440BX/ZX/DX - 82443BX/ZX/DX AGP bridge  
1028 008e PowerEdge 1300 mainboard  
7192 440BX/ZX/DX - 82443BX/ZX/DX Host bridge (AGP disabled)  
0e11 0460 Armada 1700 Laptop System Chipset  
1179 0001 Satellite 4010  
4c53 1000 CC7/CR7/CP7/VC7/VP7/VR7 mainboard  
8086 7190 Dell PowerEdge 350  
7194 82440MX Host Bridge  
1033 0000 Versa Note Vxi  
4c53 10a0 CA3/CR3 mainboard  
7195 82440MX AC'97 Audio Controller  
1033 80cc Versa Note VXi  
10cf 1099 QSound\_SigmaTel Stac97 PCI Audio  
11d4 0040 SoundMAX Integrated Digital Audio  
11d4 0048 SoundMAX Integrated Digital Audio  
7196 82440MX AC'97 Modem Controller  
7198 82440MX ISA Bridge  
7199 82440MX EIDE Controller  
719a 82440MX USB Universal Host Controller  
719b 82440MX Power Management Controller  
71a0 440GX - 82443GX Host bridge  
4c53 1050 CT7 mainboard  
4c53 1051 CE7 mainboard  
71a1 440GX - 82443GX AGP bridge  
71a2 440GX - 82443GX Host bridge (AGP disabled)  
4c53 1000 CC7/CR7/CP7/VC7/VP7/VR7 mainboard  
7360  
XMM7360 LTE Advanced Modem  
7560 XMM7560 LTE Advanced Pro Modem

7600 82372FB PIIIX5 ISA  
 7601 82372FB PIIIX5 IDE  
 7602 82372FB PIIIX5 USB  
 7603 82372FB PIIIX5 SMBus  
 7800 82740 (i740) AGP Graphics Accelerator  
 003d 0008 Starfighter AGP  
 003d 000b Starfighter AGP  
 1092 0100 Stealth II G460  
 10b4 201a Lightspeed 740  
 10b4 202f Lightspeed 740  
 8086 0000 Terminator 2x/i  
 8086 0100 Intel740 Graphics Accelerator  
 7a04 Raptor Lake LPC/eSPI Controller  
 7a23 Raptor Lake-S PCH SMBus Controller  
 7a24 Raptor Lake SPI (flash) Controller  
 7a27 Raptor Lake-S PCH Shared SRAM  
 7a30 Raptor Lake PCI Express Root Port #9  
 7a38 Raptor Lake PCI Express Root Port #1  
 7a3b Raptor Lake PCI Express Root Port #4  
 7a40 Raptor Lake PCI Express Root Port #17  
 7a44 Raptor Lake PCI Express Root Port #21  
 7a48 Raptor Lake PCI Express Root Port #25  
 7a4c Raptor Lake Serial IO I2C Host Controller #0  
 7a4d Raptor Lake Serial IO I2C Host Controller #1  
 7a4e Raptor Lake Serial IO I2C Host Controller  
 #2  
 7a50 Raptor Lake High Definition Audio Controller  
 7a60 Raptor Lake USB 3.2 Gen 2x2 (20 Gb/s) XHCI Host Controller  
 7a62 Raptor Lake SATA AHCI Controller  
 7a68 Raptor Lake CSME HECI #1  
 7a69 Raptor Lake CSME HECI #2  
 7a70 Raptor Lake-S PCH CNVi WiFi  
 8086 0090 WiFi 6E AX211 160MHz  
 # Unlike other PCH components. The eSPI controller is specific to each chipset model  
 7a84 Z690 Chipset LPC/eSPI Controller  
 7a85 Alder Lake-S PCH PCI Express Root Port #?????  
 7aa3 Alder Lake-S PCH SMBus Controller  
 7aa4 Alder Lake-S PCH SPI Controller  
 7aa7 Alder Lake-S PCH Shared SRAM  
 7aa8 Alder Lake-S PCH Serial IO UART #0  
 7aab Alder Lake-S PCH Serial IO SPI Controller #1  
 7ab0 Alder Lake-S PCH PCI Express Root Port #9  
 7ab4 Alder Lake-S PCH PCI Express Root Port #13  
 7ab8 Alder Lake-S PCH PCI Express Root Port #1  
 7ab9 Alder Lake-S PCH PCI Express Root Port #2  
 7aba Alder Lake-S PCH PCI Express Root Port #3  
 7abc Alder Lake-S PCH PCI Express Root Port #5  
 7abd Alder Lake-S



PCH PCI Express Root Port #6  
7abf Alder Lake-S PCH PCI Express Root Port #8  
7ac4 Alder Lake-S PCH PCI Express Root Port #21  
7ac8 Alder Lake-S PCH PCI Express Root Port #25  
7acc Alder Lake-S PCH Serial IO I2C Controller #0  
7acd Alder Lake-S PCH Serial IO I2C Controller #1  
7ace Alder Lake-S PCH Serial IO I2C Controller #2  
7acf Alder Lake-S PCH Serial IO I2C Controller #3  
7ad0 Alder Lake-S HD Audio Controller  
7ae0 Alder Lake-S PCH USB 3.2 Gen 2x2 XHCI Controller  
7ae2 Alder Lake-S PCH SATA Controller [AHCI Mode]  
7ae8 Alder Lake-S PCH HECI Controller #1  
7af0 Alder Lake-S PCH CNVi WiFi  
8086 0034 Wireless-AC 9560  
8086 0070 Wi-Fi 6 AX201 160MHz  
8086 0094 Wi-Fi 6 AX201 160MHz  
7afc Alder Lake-S PCH Serial IO I2C Controller #4  
7afd Alder Lake-S PCH Serial IO I2C Controller #5  
7d0b Volume Management Device NVMe RAID Controller Intel Corporation  
7d1d Meteor Lake NPU  
7d40 Meteor Lake-M [Intel Graphics]  
7d41 Arrow Lake-U [Intel Graphics]  
7d45 Meteor  
Lake-P [Intel Graphics]  
7d51 Arrow Lake-P [Intel Graphics]  
7d55 Meteor Lake-P [Intel Arc Graphics]  
7d60 Meteor Lake-M [Intel Graphics]  
7d67 Arrow Lake-U [Intel Graphics]  
7dd1 Arrow Lake-P [Intel Graphics]  
7dd5 Meteor Lake-P [Intel Graphics]  
7e01 Meteor Lake-P LPC/eSPI Controller  
7e22 Meteor Lake-P SMBus Controller  
7e23 Meteor Lake-P SPI Controller  
7e24 Meteor Lake-P Trace Hub  
7e25 Meteor Lake-P Serial IO UART Controller #0  
7e26 Meteor Lake-P Serial IO UART Controller #1  
7e27 Meteor Lake-P Serial IO SPI Controller #0  
7e28 Meteor Lake-P HD Audio Controller  
7e30 Meteor Lake-P Serial IO SPI Controller #1  
7e40 Meteor Lake PCH CNVi WiFi  
8086 0094 Wi-Fi 6E AX211 160MHz  
7e46 Meteor Lake-P Serial IO SPI Controller #2  
7e50 Meteor Lake-P Serial IO I2C Controller #4  
7e51 Meteor Lake-P Serial IO I2C Controller #5  
7e52 Meteor Lake-P Serial IO UART Controller #2  
7e78 Meteor Lake-P Serial IO I2C Controller #0  
7e79 Meteor Lake-P Serial IO I2C Controller #1  
7e7a

Meteor Lake-P Serial IO I2C Controller #2  
7e7b Meteor Lake-P Serial IO I2C Controller #3  
7e7d Meteor Lake-P USB 3.2 Gen 2x1 xHCI Host Controller  
7e7e Meteor Lake-P USB Device Controller  
7ec0 Meteor Lake-P Thunderbolt 4 USB Controller  
7ec2 Meteor Lake-P Thunderbolt 4 NHI #0  
7ec3 Meteor Lake-P Thunderbolt 4 NHI #1  
7ec4 Meteor Lake-P Thunderbolt 4 PCI Express Root Port #0  
7ec5 Meteor Lake-P Thunderbolt 4 PCI Express Root Port #1  
7ec6 Meteor Lake-P Thunderbolt 4 PCI Express Root Port #2  
7ec7 Meteor Lake-P Thunderbolt 4 PCI Express Root Port #3  
8002 Trusted Execution Technology Registers  
8003 Trusted Execution Technology Registers  
8100 US15W/US15X SCH [Poulsbo] Host Bridge  
8101 US15L/UL11L SCH [Poulsbo] Host Bridge  
8108 US15W/US15X SCH [Poulsbo] Graphics Controller  
8109 US15L/UL11L SCH [Poulsbo] Graphics Controller  
8110 US15W/US15X/US15L/UL11L SCH [Poulsbo] PCI Express Port 1  
8112 US15W/US15X/US15L/UL11L SCH [Poulsbo] PCI Express Port 2  
8114 US15W/US15X/US15L/UL11L  
SCH [Poulsbo] USB UHCI Controller #1  
8115 US15W/US15X/US15L/UL11L SCH [Poulsbo] USB UHCI Controller #2  
8116 US15W/US15X/US15L/UL11L SCH [Poulsbo] USB UHCI Controller #3  
8117 US15W/US15X/US15L/UL11L SCH [Poulsbo] USB EHCI Controller  
8118 US15W/US15X/US15L/UL11L SCH [Poulsbo] USB Client Controller  
8119 US15W/US15X/US15L/UL11L SCH [Poulsbo] LPC Bridge  
811a US15W/US15X/US15L/UL11L SCH [Poulsbo] IDE Controller  
811b US15W/US15X/US15L/UL11L SCH [Poulsbo] HD Audio Controller  
811c US15W/US15X/US15L/UL11L SCH [Poulsbo] SDIO/MMC Controller #1  
811d US15W/US15X/US15L/UL11L SCH [Poulsbo] SDIO/MMC Controller #2  
811e US15W/US15X/US15L/UL11L SCH [Poulsbo] SDIO/MMC Controller #3  
8180 Atom Processor E6xx PCI Express Port 3  
8181 Atom Processor E6xx PCI Express Port 4  
8182 Atom Processor E6xx Integrated Graphics Controller  
8183 Atom Processor E6xx Configuration Unit  
8184 Atom Processor E6xx PCI Express Port 1  
8185 Atom Processor E6xx PCI Express Port 2  
8186  
Atom Processor E6xx LPC Bridge  
84c4 450KX/GX [Orion] - 82454KX/GX PCI bridge  
84c5 450KX/GX [Orion] - 82453KX/GX Memory controller  
84ca 450NX - 82451NX Memory & I/O Controller  
84cb 450NX - 82454NX/84460GX PCI Expander Bridge  
84e0 460GX - 84460GX System Address Controller (SAC)  
84e1 460GX - 84460GX System Data Controller (SDC)  
84e2 460GX - 84460GX AGP Bridge (GXB function 2)  
84e3 460GX - 84460GX Memory Address Controller (MAC)  
84e4 460GX - 84460GX Memory Data Controller (MDC)

84e6 460GX - 82466GX Wide and fast PCI eXpander Bridge (WXB)  
84ea 460GX - 84460GX AGP Bridge (GXB function 1)  
8500 IXP4XX Network Processor (IXP420/421/422/425/IXC1100)  
1993 0ded mGuard-PCI AV#2  
1993 0dee mGuard-PCI AV#1  
1993 0def mGuard-PCI AV#0  
8603 Ice Lake-LP Dynamic Tuning Processor Participant  
87c0 UHD Graphics 617  
87ca UHD Graphics 617  
8800 Platform Controller Hub EG20T PCI Express Port  
8801 Platform Controller Hub EG20T Packet Hub  
8802 Platform Controller Hub  
EG20T Gigabit Ethernet Controller  
8803 Platform Controller Hub EG20T General Purpose IO Controller  
8804 Platform Controller Hub EG20T USB OHCI Controller #4  
8805 Platform Controller Hub EG20T USB OHCI Controller #5  
8806 Platform Controller Hub EG20T USB OHCI Controller #6  
8807 Platform Controller Hub EG20T USB2 EHCI Controller #2  
8808 Platform Controller Hub EG20T USB Client Controller  
8809 Platform Controller Hub EG20T SDIO Controller #1  
880a Platform Controller Hub EG20T SDIO Controller #2  
880b Platform Controller Hub EG20T SATA AHCI Controller  
880c Platform Controller Hub EG20T USB OHCI Controller #1  
880d Platform Controller Hub EG20T USB OHCI Controller #2  
880e Platform Controller Hub EG20T USB OHCI Controller #3  
880f Platform Controller Hub EG20T USB2 EHCI Controller #1  
8810 Platform Controller Hub EG20T DMA Controller #1  
8811 Platform Controller Hub EG20T UART Controller 0  
8812 Platform Controller Hub EG20T UART Controller 1  
8813 Platform Controller  
Hub EG20T UART Controller 2  
8814 Platform Controller Hub EG20T UART Controller 3  
8815 Platform Controller Hub EG20T DMA Controller #2  
8816 Platform Controller Hub EG20T Serial Peripheral Interface Bus  
8817 Platform Controller Hub EG20T I2C Controller  
8818 Platform Controller Hub EG20T Controller Area Network (CAN) Controller  
8819 Platform Controller Hub EG20T IEEE 1588 Hardware Assist  
8a03 Processor Power and Thermal Controller  
8a0d Ice Lake Thunderbolt 3 NHI #1  
8a11 GNA Scoring Accelerator Module  
8a12 Ice Lake-LP Processor Host Bridge/DRAM Registers  
8a13 Ice Lake Thunderbolt 3 USB Controller  
8a14 Ice Lake Processor Host Bridge/DRAM Registers  
8a17 Ice Lake Thunderbolt 3 NHI #0  
8a19 Image Signal Processor  
8a1d Ice Lake Thunderbolt 3 PCI Express Root Port #0  
8a1f Ice Lake Thunderbolt 3 PCI Express Root Port #1  
8a21 Ice Lake Thunderbolt 3 PCI Express Root Port #2

8a23 Ice Lake Thunderbolt 3 PCI Express Root Port #3  
8a51 Iris Plus Graphics G7 (Ice Lake)  
8a52 Iris Plus Graphics G7  
8a53 Iris Plus Graphics G7  
8a56 Iris Plus Graphics G1 (Ice Lake)  
8a58 Ice Lake-Y GT1 [UHD Graphics G1]  
8a5a Iris Plus Graphics G4 (Ice Lake)  
8a5c Iris Plus Graphics G4 (Ice Lake)  
8c00 8 Series/C220 Series Chipset Family 4-port SATA Controller 1 [IDE mode]  
8c01 8 Series Chipset Family 4-port SATA Controller 1 [IDE mode] - Mobile  
8c02 8 Series/C220 Series Chipset Family 6-port SATA Controller 1 [AHCI mode]  
1028 05d7 Alienware X51 R2  
103c 1998 EliteDesk 800 G1  
17aa 3098 ThinkCentre E73  
17aa 309f ThinkCentre M83  
8c03 8 Series/C220 Series Chipset Family 6-port SATA Controller 1 [AHCI mode]  
103c 1909 ZBook 15  
17aa 220e ThinkPad T440p  
8c04 8 Series/C220 Series Chipset Family SATA Controller 1 [RAID mode]  
8c05 8 Series/C220 Series Chipset Family SATA Controller 1 [RAID mode]  
8c06 8 Series/C220 Series Chipset Family SATA Controller 1 [RAID mode]  
8c07 8 Series/C220 Series Chipset Family SATA Controller 1 [RAID mode]  
8c08  
8 Series/C220 Series Chipset Family 2-port SATA Controller 2 [IDE mode]  
8c09 8 Series/C220 Series Chipset Family 2-port SATA Controller 2 [IDE mode]  
8c0e 8 Series/C220 Series Chipset Family SATA Controller 1 [RAID mode]  
8c0f 8 Series/C220 Series Chipset Family SATA Controller 1 [RAID mode]  
8c10 8 Series/C220 Series Chipset Family PCI Express Root Port #1  
103c 1998 EliteDesk 800 G1  
1043 8534 ASUS H81I-PLUS  
17aa 220e ThinkPad T440p  
17aa 3098 ThinkCentre E73  
8c11 8 Series/C220 Series Chipset Family PCI Express Root Port #1  
8c12 8 Series/C220 Series Chipset Family PCI Express Root Port #2  
103c 1998 EliteDesk 800 G1  
17aa 220e ThinkPad T440p  
8c13 8 Series/C220 Series Chipset Family PCI Express Root Port #2  
8c14 8 Series/C220 Series Chipset Family PCI Express Root Port #3  
8c15 8 Series/C220 Series Chipset Family PCI Express Root Port #3  
8c16 8 Series/C220 Series Chipset Family PCI Express Root Port #4  
8c17 8 Series/C220 Series Chipset Family PCI Express Root Port #4  
8c18 8 Series/C220 Series Chipset Family PCI Express Root Port #5  
8c19 8 Series/C220 Series Chipset Family PCI Express Root Port #5  
8c1a 8 Series/C220 Series Chipset Family PCI Express Root Port #6  
17aa 3098 ThinkCentre E73  
8c1b 8 Series/C220 Series Chipset Family PCI Express Root Port #6

8c1c 8 Series/C220 Series Chipset Family PCI Express Root Port #7  
8c1d 8 Series/C220 Series Chipset Family PCI Express Root Port #7  
8c1e 8 Series/C220 Series Chipset Family PCI Express Root Port #8  
8c1f 8 Series/C220 Series Chipset Family PCI Express Root Port #8  
8c20 8 Series/C220 Series Chipset High Definition Audio Controller  
1028 05d7 Alienware X51 R2  
103c 1909 ZBook 15  
103c 1998 EliteDesk 800 G1  
17aa 220e ThinkPad T440p  
17aa 309f ThinkCentre M83  
8c21 8 Series/C220 Series Chipset High Definition Audio Controller  
8c22 8 Series/C220 Series Chipset Family SMBus Controller  
1028 05d7 Alienware X51 R2  
103c 1909 ZBook 15  
103c 1998 EliteDesk  
800 G1  
17aa 220e ThinkPad T440p  
17aa 3098 ThinkCentre E73  
17aa 309f ThinkCentre M83  
8c23 8 Series Chipset Family CHAP Counters  
8c24 8 Series Chipset Family Thermal Management Controller  
8c26 8 Series/C220 Series Chipset Family USB EHCI #1  
1028 05d7 Alienware X51 R2  
103c 1909 ZBook 15  
103c 1998 EliteDesk 800 G1  
17aa 220e ThinkPad T440p  
17aa 2210 ThinkPad T540p  
17aa 3098 ThinkCentre E73  
17aa 309f ThinkCentre M83  
2210 17aa ThinkPad T540p  
8c2d 8 Series/C220 Series Chipset Family USB EHCI #2  
1028 05d7 Alienware X51 R2  
103c 1909 ZBook 15  
103c 1998 EliteDesk 800 G1  
17aa 220e ThinkPad T440p  
17aa 3098 ThinkCentre E73  
17aa 309f ThinkCentre M83  
8c31 8 Series/C220 Series Chipset Family USB xHCI  
1028 05d7 Alienware X51 R2  
103c 1909 ZBook 15  
103c 1998 EliteDesk 800 G1  
17aa 220e ThinkPad T440p  
17aa 3098 ThinkCentre E73  
17aa 309f ThinkCentre M83  
8c33 8 Series/C220 Series Chipset Family LAN Controller  
8c34 8 Series/C220  
Series Chipset Family NAND Controller  
8c3a 8 Series/C220 Series Chipset Family MEI Controller #1

1028 05d7 Alienware X51 R2  
103c 1909 ZBook 15  
103c 1998 EliteDesk 800 G1  
17aa 220e ThinkPad T440p  
17aa 3098 ThinkCentre E73  
17aa 309f ThinkCentre M83  
8c3b 8 Series/C220 Series Chipset Family MEI Controller #2  
8c3c 8 Series/C220 Series Chipset Family IDE-r Controller  
8c3d 8 Series/C220 Series Chipset Family KT Controller  
103c 1998 EliteDesk 800 G1  
8c40 8 Series/C220 Series Chipset Family LPC Controller  
8c41 8 Series Chipset Family Mobile Super SKU LPC Controller  
8c42 8 Series/C220 Series Chipset Family Desktop Super SKU LPC Controller  
8c43 8 Series/C220 Series Chipset Family LPC Controller  
8c44 Z87 Express LPC Controller  
8c45 8 Series/C220 Series Chipset Family LPC Controller  
8c46 Z85 Express LPC Controller  
8c47 8 Series/C220 Series Chipset Family LPC Controller  
8c48 8 Series/C220 Series Chipset Family LPC Controller  
8c49 HM86 Express LPC  
Controller  
8c4a H87 Express LPC Controller  
1028 05d7 Alienware X51 R2  
8c4b HM87 Express LPC Controller  
8c4c Q85 Express LPC Controller  
17aa 309f ThinkCentre M83  
8c4d 8 Series/C220 Series Chipset Family LPC Controller  
8c4e Q87 Express LPC Controller  
103c 1998 EliteDesk 800 G1  
8c4f QM87 Express LPC Controller  
103c 1909 ZBook 15  
17aa 220e ThinkPad T440p  
8c50 B85 Express LPC Controller  
8c51 8 Series/C220 Series Chipset Family LPC Controller  
8c52 C222 Series Chipset Family Server Essential SKU LPC Controller  
8c53 8 Series/C220 Series Chipset Family LPC Controller  
8c54 C224 Series Chipset Family Server Standard SKU LPC Controller  
8c55 8 Series/C220 Series Chipset Family LPC Controller  
8c56 C226 Series Chipset Family Server Advanced SKU LPC Controller  
8c57 8 Series/C220 Series Chipset Family LPC Controller  
8c58 8 Series/C220 Series Chipset Family WS SKU LPC Controller  
8c59 8 Series/C220 Series Chipset Family LPC Controller  
8c5a 8 Series/C220  
Series Chipset Family LPC Controller  
8c5b 8 Series/C220 Series Chipset Family LPC Controller  
8c5c H81 Express LPC Controller  
17aa 3098 ThinkCentre E73  
8c5d 8 Series/C220 Series Chipset Family LPC Controller

8c5e 8 Series/C220 Series Chipset Family LPC Controller  
8c5f 8 Series/C220 Series Chipset Family LPC Controller  
8c80 9 Series Chipset Family SATA Controller [IDE Mode]  
8c81 9 Series Chipset Family SATA Controller [IDE Mode]  
8c82 9 Series Chipset Family SATA Controller [AHCI Mode]  
8c83 9 Series Chipset Family SATA Controller [AHCI Mode]  
8c84 9 Series Chipset Family SATA Controller [RAID Mode]  
8c85 9 Series Chipset Family SATA Controller [RAID Mode]  
8c86 9 Series Chipset Family SATA Controller [RAID Mode]  
8c87 9 Series Chipset Family SATA Controller [RAID Mode]  
8c88 9 Series Chipset Family SATA Controller [IDE Mode]  
8c89 9 Series Chipset Family SATA Controller [IDE Mode]  
8c8e 9 Series Chipset Family SATA Controller [RAID Mode]  
8c8f 9 Series Chipset  
Family SATA Controller [RAID Mode]  
8c90 9 Series Chipset Family PCI Express Root Port 1  
8c92 9 Series Chipset Family PCI Express Root Port 2  
8c94 9 Series Chipset Family PCI Express Root Port 3  
8c96 9 Series Chipset Family PCI Express Root Port 4  
8c98 9 Series Chipset Family PCI Express Root Port 5  
8c9a 9 Series Chipset Family PCI Express Root Port 6  
8c9c 9 Series Chipset Family PCI Express Root Port 7  
8c9e 9 Series Chipset Family PCI Express Root Port 8  
8ca0 9 Series Chipset Family HD Audio Controller  
8ca2 9 Series Chipset Family SMBus Controller  
8ca4 9 Series Chipset Family Thermal Controller  
8ca6 9 Series Chipset Family USB EHCI Controller #1  
8cad 9 Series Chipset Family USB EHCI Controller #2  
8cb1 9 Series Chipset Family USB xHCI Controller  
8cb3 9 Series Chipset Family LAN Controller  
8cba 9 Series Chipset Family ME Interface #1  
8cbb 9 Series Chipset Family ME Interface #2  
8cbc 9 Series Chipset Family IDE-R Controller  
8cbd 9 Series Chipset Family  
KT Controller  
8cc1 9 Series Chipset Family LPC Controller  
8cc2 9 Series Chipset Family LPC Controller  
8cc3 HM97 Chipset LPC Controller  
8cc4 Z97 Chipset LPC Controller  
8cc5 QM97 Chipset LPC Controller  
8cc6 H97 Chipset LPC Controller  
8d00 C610/X99 series chipset 4-port SATA Controller [IDE mode]  
8d02 C610/X99 series chipset 6-Port SATA Controller [AHCI mode]  
8d04 C610/X99 series chipset SATA Controller [RAID mode]  
8d06 C610/X99 series chipset SATA Controller [RAID mode]  
17aa 1031 ThinkServer RAID 110i  
8d08 C610/X99 series chipset 2-port SATA Controller [IDE mode]  
8d0e C610/X99 series chipset SATA Controller [RAID mode]

8d10 C610/X99 series chipset PCI Express Root Port #1  
8d11 C610/X99 series chipset PCI Express Root Port #1  
8d12 C610/X99 series chipset PCI Express Root Port #2  
8d13 C610/X99 series chipset PCI Express Root Port #2  
8d14 C610/X99 series chipset PCI Express Root Port #3  
8d15 C610/X99 series chipset PCI Express Root Port #3  
8d16 C610/X99  
series chipset PCI Express Root Port #4  
8d17 C610/X99 series chipset PCI Express Root Port #4  
8d18 C610/X99 series chipset PCI Express Root Port #5  
8d19 C610/X99 series chipset PCI Express Root Port #5  
8d1a C610/X99 series chipset PCI Express Root Port #6  
8d1b C610/X99 series chipset PCI Express Root Port #6  
8d1c C610/X99 series chipset PCI Express Root Port #7  
8d1d C610/X99 series chipset PCI Express Root Port #7  
8d1e C610/X99 series chipset PCI Express Root Port #8  
8d1f C610/X99 series chipset PCI Express Root Port #8  
8d20 C610/X99 series chipset HD Audio Controller  
8d21 C610/X99 series chipset HD Audio Controller  
8d22 C610/X99 series chipset SMBus Controller  
15d9 0832 X10SRL-F  
8d24 C610/X99 series chipset Thermal Subsystem  
8d26 C610/X99 series chipset USB Enhanced Host Controller #1  
15d9 0832 X10SRL-F  
8d2d C610/X99 series chipset USB Enhanced Host Controller #2  
15d9 0832 X10SRL-F  
8d31 C610/X99 series chipset USB xHCI Host Controller  
15d9  
0832 X10SRL-F  
8d33 C610/X99 series chipset LAN Controller  
8d34 C610/X99 series chipset NAND Controller  
8d3a C610/X99 series chipset MEI Controller #1  
15d9 0832 X10SRL-F  
8d3b C610/X99 series chipset MEI Controller #2  
15d9 0832 X10SRL-F  
8d3c C610/X99 series chipset IDE-r Controller  
8d3d C610/X99 series chipset KT Controller  
8d40 C610/X99 series chipset LPC Controller  
8d41 C610/X99 series chipset LPC Controller  
8d42 C610/X99 series chipset LPC Controller  
8d43 C610/X99 series chipset LPC Controller  
8d44 C610/X99 series chipset LPC Controller  
15d9 0832 X10SRL-F  
8d45 C610/X99 series chipset LPC Controller  
8d46 C610/X99 series chipset LPC Controller  
8d47 C610/X99 series chipset LPC Controller  
8d48 C610/X99 series chipset LPC Controller  
8d49 C610/X99 series chipset LPC Controller



8d4a C610/X99 series chipset LPC Controller  
8d4b C610/X99 series chipset LPC Controller  
8d4c C610/X99 series chipset LPC Controller  
8d4d C610/X99 series chipset  
LPC Controller  
8d4e C610/X99 series chipset LPC Controller  
8d4f C610/X99 series chipset LPC Controller  
8d60 C610/X99 series chipset sSATA Controller [IDE mode]  
8d62 C610/X99 series chipset sSATA Controller [AHCI mode]  
8d64 C610/X99 series chipset sSATA Controller [RAID mode]  
8d66 C610/X99 series chipset sSATA Controller [RAID mode]  
8d68 C610/X99 series chipset sSATA Controller [IDE mode]  
8d6e C610/X99 series chipset sSATA Controller [RAID mode]  
8d7c C610/X99 series chipset SPSR  
15d9 0832 X10SRL-F  
8d7d C610/X99 series chipset MS SMBus 0  
8d7e C610/X99 series chipset MS SMBus 1  
8d7f C610/X99 series chipset MS SMBus 2  
9000 IXP2000 Family Network Processor  
9001 IXP2400 Network Processor  
9002 IXP2300 Network Processor  
9004 IXP2800 Network Processor  
9621 Integrated RAID  
9622 Integrated RAID  
9641 Integrated RAID  
96a1 Integrated RAID  
9840 Lakefield GT2 [UHD Graphics]  
9841 Lakefield GT1.5 [UHD Graphics]  
9a01 11th Gen Core Processor PCIe Controller  
#1  
9a03 TigerLake-LP Dynamic Tuning Processor Participant  
9a09 11th Gen Core Processor PCIe Controller  
9a0b Volume Management Device NVMe RAID Controller  
9a0d Tigerlake Telemetry Aggregator Driver  
9a0f 11th Gen Core Processor PCIe Controller #0  
9a11 GNA Scoring Accelerator module  
9a13 Tiger Lake-LP Thunderbolt 4 USB Controller  
9a14 11th Gen Core Processor Host Bridge/DRAM Registers  
9a17 Tiger Lake-H Thunderbolt 4 USB Controller  
9a1b Tiger Lake-LP Thunderbolt 4 NHI #0  
9a1d Tiger Lake-LP Thunderbolt 4 NHI #1  
9a1f Tiger Lake-H Thunderbolt 4 NHI #0  
9a21 Tiger Lake-H Thunderbolt 4 NHI #1  
9a23 Tiger Lake-LP Thunderbolt 4 PCI Express Root Port #0  
9a25 Tiger Lake-LP Thunderbolt 4 PCI Express Root Port #1  
9a26 11th Gen Core Processor Host Bridge/DRAM Registers  
9a27 Tiger Lake-LP Thunderbolt 4 PCI Express Root Port #2  
9a29 Tiger Lake-LP Thunderbolt 4 PCI Express Root Port #3

9a2b Tiger Lake-H Thunderbolt 4 PCI Express Root Port #0  
9a2d Tiger Lake-H Thunderbolt  
4 PCI Express Root Port #1  
9a2f Tiger Lake-H Thunderbolt 4 PCI Express Root Port #2  
9a31 Tiger Lake-H Thunderbolt 4 PCI Express Root Port #3  
9a33 Tiger Lake Trace Hub  
9a36 11th Gen Core Processor Host Bridge/DRAM Registers  
9a40 Tiger Lake-UP4 GT2 [Iris Xe Graphics]  
9a49 TigerLake-LP GT2 [Iris Xe Graphics]  
9a60 TigerLake-H GT1 [UHD Graphics]  
9a68 TigerLake-H GT1 [UHD Graphics]  
9a70 Tiger Lake-H GT1 [UHD Graphics]  
9a78 Tiger Lake-LP GT2 [UHD Graphics G4]  
9b21 Comet Lake-U GT2 [UHD Graphics 620]  
9b33 Comet Lake-S 6c Host Bridge/DRAM Controller  
9b41 CometLake-U GT2 [UHD Graphics]  
1028 09bd Latitude 7310  
1028 09be Latitude 7410  
9b43 10th Gen Core Processor Host Bridge/DRAM Registers  
9b44 10th Gen Core Processor Host Bridge/DRAM Registers  
9b51 10th Gen Core Processor Host Bridge/DRAM Registers  
9b53 Comet Lake-S 6c Host Bridge/DRAM Controller  
9b54 10th Gen Core Processor Host Bridge/DRAM Registers  
9b61 Comet Lake-U v1 4c Host Bridge/DRAM Controller  
1028  
09be Latitude 7410  
9b63 10th Gen Core Processor Host Bridge/DRAM Registers  
9b64 10th Gen Core Processor Host Bridge/DRAM Registers  
9ba4 Comet Lake-H GT1 [UHD Graphics 610]  
9ba8 CometLake-S GT1 [UHD Graphics 610]  
9baa Comet Lake UHD Graphics  
9bac Comet Lake UHD Graphics  
9bc4 CometLake-H GT2 [UHD Graphics]  
9bc5 CometLake-S GT2 [UHD Graphics 630]  
9bc6 Comet Lake-S GT2 [UHD Graphics P630]  
9bc8 CometLake-S GT2 [UHD Graphics 630]  
9bca Comet Lake UHD Graphics  
9bcc Comet Lake UHD Graphics  
9be6 Comet Lake-S GT2 [UHD Graphics P630]  
9bf6 Coffee Lake-S GT2 [UHD Graphics P630]  
9c00 8 Series SATA Controller 1 [IDE mode]  
9c01 8 Series SATA Controller 1 [IDE mode]  
9c02 8 Series SATA Controller 1 [AHCI mode]  
9c03 8 Series SATA Controller 1 [AHCI mode]  
17aa 2214 ThinkPad X240  
9c04 8 Series SATA Controller 1 [RAID mode]  
9c05 8 Series SATA Controller 1 [RAID mode]  
9c06 8 Series SATA Controller 1 [RAID mode]

9c07 8 Series SATA Controller 1 [RAID mode]  
9c08 8 Series SATA Controller 2 [IDE mode]  
9c09 8 Series SATA Controller 2 [IDE mode]  
9c0a 8 Series SATA Controller [Reserved]  
9c0b 8 Series SATA Controller [Reserved]  
9c0c 8 Series SATA Controller [Reserved]  
9c0d 8 Series SATA Controller [Reserved]  
9c0e 8 Series SATA Controller 1 [RAID mode]  
9c0f 8 Series SATA Controller 1 [RAID mode]  
9c10 8 Series PCI Express Root Port 1  
9c11 8 Series PCI Express Root Port 1  
9c12 8 Series PCI Express Root Port 2  
9c13 8 Series PCI Express Root Port 2  
9c14 8 Series PCI Express Root Port 3  
9c15 8 Series PCI Express Root Port 3  
9c16 8 Series PCI Express Root Port 4  
9c17 8 Series PCI Express Root Port 4  
9c18 8 Series PCI Express Root Port 5  
9c19 8 Series PCI Express Root Port 5  
9c1a 8 Series PCI Express Root Port 6  
9c1b 8 Series PCI Express Root Port 6  
9c1c 8 Series PCI Express Root Port 7  
9c1d 8 Series PCI Express Root Port 7  
9c1e 8 Series PCI Express Root Port 8  
9c1f 8 Series PCI Express Root Port 8  
9c20  
8 Series HD Audio Controller  
17aa 2214 ThinkPad X240  
9c21 8 Series HD Audio Controller  
9c22 8 Series SMBus Controller  
17aa 2214 ThinkPad X240  
9c23 8 Series CHAP Counters  
9c24 8 Series Thermal  
9c26 8 Series USB EHCI #1  
17aa 220c T440s  
17aa 2214 ThinkPad X240  
9c2d 8 Series USB EHCI #2  
9c31 8 Series USB xHCI HC  
17aa 2214 ThinkPad X240  
8086 7270 Apple MacBookAir6,2 / MacBookPro11,1  
9c35 8 Series SDIO Controller  
9c36 8 Series Audio DSP Controller  
9c3a 8 Series HECI #0  
17aa 2214 ThinkPad X240  
9c3b 8 Series HECI #1  
9c3c 8 Series HECI IDER  
9c3d 8 Series HECI KT

9c40 8 Series LPC Controller  
9c41 8 Series LPC Controller  
9c42 8 Series LPC Controller  
9c43 8 Series LPC Controller  
17aa 2214 ThinkPad X240  
9c44 8 Series LPC Controller  
9c45 8 Series LPC Controller  
9c46 8 Series LPC Controller  
9c47 8 Series LPC Controller  
9c60 8 Series Low Power Sub-System DMA  
9c61 8 Series I2C Controller #0  
9c62 8 Series I2C Controller #1  
9c63  
8 Series UART Controller #0  
9c64 8 Series UART Controller #1  
9c65 8 Series SPI Controller #0  
9c66 8 Series SPI Controller #1  
9c83 Wildcat Point-LP SATA Controller [AHCI Mode]  
9c85 Wildcat Point-LP SATA Controller [RAID Mode]  
9c87 Wildcat Point-LP SATA Controller [RAID Mode]  
9c8f Wildcat Point-LP SATA Controller [RAID Mode]  
9c90 Wildcat Point-LP PCI Express Root Port #1  
9c92 Wildcat Point-LP PCI Express Root Port #2  
9c94 Wildcat Point-LP PCI Express Root Port #3  
9c96 Wildcat Point-LP PCI Express Root Port #4  
9c98 Wildcat Point-LP PCI Express Root Port #5  
9c9a Wildcat Point-LP PCI Express Root Port #6  
9ca0 Wildcat Point-LP High Definition Audio Controller  
9ca2 Wildcat Point-LP SMBus Controller  
9ca4 Wildcat Point-LP Thermal Management Controller  
9ca6 Wildcat Point-LP USB EHCI Controller  
9cb1 Wildcat Point-LP USB xHCI Controller  
9cb5 Wildcat Point-LP Secure Digital IO Controller  
9cb6 Wildcat Point-LP Smart Sound Technology Controller  
9cba Wildcat  
Point-LP MEI Controller #1  
9cbb Wildcat Point-LP MEI Controller #2  
9cbc Wildcat Point-LP IDE-r Controller  
9cbd Wildcat Point-LP KT Controller  
9cc1 Wildcat Point-LP LPC Controller  
9cc2 Wildcat Point-LP LPC Controller  
9cc3 Wildcat Point-LP LPC Controller  
9cc5 Wildcat Point-LP LPC Controller  
9cc6 Wildcat Point-LP LPC Controller  
9cc7 Wildcat Point-LP LPC Controller  
9cc9 Wildcat Point-LP LPC Controller  
9ce0 Wildcat Point-LP Serial IO DMA Controller  
9ce1 Wildcat Point-LP Serial IO I2C Controller #0

9ce2 Wildcat Point-LP Serial IO I2C Controller #1  
9ce3 Wildcat Point-LP Serial IO UART Controller #0  
9ce4 Wildcat Point-LP Serial IO UART Controller #1  
9ce5 Wildcat Point-LP Serial IO GSPI Controller #0  
9ce6 Wildcat Point-LP Serial IO GSPI Controller #1  
9d03 Sunrise Point-LP SATA Controller [AHCI mode]  
1025 115f Acer Aspire E5-575G  
1028 06dc Latitude E7470  
1028 06e6 Latitude 11 5175 2-in-1  
1028 06f3 Latitude 3570  
103c 8079 EliteBook 840 G3  
17aa  
225d ThinkPad T480  
17aa 382a B51-80 Laptop  
9d10 Sunrise Point-LP PCI Express Root Port #1  
9d11 Sunrise Point-LP PCI Express Root Port #2  
9d12 Sunrise Point-LP PCI Express Root Port #3  
9d13 Sunrise Point-LP PCI Express Root Port #4  
9d14 Sunrise Point-LP PCI Express Root Port #5  
17aa 382a B51-80 Laptop  
9d15 Sunrise Point-LP PCI Express Root Port #6  
17aa 382a B51-80 Laptop  
9d16 Sunrise Point-LP PCI Express Root Port #7  
9d17 Sunrise Point-LP PCI Express Root Port #8  
9d18 Sunrise Point-LP PCI Express Root Port #9  
17aa 2247 ThinkPad T570  
17aa 382a B51-80 Laptop  
9d19 Sunrise Point-LP PCI Express Root Port #10  
9d1a Sunrise Point-LP PCI Express Root Port #11  
9d21 Sunrise Point-LP PMC  
1025 115f Acer Aspire E5-575G  
1028 06d6 Latitude 7275 tablet  
1028 06dc Latitude E7470  
1028 06e6 Latitude 11 5175 2-in-1  
1028 06f3 Latitude 3570  
103c 8079 EliteBook 840 G3  
17aa 2247 ThinkPad T570  
17aa 224f ThinkPad X1 Carbon 5th Gen  
17aa 225d ThinkPad  
T480  
17aa 382a B51-80 Laptop  
9d23 Sunrise Point-LP SMBus  
1025 115f Acer Aspire E5-575G  
1028 06d6 Latitude 7275 tablet  
1028 06dc Latitude E7470  
1028 06e6 Latitude 11 5175 2-in-1  
1028 06f3 Latitude 3570  
103c 8079 EliteBook 840 G3

17aa 2247 ThinkPad T570  
17aa 224f ThinkPad X1 Carbon 5th Gen  
17aa 225d ThinkPad T480  
17aa 382a B51-80 Laptop  
9d27 Sunrise Point-LP Serial IO UART Controller #0  
9d28 Sunrise Point-LP Serial IO UART Controller #1  
9d29 Sunrise Point-LP Serial IO SPI Controller #0  
9d2a Sunrise Point-LP Serial IO SPI Controller #1  
9d2d Sunrise Point-LP Secure Digital IO Controller  
9d2f Sunrise Point-LP USB 3.0 xHCI Controller  
1025 115f Acer Aspire E5-575G  
1028 06d6 Latitude 7275 tablet  
1028 06dc Latitude E7470  
1028 06e6 Latitude 11 5175 2-in-1  
1028 06f3 Latitude 3570  
103c 8079 EliteBook 840 G3  
17aa 2247 ThinkPad T570  
17aa 225d ThinkPad T480  
17aa 382a B51-80 Laptop  
9d31 Sunrise Point-LP Thermal subsystem  
1025  
115f Acer Aspire E5-575G  
1028 06d6 Latitude 7275 tablet  
1028 06dc Latitude E7470  
1028 06e6 Latitude 11 5175 2-in-1  
1028 06f3 Latitude 3570  
103c 8079 EliteBook 840 G3  
17aa 2247 ThinkPad T570  
17aa 224f ThinkPad X1 Carbon 5th Gen  
17aa 225d ThinkPad T480  
17aa 382a B51-80 Laptop  
9d32 CSI-2 Host Controller  
1028 06d6 Latitude 7275 tablet  
1028 06e6 Latitude 11 5175 2-in-1  
9d35 Sunrise Point-LP Integrated Sensor Hub  
1028 06d6 Latitude 7275 tablet  
1028 06e6 Latitude 11 5175 2-in-1  
9d3a Sunrise Point-LP CSME HECI #1  
1025 115f Acer Aspire E5-575G  
1028 06d6 Latitude 7275 tablet  
1028 06dc Latitude E7470  
1028 06e6 Latitude 11 5175 2-in-1  
1028 06f3 Latitude 3570  
103c 8079 EliteBook 840 G3  
17aa 2247 ThinkPad T570  
17aa 224f ThinkPad X1 Carbon 5th Gen  
17aa 225d ThinkPad T480  
17aa 382a B51-80 Laptop

9d3d Sunrise Point-LP Active Management Technology - SOL  
103c 8079 EliteBook 840 G3  
17aa 2247 ThinkPad T570  
9d3e iTouch  
Controller  
9d43 Sunrise Point-LP LPC Controller  
17aa 382a B51-80 Laptop  
9d46 LPC/eSPI Controller  
1028 06d6 Latitude 7275 tablet  
1028 06e6 Latitude 11 5175 2-in-1  
9d48 Sunrise Point-LP LPC Controller  
1028 06dc Latitude E7470  
1028 06f3 Latitude 3570  
103c 8079 EliteBook 840 G3  
17aa 2247 ThinkPad T570  
9d4e Sunrise Point LPC/eSPI Controller  
17aa 225d ThinkPad T480  
9d50 Sunrise Point LPC Controller  
9d56 Sunrise Point-LP LPC Controller  
9d58 Sunrise Point-LP LPC Controller  
1025 115f Acer Aspire E5-575G  
17aa 2247 ThinkPad T570  
17aa 224f ThinkPad X1 Carbon 5th Gen  
9d60 Sunrise Point-LP Serial IO I2C Controller #0  
1025 115f Acer Aspire E5-575G  
1028 06d6 Latitude 7275 tablet  
1028 06e6 Latitude 11 5175 2-in-1  
1028 06f3 Latitude 3570  
103c 8079 EliteBook 840 G3  
17aa 225d ThinkPad T480  
8086 9d60 100 Series PCH/Sunrise Point PCH I2C0 [Skylake/Kaby Lake LPSS I2C]  
9d61 Sunrise Point-LP Serial IO I2C Controller #1  
1028 06d6 Latitude  
7275 tablet  
1028 06e6 Latitude 11 5175 2-in-1  
9d62 Sunrise Point-LP Serial IO I2C Controller #2  
1028 06d6 Latitude 7275 tablet  
1028 06e6 Latitude 11 5175 2-in-1  
9d63 Sunrise Point-LP Serial IO I2C Controller #3  
9d64 Sunrise Point-LP Serial IO I2C Controller #4  
9d65 Sunrise Point-LP Serial IO I2C Controller #5  
9d66 Sunrise Point-LP Serial IO UART Controller #2  
9d70 Sunrise Point-LP HD Audio  
1028 06d6 Latitude 7275 tablet  
1028 06dc Latitude E7470  
1028 06e6 Latitude 11 5175 2-in-1  
1028 06f3 Latitude 3570  
103c 8079 EliteBook 840 G3

17aa 2247 ThinkPad T570  
17aa 382a B51-80 Laptop  
9d71 Sunrise Point-LP HD Audio  
1025 1094 Acer Aspire E5-575G  
17aa 224f ThinkPad X1 Carbon 5th Gen  
17aa 225d ThinkPad T480  
9d84 Cannon Point-LP LPC Controller  
1028 089e Inspiron 5482  
9da3 Cannon Point-LP SMBus Controller  
9da4 Cannon Point-LP SPI Controller  
9da8 Cannon Point-LP Serial IO UART Controller #2  
9daa Cannon Point-LP Serial IO SPI Controller  
9dab  
Cannon Point-LP Serial IO SPI Controller  
9db0 Cannon Point-LP PCI Express Root Port #9  
9db1 Cannon Point-LP PCI Express Root Port #10  
9db2 Cannon Point-LP PCI Express Root Port #1  
9db4 Cannon Point-LP PCI Express Root Port #13  
1028 089e Inspiron 5482  
9db6 Cannon Point-LP PCI Express Root Port #15  
9db8 Cannon Point-LP PCI Express Root Port #1  
9dbc Cannon Point-LP PCI Express Root Port #5  
9dbe Cannon Point-LP PCI Express Root Port #7  
9dbf Cannon Point PCI Express Root Port #8  
9dc4 Cannon Point-LP SD Host Controller  
9dc5 Cannon Point-LP Serial IO I2C Host Controller  
9dc8 Cannon Point-LP High Definition Audio Controller  
1028 089e Inspiron 5482  
9dd3 Cannon Point-LP SATA Controller [AHCI Mode]  
9de0 Cannon Point-LP MEI Controller #1  
9de3 Cannon Point-LP Keyboard and Text (KT) Redirection  
9de8 Cannon Point-LP Serial IO I2C Controller #0  
1028 089e Inspiron 5482  
9de9 Cannon Point-LP Serial IO I2C Controller #1  
1028 089e Inspiron 5482  
9ded  
Cannon Point-LP USB 3.1 xHCI Controller  
9def Cannon Point-LP Shared SRAM  
9df0 Cannon Point-LP CNVi [Wireless-AC]  
9df5 BayHubTech Integrated SD controller  
9df9 Cannon Point-LP Thermal Controller  
9dfc Cannon Point-LP Integrated Sensor Hub  
a000 Atom Processor D4xx/D5xx/N4xx/N5xx DMI Bridge  
1458 5000 GA-D525TUD  
8086 4f4d DeskTop Board D510MO  
8086 544b Desktop Board D425KT  
a001 Atom Processor D4xx/D5xx/N4xx/N5xx Integrated Graphics Controller  
1458 d000 GA-D525TUD



8086 4f4d DeskTop Board D510MO  
 8086 544b Desktop Board D425KT  
 a002 Atom Processor D4xx/D5xx/N4xx/N5xx Integrated Graphics Controller  
 a003 Atom Processor D4xx/D5xx/N4xx/N5xx CHAPS counter  
 a010 Atom Processor D4xx/D5xx/N4xx/N5xx DMI Bridge  
 1043 83ac Eee PC 1015PX  
 144d c072 Notebook N150P  
 a011 Atom Processor D4xx/D5xx/N4xx/N5xx Integrated Graphics Controller  
 1043 83ac Eee PC 1015PX  
 144d c072 Notebook N150P  
 a012 Atom Processor D4xx/D5xx/N4xx/N5xx Integrated Graphics Controller  
 1043  
 83ac Eee PC 1015PX  
 144d c072 Notebook N150P  
 a013 Atom Processor D4xx/D5xx/N4xx/N5xx CHAPS counter  
 a082 Tiger Lake-LP LPC Controller  
 a0a3 Tiger Lake-LP SMBus Controller  
 a0a4 Tiger Lake-LP SPI Controller  
 a0a6 Tiger Lake-LP Trace Hub  
 a0a8 Tiger Lake-LP Serial IO UART Controller #0  
 a0a9 Tiger Lake-LP Serial IO UART Controller #1  
 a0ab Tiger Lake-LP Serial IO SPI Controller #1  
 a0b0 Tiger Lake-LP PCI Express Root Port #9  
 a0b1 Tiger Lake-LP PCI Express Root Port #10  
 a0b3 Tiger Lake-LP PCI Express Root Port #12  
 a0bc Tiger Lake-LP PCI Express Root Port #5  
 a0bd Tigerlake PCH-LP PCI Express Root Port #6  
 a0be Tiger Lake-LP PCI Express Root Port #7  
 a0bf Tiger Lake-LP PCI Express Root Port #8  
 a0c5 Tiger Lake-LP Serial IO I2C Controller #4  
 a0c6 Tiger Lake-LP Serial IO I2C Controller #5  
 a0c8 Tiger Lake-LP Smart Sound Technology Audio Controller  
 # SATA controller on Intel Tiger Lake based mobile platforms in AHCI mode. Could be found on Panasonic Let's  
 Note  
 CF-SV2.  
 a0d3 Tiger Lake-LP SATA Controller  
 a0e0 Tiger Lake-LP Management Engine Interface  
 a0e3 Tiger Lake-LP Active Management Technology - SOL  
 a0e8 Tiger Lake-LP Serial IO I2C Controller #0  
 a0e9 Tiger Lake-LP Serial IO I2C Controller #1  
 a0ea Tiger Lake-LP Serial IO I2C Controller #2  
 a0eb Tiger Lake-LP Serial IO I2C Controller #3  
 a0ed Tiger Lake-LP USB 3.2 Gen 2x1 xHCI Host Controller  
 a0ef Tiger Lake-LP Shared SRAM  
 a0f0 Wi-Fi 6 AX201  
 8086 0244 Wi-Fi 6 AX101NGW  
 a0fc Tiger Lake-LP Integrated Sensor Hub  
 a102 Q170/Q150/B150/H170/H110/Z170/CM236 Chipset SATA Controller [AHCI Mode]

1043 8694 H110I-PLUS Motherboard  
1462 7994 H110M ECO/GAMING  
a103 HM170/QM170 Chipset SATA Controller [AHCI Mode]  
1028 06e4 XPS 15 9550  
103c 825b OMEN-17-w001nv  
a105 Sunrise Point-H SATA Controller [RAID mode]  
a106 Q170/H170/Z170/CM236 Chipset SATA Controller [RAID Mode]  
a107 HM170/QM170 Chipset SATA Controller [RAID Mode]  
a10f Sunrise Point-H SATA Controller [RAID  
mode]  
a110 100 Series/C230 Series Chipset Family PCI Express Root Port #1  
a111 100 Series/C230 Series Chipset Family PCI Express Root Port #2  
a112 100 Series/C230 Series Chipset Family PCI Express Root Port #3  
a113 100 Series/C230 Series Chipset Family PCI Express Root Port #4  
a114 100 Series/C230 Series Chipset Family PCI Express Root Port #5  
1043 8694 H110I-PLUS Motherboard  
a115 100 Series/C230 Series Chipset Family PCI Express Root Port #6  
a116 100 Series/C230 Series Chipset Family PCI Express Root Port #7  
a117 100 Series/C230 Series Chipset Family PCI Express Root Port #8  
a118 100 Series/C230 Series Chipset Family PCI Express Root Port #9  
1043 8694 H110I-PLUS Motherboard  
a119 100 Series/C230 Series Chipset Family PCI Express Root Port #10  
1043 8694 H110I-PLUS Motherboard  
a11a 100 Series/C230 Series Chipset Family PCI Express Root Port #11  
a11b 100 Series/C230 Series Chipset Family PCI Express Root Port #12  
a11c 100 Series/C230 Series Chipset Family  
PCI Express Root Port #13  
a11d 100 Series/C230 Series Chipset Family PCI Express Root Port #14  
a11e 100 Series/C230 Series Chipset Family PCI Express Root Port #15  
a11f 100 Series/C230 Series Chipset Family PCI Express Root Port #16  
a120 100 Series/C230 Series Chipset Family P2SB  
a121 100 Series/C230 Series Chipset Family Power Management Controller  
1028 06e4 XPS 15 9550  
103c 825b OMEN-17-w001nv  
1043 8694 H110I-PLUS Motherboard  
1462 7994 H110M ECO/GAMING  
a122 Sunrise Point-H cAVS  
a123 100 Series/C230 Series Chipset Family SMBus  
1028 06e4 XPS 15 9550  
103c 825b OMEN-17-w001nv  
1043 8694 H110I-PLUS Motherboard  
1462 7994 H110M ECO/GAMING  
a124 100 Series/C230 Series Chipset Family SPI Controller  
a125 100 Series/C230 Series Chipset Family Gigabit Ethernet Controller  
a126 100 Series/C230 Series Chipset Family Trace Hub  
a127 100 Series/C230 Series Chipset Family Serial IO UART #0  
a128 100 Series/C230 Series Chipset Family Serial IO UART #1  
a129

100 Series/C230 Series Chipset Family Serial IO GSPI #0  
a12a 100 Series/C230 Series Chipset Family Serial IO GSPI #1  
a12f 100 Series/C230 Series Chipset Family USB 3.0 xHCI Controller  
1028 06e4 XPS 15 9550  
103c 825b OMEN-17-w001nv  
1043 8694 H110I-PLUS Motherboard  
1462 7994 H110M ECO/GAMING  
a130 100 Series/C230 Series Chipset Family USB Device Controller (OTG)  
a131 100 Series/C230 Series Chipset Family Thermal Subsystem  
1028 06e4 XPS 15 9550  
103c 825b OMEN-17-w001nv  
1462 7994 H110M ECO/GAMING  
a133 Sunrise Point-H Northpeak ACPI Function  
a135 100 Series/C230 Series Chipset Family Integrated Sensor Hub  
a13a 100 Series/C230 Series Chipset Family MEI Controller #1  
1028 06e4 XPS 15 9550  
103c 825b OMEN-17-w001nv  
1043 8694 H110I-PLUS Motherboard  
1462 7994 H110M ECO/GAMING  
a13b 100 Series/C230 Series Chipset Family MEI Controller #2  
a13c 100 Series/C230 Series Chipset Family IDE Redirection  
a13d 100 Series/C230 Series Chipset Family KT Redirection  
a13e  
100 Series/C230 Series Chipset Family MEI Controller #3  
a140 Sunrise Point-H LPC Controller  
a141 Sunrise Point-H LPC Controller  
a142 Sunrise Point-H LPC Controller  
a143 H110 Chipset LPC/eSPI Controller  
1043 8694 H110I-PLUS Motherboard  
1462 7994 H110M ECO/GAMING  
a144 H170 Chipset LPC/eSPI Controller  
a145 Z170 Chipset LPC/eSPI Controller  
a146 Q170 Chipset LPC/eSPI Controller  
a147 Q150 Chipset LPC/eSPI Controller  
a148 B150 Chipset LPC/eSPI Controller  
a149 C236 Chipset LPC/eSPI Controller  
a14a C232 Chipset LPC/eSPI Controller  
a14b Sunrise Point-H LPC Controller  
a14c Sunrise Point-H LPC Controller  
a14d QM170 Chipset LPC/eSPI Controller  
a14e HM170 Chipset LPC/eSPI Controller  
1028 06e4 XPS 15 9550  
103c 825b OMEN-17-w001nv  
a14f Sunrise Point-H LPC Controller  
a150 CM236 Chipset LPC/eSPI Controller  
a151 Sunrise Point-H LPC Controller  
a152 HM175 Chipset LPC/eSPI Controller  
a153 QM175 Chipset LPC/eSPI Controller

a154 CM238 Chipset  
LPC/eSPI Controller

a155 Sunrise Point-H LPC Controller

a156 Sunrise Point-H LPC Controller

a157 Sunrise Point-H LPC Controller

a158 Sunrise Point-H LPC Controller

a159 Sunrise Point-H LPC Controller

a15a Sunrise Point-H LPC Controller

a15b Sunrise Point-H LPC Controller

a15c Sunrise Point-H LPC Controller

a15d Sunrise Point-H LPC Controller

a15e Sunrise Point-H LPC Controller

a15f Sunrise Point-H LPC Controller

a160 100 Series/C230 Series Chipset Family Serial IO I2C Controller #0  
1028 06e4 XPS 15 9550  
103c 825b OMEN-17-w001nv

a161 100 Series/C230 Series Chipset Family Serial IO I2C Controller #1  
1028 06e4 XPS 15 9550

a162 100 Series/C230 Series Chipset Family Serial IO I2C Controller #2

a163 100 Series/C230 Series Chipset Family Serial IO I2C Controller #3

a166 100 Series/C230 Series Chipset Family Serial IO UART Controller #2

a167 100 Series/C230 Series Chipset Family PCI Express Root Port #17

a168 100 Series/C230 Series Chipset Family  
PCI Express Root Port #18

a169 100 Series/C230 Series Chipset Family PCI Express Root Port #19

a16a 100 Series/C230 Series Chipset Family PCI Express Root Port #20

a170 100 Series/C230 Series Chipset Family HD Audio Controller  
1028 06e4 XPS 15 9550  
103c 825b OMEN-17-w001nv  
1043 86c7 H110I-PLUS Motherboard

a171 CM238 HD Audio Controller

a182 C620 Series Chipset Family SATA Controller [AHCI mode]

a186 C620 Series Chipset Family SATA Controller [RAID mode]

a190 C620 Series Chipset Family PCI Express Root Port #1

a191 C620 Series Chipset Family PCI Express Root Port #2

a192 C620 Series Chipset Family PCI Express Root Port #3

a193 C620 Series Chipset Family PCI Express Root Port #4

a194 C620 Series Chipset Family PCI Express Root Port #5

a195 C620 Series Chipset Family PCI Express Root Port #6

a196 C620 Series Chipset Family PCI Express Root Port #7

a197 C620 Series Chipset Family PCI Express Root Port #8

a198 C620 Series Chipset Family PCI Express Root  
Port #9

a199 C620 Series Chipset Family PCI Express Root Port #10

a19a C620 Series Chipset Family PCI Express Root Port #11

a19b C620 Series Chipset Family PCI Express Root Port #12

a19c C620 Series Chipset Family PCI Express Root Port #13

a19d C620 Series Chipset Family PCI Express Root Port #14

a19e C620 Series Chipset Family PCI Express Root Port #15  
a19f C620 Series Chipset Family PCI Express Root Port #16  
a1a0 C620 Series Chipset Family P2SB  
a1a1 C620 Series Chipset Family Power Management Controller  
15d9 095d X11SPM-TF  
a1a2 C620 Series Chipset Family cAVS  
a1a3 C620 Series Chipset Family SMBus  
15d9 095d X11SPM-TF  
a1a4 C620 Series Chipset Family SPI Controller  
15d9 095d X11SPM-TF  
a1a6 C620 Series Chipset Family Trace Hub  
a1af C620 Series Chipset Family USB 3.0 xHCI Controller  
15d9 095d X11SPM-TF  
a1b1 C620 Series Chipset Family Thermal Subsystem  
15d9 095d X11SPM-TF  
a1ba C620 Series Chipset Family MEI Controller #1  
15d9 095d X11SPM-TF  
a1bb  
C620 Series Chipset Family MEI Controller #2  
15d9 095d X11SPM-TF  
a1bc C620 Series Chipset Family IDE Redirection  
a1bd C620 Series Chipset Family KT Redirection  
a1be C620 Series Chipset Family MEI Controller #3  
15d9 095d X11SPM-TF  
a1c1 C621 Series Chipset LPC/eSPI Controller  
a1c2 C622 Series Chipset LPC/eSPI Controller  
15d9 095d X11SPM-TF  
a1c3 C624 Series Chipset LPC/eSPI Controller  
a1c4 C625 Series Chipset LPC/eSPI Controller  
a1c5 C626 Series Chipset LPC/eSPI Controller  
a1c6 C627 Series Chipset LPC/eSPI Controller  
a1c7 C628 Series Chipset LPC/eSPI Controller  
a1d2 C620 Series Chipset Family SSATA Controller [AHCI mode]  
a1d6 C620 Series Chipset Family SSATA Controller [RAID mode]  
a1e7 C620 Series Chipset Family PCI Express Root Port #17  
a1e8 C620 Series Chipset Family PCI Express Root Port #18  
a1e9 C620 Series Chipset Family PCI Express Root Port #19  
a1ea C620 Series Chipset Family PCI Express Root Port #20  
a1ec C620 Series Chipset Family  
MROM 0  
a1ed C620 Series Chipset Family MROM 1  
a1f8 Lewisburg IE: HECI #1  
a1f9 Lewisburg IE: HECI #2  
a1fa Lewisburg IE: IDE-r  
a1fb Lewisburg IE: KT Controller  
a1fc Lewisburg IE: HECI #3  
a202 Lewisburg SATA Controller [AHCI mode]  
a206 Lewisburg SATA Controller [RAID mode]

a223 Lewisburg SMBus  
a224 Lewisburg SPI Controller  
a242 Lewisburg LPC or eSPI Controller  
a243 Lewisburg LPC or eSPI Controller  
a252 Lewisburg SSATA Controller [AHCI mode]  
a256 Lewisburg SSATA Controller [RAID mode]  
a282 200 Series PCH SATA controller [AHCI mode]  
1462 7a72 H270 PC MATE  
a286 200 Series PCH SATA controller [RAID mode]  
a290 200 Series PCH PCI Express Root Port #1  
a291 200 Series PCH PCI Express Root Port #2  
a292 200 Series PCH PCI Express Root Port #3  
a293 200 Series PCH PCI Express Root Port #4  
a294 200 Series PCH PCI Express Root Port #5  
1462 7a72 H270 PC MATE  
a295 200 Series PCH PCI Express Root Port #6  
a296 200 Series PCH PCI Express Root Port #7  
1462  
7a72 H270 PC MATE  
a297 200 Series PCH PCI Express Root Port #8  
a298 200 Series PCH PCI Express Root Port #9  
1462 7a72 H270 PC MATE  
a299 200 Series PCH PCI Express Root Port #10  
a29a 200 Series PCH PCI Express Root Port #11  
a29b 200 Series PCH PCI Express Root Port #12  
a29c 200 Series PCH PCI Express Root Port #13  
a29d 200 Series PCH PCI Express Root Port #14  
a29e 200 Series PCH PCI Express Root Port #15  
a29f 200 Series PCH PCI Express Root Port #16  
a2a0 200 Series/Z370 Chipset Family P2SB  
a2a1 200 Series/Z370 Chipset Family Power Management Controller  
1462 7a72 H270 PC MATE  
a2a3 200 Series/Z370 Chipset Family SMBus Controller  
1462 7a72 H270 PC MATE  
a2a4 200 Series/Z370 Chipset Family SPI Controller  
a2a5 200 Series/Z370 Chipset Family Gigabit Ethernet Controller  
a2a6 200 Series/Z370 Chipset Family Trace Hub  
a2a7 200 Series/Z370 Chipset Family Serial IO UART Controller #0  
a2a8 200 Series/Z370 Chipset Family Serial IO UART Controller #1  
a2a9  
200 Series/Z370 Chipset Family Serial IO SPI Controller #0  
a2aa 200 Series/Z370 Chipset Family Serial IO SPI Controller #1  
a2af 200 Series/Z370 Chipset Family USB 3.0 xHCI Controller  
1462 7a72 H270 PC MATE  
a2b1 200 Series PCH Thermal Subsystem  
1462 7a72 H270 PC MATE  
a2ba 200 Series PCH CSME HECI #1  
1462 7a72 H270 PC MATE

a2bb 200 Series PCH CSME HECI #2  
# AMT serial over LAN  
a2bd 200 Series Chipset Family KT Redirection  
a2c4 200 Series PCH LPC Controller (H270)  
1462 7a72 H270 PC MATE  
a2c5 200 Series PCH LPC Controller (Z270)  
a2c6 200 Series PCH LPC Controller (Q270)  
a2c7 200 Series PCH LPC Controller (Q250)  
a2c8 200 Series PCH LPC Controller (B250)  
a2c9 Z370 Chipset LPC/eSPI Controller  
a2d2 X299 Chipset LPC/eSPI Controller  
a2d3 C422 Chipset LPC/eSPI Controller  
a2e0 200 Series PCH Serial IO I2C Controller #0  
a2e1 200 Series PCH Serial IO I2C Controller #1  
a2e2 200 Series PCH Serial IO I2C Controller #2  
a2e3 200 Series PCH Serial IO I2C  
Controller #3  
a2e6 200 Series PCH Serial IO UART Controller #2  
a2e7 200 Series PCH PCI Express Root Port #17  
a2e8 200 Series PCH PCI Express Root Port #18  
a2e9 200 Series PCH PCI Express Root Port #19  
a2ea 200 Series PCH PCI Express Root Port #20  
a2eb 200 Series PCH PCI Express Root Port #21  
a2ec 200 Series PCH PCI Express Root Port #22  
a2ed 200 Series PCH PCI Express Root Port #23  
a2ee 200 Series PCH PCI Express Root Port #24  
a2f0 200 Series PCH HD Audio  
1462 7a72 H270 PC MATE  
1462 fa72 H270 PC MATE  
a303 H310 Chipset LPC/eSPI Controller  
a304 H370 Chipset LPC/eSPI Controller  
1028 0869 Vostro 3470  
a305 Z390 Chipset LPC/eSPI Controller  
a306 Q370 Chipset LPC/eSPI Controller  
a309 Cannon Point-LP LPC Controller  
a30c QM370 Chipset LPC/eSPI Controller  
a30d HM470 Chipset LPC/eSPI Controller  
a30e Cannon Lake LPC Controller  
a323 Cannon Lake PCH SMBus Controller  
1028 0869 Vostro 3470  
a324 Cannon Lake PCH SPI Controller  
1028 0869 Vostro 3470  
a328  
Cannon Lake PCH Serial IO UART Host Controller  
a32b Cannon Lake PCH SPI Host Controller  
a32c Cannon Lake PCH PCI Express Root Port #21  
a32d Cannon Lake PCH PCI Express Root Port #22  
a32e Cannon Lake PCH PCI Express Root Port #23

a32f Cannon Lake PCH PCI Express Root Port #24  
a330 Cannon Lake PCH PCI Express Root Port #9  
a331 Cannon Lake PCH PCI Express Root Port #10  
a332 Cannon Lake PCH PCI Express Root Port #11  
a333 Cannon Lake PCH PCI Express Root Port #12  
a334 Cannon Lake PCH PCI Express Root Port #13  
a335 Cannon Lake PCH PCI Express Root Port #14  
a336 Cannon Lake PCH PCI Express Root Port #15  
a337 Cannon Lake PCH PCI Express Root Port #16  
a338 Cannon Lake PCH PCI Express Root Port #1  
a339 Cannon Lake PCH PCI Express Root Port #2  
a33a Cannon Lake PCH PCI Express Root Port #3  
a33b Cannon Lake PCH PCI Express Root Port #4  
a33c Cannon Lake PCH PCI Express Root Port #5  
a33d Cannon Lake PCH PCI Express Root Port #6  
a33e Cannon Lake PCH PCI  
Express Root Port #7  
a33f Cannon Lake PCH PCI Express Root Port #8  
a340 Cannon Lake PCH PCI Express Root Port #17  
a341 Cannon Lake PCH PCI Express Root Port #18  
a342 Cannon Lake PCH PCI Express Root Port #19  
a343 Cannon Lake PCH PCI Express Root Port #20  
a348 Cannon Lake PCH cAVS  
1028 0869 Vostro 3470  
a352 Cannon Lake PCH SATA AHCI Controller  
1028 0869 Vostro 3470  
a353 Cannon Lake Mobile PCH SATA AHCI Controller  
a360 Cannon Lake PCH HECI Controller  
1028 0869 Vostro 3470  
a363 Cannon Lake PCH Active Management Technology - SOL  
a364 Cannon Lake PCH HECI Controller #2  
a368 Cannon Lake PCH Serial IO I2C Controller #0  
a369 Cannon Lake PCH Serial IO I2C Controller #1  
a36a Cannon Lake PCH Serial IO I2C Controller #2  
a36b Cannon Lake PCH Serial IO I2C Controller #3  
a36d Cannon Lake PCH USB 3.1 xHCI Host Controller  
1028 0869 Vostro 3470  
a36f Cannon Lake PCH Shared SRAM  
a370 Cannon Lake PCH CNVi WiFi  
1a56 1552 Killer(R) Wireless-AC 1550i Wireless  
Network Adapter (9560NGW)  
8086 0034 Wireless-AC 9560  
a379 Cannon Lake PCH Thermal Controller  
1028 0869 Vostro 3470  
a382 400 Series Chipset Family SATA AHCI Controller  
a394 Comet Lake PCI Express Root Port #05  
a397 Comet Lake PCI Express Root Port #08  
a398 Comet Lake PCI Express Root Port 9



a39a Comet Lake PCI Express Root Port 11  
a3a1 Cannon Lake PCH Power Management Controller  
a3a3 Comet Lake PCH-V SMBus Host Controller  
a3af Comet Lake PCH-V USB Controller  
a3b1 Comet Lake PCH-V Thermal Subsystem  
a3ba Comet Lake PCH-V HECI Controller  
a3c8 B460 Chipset LPC/eSPI Controller  
a3da H410 Chipset LPC/eSPI Controller  
a3eb Comet Lake PCI Express Root Port #21  
a3f0 Comet Lake PCH-V cAVS  
a620 6400/6402 Advanced Memory Buffer (AMB)  
a706 Raptor Lake-P 6p+8e cores Host Bridge/DRAM Controller  
1028 0c06 Precision 3580  
a707 Raptor Lake-P/U 4p+8e cores Host Bridge/DRAM Controller  
a708 Raptor Lake-P/U 2p+8e cores Host Bridge/DRAM Controller  
a71d Raptor Lake  
Dynamic Platform and Thermal Framework Processor Participant  
1028 0c06 Precision 3580  
a71e Raptor Lake-P Thunderbolt 4 USB Controller  
1028 0c06 Precision 3580  
a720 Raptor Lake-P [UHD Graphics]  
a721 Raptor Lake-P [UHD Graphics]  
a72f Raptor Lake-P Thunderbolt 4 PCI Express Root Port #2  
a73e Raptor Lake-P Thunderbolt 4 NHI #0  
1028 0c06 Precision 3580  
a74d Raptor Lake PCIe 4.0 Graphics Port  
a74f GNA Scoring Accelerator module  
1028 0c06 Precision 3580  
a76d Raptor Lake-P Thunderbolt 4 NHI #1  
a76e Raptor Lake-P Thunderbolt 4 PCI Express Root Port #0  
a77d Raptor Lake Crashlog and Telemetry  
1028 0c06 Precision 3580  
a77f Volume Management Device NVMe RAID Controller Intel Corporation  
a780 Raptor Lake-S GT1 [UHD Graphics 770]  
a781 Raptor Lake-S UHD Graphics  
a782 Raptor Lake-S UHD Graphics  
a783 Raptor Lake-S UHD Graphics  
a788 Raptor Lake-S UHD Graphics  
a789 Raptor Lake-S UHD Graphics  
a78a Raptor Lake-S UHD Graphics  
a78b Raptor Lake-S UHD Graphics  
a7a0  
Raptor Lake-P [Iris Xe Graphics]  
1028 0c06 Precision 3580  
a7a1 Raptor Lake-P [Iris Xe Graphics]  
a7a8 Raptor Lake-P [UHD Graphics]  
a7a9 Raptor Lake-P [UHD Graphics]  
a7aa Raptor Lake-P [Intel Graphics]

a7ab Raptor Lake-P [Intel Graphics]  
a7ac Raptor Lake-U [Intel Graphics]  
a7ad Raptor Lake-U [Intel Graphics]  
a806 Lunar Lake-M LPC/eSPI Controller  
a822 Lunar Lake-M SMBus Controller  
a823 Lunar Lake-M SPI Controller  
a824 Lunar Lake-M Trace Hub  
a825 Lunar Lake-M Serial IO UART Controller #0  
a826 Lunar Lake-M Serial IO UART Controller #1  
a827 Lunar Lake-M Serial IO SPI Controller #0  
a828 Lunar Lake-M HD Audio Controller  
a830 Lunar Lake-M Serial IO SPI Controller #1  
a831 Lunar Lake-M Thunderbolt 4 USB Controller  
a833 Lunar Lake-M Thunderbolt 4 NHI #0  
a834 Lunar Lake-M Thunderbolt 4 NHI #1  
a838 Lunar Lake-M PCI Express Root Port #1  
a839 Lunar Lake-M PCI Express Root Port #2  
a83a Lunar Lake-M PCI Express Root Port #3  
a83b Lunar Lake-M PCI  
Express Root Port #4  
a83c Lunar Lake-M PCI Express Root Port #5  
a83d Lunar Lake-M PCI Express Root Port #6  
a845 Lunar Lake-M Integrated Sensor Hub  
a847 Lunar Lake-M UFS Controller  
a84e Lunar Lake-M Thunderbolt 4 PCI Express Root Port #0  
a84f Lunar Lake-M Thunderbolt 4 PCI Express Root Port #1  
a860 Lunar Lake-M Thunderbolt 4 PCI Express Root Port #2  
a878 Lunar Lake-M Serial IO I2C Controller #0  
a879 Lunar Lake-M Serial IO I2C Controller #1  
a87a Lunar Lake-M Serial IO I2C Controller #2  
a87b Lunar Lake-M Serial IO I2C Controller #3  
a87d Lunar Lake-M USB 3.2 Gen 2x1 xHCI Host Controller  
abc0 Omni-Path Fabric Switch Silicon 100 Series  
ad0b Volume Management Device NVMe RAID Controller Intel Corporation  
ad1d Arrow Lake NPU  
b152 21152 PCI-to-PCI Bridge  
8086 b152 21152 PCI-to-PCI Bridge  
# observed, and documented in Intel revision note; new mask of 1011:0026  
b154 21154 PCI-to-PCI Bridge  
b555 21555 Non transparent PCI-to-PCI Bridge  
12c7 5005 SS7HD PCI  
Adaptor Card  
12c7 5006 SS7HDC cPCI Adaptor Card  
12d9 000a PCI VoIP Gateway  
4c53 1050 CT7 mainboard  
4c53 1051 CE7 mainboard  
e4bf 1000 CC8-1-BLUES  
d130 Core Processor DMI

15d9 0605 X8SIL  
d131 Core Processor DMI  
1028 02da OptiPlex 980  
15d9 060d C7SIM-Q Motherboard  
d132 Core Processor DMI  
1028 040b Latitude E6510  
d133 Core Processor DMI  
d134 Core Processor DMI  
d135 Core Processor DMI  
d136 Core Processor DMI  
d137 Core Processor DMI  
d138 Core Processor PCI Express Root Port 1  
1028 02da OptiPlex 980  
1028 040b Latitude E6510  
15d9 060d C7SIM-Q Motherboard  
d139 Core Processor PCI Express Root Port 2  
d13a Core Processor PCI Express Root Port 3  
d13b Core Processor PCI Express Root Port 4  
d150 Core Processor QPI Link  
d151 Core Processor QPI Routing and Protocol Registers  
d155 Core Processor System Management Registers  
d156 Core Processor Semaphore and Scratchpad Registers  
d157 Core Processor System Control and Status Registers  
d158  
Core Processor Miscellaneous Registers  
f1a5 SSD 600P Series  
8086 390a SSDPEKKW256G7 256GB  
f1a6 SSD DC P4101/Pro 7600p/760p/E 6100p Series  
8086 390b SSD Pro 7600p/760p/E 6100p Series [NVM Express]  
f1a7 SSD 700p Series  
f1a8 SSD 660P Series  
f1aa SSD 670p Series [Keystone Harbor]  
faf0 SSD 665p Series [Neptune Harbor Refresh]  
8088 Beijing Wangxun Technology Co., Ltd.  
0100 WX1860AL-W Gigabit Ethernet Controller  
0101 WX1860A2 Gigabit Ethernet Controller  
4c52 2024 LRES2024PT Dual-port 1Gb Ethernet Network Adapter  
4c52 2025 LRES2025PT Quad-port 1Gb Ethernet Network Adapter  
4c52 2027 LRES2027PF Dual-port 1Gb Ethernet Server Adapter  
4c52 3018 LRES3018PT Dual-port 1Gb Ethernet Server Adapter for OCP  
8088 0201 Dual-Port Ethernet Network Adaptor SF200T  
8088 0501 Dual-Port Ethernet Network Adapter SF200T-C101  
8088 0901 Dual-Port Ethernet Network Adapter SF200T-B401  
8088 0b01 Dual-Port Ethernet Network Adapter SF200T-B402  
8088 4201 Dual-Port Ethernet  
Network Adaptor SF200T (WOL)  
8088 8201 Dual-Port Ethernet Network Adaptor SF200T (NCSI)  
8088 c201 Dual-Port Ethernet Network Adaptor SF200T (WOL, NCSI)

0102 WX1860A2S Gigabit Ethernet Controller  
8088 0210 Dual-Port Ethernet Network Adaptor SF200T-S

0103 WX1860A4 Gigabit Ethernet Controller  
1bd4 009e ENPW2100-T4  
4c52 2028 LRES2028PF Quad-port 1Gb Ethernet Server Adapter  
4c52 3019 LRES3019PT Quad-port 1Gb Ethernet Server Adapter for OCP  
8088 0401 Quad-Port Ethernet Network Adaptor SF400T  
8088 0440 Quad-Port Ethernet Network Adaptor SF400-OCP  
8088 0a01 Quad-Port Ethernet Network Adapter SF400T-B401  
8088 0c01 Quad-Port Ethernet Network Adapter SF400T-B402  
8088 4401 Quad-Port Ethernet Network Adapter SF400T (WOL)  
8088 8103 Quad-Port Ethernet Network Adaptor SF400T (NCSI)  
8088 8401 Quad-Port Ethernet Network Adapter SF400T (NCSI)  
8088 c103 Quad-Port Ethernet Network Adaptor SF400T (WOL, NCSI)  
8088 c401 Quad-Port Ethernet Network Adapter SF400T  
(WOL, NCSI)

0104 WX1860A4S Gigabit Ethernet Controller  
8088 0410 Quad-Port Ethernet Network Adaptor SF400T-S

0105 WX1860AL2 Gigabit Ethernet Controller  
8088 0202 Dual-Port Ethernet Network Adaptor SF200HT  
8088 4202 Dual-Port Ethernet Network Adaptor SF200HT (WOL)  
8088 8202 Dual-Port Ethernet Network Adaptor SF200HT (NCSI)  
8088 c202 Dual-Port Ethernet Network Adaptor SF200HT (WOL, NCSI)

0106 WX1860AL2S Gigabit Ethernet Controller  
8088 0220 Dual-Port Ethernet Network Adaptor SF200HT-S

0107 WX1860AL4 Gigabit Ethernet Controller  
8088 0402 Quad-Port Ethernet Network Adaptor SF400HT  
8088 4402 Quad-Port Ethernet Network Adaptor SF400HT (WOL)  
8088 8402 Quad-Port Ethernet Network Adaptor SF400HT (NCSI)  
8088 c402 Quad-Port Ethernet Network Adaptor SF400HT (WOL, NCSI)

0108 WX1860AL4S Gigabit Ethernet Controller  
8088 0420 Quad-Port Ethernet Network Adaptor SF400HT-S

0109 WX1860-LC Gigabit Ethernet Controller

010a WX1860A1 Gigabit Ethernet Controller  
4c52

2023 LRES2034PT Single-port 1Gb Ethernet Network Adapter  
4c52 2026 LRES2026PF Single-port 1Gb Ethernet Network Adapter

010b WX1860AL1 Gigabit Ethernet Controller  
8088 0102 Single-Port Ethernet Network Adaptor SF100HT  
8088 4102 Single-Port Ethernet Network Adaptor SF100HT (WOL)  
8088 8102 Single-Port Ethernet Network Adaptor SF100HT (NCSI)  
8088 c102 Single-Port Ethernet Network Adaptor SF100HT (WOL, NCSI)

0111 WX1860A2 Ethernet Controller Virtual Function

0113 WX1860A4 Ethernet Controller Virtual Function

0115 WX1860AL2 Ethernet Controller Virtual Function

0117 WX1860AL4 Ethernet Controller Virtual Function

0119 WX1860-LC Gigabit Ethernet Controller Virtual Function

011a WX1860A1 Gigabit Ethernet Controller Virtual Function

011b WX1860AL1 Gigabit Ethernet Controller Virtual Function  
1000 Ethernet Controller RP1000 Virtual Function for 10GbE SFP+  
1001 Ethernet Controller RP1000 for 10GbE SFP+  
1bd4 0084 Ethernet Controller SP1000A for 10GbE  
SFP+(lldp)  
1bd4 0085 Ethernet Controller SP1000A for 10GBASE-T  
4c52 1002 LRES1002PF Dual-port 10Gb Ethernet Server Adapter  
4c52 1003 LRES1003PF Single-port 10Gb Ethernet Server Adapter  
4c52 3001 LRES3001PF Dual-port 10Gb Ethernet Server Adapter for OCP  
8088 0000 Ethernet Network Adaptor RP1000 for 10GbE SFP+  
8088 0300 Ethernet Network Adaptor RP1000-A03 for 10GbE SFP+  
8088 0400 Ethernet Network Adaptor RP1000-A04 for 10GbE SFP+  
2000 Ethernet Controller RP2000 Virtual Function for 10GbE SFP+  
2001 Ethernet Controller RP2000 for 10GbE SFP+  
8088 2000 Ethernet Network Adaptor RP2000 for 10GbE SFP+  
8088 2300 Ethernet Network Adaptor RP2000-A03 for 10GbE SFP+  
8088 2400 Ethernet Network Adaptor RP2000-A04 for 10GbE SFP+  
80ee InnoTek Systemberatung GmbH  
beef VirtualBox Graphics Adapter  
cafe VirtualBox Guest Service  
8322 Sodick America Corp.  
8384 SigmaTel  
8401 TRENDware International Inc.  
8510 Sietium Semiconductor Co., Ltd.  
0201 GenBu02 [GB2062-PCIe-C0]  
#  
nee ScaleMP  
8686 SAP  
1010 vSMP Foundation controller [vSMP CTL]  
1011 vSMP Foundation MEX/FLX controller [vSMP CTL]  
8800 Trigem Computer Inc.  
2008 Video assistant component  
8820 Stryker Corporation  
2724 Mako Front Side Motor Controller [cPCI]  
# Wuxi Micro Innovation Integrated Circuit Design Co.,Ltd.  
8848 MUCSE  
1000 Ethernet Controller N10 Series for 10GbE or 40GbE (Dual-port)  
8848 8410 Ethernet Network Adapter N10G-X2-DC for 10GbE SFP+ 2-port  
1001 Ethernet Controller N400 Series for 1GbE (Dual-port)  
1003 Ethernet Controller N400 Series for 10GbE (Single-port)  
4c52 1050 LRES1050PF Single-port 10Gb Ethernet Network Adapter  
1020 Ethernet Controller N10 Series for 10GbE (Quad-port)  
4c52 1030 LRES1030PF Quad-port 10Gb Ethernet Server Adapter  
4c52 1031 LRES1031PF Dual-port 10Gb Ethernet Server Adapter  
4c52 3031 LRES3031PF Quad-port 10Gb Ethernet Server Adapter for OCP  
8848 8451 Ethernet Network Adapter N10G-X4-QC for 10GbE SFP+ 4-port  
1021 Ethernet

Controller N400 Series for 1GbE (Quad-port)  
4c52 1032 LRES1032PF Quad-port 1Gb Ethernet Network Adapter  
4c52 1039 LRES1039PT Quad-port 1Gb Ethernet Network Adapter  
1060 Ethernet Controller N10 Series for 1GbE or 10GbE (8-port)  
1080 Ethernet Controller N10 Series Virtual Function  
1081 Ethernet Controller N400 Series Virtual Function  
1083 Ethernet Controller N400 Series Virtual Function  
8308 Ethernet Controller N500 Series for 1GbE (Quad-port, Copper RJ45)  
4c52 1048 LRES1048PT Quad-port 1Gb Ethernet Network Adapter  
8309 Ethernet Controller N500 Series Virtual Function  
8318 Ethernet Controller N500 Series for 1GbE (Dual-port, Copper RJ45)  
4c52 1049 LRES1049PT Dual-port 1Gb Ethernet Network Adapter  
8866 T-Square Design Inc.  
8888 Silicon Magic  
8912 TRX  
# 8c4a is not Winbond but there is a board misprogrammed  
8c4a Winbond  
1980 W89C940 misprogrammed [ne2k]  
8e0e Computone Corporation  
8e2e KTI  
3000 ET32P2  
9004 Adaptec  
0078 AHA-2940U\_CN  
1078 AIC-7810  
1160  
AIC-1160 [Family Fibre Channel Adapter]  
2178 AIC-7821  
3860 AHA-2930CU  
3b78 AHA-4844W/4844UW  
5075 AIC-755x  
5078 AIC-7850T/7856T [AVA-2902/4/6 / AHA-2910]  
9004 7850 AIC-7850T/7856T [AVA-290x / AHA-2910]  
5175 AIC-755x  
5178 AIC-7851  
5275 AIC-755x  
5278 AIC-7852  
5375 AIC-755x  
5378 AIC-7850  
5475 AIC-755x  
5478 AIC-7850  
5575 AVA-2930  
5578 AIC-7855  
5647 ANA-7711 TCP Offload Engine  
9004 7710 ANA-7711F TCP Offload Engine - Optical  
9004 7711 ANA-7711LP TCP Offload Engine - Copper  
5675 AIC-755x  
5678 AIC-7856  
5775 AIC-755x

5778 AIC-7850  
5800 AIC-5800  
5900 ANA-5910/5930/5940 ATM155 & 25 LAN Adapter  
5905 ANA-5910A/5930A/5940A ATM Adapter  
6038 AIC-3860  
6075 AIC-1480 / APA-1480  
9004 7560 AIC-1480 / APA-1480 Cardbus  
6078 AIC-7860  
6178 AIC-7861  
9004 7861 AHA-2940AU Single  
6278 AIC-7860  
6378 AIC-7860  
6478 AIC-786x  
6578 AIC-786x  
6678 AIC-786x  
6778 AIC-786x  
6915 ANA620xx/ANA69011A  
9004 0008 ANA69011A/TX 10/100  
9004  
0009 ANA69011A/TX 10/100  
9004 0010 ANA62022 2-port 10/100  
9004 0018 ANA62044 4-port 10/100  
9004 0019 ANA62044 4-port 10/100  
9004 0020 ANA62022 2-port 10/100  
9004 0028 ANA69011A/TX 10/100  
9004 8008 ANA69011A/TX 64 bit 10/100  
9004 8009 ANA69011A/TX 64 bit 10/100  
9004 8010 ANA62022 2-port 64 bit 10/100  
9004 8018 ANA62044 4-port 64 bit 10/100  
9004 8019 ANA62044 4-port 64 bit 10/100  
9004 8020 ANA62022 2-port 64 bit 10/100  
9004 8028 ANA69011A/TX 64 bit 10/100  
7078 AHA-294x / AIC-7870  
7178 AIC-7870P/7871 [AHA-2940/W/S76]  
7278 AHA-3940/3940W / AIC-7872  
7378 AHA-3985 / AIC-7873  
7478 AHA-2944/2944W / AIC-7874  
7578 AHA-3944/3944W / AIC-7875  
7678 AHA-4944W/UW / AIC-7876  
7710 ANA-7711F Network Accelerator Card (NAC) - Optical  
7711 ANA-7711C Network Accelerator Card (NAC) - Copper  
7778 AIC-787x  
7810 AIC-7810  
7815 AIC-7815 RAID+Memory Controller IC  
9004 7815 ARO-1130U2 RAID Controller  
9004 7840 AIC-7815 RAID+Memory Controller IC  
7850

AIC-7850  
7855 AHA-2930  
7860 AIC-7860  
7870 AIC-7870  
7871 AHA-2940  
7872 AHA-3940  
7873 AHA-3980  
7874 AHA-2944  
7880 AIC-7880P  
7890 AIC-7890  
7891 AIC-789x  
7892 AIC-789x  
7893 AIC-789x  
7894 AIC-789x  
7895 AHA-2940U/UW / AHA-39xx / AIC-7895  
9004 7890 AHA-2940U/2940UW Dual AHA-394xAU/AUW/AUWD AIC-7895B  
9004 7891 AHA-2940U/2940UW Dual  
9004 7892 AHA-3940AU/AUW/AUWD/UWD  
9004 7894 AHA-3944AUWD  
9004 7895 AHA-2940U/2940UW Dual AHA-394xAU/AUW/AUWD AIC-7895B  
9004 7896 AHA-2940U/2940UW Dual AHA-394xAU/AUW/AUWD AIC-7895B  
9004 7897 AHA-2940U/2940UW Dual AHA-394xAU/AUW/AUWD AIC-7895B  
7896 AIC-789x  
7897 AIC-789x  
8078 AIC-7880U  
9004 7880 AIC-7880P Ultra/Ultra Wide SCSI Chipset  
8178 AIC-7870P/7881U [AHA-2940U/UW/D/S76]  
9004 7881 AHA-2940UW SCSI Host Adapter  
8278 AHA-3940U/UW/UWD / AIC-7882U  
8378 AHA-3940U/UW / AIC-7883U  
8478 AHA-2944UW / AIC-7884U  
8578 AHA-3944U/UWD / AIC-7885  
8678 AHA-4944UW / AIC-7886  
8778 AHA-2940UW Pro / AIC-788x  
9004  
7887 2940UW Pro Ultra-Wide SCSI Controller  
8878 AHA-2930UW / AIC-7888  
9004 7888 AHA-2930UW SCSI Controller  
8b78 ABA-1030  
ec78 AHA-4944W/UW  
# Acquired by Microchip Technology  
9005 Adaptec  
0010 AHA-2940U2/U2W  
9005 2180 AHA-2940U2 SCSI Controller  
9005 8100 AHA-2940U2B SCSI Controller  
9005 a100 AHA-2940U2B SCSI Controller  
9005 a180 AIC-3860Q [AHA-2940U2W/GE] SCSI Controller  
9005 e100 AHA-2950U2B SCSI Controller



0011 AHA-2930U2  
0013 78902  
9005 0003 AAA-131U2 Array1000 1 Channel RAID Controller  
9005 000f AIC7890\_ARO  
001f AHA-2940U2/U2W / 7890/7891  
9005 000f 2940U2W SCSI Controller  
9005 a180 2940U2W SCSI Controller  
0020 AIC-7890  
002f AIC-7890  
0030 AIC-7890  
003f AIC-7890  
0050 AHA-3940U2x/395U2x  
9005 f500 AHA-3950U2B  
9005 ffff AHA-3950U2B  
0051 AHA-3950U2D  
9005 b500 AHA-3950U2D  
0053 AIC-7896 SCSI Controller  
9005 ffff AIC-7896 SCSI Controller mainboard implementation  
005f AIC-7896U2/7897U2  
0080 AIC-7892A U160/m  
0e11  
e2a0 Compaq 64-Bit/66MHz Wide Ultra3 SCSI Adapter  
9005 6220 AHA-29160C  
9005 62a0 29160N Ultra160 SCSI Controller  
9005 e220 29160LP Low Profile Ultra160 SCSI Controller  
9005 e2a0 29160 Ultra160 SCSI Controller  
0081 AIC-7892B U160/m  
9005 62a1 19160 Ultra160 SCSI Controller  
0083 AIC-7892D U160/m  
008f AIC-7892P U160/m  
1179 0001 Magnia Z310  
15d9 9005 Onboard SCSI Host Adapter  
0092 AVC-2010 [VideoH!]  
0093 AVC-2410 [VideoH!]  
00c0 AHA-3960D / AIC-7899A U160/m  
0e11 f620 Compaq 64-Bit/66MHz Dual Channel Wide Ultra3 SCSI Adapter  
9005 f620 AHA-3960D U160/m  
00c1 AIC-7899B U160/m  
00c3 AIC-7899D U160/m  
00c5 RAID subsystem HBA  
1028 00c5 PowerEdge 2400,2500,2550,4400  
00cf AIC-7899P U160/m  
1028 00ce PowerEdge 1400  
1028 00d1 PowerEdge 2550  
1028 00d9 PowerEdge 2500  
10f1 2462 Thunder K7 S2462  
15d9 9005 Onboard SCSI Host Adapter  
8086 3411 SDS2 Mainboard

0241 Serial ATA II RAID 1420SA  
0242 Serial ATA II RAID 1220SA  
0243 Serial ATA  
II RAID 1430SA  
0244 eSATA II RAID 1225SA  
0250 ServeRAID Controller  
1014 0279 ServeRAID 6M  
1014 028c ServeRAID 6i/6i+  
1014 028e ServeRAID 7k  
0279 ServeRAID 6M  
0283 AAC-RAID  
9005 0283 Catapult  
0284 AAC-RAID  
9005 0284 Tomcat  
0285 AAC-RAID  
0e11 0295 SATA 6Ch (Bearcat)  
1014 02f2 ServeRAID 8i  
1028 0287 PowerEdge Expandable RAID Controller 320/DC  
1028 0291 CERC SATA RAID 2 PCI SATA 6ch (DellCorsair)  
103c 3227 AAR-2610SA  
108e 0286 Sun StorageTek SAS RAID HBA, Internal  
108e 0287 STK RAID EXT  
108e 7aac STK RAID REM  
108e 7aae STK RAID EX  
15d9 02b5 SMC AOC-USAS-S4i  
15d9 02b6 SMC AOC-USAS-S8i  
15d9 02c9 SMC AOC-USAS-S4iR  
15d9 02ca SMC AOC-USAS-S8iR  
15d9 02d2 SMC AOC-USAS-S8i-LP  
15d9 02d3 SMC AOC-USAS-S8iR-LP  
17aa 0286 Legend S220 (Legend Crusader)  
17aa 0287 Legend S230 (Legend Vulcan)  
9005 0285 2200S (Vulcan)  
9005 0286 2120S (Crusader)  
9005 0287 2200S (Vulcan-2m)  
9005 0288 3230S (Harrier)  
9005 0289 3240S (Tornado)  
#  
Some early versions reported 2020S  
9005 028a ASR-2020ZCR  
# Some early versions reported 2025S  
9005 028b ASR-2025ZCR (Terminator)  
9005 028e ASR-2020SA (Skyhawk)  
9005 028f ASR-2025SA  
9005 0290 AAR-2410SA PCI SATA 4ch (Jaguar II)  
9005 0292 AAR-2810SA PCI SATA 8ch (Corsair-8)  
9005 0293 AAR-21610SA PCI SATA 16ch (Corsair-16)  
9005 0294 ESD SO-DIMM PCI-X SATA ZCR (Prowler)

9005 0296 ASR-2240S  
9005 0297 ASR-4005SAS  
9005 0298 ASR-4000  
9005 0299 ASR-4800SAS  
9005 029a 4805SAS  
9005 02a4 ICP ICP9085LI  
9005 02a5 ICP ICP5085BR  
9005 02b5 ASR5800  
9005 02b6 ASR5805  
9005 02b7 ASR5808  
9005 02b8 ICP5445SL  
9005 02b9 ICP5085SL  
9005 02ba ICP5805SL  
9005 02bb 3405  
9005 02bc 3805  
9005 02bd 31205  
9005 02be 31605  
9005 02bf ICP ICP5045BL  
9005 02c0 ICP ICP5085BL  
9005 02c1 ICP ICP5125BR  
9005 02c2 ICP ICP5165BR  
9005 02c3 51205  
9005 02c4 51605  
9005 02c5 ICP ICP5125SL  
9005 02c6 ICP ICP5165SL  
9005 02c7 3085  
9005  
02c8 ICP5805BL  
9005 02ce 51245  
9005 02cf 51645  
9005 02d0 52445  
9005 02d1 5405  
9005 02d4 ASR-2045  
9005 02d5 ASR-2405  
9005 02d6 ASR-2445  
9005 02d7 ASR-2805  
9005 02d8 5405G  
9005 02d9 5445G  
9005 02da 5805G  
9005 02db 5085G  
9005 02dc 51245G  
9005 02dd 51645G  
9005 02de 52445G  
9005 02df ASR-2045G  
9005 02e0 ASR-2405G  
9005 02e1 ASR-2445G  
9005 02e2 ASR-2805G  
0286 AAC-RAID (Rocket)

1014 034d 8s  
1014 9540 ServeRAID 8k/8k-14  
1014 9580 ServeRAID 8k/8k-18  
9005 028c ASR-2230S + ASR-2230SLP PCI-X (Lancer)  
9005 028d ASR-2130S  
9005 029b ASR-2820SA  
9005 029c ASR-2620SA  
9005 029d ASR-2420SA  
9005 029e ICP ICP9024R0  
9005 029f ICP ICP9014R0  
9005 02a0 ICP ICP9047MA  
9005 02a1 ICP ICP9087MA  
9005 02a2 3800  
9005 02a3 ICP ICP5445AU  
9005 02a4 ICP ICP9085LI  
9005 02a5 ICP ICP5085BR  
9005 02a6 ICP9067MA  
9005 02a7 3805  
9005 02a8 3400  
9005 02a9 ICP ICP5085AU  
9005 02aa ICP ICP5045AU  
9005 02ac 1800  
9005  
02b3 2400  
9005 02b4 ICP ICP5045AL  
9005 0800 Callisto  
028b Series 6 - 6G SAS/PCIe 2  
9005 0200 Series 6 Entry Level - ASR-6405E - 4 internal 6G SAS ports  
9005 0201 Series 6 Entry Level - ASR-6805E - 8 internal 6G SAS ports  
9005 0300 Series 6 - ASR-6405 - 4 internal 6G SAS ports  
9005 0301 Series 6 - ASR-6805 - 8 internal 6G SAS ports  
9005 0302 Series 6 - ASR-6445 - 4 internal and 4 external 6G SAS ports  
9005 0310 Series 6 Connectors on Top - ASR-6405T - 4 internal 6G SAS ports  
9005 0311 Series 6 Connectors on Top - ASR-6805T - 8 internal 6G SAS  
9005 0400 Series 6 - ASR-61205 - 12 internal 6G SAS ports  
9005 0401 Series 6 - ASR-61605 - 16 internal 6G SAS ports  
9005 0403 Series 6 - ASR-62405 - 24 internal 6G SAS ports  
028c Series 7 6G SAS/PCIe 3  
9005 0500 Series 7 - ASR-7805 - 8 internal 6G SAS Port/PCIe 3.0  
9005 0501 Series 7 - ASR-71605 - 16 internal 6G SAS Port/PCIe 3.0  
9005 0502 Series 7 - ASR-71685 - 16 internal 8 external 6G SAS  
Port/PCIe 3.0  
9005 0503 Series 7 - ASR-72405 - 24 internal 0 external 6G SAS Port/PCIe 3.0  
9005 0504 Series 7 - ASR-7885 - 8 internal 8 external 6G SAS Port/PCIe 3.0  
9005 0505 Series 7 Entry Level - ASR-71685E - 16 internal 8 external 6G SAS Port/PCIe 3.0  
9005 0506 Series 7 Entry Level - ASR-72405E - 24 internal 0 external 6G SAS Port/PCIe 3.0  
028d Series 8 12G SAS/PCIe 3  
9005 0550 Series 8 - ASR-82405 - 24 internal 0 external 12G SAS Port/PCIe 3.0

9005 0551 Series 8 - ASR-81605 - 16 internal 0 external 12G SAS Port/PCIe 3.0  
9005 0552 Series 8 - ASR-8805 - 8 internal 0 external 12G SAS Port/PCIe 3.0  
9005 0553 Series 8 - ASR-8085 - 0 internal 8 external 12G SAS Port/PCIe 3.0  
9005 0554 Series 8 - ASR-8885 - 8 internal 8 external 12G SAS Port/PCIe 3.0  
028f Smart Storage PQI SAS  
103c 0600 Smart Array P408i-p SR Gen10  
103c 0601 Smart Array P408e-p SR Gen10  
103c 0602 Smart Array P408i-a SR Gen10  
103c 0603 Smart Array P408i-c SR Gen10  
103c 0650  
Smart Array E208i-p SR Gen10  
103c 0651 Smart Array E208e-p SR Gen10  
103c 0652 Smart Array E208i-c SR Gen10  
103c 0654 Smart Array E208i-a SR Gen10  
103c 0655 Smart Array P408e-m SR Gen10  
103c 0700 Smart Array P204i-c SR Gen10  
103c 0701 Smart Array P204i-b SR Gen10  
103c 1100 Smart Array P816i-a SR Gen10  
103c 1101 Smart Array P416ie-m SR G10  
105b 1211 HBA 8238-16i  
105b 1321 HBA 8242-24i  
13fe 8312 SKY-9200 MIC-8312BridgeB  
152d 8a22 QS-8204-8i  
152d 8a23 QS-8238-16i  
152d 8a24 QS-8236-16i  
152d 8a36 QS-8240-24i  
152d 8a37 QS-8242-24i  
1590 0294 SR932i-p Gen10+  
1590 02dc SR416i-a Gen10+  
193d 1104 RAID P2404-Mf-4i-2GB  
193d 1105 RAID P4408-Mf-8i-2GB  
193d 1106 RAID P2404-Mf-4i-1GB  
193d 1107 RAID P4408-Mf-8i-4GB  
193d 8460 HBA H460-M1  
193d 8461 HBA H460-B1  
193d c460 RAID P460-M2  
193d c461 RAID P460-B2  
193d f460 RAID P460-M4  
193d f461 RAID P460-B4  
19e5 d227 SmartROC-HD SR465C-M 4G  
19e5 d228 SmartROC SR455C-M 2G  
19e5  
d229 SmartIOC SR155-M  
19e5 d22a SmartIOC-HD SR765-M  
19e5 d22b SmartROC-e SR455C-ME 4G  
19e5 d22c SmartROC SR455C-M 4G  
1bd4 0045 SMART-HBA 8242-24i  
1bd4 0046 RAID 8236-16i

1bd4 0047 RAID 8240-24i  
1bd4 0048 SMART-HBA 8238-16i  
1bd4 004a PM8222-SHBA  
1bd4 004b RAID PM8204-2GB  
1bd4 004c RAID PM8204-4GB  
1bd4 004f PM8222-HBA  
1bd4 006b RS0800M5H24I  
1bd4 006c RS0800M5E8i  
1bd4 006d RS0800M5H8i  
1bd4 006f RS0804M5R16i  
1bd4 0070 RS0800M5E24i  
1bd4 0071 RS0800M5H16i  
1bd4 0072 RS0800M5E16i  
1bd4 0077 RS0800M5E16iM  
1bd4 0078 RS0800M5E24iM  
1bd4 0079 RS0800M5H24iM  
1bd4 0080 RS0804M5R16iM  
1bd4 0086 RT0800M7E  
1bd4 0087 RT0800M7H  
1bd4 0088 RT0804M7R  
1bd4 0089 RT0808M7R  
1cc4 0101 Ramaxel FBGF-RAD PM8204  
1cc4 0201 Ramaxel FBGF-RAD PM8222  
1d49 0220 ThinkSystem 4350-8i SAS/SATA 12Gb HBA  
1d49 0221 ThinkSystem 4350-16i SAS/SATA 12Gb HBA  
1d49 0520 ThinkSystem RAID 5350-8i PCIe 12Gb Adapter  
1d49 0522 ThinkSystem RAID 5350-8i  
PCIe 12Gb Internal Adapter  
1d49 0620 ThinkSystem RAID 9350-8i 2GB Flash PCIe 12Gb Adapter  
1d49 0621 ThinkSystem RAID 9350-8i 2GB Flash PCIe 12Gb Internal Adapter  
1d49 0622 ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Adapter  
1d49 0623 ThinkSystem RAID 9350-16i 4GB Flash PCIe 12Gb Internal Adapter  
9005 0608 SmartRAID 3162-8i /e  
9005 0800 SmartRAID 3154-8i  
9005 0801 SmartRAID 3152-8i  
9005 0802 SmartRAID 3151-4i  
9005 0803 SmartRAID 3101-4i  
9005 0804 SmartRAID 3154-8e  
9005 0805 SmartRAID 3102-8i  
9005 0806 SmartRAID 3100  
9005 0807 SmartRAID 3162-8i  
9005 0808 SmartRAID 3101E-4i  
9005 0809 SmartRAID 3102E-8i  
9005 0900 SmartHBA 2100-8i  
9005 0901 SmartHBA 2100-4i  
9005 0902 HBA 1100-8i  
9005 0903 HBA 1100-4i  
9005 0904 SmartHBA 2100-8e

9005 0905 HBA 1100-8e  
9005 0906 SmartHBA 2100-4i4e  
9005 0907 HBA 1100  
9005 0908 SmartHBA 2100  
9005 090a SmartHBA 2100A-8i  
9005 1200 SmartRAID 3154-24i  
9005 1201 SmartRAID 3154-8i16e  
9005  
1202 SmartRAID 3154-8i8e  
9005 1280 HBA 1100-16i  
9005 1281 HBA 1100-16e  
9005 1282 SmartHBA 2100-16i  
9005 1300 HBA 1100-8i8e  
9005 1301 HBA 1100-24i  
9005 1302 SmartHBA 2100-8i8e  
9005 1303 SmartHBA 2100-24i  
9005 1380 SmartRAID 3154-16i  
9005 1400 SmartRAID Ultra 3258p-16i /e  
9005 1402 HBA Ultra 1200p-16i  
9005 1410 HBA Ultra 1200-16e  
9005 1430 SmartRAID Ultra 3254-16e /e  
9005 1441 HBA Ultra 1200p-32i  
9005 1450 SmartRAID Ultra 3258p-32i /e  
9005 1462 HBA 1200-8i  
9005 1471 SmartRAID 3254-16i /e  
9005 1472 SmartRAID 3258-16i /e  
9005 1475 SmartRAID 3254-16e /e  
9005 14a0 SmartRAID 3254-8i  
9005 14a1 SmartRAID 3204-8i  
9005 14a2 SmartRAID 3252-8i  
9005 14a4 SmartRAID 3254-8i /e  
9005 14a5 SmartRAID 3252-8i /e  
9005 14a6 SmartRAID 3204-8i /e  
9005 14c0 SmartHBA 2200-16i  
9005 14c1 HBA 1200-16i  
9005 14c3 HBA 1200-16e  
9005 14c4 HBA 1200-8e  
0410 AIC-9410W SAS (Razor HBA RAID)  
9005 0410 ASC-48300(Spirit RAID)  
9005  
0411 ASC-58300 (Oakmont RAID)  
0412 AIC-9410W SAS (Razor HBA non-RAID)  
9005 0412 ASC-48300 (Spirit non-RAID)  
9005 0413 ASC-58300 (Oakmont non-RAID)  
0415 ASC-58300 SAS (Razor-External HBA RAID)  
0416 ASC-58300 SAS (Razor-External HBA non-RAID)  
041e AIC-9410W SAS (Razor ASIC non-RAID)  
041f AIC-9410W SAS (Razor ASIC RAID)

9005 041f AIC-9410W SAS (Razor ASIC RAID)  
042f VSC7250/7251 SAS (Aurora ASIC non-RAID)  
0430 AIC-9405W SAS (Razor-Lite HBA RAID)  
9005 0430 ASC-44300 (Spirit-Lite RAID)  
0432 AIC-9405W SAS (Razor-Lite HBA non-RAID)  
9005 0432 ASC-44300 (Spirit-Lite non-RAID)  
043e AIC-9405W SAS (Razor-Lite ASIC non-RAID)  
043f AIC-9405W SAS (Razor-Lite ASIC RAID)  
0450 ASC-1405 Unified Serial HBA  
0500 Obsidian chipset SCSI controller  
1014 02c1 PCI-X DDR 3Gb SAS Adapter (572A/572C)  
1014 02c2 PCI-X DDR 3Gb SAS RAID Adapter (572B/572D)  
0503 Scamp chipset SCSI controller  
1014 02bf Quad Channel PCI-X DDR U320 SCSI RAID Adapter (571E)  
1014 02c3  
PCI-X DDR 3Gb SAS RAID Adapter (572F)  
1014 02d5 Quad Channel PCI-X DDR U320 SCSI RAID Adapter (571F)  
0910 AUA-3100B  
091e AUA-3100B  
8000 ASC-29320A U320  
800f AIC-7901 U320  
8010 ASC-39320 U320  
8011 ASC-39320D  
0e11 00ac ASC-39320D U320  
9005 0041 ASC-39320D U320  
8012 ASC-29320 U320  
8013 ASC-29320B U320  
8014 ASC-29320LP U320  
8015 ASC-39320B U320  
8016 ASC-39320A U320  
8017 ASC-29320ALP U320  
9005 0044 ASC-29320ALP PCIx U320  
9005 0045 ASC-29320LPE PCIe U320  
801c ASC-39320D U320  
801d AIC-7902B U320  
1014 02cc ServeRAID 7e  
801e AIC-7901A U320  
801f AIC-7902 U320  
1734 1011 PRIMERGY RX300 onboard SCSI  
8080 ASC-29320A U320 w/HostRAID  
8081 PMC-Sierra PM8001 SAS HBA [Series 6H]  
9005 0400 Adaptec SAS HBA 6405H  
9005 0800 Adaptec SAS HBA 6805H  
8088 PMC-Sierra PM8018 SAS HBA [Series 7H]  
9005 0008 Adaptec SAS HBA 7085H  
9005 0016 Adaptec SAS HBA 70165H  
9005 0800 Adaptec SAS HBA 7805H  
9005 1600 Adaptec SAS HBA 71605H



8089 PMC-Sierra  
PM8019 SAS encryption HBA [Series 7He]  
808f AIC-7901 U320 w/HostRAID  
1028 0168 Precision Workstation 670 Mainboard  
8090 ASC-39320 U320 w/HostRAID  
8091 ASC-39320D U320 w/HostRAID  
8092 ASC-29320 U320 w/HostRAID  
8093 ASC-29320B U320 w/HostRAID  
8094 ASC-29320LP U320 w/HostRAID  
8095 ASC-39320(B) U320 w/HostRAID  
8096 ASC-39320A U320 w/HostRAID  
8097 ASC-29320ALP U320 w/HostRAID  
809c ASC-39320D(B) U320 w/HostRAID  
809d AIC-7902(B) U320 w/HostRAID  
1014 02cc ServeRAID 7e  
809e AIC-7901A U320 w/HostRAID  
809f AIC-7902 U320 w/HostRAID  
907f Atronics  
2015 IDE-2015PL  
919a Gigapixel Corp  
9412 Holtek  
6565 6565  
9413 Softlogic Co., Ltd.  
6010 SOLO6010 MPEG-4 Video encoder/decoder  
6110 SOLO6110 H.264 Video encoder/decoder  
9618 JusonTech Corporation  
0001 JusonTech Gigabit Ethernet Controller  
9699 Omni Media Technology Inc  
6565 6565  
# nee Netmos Technology  
9710 MosChip Semiconductor Technology Ltd.  
9250 PCI-to-PCI bridge [MCS9250]  
9805 PCI 1 port parallel  
adapter  
9815 PCI 9815 Multi-I/O Controller  
1000 0020 2P0S (2 port parallel adaptor)  
9820 PCI 9820 Multi-I/O Controller  
9835 PCI 9835 Multi-I/O Controller  
1000 0002 2S (16C550 UART)  
1000 0012 1P2S  
9845 PCI 9845 Multi-I/O Controller  
# Serial ports at BAR0-3  
1000 0004 0P4S (4 port 16550A serial card)  
1000 0006 0P6S (6 port 16550a serial card)  
# Serial ports at BAR0-3, Parallel port at BAR4  
1000 0014 1P4S (1 Parallel / 4 16550A Serial Port Adapter)  
9855 PCI 9855 Multi-I/O Controller  
# Parallel port at BAR0. Serial ports at BAR2-5

1000 0014 1P4S  
# Parallel ports at BAR0,BAR2. Serial ports at BAR4-5  
1000 0022 2P2S (2 Parallel / 2 16550A Serial Port Adapter)  
9865 PCI 9865 Multi-I/O Controller  
9900 MCS9900 Multi-I/O Controller  
9901 PCIe 9901 Multi-I/O Controller  
9904 4-Port PCIe Serial Adapter  
# 2-port Serial 1-port Parallel Adaptor  
9912 PCIe 9912 Multi-I/O Controller  
9922 MCS9922 PCIe Multi-I/O Controller  
9990 MCS9990 PCIe to 4-Port USB 2.0 Host  
Controller  
# Subsystem ID on a 3c985B-SX network card  
9850 3Com (wrong ID)  
9902 Stargen Inc.  
0001 SG2010 PCI over Starfabric Bridge  
0002 SG2010 PCI to Starfabric Gateway  
0003 SG1010 Starfabric Switch and PCI Bridge  
9a11 Tiger Lake-H Gaussian & Neural Accelerator  
9d32 Beijing Starblaze Technology Co. Ltd.  
0000 STAR1000 PCIe NVMe SSD Controller  
1000 STAR1000 PCIe NVMe SSD Controller  
1001 STAR1000P PCIe NVMe SSD Controller  
1201 STAR1200C NVMe SSD  
1202 STAR1200I NVMe SSD  
1203 STAR1200L NVMe SSD  
1204 STAR1200E NVMe SSD  
1500 STAR1500 PCIe NVMe SSD Controller  
1501 STAR1500C NVMe SSD  
1502 STAR1500E NVMe SSD  
1504 STAR1500L NVMe SSD  
2000 STAR2000 NVMe Controller  
2001 STAR2000E NVMe SSD  
2002 STAR2000C NVMe SSD  
2003 STAR2000L NVMe SSD  
bb5b Asgard AN3+ NVMe SSD  
fc22 Asgard AN3+ NVMe SSD  
a000 Asix Electronics Corporation (Wrong ID)  
a0a0 AOPEN Inc.  
a0f1 UNISYS Corporation  
a200 NEC Corporation  
a259 Hewlett Packard  
a25b Hewlett Packard GmbH PL24-MKT  
a304  
Sony  
a727 3Com Corporation  
0013 3CRPAG175 Wireless PC Card  
6803 3CRDAG675B Wireless 11a/b/g Adapter

aa00 iTuner  
aa01 iTuner  
aa02 iTuner  
aa03 iTuner  
aa04 iTuner  
aa05 iTuner  
aa06 iTuner  
aa07 iTuner  
aa08 iTuner  
aa09 iTuner  
aa0a iTuner  
aa0b iTuner  
aa0c iTuner  
aa0d iTuner  
aa0e iTuner  
aa0f iTuner  
aa42 Scitex Digital Video  
aa55 Ncomputing X300 PCI-Engine  
aaaa Adnaco Technology Inc.  
0001 H1 PCIe over fiber optic host controller  
0002 R1BP1 PCIe over fiber optic expansion chassis  
abcd Vadatech Inc.  
ac1e Digital Receiver Technology Inc  
ac3d Actuality Systems  
ad00 Alta Data Technologies LLC  
aecb Adrienne Electronics Corporation  
6250 VITC/LTC Timecode Reader card [PCI-VLTC/RDR]  
affe Sirrix AG security technologies  
01e1 PCI1E1 1-port ISDN E1 interface  
02e1 PCI2E1 2-port ISDN E1 interface  
450e PCI4S0EC 4-port ISDN S0 interface  
dead Sirrix.PCI4S0 4-port ISDN S0 interface  
b100 OpenVox Communication Co. Ltd.  
# Not registered officially  
b10b Uakron PCI Project  
b1b3  
Shiva Europe Limited  
b1d9 ATCOM Technology co., LTD.  
# Pinnacle should be 11bd, but they got it wrong several times --mj  
bd11 Pinnacle Systems, Inc. (Wrong ID)  
bdbd Blackmagic Design  
a106 Multibridge Extreme  
a117 Intensity Pro  
a11a DeckLink HD Extreme 2  
a11b DeckLink SDI/Duo/Quad  
a11c DeckLink HD Extreme 3  
a11d DeckLink Studio  
a11e DeckLink Optical Fibre

a120 Decklink Studio 2  
a121 DeckLink HD Extreme 3D/3D+  
a124 Intensity Extreme  
a126 Intensity Shuttle  
a127 UltraStudio Express  
a129 UltraStudio Mini Recorder  
a12a UltraStudio Mini Monitor  
a12d UltraStudio 4K  
a12e DeckLink 4K Extreme  
a12f DeckLink Mini Monitor  
a130 DeckLink Mini Recorder  
a132 UltraStudio 4K  
a136 DeckLink 4K Extreme 12G  
a137 DeckLink Studio 4K  
a138 Decklink SDI 4K  
a139 Intensity Pro 4K  
a13b DeckLink Micro Recorder  
a13d DeckLink 4K Pro  
a13e UltraStudio 4K Extreme  
a13f DeckLink Quad 2  
a140 DeckLink Duo 2  
a141 UltraStudio 4K Extreme 3  
a142 UltraStudio  
HD Mini  
a143 DeckLink Mini Recorder 4K  
a144 DeckLink Mini Monitor 4K  
a148 DeckLink SDI Micro  
a14b DeckLink 8K Pro  
a14e DeckLink Quad HDMI Recorder  
a1ff eGPU RX580  
c001 TSI Telsys  
c0a9 Micron/Crucial Technology  
2263 P1 NVMe PCIe SSD[Frampton]  
5403 P1 NVMe PCIe SSD[Frampton2]  
5407 P5 Plus NVMe PCIe SSD  
540a P2 [Nick P2] / P3 / P3 Plus NVMe PCIe SSD (DRAM-less)  
5412 P5 NVMe PCIe SSD[SlashP5]  
5415 T500 NVMe PCIe SSD  
5419 T700 NVMe PCIe SSD  
c0de Motorola  
c0fe Motion Engineering, Inc.  
ca01 I-TEK OptoElectronics Co., LTD.  
0212 Vulcan-CL CameraLink Frame Grabber  
ca02 I-TEK OptoElectronics Co., LTD.  
0213 Vulcan-CXP Frame Grabber  
ca3b Cambionix Ltd.  
ca50 Varian Australia Pty Ltd  
cace CACE Technologies, Inc.

0001 TurboCap Port A  
0002 TurboCap Port B  
0023 AirPcap N  
caed Canny Edge  
cafe Chrysalis-ITS  
0003 Luna K3 Hardware Security Module  
0006 Luna PCI-e 3000 Hardware Security Module  
0007 Luna K6 Hardware Security Module  
0008 Luna K7 Hardware  
Security Module  
cc53 ScaleFlux Inc.  
0001 CSS 1000  
0010 CSD 3310  
cccc Catapult Communications  
ceec Curtiss-Wright Controls Embedded Computing  
cddd Tyzx, Inc.  
0101 DeepSea 1 High Speed Stereo Vision Frame Grabber  
0200 DeepSea 2 High Speed Stereo Vision Frame Grabber  
cdfa NextSilicon Ltd  
0007 Maverick  
ceba KEBA AG  
cf86 Spectrum-4TOR  
0276 Spectrum-4TOR in Flash Recovery Mode  
d063 SolidRun  
1000 SolidNET DPU  
1500 Emulated NVMe  
d161 Digium, Inc.  
0120 Wildcard TE120P single-span T1/E1/J1 card  
0205 Wildcard TE205P/TE207P dual-span T1/E1/J1 card 5.0V  
0210 Wildcard TE210P/TE212P dual-span T1/E1/J1 card 3.3V  
0220 Wildcard TE220 dual-span T1/E1/J1 card 3.3V (PCI-Express)  
0405 Wildcard TE405P/TE407P quad-span T1/E1/J1 card 5.0V  
0410 Wildcard TE410P/TE412P quad-span T1/E1/J1 card 3.3V  
0420 Wildcard TE420P quad-span T1/E1/J1 card 3.3V (PCI-Express)  
0800 Wildcard TDM800P 8-port analog card  
1205 Wildcard TE205P/TE207P dual-span T1/E1/J1 card 5.0V (u1)  
1220 Wildcard  
TE220 dual-span T1/E1/J1 card 3.3V (PCI-Express) (5th gen)  
1405 Wildcard TE405P/TE407P quad-span T1/E1/J1 card 5.0V (u1)  
1410 Wildcard TE410P quad-span T1/E1/J1 card 3.3V (5th Gen)  
1420 Wildcard TE420 quad-span T1/E1/J1 card 3.3V (PCI-Express) (5th gen)  
1820 Wildcard TE820 octal-span T1/E1/J1 card 3.3V (PCI-Express)  
2400 Wildcard TDM2400P 24-port analog card  
3400 Wildcard TC400P transcoder base card  
8000 Wildcard TE121 single-span T1/E1/J1 card (PCI-Express)  
8001 Wildcard TE122 single-span T1/E1/J1 card  
8002 Wildcard AEX800 8-port analog card (PCI-Express)  
8003 Wildcard AEX2400 24-port analog card (PCI-Express)

8004 Wildcard TCE400P transcoder base card  
8005 Wildcard TDM410 4-port analog card  
8006 Wildcard AEX410 4-port analog card (PCI-Express)  
8007 Hx8 Series 8-port Base Card  
8008 Hx8 Series 8-port Base Card (PCI-Express)  
800a Wildcard TE133 single-span T1/E1/J1 card (PCI Express)  
800b Wildcard TE134 single-span T1/E1/J1 card  
800c Wildcard  
A8A 8-port analog card  
800d Wildcard A8B 8-port analog card (PCI-Express)  
800e Wildcard TE235/TE435 quad-span T1/E1/J1 card (PCI-Express)  
800f Wildcard A4A 4-port analog card  
8010 Wildcard A4B 4-port analog card (PCI-Express)  
8013 Wildcard TE236/TE436 quad-span T1/E1/J1 card  
b410 Wildcard B410 quad-BRI card  
d209 Ultimarc  
1500 PAC Drive  
15a2 SpinTrak  
1601 AimTrak  
d20c Chengdu BeiZhongWangXin Technology Co., Ltd.  
5010 NE5000 Ethernet Controller  
5011 NE5000 Ethernet Controller  
d20c e220 N5 Series 2-port 25GbE Network Adapter  
d20c e221 N5S Series 2-port 25GbE Network Adapter  
d20c e22c N5 Series 2-port 25GbE Network Adapter for OCP  
d20c e22d N5S Series 2-port 25GbE Network Adapter for OCP  
6010 NE6000 Ethernet Controller  
6011 NE6000 Ethernet Controller  
d20c a141 N6S Series 4-port 10GbE Network Adapter  
d20c a221 N6S Series 2-port 25GbE Network Adapter  
d20c a241 N6S Series 4-port 25GbE Network Adapter  
d20c a421 N6S Series 2-port 40GbE Network  
Adapter  
d20c aa21 N6S Series 2-port 100GbE Network Adapter  
d20c d221 N6S Series 2-port 25GbE Network Adapter with DPI  
d20c da21 N6S Series 2-port 100GbE Network Adapter with DPI  
d20c ea20 N6 Series 2-port 100GbE Network Adapter  
d20c ea21 N6S Series 2-port 100GbE Network Adapter  
d20c ea2c N6 Series 2-port 100GbE Network Adapter for OCP  
d20c ea2d N6S Series 2-port 100GbE Network Adapter for OCP  
d4d4 Dy4 Systems Inc  
0601 PCI Mezzanine Card  
d531 I+ME ACTIA GmbH  
d84d Exsys  
dada Datapath Limited  
0133 VisionRGB-X2  
0139 VisionRGB-E1  
0144 VisionSD8

0150 VisionRGB-E2  
0151 VisionSD4+1  
0159 VisionAV  
0161 DGC161  
0165 DGC165  
0167 DGC167  
0168 DGC168  
1139 VisionRGB-E1S  
1150 VisionRGB-E2S  
1151 VisionSD4+1S  
1153 VisionDVI-DL  
1154 VisionSDI2  
db10 Diablo Technologies  
dc93 Dawicontrol GmbH  
dcba Dynamic Engineering  
0046 PCIe Altera Cyclone IV  
# VPX format Receiver Controller Board  
0047 VPX-RCB  
# PMC Format FPGA design with 8 high speed UART channels  
0048  
    PMC-Biserial-III-BAE9  
004e PC104p-Biserial-III-NVY5  
004f PC104p-Biserial-III-NVY6  
0052 PCIeBiSerialDb37 BA22 LVDS IO  
# 8 port 16550 compatible UART, PMC format, RS-232 IO, RTS, CTS, DTR, DSR supported  
0066 PMC-OctalUART-232  
dd01 Digital Devices GmbH  
0003 Octopus DVB Adapter  
    dd01 0001 Octopus DVB adapter  
    dd01 0002 Octopus LE DVB adapter  
    dd01 0003 Octopus OEM  
    dd01 0004 Octopus V3 DVB adapter  
    dd01 0010 Octopus Mini  
    dd01 0020 Cine S2 V6 DVB adapter  
    dd01 0021 Cine S2 V6.5 DVB adapter  
    dd01 0030 Cine CT V6.1 DVB adapter  
    dd01 db03 Mystique SaTiX-S2 V3 DVB adapter  
0006 Cine V7  
0007 Max  
    dd01 0023 Max S8 4/8  
0011 Octopus CI DVB Adapter  
    dd01 0040 Octopus CI  
    dd01 0041 Octopus CI Single  
0201 Resi DVB-C Modulator  
    dd01 0001 Resi DVB-C Modulator  
dead Indigita Corporation  
deaf Middle Digital Inc.  
9050 PC Weasel Virtual VGA

9051 PC Weasel Serial Port  
9052 PC Weasel Watchdog Timer  
# formerly SoftHard Technology Ltd.  
deda XIMEA  
4001  
    CB or MX camera  
4021 MT camera  
e000 Winbond  
    e000 W89C940  
e159 Tiger Jet Network Inc. / ICP DAS  
0001 Tiger3XX Modem/ISDN interface  
    0059 0001 128k ISDN-S/T Adapter  
    0059 0003 128k ISDN-U Adapter  
    00a7 0001 TELES.S0/PCI 2.x ISDN Adapter  
    8086 0003 Digium X100P/X101P analogue PSTN FXO interface  
    b100 0003 OpenVox A400P 4-port analog card  
    b1d9 0003 AX400P 4-port analog card  
0002 Tiger100APC ISDN chipset  
e1c5 Elcus  
e4bf EKF Elektronik GmbH  
0ccd CCD-CALYPSO  
0cd1 CD1-OPERA  
0cd2 CD2-BEBOP  
0cd3 CD3-JIVE  
50c1 PC1-GROOVE  
50c2 PC2-LIMBO  
53c1 SC1-ALLEGRO  
cc47 CCG-RUMBA  
cc4d CCM-BOOGIE  
e4e4 Xorcom  
e55e Essence Technology, Inc.  
ea01 Eagle Technology  
    000a PCI-773 Temperature Card  
    0032 PCI-730 & PC104P-30 Card  
    003e PCI-762 Opto-Isolator Card  
    0041 PCI-763 Reed Relay Card  
    0043 PCI-769 Opto-Isolator Reed Relay Combo Card  
    0046 PCI-766 Analog Output Card  
    0052 PCI-703 Analog I/O Card  
    0800 PCI-800 Digital I/O Card  
ea50 Emerson Automation  
    Solutions  
# The main chip of all these devices is by Xilinx -> It could also be a Xilinx ID.  
ea60 RME  
    9896 Digi32  
    9897 Digi32 Pro  
    9898 Digi32/8  
eabb Aashima Technology B.V.



eeace Endace Measurement Systems, Ltd  
3100 DAG 3.10 OC-3/OC-12  
3200 DAG 3.2x OC-3/OC-12  
320e DAG 3.2E Fast Ethernet  
340e DAG 3.4E Fast Ethernet  
341e DAG 3.41E Fast Ethernet  
3500 DAG 3.5 OC-3/OC-12  
351c DAG 3.5ECM Fast Ethernet  
360d DAG 3.6D DS3  
360e DAG 3.6E Fast Ethernet  
368e DAG 3.6E Gig Ethernet  
3707 DAG 3.7T T1/E1/J1  
370d DAG 3.7D DS3/E3  
378e DAG 3.7G Gig Ethernet  
3800 DAG 3.8S OC-3/OC-12  
4100 DAG 4.10 OC-48  
4110 DAG 4.11 OC-48  
4220 DAG 4.2 OC-48  
422e DAG 4.2GE Gig Ethernet  
4230 DAG 4.2S OC-48  
423e DAG 4.2GE Gig Ethernet  
4300 DAG 4.3S OC-48  
430e DAG 4.3GE Gig Ethernet  
452e DAG 4.5G2 Gig Ethernet  
454e DAG 4.5G4 Gig Ethernet  
45b8 DAG 4.5Z8 Gig Ethernet  
45be DAG 4.5Z2 Gig Ethernet  
520e DAG 5.2X 10G Ethernet  
521a DAG 5.2SXA 10G Ethernet/OC-192  
5400 DAG  
5.4S-12 OC-3/OC-12  
5401 DAG 5.4SG-48 Gig Ethernet/OC-3/OC-12/OC-48  
540a DAG 5.4GA Gig Ethernet  
541a DAG 5.4SA-12 OC-3/OC-12  
542a DAG 5.4SGA-48 Gig Ethernet/OC-3/OC-12/OC-48  
6000 DAG 6.0SE 10G Ethernet/OC-192  
6100 DAG 6.1SE 10G Ethernet/OC-192  
6200 DAG 6.2SE 10G Ethernet/OC-192  
7100 DAG 7.1S OC-3/OC-12  
7400 DAG 7.4S OC-3/OC-12  
7401 DAG 7.4S48 OC-48  
752e DAG 7.5G2 Gig Ethernet  
754e DAG 7.5G4 Gig Ethernet  
8100 DAG 8.1X 10G Ethernet  
8101 DAG 8.1SX 10G Ethernet/OC-192  
8102 DAG 8.1X 10G Ethernet  
820e DAG 8.2X 10G Ethernet  
820f DAG 8.2X 10G Ethernet (2nd bus)

8400 DAG 8.4I Infiniband x4 SDR  
8500 DAG 8.5I Infiniband x4 DDR  
9200 DAG 9.2SX2 10G Ethernet  
920e DAG 9.2X2 10G Ethernet  
9540 DAG 9.5G4 Gig Ethernet  
954f DAG 9.5G4F Gig Ethernet  
a120 DAG 10X2-P 10G Ethernet  
a12e DAG 10X2-S 10G Ethernet  
a140 DAG 10X4-P 10/40G Ethernet  
a14e DAG 10X4-S 10/40G Ethernet  
eace vDAG virtual device  
ec80 Belkin Corporation  
ec00 F5D6000  
ecc0 Echo Digital  
Audio Corporation  
edd8 ARK Logic Inc  
a091 1000PV [Stingray]  
a099 2000PV [Stingray]  
a0a1 2000MT  
a0a9 2000MI  
# Found on M2N68-AM Motherboard  
f043 ASUSTeK Computer Inc. (Wrong ID)  
f05b Foxconn International, Inc. (Wrong ID)  
f111 Framework Computer Inc.  
f15e SiFive, Inc.  
0000 FU740-C000 RISC-V SoC PCI Express x8 to AXI4 Bridge  
f1d0 AJA Video  
c0fe Xena HS/HD-R  
c0ff Kona/Xena 2  
cafe Kona SD  
cfee Xena LS/SD-22-DA/SD-DA  
dafe Corvid 1  
daff KONA LHi  
db00 IoExpress  
db01 Corvid22  
db02 Kona 3G  
db03 Corvid 3G  
db04 Kona 3G QUAD  
db05 Kona LHe+  
db06 IoXT  
db07 Kona 3G P2P  
db08 Kona 3G QUAD P2P  
db09 Corvid 24  
db11 T-Tap  
dcaf Kona HD  
dfee Xena HD-DA  
eb07 Io4K  
eb0a Io4K UFC

eb0b Kona 4  
eb0c Kona 4 UFC  
eb0d Corvid 88  
eb0e Corvid 44  
eb16 Corvid HEVC  
10cf 1049 Corvid HEVC M31  
eb18 Corvid HB-R  
eb1a Kona IP 1SFP  
eb1c Kona IP 2SFP  
eb1d Io4KPlus  
eb1e IoIP  
eb1f Kona 5  
eb23 Kona 1  
eb24 Kona HDMI  
eb25 Corvid 44 12g  
eb26 T-Tap  
Pro  
eb27 IoX3  
efac Xena SD-MM/SD-22-MM  
facd Xena HD-MM  
f5f5 F5 Networks, Inc.  
# Subsystem ID for PATA controller on nForce motherboard  
f849 ASRock Incorporation (Wrong ID)  
fa57 Interagon AS  
0001 PMC [Pattern Matching Chip]  
fab7 Fabric7 Systems, Inc.  
fe19 TenaFe, Inc.  
0001 TC2200/TC2201 NVMe Controller (DRAM-less)  
febd Ultraview Corp.  
# Nee Epigram  
feda Broadcom Inc  
a0fa BCM4210 iLine10 HomePNA 2.0  
a10e BCM4230 iLine10 HomePNA 2.0  
fede Fedetec Inc.  
0003 TABIC PCI v3  
ffe1 Suzhou XiongLi Technology Inc.  
d200 XL82101/82102 PCI Express Gigabit Ethernet Controller  
ffff XenSource, Inc.  
0101 PCI Event Channel Controller  
# Used in some old VMWare products before they got a real ID assigned  
fffe VMWare Inc (temporary ID)  
0710 Virtual SVGA  
ffff Illegal Vendor ID

# List of known device classes, subclasses and programming interfaces

# Syntax:

```
# C class class_name
# subclass subclass_name <-- single tab
# prog-if prog-if_name <-- two tabs

C 00 Unclassified
  device
  00 Non-VGA unclassified device
  01 VGA compatible unclassified device
  05 Image coprocessor
C 01 Mass storage controller
  00 SCSI storage controller
  01 IDE interface
    00 ISA Compatibility mode-only controller
    05 PCI native mode-only controller
    0a ISA Compatibility mode controller, supports both channels switched to PCI native mode
    0f PCI native mode controller, supports both channels switched to ISA compatibility mode
    80 ISA Compatibility mode-only controller, supports bus mastering
    85 PCI native mode-only controller, supports bus mastering
    8a ISA Compatibility mode controller, supports both channels switched to PCI native mode, supports bus mastering
    8f PCI native mode controller, supports both channels switched to ISA compatibility mode, supports bus mastering
  02 Floppy disk controller
  03 IPI bus controller
  04 RAID bus controller
  05 ATA controller
    20 ADMA single stepping
    30 ADMA continuous operation
  06 SATA controller
    00 Vendor
    specific
    01 AHCI 1.0
    02 Serial Storage Bus
  07 Serial Attached SCSI controller
    01 Serial Storage Bus
  08 Non-Volatile memory controller
    01 NVMHCI
    02 NVM Express
  09 Universal Flash Storage controller
    00 Vendor specific
    01 UFSHCI
  80 Mass storage controller
C 02 Network controller
  00 Ethernet controller
  01 Token ring network controller
  02 FDDI network controller
  03 ATM network controller
  04 ISDN controller
  05 WorldFip controller
  06 PICMG controller
```

- 07 Infiniband controller
- 08 Fabric controller
- 80 Network controller
- C 03 Display controller
  - 00 VGA compatible controller
    - 00 VGA controller
    - 01 8514 controller
    - 01 XGA compatible controller
    - 02 3D controller
    - 80 Display controller
  - C 04 Multimedia controller
    - 00 Multimedia video controller
    - 01 Multimedia audio controller
    - 02 Computer telephony device
    - 03 Audio device
    - 80 Multimedia controller
  - C 05 Memory controller
    - 00 RAM memory
    - 01 FLASH memory
    - 02 CXL
      - 00 CXL Memory Device
        - vendor specific
        - 10 CXL Memory Device (CXL 2.x)
      - 80 Memory controller
  - C 06 Bridge
    - 00 Host bridge
    - 01 ISA bridge
    - 02 EISA bridge
    - 03 MicroChannel bridge
    - 04 PCI bridge
      - 00 Normal decode
      - 01 Subtractive decode
    - 05 PCMCIA bridge
    - 06 NuBus bridge
    - 07 CardBus bridge
    - 08 RACEway bridge
      - 00 Transparent mode
      - 01 Endpoint mode
    - 09 Semi-transparent PCI-to-PCI bridge
      - 40 Primary bus towards host CPU
      - 80 Secondary bus towards host CPU
    - 0a InfiniBand to PCI host bridge
    - 80 Bridge
  - C 07 Communication controller
    - 00 Serial controller
      - 00 8250
      - 01 16450
      - 02 16550

- 03 16650
- 04 16750
- 05 16850
- 06 16950
- 01 Parallel controller
  - 00 SPP
  - 01 BiDir
  - 02 ECP
  - 03 IEEE1284
  - fe IEEE1284 Target
- 02 Multiport serial controller
  - 03 Modem
    - 00 Generic
    - 01 Hayes/16450
    - 02 Hayes/16550
    - 03 Hayes/16650
    - 04 Hayes/16750
  - 04 GPIB controller
  - 05 Smard Card controller
  - 80 Communication controller
- C 08 Generic system peripheral
  - 00 PIC
    - 00 8259
    - 01
      - ISA PIC
      - 02 EISA PIC
      - 10 IO-APIC
      - 20 IO(X)-APIC
    - 01 DMA controller
      - 00 8237
      - 01 ISA DMA
      - 02 EISA DMA
    - 02 Timer
      - 00 8254
      - 01 ISA Timer
      - 02 EISA Timers
      - 03 HPET
    - 03 RTC
      - 00 Generic
      - 01 ISA RTC
    - 04 PCI Hot-plug controller
    - 05 SD Host controller
    - 06 IOMMU
    - 80 System peripheral
    - 99 Timing Card
  - # PTP Grandmaster Source Clock
    - 01 TAP Timing Card
  - C 09 Input device controller

- 00 Keyboard controller
- 01 Digitizer Pen
- 02 Mouse controller
- 03 Scanner controller
- 04 Gameport controller
  - 00 Generic
  - 10 Extended
- 80 Input device controller
- C 0a Docking station
  - 00 Generic Docking Station
  - 80 Docking Station
- C 0b Processor
  - 00 386
  - 01 486
  - 02 Pentium
  - 10 Alpha
  - 20 Power PC
  - 30 MIPS
  - 40 Co-processor
- C 0c Serial bus controller
  - 00 FireWire (IEEE 1394)
    - 00 Generic
    - 10 OHCI
  - 01 ACCESS Bus
  - 02 SSA
  - 03 USB controller
    - 00 UHCI
    - 10 OHCI
    - 20 EHCI
    - 30 XHCI
    - 40 USB4 Host Interface
    - 80 Unspecified
  - fe USB Device
  - 04 Fibre Channel
  - 05
    - SMBus
  - 06 InfiniBand
  - 07 IPMI Interface
    - 00 SMIC
    - 01 KCS
    - 02 BT (Block Transfer)
  - 08 SERCOS interface
  - 09 CANBUS
  - 80 Serial bus controller
- C 0d Wireless controller
  - 00 IRDA controller
  - 01 Consumer IR controller
  - 10 RF controller

- 11 Bluetooth
- 12 Broadband
- 20 802.1a controller
- 21 802.1b controller
- 80 Wireless controller
- C 0e Intelligent controller
- 00 I2O
- C 0f Satellite communications controller
- 01 Satellite TV controller
- 02 Satellite audio communication controller
- 03 Satellite voice communication controller
- 04 Satellite data communication controller
- C 10 Encryption controller
- 00 Network and computing encryption device
- 10 Entertainment encryption device
- 80 Encryption controller
- C 11 Signal processing controller
- 00 DPIO module
- 01 Performance counters
- 10 Communication synchronizer
- 20 Signal processing management
- 80 Signal processing controller
- C 12 Processing accelerators
- 00 Processing accelerators
- 01 SNIA Smart Data Accelerator  
Interface (SDXI) controller
- C 13 Non-Essential Instrumentation
- C 40 Coprocessor
- C ff Unassigned class

Found in path(s):

\* /opt/cola/permits/2148525668\_1730382599.4846385/0/pci-ids-0-0-2024-03-31-orig-tar-xz/pci.ids-0.0~2024.03.31/pci.ids

# 1.272 libqrtr-glib 1.2.2-1ubuntu4

## 1.272.1 Available under license :

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Version 2.1, February 1999

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## 1.273 libde 1.0.15-1build3

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Version 3, 29 June 2007

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# 1.274 time 1.9-0.2build1

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## 1.277 multipath-tools 0.9.4-5ubuntu8

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice

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## 1.279 libmodule-find-perl 0.16-2

### 1.279.1 Available under license :

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Module::Find version 0.16

=====

Module::Find lets you find and use modules in categories. This can be very useful for auto-detecting driver or plugin modules. You can differentiate between looking in the category itself or in all subcategories.

#### INSTALLATION

To install this module type the following:

```
perl Makefile.PL
make
make test
make install
```

## DEPENDENCIES

This module requires these other modules and libraries:

Test::More  
File::Spec  
File::Find

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Found in path(s):

\* /opt/cola/permits/2148525499\_1724000962.6700876/0/libmodule-find-perl-0-16-orig-1-tar-gz/Module-Find-0.16/README

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---

abstract: 'Find and use installed modules in a (sub)category'

author:

- 'Christian Renz <crenz@web42.com>'

build\_requires:

Test::More: '0'

configure\_requires:

ExtUtils::MakeMaker: '0'

dynamic\_config: 1

generated\_by: 'ExtUtils::MakeMaker version 7.34, CPAN::Meta::Converter version 2.150010'

license: perl

meta-spec:

url: <http://module-build.sourceforge.net/META-spec-v1.4.html>

version: '1.4'

name: Module-Find

no\_index:

directory:

- t

- inc

recommends:

Test::Pod: '1.14'

Test::Pod::Coverage: '1.04'

requires:

File::Find: '0'

File::Spec: '0'

perl: '5.008001'

resources:



repository: <http://github.com/crenz/Module-Find>  
version: '0.16'  
x\_serialization\_backend: 'CPAN::Meta::YAML version 0.018'

Found in path(s):

\* /opt/cola/permits/2148525499\_1724000962.6700876/0/libmodule-find-perl-0-16-orig-1-tar-gz/Module-Find-0.16/META.yml

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=back

=head1 HISTORY

=over 8

=item 0.01, 2004-04-22

Original version; created by h2xs 1.22

=item 0.02, 2004-05-25

Added test modules that were left out in the first version. Thanks to Stuart Johnston for alerting me to this.

=item 0.03, 2004-06-18

Fixed a bug (non-localized \$\_) by declaring a loop variable in use functions. Thanks to Stuart Johnston for alerting me to this and providing a fix.

Fixed non-platform compatibility by using File::Spec. Thanks to brian d foy.

Added setmoduledirs and updated tests. Idea shamelessly stolen from ...erm... inspired by brian d foy.

=item 0.04, 2005-05-20

Added POD tests.

=item 0.05, 2005-11-30

Fixed issue with bugfix in PathTools-3.14.

=item 0.06, 2008-01-26

Module::Find now won't report duplicate modules several times anymore (thanks to Uwe Völker for the report and the patch)

=item 0.07, 2009-09-08

Fixed RT#38302: Module::Find now follows symlinks by default  
(can be disabled).

=item 0.08, 2009-09-08

Fixed RT#49511: Removed Mac OS X extended attributes from distribution

=item 0.09, 2010-02-26

Fixed RT#38302: Fixed META.yml generation (thanks very much to cpanservice for the help).

=item 0.10, 2010-02-26

Fixed RT#55010: Removed Unicode BOM from Find.pm.

=item 0.11, 2012-05-22

Fixed RT#74251: defined(@array) is deprecated under Perl 5.15.7.  
Thanks to Roman F, who contributed the implementation.

=item 0.12, 2014-02-08

Fixed RT#81077: useall fails in taint mode  
Thanks to Aran Deltac, who contributed the implementation and test.

Fixed RT#83596: Documentation doesn't describe behaviour if a module fails to load  
Clarified documentation for useall and usesub.

Fixed RT#62923: setmoduledirs(undef) doesn't reset to searching @INC  
Added more explicit tests.  
Thanks to Colin Robertson for his input.

=item 0.13, 2015-03-09

This release contains two contributions from Moritz Lenz:

Link to Module::Pluggable and Class::Factory::Util in "SEE ALSO"

Align  
package name parsing with how perl does it (allowing single quotes as module separator)

Also, added a test for meta.yml

=item 0.14, 2019-12-25

A long overdue update. Thank you for the many contributions!

Fixed RT#99055: Removed file readability check (pull request contributed by Moritz Lenz)

Now supports @INC hooks (pull request contributed by Graham Knop)

Now filters out filenames starting with a dot (pull request contributed by Desmond Daignault)

Now uses strict (pull request contributed by Shlomi Fish)

Fixed RT#122016: test/ files show up in metacpan (bug report contributed by Karen Etheridge)

=item 0.15, 2019-12-26

Fixed RT#127657 (bug report contributed by Karen Etheridge): Module::Find now uses @ModuleDirs (if specified) for loading modules. Previously, when using setmoduledirs() to set an array of directories that did not contain @INC, Module::Find would find the modules correctly, but load them from @INC.

=item 0.16, 2022-08-01

Fixes an issue where symlink

tests failed on systems that do not support creation of symlinks.

The issue appears on Windows systems due to changed behaviour in C<File::Find> described in L<perl5/issue #19995|https://github.com/Perl/perl5/issues/19995>

Symlink tests were previously skipped if C<symlink()> is not available, and now also if creation of a symlink is not possible.

Fixes L<issue #9|https://github.com/crenz/Module-Find/issues/9>. Note that on Windows system, the patch to C<File::Find> from L<perl5/PR #20008|https://github.com/Perl/perl5/pull/20008> will be required for proper operation.

=back

=head1 DEVELOPMENT NOTES

The development repository for this module is hosted on GitHub: L<http://github.com/crenz/Module-Find/>. Please report any bugs by opening an issue there.

=head1 SEE ALSO

L<perl>, L<Module::Pluggable>, L<Class::Factory::Util>

=head1 AUTHOR

Christian Renz, E<lt>crenz@web42.comE<gt>

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=cut

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# 1.280 python-colorama 0.4.6-4

## 1.280.1 Available under license :

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# 1.281 pyjwt 2.7.0-1

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# 1.282 usb-modeswitch 2.6.1-3ubuntu3

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

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When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

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- a) Accompany

the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

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d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

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## 1.286 bc 1.07.1-3ubuntu4

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## 1.287 python-wadllib 1.3.6-5

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## 1.288 cloud-utils 0.33-1

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Upstream-Name: cloud-utils

Source: <https://code.launchpad.net/cloud-utils>

Upstream-Contact: Scott Moser <[scott.moser@canonical.com](mailto:scott.moser@canonical.com)>

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## 1.290 duktape 2.7.0+tests-0ubuntu3

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// Original can be found at:

// <https://bitbucket.org/lindenlab/lld>

// Modifications by Joshua Bell [inexorabletash@gmail.com](mailto:inexorabletash@gmail.com)

// <https://github.com/inexorabletash/polyfill>

// ES3/ES5 implementation of the Khronos Typed Array Specification

// Ref: <http://www.khronos.org/registry/typedarray/specs/latest/>

// Date: 2011-02-01

//

// Variations:

// \* Allows `typed_array.get/set()` as alias for subscripts (`typed_array[]`)

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## 1.292 rsyslog 8.2312.0-3ubuntu9

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## 1.294 python-stdlib-extensions 3.12.3-

### Oubuntu1

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- \* /opt/cola/permits/2148525288\_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.7/Lib/lib2to3/fixes/fix\_has\_key.py
- \* /opt/cola/permits/2148525288\_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.9/Lib/lib2to3/tests/pytree\_idempotency.py
- \* /opt/cola/permits/2148525288\_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.6/Lib/lib2to3/pygram.py
- \* /opt/cola/permits/2148525288\_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.11/Lib/lib2to3/fixes/fix\_repr.py
- \* /opt/cola/permits/2148525288\_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.11/Lib/lib2to3/pytree.py

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/opt/cola/permits/2148525288\_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.8/Lib/lib2to3/tests/test\_pytree.py

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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.8/Lib/lib2to3/fixes/fix_repr.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.6/Lib/lib2to3/fixes/fix_has_key.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.10/Lib/lib2to3/fixes/fix_apply.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.8/Lib/lib2to3/fixes/fix_ne.py
*
/opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-
extensions-3.12.3/3.9/Lib/lib2to3/fixes/fix_ne.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.12/Lib/lib2to3/fixes/fix_execfile.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.6/Lib/lib2to3/tests/pytree_idempotency.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.9/Lib/lib2to3/pygram.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.12/Lib/lib2to3/refactor.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.11/Lib/lib2to3/fixes/fix_print.py
*
/opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-
extensions-3.12.3/3.9/Lib/lib2to3/fixes/fix_exec.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-

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```
stdlib-extensions-3.12.3/3.11/Lib/lib2to3/fixer_base.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.6/Lib/lib2to3/refactor.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.7/Lib/lib2to3/tests/test_pytree.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.6/Lib/lib2to3/tests/test_pytree.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.7/Lib/lib2to3/fixes/fix_execfile.py
*
/opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-
extensions-3.12.3/3.7/Lib/lib2to3/pytree.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.12/Lib/lib2to3/fixes/fix_long.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.12/Lib/lib2to3/fixes/fix_has_key.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.6/Lib/lib2to3/patcomp.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.9/Lib/lib2to3/refactor.py
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```

executable.

Found in path(s):

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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.8/Lib/distutils/spawn.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.10/Lib/distutils/spawn.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.6/Lib/distutils/spawn.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.11/Lib/distutils/spawn.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.9/Lib/distutils/spawn.py
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```

```
file.write('License: %s\n' % self.get_license())
```

Found in path(s):

```
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.11/Lib/distutils/dist.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.7/Lib/distutils/dist.py
```

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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.10/Lib/distutils/dist.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.9/Lib/distutils/dist.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.8/Lib/distutils/dist.py
```

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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.9/Lib/lib2to3/fixes/fix_filter.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.11/Lib/lib2to3/fixes/fix_buffer.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.12/Lib/lib2to3/fixes/fix_filter.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.12/Lib/lib2to3/fixes/fix_dict.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.12/Lib/lib2to3/fixes/fix_map.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.7/Lib/lib2to3/fixes/fix_types.py
*
/opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.7/Lib/lib2to3/fixes/fix_xrange.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.10/Lib/lib2to3/fixes/fix_xrange.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.11/Lib/lib2to3/fixes/fix_map.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.7/Lib/lib2to3/fixes/fix_dict.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.11/Lib/lib2to3/fixes/fix_types.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.11/Lib/lib2to3/fixes/fix_standarderror.py
*
/opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.7/Lib/lib2to3/fixes/fix_standarderror.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.9/Lib/lib2to3/fixes/fix_map.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.7/Lib/lib2to3/fixes/fix_buffer.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.9/Lib/lib2to3/fixes/fix_types.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.6/Lib/lib2to3/fixes/fix_buffer.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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stdlib-extensions-3.12.3/3.12/Lib/lib2to3/fixes/fix_buffer.py
*
/opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-
extensions-3.12.3/3.7/Lib/lib2to3/fixes/fix_map.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.6/Lib/lib2to3/fixes/fix_dict.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.9/Lib/lib2to3/fixes/fix_buffer.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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*
/opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.11/Lib/lib2to3/fixes/fix_dict.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.9/Lib/lib2to3/fixes/fix_xrange.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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*
/opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-
extensions-3.12.3/3.10/Lib/lib2to3/fixes/fix_dict.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.10/Lib/lib2to3/fixes/fix_filter.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.8/Lib/lib2to3/fixes/fix_map.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.8/Lib/lib2to3/fixes/fix_standarderror.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.6/Lib/lib2to3/fixes/fix_standarderror.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.8/Lib/lib2to3/fixes/fix_buffer.py
*
/opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-
extensions-3.12.3/3.6/Lib/lib2to3/fixes/fix_xrange.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.6/Lib/lib2to3/fixes/fix_map.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.9/Lib/lib2to3/fixes/fix_standarderror.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-

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stdlib-extensions-3.12.3/3.11/Lib/lib2to3/fixes/fix_xrange.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.8/Lib/lib2to3/fixes/fix_dict.py
*
/opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-
extensions-3.12.3/3.12/Lib/lib2to3/fixes/fix_types.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.10/Lib/lib2to3/fixes/fix_types.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.12/Lib/lib2to3/fixes/fix_standarderror.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.10/Lib/lib2to3/fixes/fix_map.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.8/Lib/lib2to3/fixes/fix_filter.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.10/Lib/lib2to3/fixes/fix_standarderror.py
*
/opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-
extensions-3.12.3/3.9/Lib/lib2to3/fixes/fix_dict.py
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```
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.6/Lib/lib2to3/pgen2/driver.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.8/Lib/lib2to3/pgen2/driver.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.10/Lib/lib2to3/pgen2/driver.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.9/Lib/lib2to3/pgen2/driver.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.12/Lib/lib2to3/pgen2/driver.py
*
/opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-
extensions-3.12.3/3.7/Lib/lib2to3/pgen2/driver.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.11/Lib/lib2to3/pgen2/driver.py
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```

/\* An object allocator for Python.

Here is an introduction to the layers of the Python memory architecture,  
showing where the object allocator is actually used (layer +2), It is

called for every object allocation and deallocation (PyObject\_New/Del), unless the object-specific allocators implement a proprietary allocation scheme (ex.: ints use a simple free list). This is also the place where the cyclic garbage collector operates selectively on container objects.

#### Object-specific allocators

```

_____
[ int ] [ dict ] [ list ] ... [ string ]   Python core   |
+3 | <----- Object-specific memory -----> | <-- Non-object memory --> |
_____ | _____ |
[ Python's object allocator ] | _____ |
+2 | ##### Object memory ##### | <----- Internal buffers -----> |
_____
|
[ Python's raw memory allocator (PyMem_API) ] |
+1 | <----- Python memory (under PyMem manager's control) -----> | |
_____
[ Underlying general-purpose allocator (ex: C library malloc) ]
0 | <----- Virtual memory allocated for the python process -----> |

=====

_____
[ OS-specific Virtual Memory Manager (VMM) ]
-1 | <--- Kernel dynamic storage allocation & management (page-based) ---> |
_____
[ ] [ ]
-2 | <-- Physical memory: ROM/RAM --> | | <-- Secondary storage (swap) --> |

*/

```

Found in path(s):

```

* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.12/Modules/pycore_obmalloc.h
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Found in path(s):

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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.12/Lib/lib2to3/pgen2/grammar.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.8/Lib/lib2to3/pgen2/conv.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.6/Lib/lib2to3/pgen2/parse.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.8/Lib/lib2to3/pgen2/pgen.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-

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\* /opt/cola/permits/2148525288\_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.9/Lib/lib2to3/pgen2/\_\_init\_\_.py  
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.11/Lib/lib2to3/pgen2/grammar.py
No license file was found, but licenses were detected in source scan.
```

```
# version.
```

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Found in path(s):
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.9/Lib/distutils/command/bdist_msi.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.9/Lib/distutils/cygwincompiler.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
stdlib-extensions-3.12.3/3.7/Lib/distutils/cygwincompiler.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.8/Lib/distutils/command/bdist_msi.py
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.8/Lib/distutils/cygwincompiler.py
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.8/Lib/distutils/command/bdist_wininst.py
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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.10/Lib/distutils/cygwincompiler.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.10/Lib/distutils/command/bdist_msi.py
No license file was found, but licenses were detected in source scan.
```

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Found in path(s):

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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.8/Lib/lib2to3/pgen2/tokenize.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.11/Lib/lib2to3/pgen2/tokenize.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.12/Lib/lib2to3/pgen2/tokenize.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.9/Lib/lib2to3/pgen2/tokenize.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.7/Lib/lib2to3/pgen2/tokenize.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.6/Lib/lib2to3/pgen2/tokenize.py
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No license file was found, but licenses were detected in source scan.
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```
('binary-only', None,
"cannot supply both '--source-only' and '--binary-only'")
'License: ' + self.distribution.get_license(),
```

Found in path(s):

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* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.9/Lib/distutils/command/bdist_rpm.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.10/Lib/distutils/command/bdist_rpm.py
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.11/Lib/distutils/command/bdist_rpm.py
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```

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# A grammar to describe tree matching patterns.

# Not shown here:

# - 'TOKEN' stands for any token (leaf node)

# - 'any' stands for any node (leaf or interior)

# With 'any' we can still specify the sub-structure.

# The start symbol is 'Matcher'.

Matcher: Alternatives ENDMARKER

Alternatives: Alternative ('| Alternative)\*

Alternative: (Unit | NegatedUnit)+

Unit: [NAME '='] ( STRING [Repeater]

    | NAME [Details] [Repeater]

    | '(' Alternatives ')' [Repeater]

    | '[' Alternatives ']'

)

NegatedUnit: 'not' (STRING | NAME [Details] | '(' Alternatives ')')

Repeater: '\*' | '+' | '{' NUMBER [',' NUMBER] '}'

Details: '<' Alternatives '>'

Found in path(s):

```
* /opt/cola/permits/2148525288_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.7/Lib/lib2to3/PatternGrammar.txt
```

\*

/opt/cola/permits/2148525288\_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.10/Lib/lib2to3/PatternGrammar.txt

\* /opt/cola/permits/2148525288\_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.11/Lib/lib2to3/PatternGrammar.txt

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\* /opt/cola/permits/2148525288\_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.6/Lib/lib2to3/PatternGrammar.txt

\* /opt/cola/permits/2148525288\_1730699792.599628/0/python3-stdlib-extensions-3-12-3-orig-tar-xz/python3-stdlib-extensions-3.12.3/3.12/Lib/lib2to3/PatternGrammar.txt

## 1.295 os-prober 1.81ubuntu4

### 1.295.1 Available under license :

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On Debian systems, a copy of the GNU General Public License is available in /usr/share/common-licenses/GPL-2.

## 1.296 python-certifi 2023.11.17-1

### 1.296.1 Available under license :

This package contains a modified version of ca-bundle.crt:

ca-bundle.crt -- Bundle of CA Root Certificates

This is a bundle of X.509 certificates of public Certificate Authorities (CA). These were automatically extracted from Mozilla's root certificates file (certdata.txt). This file can be found in the mozilla source tree:

<https://hg.mozilla.org/mozilla-central/file/tip/security/nss/lib/ckfw/builtins/certdata.txt>

It contains the certificates in PEM format and therefore can be directly used with curl / libcurl / php\_curl, or with an Apache+mod\_ssl webserver for SSL client authentication.

Just configure this file as the SSLCACertificateFile.#

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\*\*\*\*\* END LICENSE BLOCK \*\*\*\*\*

@(#) \$RCSfile: certdata.txt,v \$ \$Revision: 1.80 \$ \$Date: 2011/11/03 15:11:58 \$

# 1.297 hd-parm 9.65+ds-1build1

## 1.297.1 Available under license :

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Version 2, June 1991

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Please use github or [rt.cpan.org](https://rt.cpan.org/Public/Dist/Display.html?Name=Proc-ProcessTable) to submit  
bugs and patches.

## MAINTENANCE STATUS

This module is maintained by Joachim Bargsten. I have nearly zero knowledge of  
the implementation within but wanted to rescue the distribution from  
abandonment and try to get critical bug fixes out. This will need to be  
a community effort.

The source is in github -

<https://github.com/jwbargsten/perl-proc-processtable>

Commit bits will be generously granted, send me your github id.

## STATUS

This is BETA software; it seems to work, but use at your own risk :)

Currently works on darwin, nonstop-ux, Windows (both native MSWin32 and Cygwin), linux,  
solaris, aix, hpux, freebsd,



irix, dec\_osf, bsdi, netbsd, unixware 7.x, SunOS and openbsd. Please see the "README.osname" files for details on individual os implementations. Please see the file PORTING if you are interested in making it work on something else. Please see the file TODO for a list of issues that need to be addressed (and send me patches!).

Please note that the Windows port is derived from Cygwin code and is therefore covered by the Cygwin license (<http://cygwin.com/licensing.html>).

Multithread support is now available for Solaris; please see README.solaris for info. It may work under other OS's as well; please let me know if it does.

Comments, bug reports, patches and especially ports are greatly appreciated. If you want to submit a patch, *\*please\** use standard context-diff format; if you're submitting a port, a tarball of the new files is great.

## ## DESCRIPTION

This module is a first crack at providing a consistent interface to Unix (and maybe other multitasking OS's) process table information.

The

impetus for this came about with my frustration at having to parse the output of various systems' ps commands to check whether specific processes were running on different boxes at a larged mixed Unix site. The output format of ps was different on each OS, and sometimes changed with each new release of an OS. Also, running a ps subprocess from within a perl or shell script and parsing the output was not a very efficient or aesthetic way to do things.

With this module, you can do things like this:

```
# kill memory pigs
use Proc::ProcessTable;

my $t = Proc::ProcessTable->new;
foreach my $p ( @{$t->table} ) {
    if( $p->pctmem > 95 ){
        $p->kill(9);
    }
}
```

There is another short example in the file "example.pl" in the distribution. For a more elaborate example (in German), see <http://www.linux-magazin.de/ausgabe.1999.02/Proc/proc.html>. <shameless plug> If you can't read German, try my other module,

WWW::Babelfish!</shameless plug>

There

are also two contributed modules: a module called Proc::Killall contributed by Aaron Sherman to kill all processes whose command-lines match a given pattern, and a module called Proc::Killfam by Stephen Lidie to kill a list of processes and their children. These modules are installed along with Proc::ProcessTable. Pod documentation is included in both of them.

## ## INSTALLATION

This module needs the File::Find and Storable modules in order to work. File::Find is generally included with perl distributions; Storable is available from CPAN.

After unpacking the tar file, do:

```
perl Makefile.PL
make
make test
make install
```

There is embedded POD documentation in ProcessTable.pm and Process/Process.pm.

## ## ACKNOWLEDGEMENTS

Thanks to the many people who have sent in ports and patches. Without them this module would be impossible to support on so many platforms. Patches are noted in the Changes file.

- \* David Paquet <David.Paquet@cnes.fr>: AIX port
- \* Mike Romberg  
<romberg@fsl.noaa.gov>: HPUX port
- \* Slaven Rezic <eserte@cs.tu-berlin.de>: FreeBSD port
- \* W. Phillip Moore <wpm@ms.com>: IRIX port
- \* Peter ? <hooft@natlab.research.philips.com>: IRIX version patch
- \* Bernhard Schmalhofer <Bernhard.Schmalhofer@gmx.de>: dec\_osf port
- \* Sean Eskins <sean@gilasoft.com>: bsdi port
- \* Peter Reich <pr@alles.prima.de>: netbsd port
- \* Aaron Sherman <ajs@ajs.com>: Proc::Killall module
- \* Steve Lidie <sol0@Lehigh.EDU>: Killfam.pm module
- \* Martin Lucina <mato@catalyst.net.nz>: Unixware 7.x port
- \* Shawn Clifford <shawn.a.clifford@lmco.com> SunOS port
- \* J Robert Ray <jrray@jrray.org>: Windows (Cygwin) port.
- \* Tom Wyant <twyant3@comcast.net>: Darwin port.

\* Mike Steinert <mike.steinert@motorola.com>: Nonstop-UX port.  
\* <bsd@openbsd.rutgers.edu>: Openbsd port.

Please note that Bernard Schmalhofer is no longer able to provide support for the dec\_osf port.

## ## COPYRIGHT

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Found in path(s):

\* /opt/cola/permits/2148525354\_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-ProcessTable-0.636/README.md

No license file was found, but licenses were detected in source scan.

---

abstract: 'Perl extension to access the unix process table'

author:

- 'Joachim Bargsten <jw@bargsten.org>'

build\_requires:

ExtUtils::MakeMaker: '0'

Test::More: '0'

configure\_requires:

ExtUtils::MakeMaker: '0'

dynamic\_config: 1

generated\_by: 'ExtUtils::MakeMaker version 7.64, CPAN::Meta::Converter version 2.150010'

license: artistic\_2

meta-spec:

url: <http://module-build.sourceforge.net/META-spec-v1.4.html>

version: '1.4'

name: Proc-ProcessTable

no\_index:

directory:

- t

- inc

requires:

File::Find: '0'

Storable: '0'

perl: '5.006'

resources:

repository: <https://github.com/jwbargsten/perl-proc-processtable>

version: '0.636'

x\_serialization\_backend: 'CPAN::Meta::YAML version 0.018'

Found in path(s):

```
* /opt/cola/permits/2148525354_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-ProcessTable-0.636/META.yml
```

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```
/* obstack.h - object stack macros
```

```
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```

```
This file is part of the GNU C Library.
```

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Found in path(s):

```
* /opt/cola/permits/2148525354_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-ProcessTable-0.636/os/obstack.h
```

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```
/* Copyright (c) 1998, David Paquet. All rights reserved. */
```

```
/* This file is free software; you can redistribute it and/or modify it */
```

```
/* under the same terms as Perl itself. */
```

Found in path(s):

```
* /opt/cola/permits/2148525354_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-ProcessTable-0.636/os/aix.h
```

```
* /opt/cola/permits/2148525354_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-ProcessTable-0.636/os/aix.c
```

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=head1 NAME

killall - Kill all instances of a process by pattern matching the command-line

=head1 SYNOPSIS

use Proc::Killall;

```
killall('HUP', 'xterm'); # SIGHUP all xterms
```

```
killall('KILL', '^netscape$'); # SIGKILL to "netscape"
```

## =head1 DESCRIPTION

This module provides one function, `C<killall()>`, which takes two parameters: a signal name or number (see `C<kill()>`) and a process pattern. This pattern is matched against the process' command-line as the `C<ps>` command would show it (`C<ps>` is not used internally, instead a package called `C<Proc::ProcessTable>` is used).

`C<killall>` searches the process table and sends that signal to all processes which match the pattern. The return value is the number of processes that were successfully signaled. If any kills failed, the `C<$!>` variable will be set based on that last one that failed (even if a successful kill happened afterward).

## =head1 AUTHOR

Written in 2000 by Aaron  
Sherman E<lt>ajs@ajs.comE<gt>

`C<Proc::Killall>` is copyright 2000 by Aaron Sherman, and may be distributed under the same terms as Perl itself.

## =head1 PREREQUISITES

`C<Proc::ProcessTable>` is required for `C<Proc::Killall>` to function.

## =head1 SEE ALSO

`L<perl>`, `L<perlfunc>`, `L<perlvar>`, `L<Proc::ProcessTable>`

Found in path(s):

\* /opt/cola/permits/2148525354\_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-ProcessTable-0.636/lib/Proc/Killall.pm

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/\*alan.martin@oracle.com

\* Copyright (c) 1998 by Mike Romberg ( romberg@fsl.noaa.gov )

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\*

\* This will probably only work under HPUX-10 or later.

\*

\* 8/26/99 Added "fname" field for consistency with other OS's - D. Urist

\*

\*/

Found in path(s):

\* /opt/cola/permits/2148525354\_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-

ProcessTable-0.636/os/HPUX.c

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/\*

Adapted from ps.cc by J Robert Ray <jrray@jrray.org>

ps.cc

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details. \*/

Found in path(s):

\* /opt/cola/permits/2148525354\_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-  
ProcessTable-0.636/os/MSWin32.c

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port of Proc::ProcessTable under AIX

New files

=====

os/aix.c

os/aix.h

hints/aix.pl

README.aix

Sample (low effort) application (please don't laugh ;)

=====

minitop.pl

xminitop

Blah

=====

o Documentation under AIX is rather cryptic and incomplete. I managed to read  
the process table using undocumented calls : getproc, getuser, getargs.

I've read C code from Vic Abell <abe@purdue.edu> in lsof-4.36, Jussi Maki  
<Jussi.Maki@csc.fi> and Marcel J.E. Mol <marcel@mesa.nl> in monitor-2.1.2

as well as a usenet news posted by Michael Wojcik <mike@raederle.mfltd.co.uk>  
(Article: 63164 of comp.unix.aix, Date: 04/04/95)

[lsof is a really nice tool and provides C examples to read low-level  
structures under nearly any UNIX system on earth. ]

o my port was only tested under the following conditions :

AIX 4.1.5  
perl 5.005\_02

o I am not a C programming terminator, so consider this  
as really ALPHA  
software.

o I wanted this tool to be usable by a non root user. This is why I don't read  
/dev/kmem unlike Vic and Jussi.

Bugs

====

o When mapping tty device numbers to names, I get a 'permission denied' message  
due to the /dev/.SRC-unix directory whose perms are as follows :

```
drwxrwx--- 2 root system 512 Aug 12 11:26 .SRC-unix/
```

This dir contains only a few unix domain socket files used by IBM's System  
Resource Controller, so it is of no interest for getting ttynames.

Maybe we should bind STDERR to /dev/null

o I sometimes get :

```
"Can't access `pctmem' field in class Proc::ProcessTable::Process"
```

It comes from the AUTOLOAD function defined in Process.pm. How come we are  
able to access fields like "pctcpu" but not "pctmem" ? I am puzzled.

We may change the 'croak' statement to a 'warn' but it'd be better if we  
knew where this error comes from.

o Hidden ones ? I bet there is some ...

Thanks

=====

Daniel J. Urist <durist@world.std.com>

Vic

Abell <abe@purdue.edu>  
Jussi Maki <Jussi.Maki@csc.fi>  
Cedric Le Goater <LE-GOATER\_Cedric@stna.dgac.fr>  
Gregory Kurz <KURZ\_Gregory@stna.dgac.fr>

## COPYRIGHT

=====

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Copyright (c) 1998, David Paquet. All rights reserved. This package is free software; you can redistribute it and/or modify it under the same terms as Perl itself.

--

David Paquet  
david-paquet@usa.net

Found in path(s):

\* /opt/cola/permits/2148525354\_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-ProcessTable-0.636/README.aix

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/\*

\* Copyright (c) 2001 by Shawn A. Clifford <shawn.a.clifford@lmco.com>

\* This file may be distributed under the same terms as Perl.

\*

\* Modification History:

\*

\* Who When Description

\* -----

\* SAC 30July2001 Original code

\*/

Found in path(s):

\* /opt/cola/permits/2148525354\_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-ProcessTable-0.636/os/SunOS.c

\* /opt/cola/permits/2148525354\_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-ProcessTable-0.636/os/SunOS.h

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/\* redistributed under the same terms as Perl itself. \*/

Found in path(s):

\* /opt/cola/permits/2148525354\_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-



ProcessTable-0.636/os/bsdi.h

No license file was found, but licenses were detected in source scan.

/\*\_

\* This code relies heavily on the Darwin "ps" command, which is available  
\* from Apple in the adv\_cmds portion of the Darwin distribution. The portions  
\* of this code which were included from that source are:

\*

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\* SUCH DAMAGE.

\*

\* The portions of this code which were necessary to tie into the Perl

\* Proc::ProcessTable module are:

\*

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\*

\* and may be reused under the same terms as Perl itself.

\*/

Found in path(s):

```
* /opt/cola/permits/2148525354_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-ProcessTable-0.636/os/darwin.h
```

No license file was found, but licenses were detected in source scan.

```
/* obstack.c - subroutines used implicitly by object stack macros
```

```
Copyright (C) 1988-2021 Free Software Foundation, Inc.
```

```
This file is part of the GNU C Library.
```

The GNU C Library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

The GNU C Library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with the GNU C Library; if not, see <http://www.gnu.org/licenses/>. \*/

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```

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Proc::ProcessTable

Please use [rt.cpan.org](http://rt.cpan.org) to submit bugs and patches.

#### MAINTENANCE STATUS

=====

This module is now being lightly "maintained" by Jonathan Swartz <[swartz@pobox.com](mailto:swartz@pobox.com)>. I have nearly zero knowledge of the implementation within but wanted to rescue the distribution from abandonment and try to get critical bug fixes out. This will need to be a community effort.

The source is in github -

<https://github.com/jwbargsten/perl-proc-processtable>

Commit bits will be generously granted, send me your github id.

#### STATUS

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This is BETA software; it seems to work, but use at your own risk :)

Currently works on darwin, nonstop-ux, Windows (both native MSWin32 and Cygwin), linux, solaris, aix, hpux, freebsd, irix, dec\_osf, bsd, netbsd, unixware 7.x, SunOS and openbsd. Please see the "README.osname" files for details on individual os implementations. Please see the file PORTING if you are interested in making it work on something else. Please see the file TODO for a list of issues that need to be addressed (and send me patches!).

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Comments, bug reports, patches and especially ports are greatly appreciated. If you want to submit a patch, \*please\* use standard context-diff format; if you're submitting a port, a tarball of the new files is great.

## DESCRIPTION

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This module is a first crack at providing a consistent interface to Unix (and maybe other multitasking OS's) process table information. The impetus for this came about with my frustration at having to parse the output of various systems' ps commands to check whether specific processes were running on different boxes at a larged mixed Unix site. The output format of ps was different on each OS, and sometimes changed with each new release of an OS. Also, running a ps subprocess from within a perl or shell script and parsing the output was not a very efficient or aesthetic way to do things.

With this module, you can do things like this:

```
# kill memory pigs
use Proc::ProcessTable;

my $t = Proc::ProcessTable->new;
foreach my $p ( @{$t->table} ) {
    if( $p->pctmem > 95 ){
        $p->kill(9);
    }
}
```

There is another short example in the file "example.pl" in the distribution. For a more elaborate example (in German), see <http://www.linux-magazin.de/ausgabe.1999.02/Proc/proc.html>.  
<shameless plug> If you can't read German, try my other module, WWW::Babelfish!</shameless plug>

There are also two contributed modules: a module called Proc::Killall contributed by Aaron Sherman to kill all processes whose command-lines match a given pattern, and a module called Proc::Killfam by Stephen Lidie to kill a list of processes and their children. These modules are installed along with Proc::ProcessTable. Pod documentation is included in both of them.

## INSTALLATION

=====

This module needs the File::Find and Storable modules in order to work. File::Find is generally included with perl distributions; Storable is available from CPAN.

After unpacking the tar file, do:

```
perl Makefile.PL
make
make test
make install
```

There is embedded POD documentation in ProcessTable.pm and Process/Process.pm.

## ACKNOWLEDGEMENTS

=====

Thanks to the many people who have sent in ports and patches. Without them this module would be impossible to support on so many platforms. Patches are noted in the Changes file.

David Paquet <David.Paquet@cnes.fr> AIX port  
Mike Romberg <romberg@fsl.noaa.gov> HPUX port  
Slaven Rezic <eserte@cs.tu-berlin.de> FreeBSD port  
W. Phillip Moore <wpm@ms.com> IRIX port  
Peter ? <hooft@natlab.research.philips.com> IRIX  
version patch  
Bernhard Schmalhofer <Bernhard.Schmalhofer@gmx.de> dec\_osf port  
Sean Eskins <sean@gilasoft.com> bsd port  
Peter Reich <pr@alles.prima.de> netbsd port  
Aaron Sherman <aajs@ajs.com> Proc::Killall module  
Steve Lidie <sol0@Lehigh.EDU> Killfam.pm module

Martin Lucina <mato@catalyst.net.nz> Unixware 7.x port  
Shawn Clifford <shawn.a.clifford@lmco.com> SunOS port  
J Robert Ray <jrray@jrray.org> Windows (Cygwin) port.  
Tom Wyant <twyant3@comcast.net> Darwin port.  
Mike Steinert <mike.steinert@motorola.com>  
Nonstop-UX port.  
<bsd@openbsd.rutgers.edu> Openbsd port.

Please note that Bernard Schmalhofer is no longer able to provide support for the dec\_osf port.

#### COPYRIGHT

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--

Daniel J. Urist  
durist@frii.com

Found in path(s):

\* /opt/cola/permits/2148525354\_1724000726.2031047/0/libproc-processtable-perl-0-636-orig-tar-gz/Proc-ProcessTable-0.636/README

# 1.304 bpfcc 0.29.1+ds-1ubuntu7

## 1.304.1 Available under license :

Format: <http://www.debian.org/doc/packaging-manuals/copyright-format/1.0/>

Upstream-Name: bcc

Source: <https://github.com/iovisor/bcc>

Files: \*

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## 1.305 udisks 2.10.1-6build1

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## 1.306 rich 13.7.1-1

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# 1.307 libtext-charwidth-perl 0.04-11build3

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# Below is stub documentation for your module. You'd better edit it!

=head1 NAME

Text::CharWidth - Get number of occupied columns of a string on terminal

=head1 SYNOPSIS

```
use Text::CharWidth qw(mbwidth mbswidth mblen);
mbwidth(string);
mbswidth(string);
mblen(string);
```

=head1 DESCRIPTION

This module supplies features similar as `wcwidth(3)` and `wcswidth(3)` in C language.

Characters have its own width on terminal depending on locale. For example, ASCII characters occupy one column per character, east Asian fullwidth characters (like Hiragana or Han Ideograph) occupy two columns per character, and combining characters (apperaring in ISO-8859-11 Thai, Unicode, and so on) occupy zero columns per character. `mbwidth()` gives the width of the first character of the given string and `mbswidth()` gives the width of the whole given string.

The names of `mbwidth` and `mbswidth` came from "multibyte" versions of `wcwidth` and `wcswidth` which are "wide character" versions.

`I<mblen(string)>` returns number of bytes of the first character of the string. Please note that a character may consist of multiple bytes in multibyte encodings such as UTF-8, EUC-JP, EUC-KR, GB2312, or Big5.

`I<mbwidth(string)>` returns the width of the first character of the string. `I<mbswidth(string)>` returns the width of the whole string.

Parameters are to be given in locale encodings, not always in UTF-8.

=head1 SEE ALSO

locale(5), wwidth(3), wcswidth(3)

=head1 AUTHOR

Tomohiro KUBOTA, E<lt>kubota@debian.orgE<gt>

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Text::CharWidth version 0.04

=====

This is a module to provide equivalent feature as `wcwidth(3)` and `wcswidth(3)`. This also provides `mblen(3)` equivalent subroutine.

`mbwidth()` and `mbswidth()` are provided subroutines corresponding `wcwidth(3)` and `wcswidth(3)` in C language. The prefix "mb" expresses that they handles "multibyte character" in C meaning, i.e., character encoding specified by `LC_CTYPE` locale.

These subroutines are used to get the width of characters on terminal. Though most characters have width of 1, there are exceptions. Fullwidth characters are characters with width of 2. Most of east Asian characters such as Hiragana, Katakana, Hangul, Han Ideogram are fullwidth. Combining characters are characters with width of 0. Unicode has many combining characters like diacritical marks. There are languages which need combining characters such as Thai and Vietnamese.

Thus, if you would like to format international texts on terminal, you will have to be aware of variation of character width and will want to use this module.

`mblen()` returns the number of bytes for the first character of the given string. In 8bit character encodings, it is always 1. However, in multibyte encodings, this may be more than 1.

The parameter is given in locale encoding, not UTF-8 string.  
(Of course locale encoding is UTF-8 in UTF-8 locales.)

#### Prerequisites

-----

This module requires your system to have `wcwidth()`, `wcswidth()`, and `mblen()` functions which are compliant with the Single Unix Specification.

#### Build and Install

-----

Please use standard way to build and install this module:

```
perl Makefile.PL
make
make install
```

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-----

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```

## 1.308 Isb-release-minimal 12.0-2

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## 1.310 apport-symptoms 0.25

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Upstream-Contact: Ubuntu Developers <[ubuntu-devel-discuss@lists.ubuntu.com](mailto:ubuntu-devel-discuss@lists.ubuntu.com)>

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## 1.313 htop 3.3.0-4build1

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# 1.316 reiserfsprogs 3.6.27-7.1build1

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\* /bin/grep

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Text::Iconv Version 1.6

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Description

-----

This module provides a Perl interface to the iconv() codeset conversion function, as defined by the Single UNIX Specification. For more details see the POD documentation embedded in the file Iconv.pm, which will also be installed as Text::Iconv(3) man page.

Prerequisites

-----

Your system should be compliant with the Single UNIX Specification or

at least provide `iconv_open()`, `iconv()` and `iconv_close()` functions compliant with it.

Note that the possible conversions and the quality of the conversions depend on the available `iconv` conversion tables and algorithms, which are in most cases supplied by the operating system vendor. Some systems also allow you to build your own tables (e.g., HP-UX, Tru64 UNIX, and AIX provide the `genxlt(1)` command).

It is also possible to use a separate `iconv` library such as GNU `libiconv` package, just make sure that the desired library is found (see <http://www.gnu.org/directory/localization/libiconv.html>).

#### Building the module

-----

Since the Single UNIX Specification only specifies an interface, several issues are left to the implementation to define, namely:

1. The supported codesets
2. The supported conversions
3. The names for the supported codesets

Please check your system documentation for the above points.

The module can be built using this sequence of commands:

```
perl Makefile.PL
make
make test
```

On some systems, the `iconv` functions are in `libc`; on others (and when you want to use a separate `iconv` library, such as GNU `libiconv`), you have to link with `-liconv`. `Makefile.PL` tries to automatically detect this. However, if your `iconv` library is in a non-standard path, you might have to help it.

You can specify library and include paths like this:

```
perl Makefile.PL LIBS='-L/path/to/lib' INC='-I/path/to/include'
```

You might also have to do this if you have multiple `iconv` implementations installed and want to use a specific one.

The purpose of the test scripts (run by "make test") is to check if an `iconv` library can be found, and if the `iconv` functions can be called. It is neither intended to find out which conversions are supported,

nor to test the quality of the conversions provided by your iconv library. However, since the iconv functions can only be tested by calling them, which in turn requires the specification of codesets to be converted. The test scripts try some conversions which seem to be widely supported. Conversions not supported by your iconv implementation are skipped, but for the purpose outlined above this is no problem, as it shows that the iconv functions are working. There is no standard way to find out which conversions are supported by an implementation.

This is also the reason why Text::Iconv can't provide platform-independent support for codeset identifiers (even if it would be nice to have).

#### Installation

-----

```
make install
```

#### Feedback

-----

Text::Iconv was tested on various platforms and with different iconv implementations.

If you built Text::Iconv on a platform where you needed to specify additional libraries, or where none of the codeset identifiers in the test scripts are supported, please drop me a note.

#### Thanks

-----

Thanks go to all those who reported bugs and suggested features.

Michael Piotrowski <mxp@dynamalabs.de>

Found in path(s):

```
* /opt/cola/permits/2148525491_1724000992.8618174/0/libtext-iconv-perl-1-7-orig-2-tar-bz2/Text-Iconv-1.7/README
```

# 1.320 bash-completion 2.11-8

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Any executables

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```

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```
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```

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'Gnomovision' (which makes passes at compilers) written by James Hacker.
```

```
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Ty Coon, President of Vice
```

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```
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```

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libtracefs(3)

=====

NAME

----

tracefs\_options - ftrace options, that can be controlled using tracefs library.

SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
enum tracefs_option_id {
    *TRACEFS_OPTION_INVALID*,
    *TRACEFS_OPTION_ANNOTATE*,
    *TRACEFS_OPTION_BIN*,
    *TRACEFS_OPTION_BLK_CGNAME*,
    *TRACEFS_OPTION_BLK_CGROUP*,
    *TRACEFS_OPTION_BLK_CLASSIC*,
    *TRACEFS_OPTION_BLOCK*,
    *TRACEFS_OPTION_CONTEXT_INFO*,
    *TRACEFS_OPTION_DISABLE_ON_FREE*,
    *TRACEFS_OPTION_DISPLAY_GRAPH*,
    *TRACEFS_OPTION_EVENT_FORK*,
    *TRACEFS_OPTION_FGRAPH_ABSTIME*,
    *TRACEFS_OPTION_FGRAPH_CPU*,
    *TRACEFS_OPTION_FGRAPH_DURATION*,
    *TRACEFS_OPTION_FGRAPH_IRQS*,
    *TRACEFS_OPTION_FGRAPH_OVERHEAD*,
    *TRACEFS_OPTION_FGRAPH_OVERRUN*,
    *TRACEFS_OPTION_FGRAPH_PROC*,
    *TRACEFS_OPTION_FGRAPH_TAIL*,
    *TRACEFS_OPTION_FUNC_STACKTRACE*,
    *TRACEFS_OPTION_FUNCTION_FORK*,
    *TRACEFS_OPTION_FUNCTION_TRACE*,

```

```

*TRACEFS_OPTION_GRAPH_TIME*,
*TRACEFS_OPTION_HEX*,
*TRACEFS_OPTION_IRQ_INFO*,
*TRACEFS_OPTION_LATENCY_FORMAT*,
*TRACEFS_OPTION_MARKERS*,
*TRACEFS_OPTION_OVERWRITE*,
*TRACEFS_OPTION_PAUSE_ON_TRACE*,
*TRACEFS_OPTION_PRINTK_MSG_ONLY*,
*TRACEFS_OPTION_PRINT_PARENT*,
*TRACEFS_OPTION_RAW*,
*TRACEFS_OPTION_RECORD_CMD*,
*TRACEFS_OPTION_RECORD_TGID*,
*TRACEFS_OPTION_SLEEP_TIME*,
*TRACEFS_OPTION_STACKTRACE*,
*TRACEFS_OPTION_SYM_ADDR*,
*TRACEFS_OPTION_SYM_OFFSET*,
*TRACEFS_OPTION_SYM_USEROBJ*,
*TRACEFS_OPTION_TRACE_PRINTK*,
*TRACEFS_OPTION_USERSTACKTRACE*,
*TRACEFS_OPTION_VERBOSE*,
};
--

```

## DESCRIPTION

-----

This

enum contains all ftrace options, that can be manipulated using tracefs library. More detailed information about each option is available in Documentation/trace/ftrace.rst from the Linux kernel tree, in the trace\_options section. Note that some ftrace options cannot be manipulated by this library, as they are intended for internal, debug purposes. These options control the tracers or the trace output. All options

have two states - on and off, the default state is different for each of them.

[verse]

--

Common options for all tracers:

\*TRACEFS\_OPTION\_INVALID\* Not a valid ftrace option, used by the API to indicate an error.

\*TRACEFS\_OPTION\_ANNOTATE\* Display when a new CPU buffer started.

\*TRACEFS\_OPTION\_BIN\* Display the formats in raw binary.

\*TRACEFS\_OPTION\_CONTEXT\_INFO\* Show only the event data. Hides the comm, PID, timestamp, CPU, and other useful data.

\*TRACEFS\_OPTION\_BLOCK\* When set, reading trace\_pipe will not block when polled.

\*TRACEFS\_OPTION\_DISABLE\_ON\_FREE\* When the free\_buffer is closed, tracing will stop.

\*TRACEFS\_OPTION\_DISPLAY\_GRAPH\* When set, the latency tracers will use function graph tracing instead of function tracing.

\*TRACEFS\_OPTION\_EVENT\_FORK\* When set, tasks with PIDs listed in set\_event\_pid will have the PIDs of their children added to set\_event\_pid when those tasks fork.

\*TRACEFS\_OPTION\_FUNCTION\_FORK\* When set, tasks with PIDs listed in set\_ftrace\_pid will have

the PIDs of their children added to `set_ftrace_pid` when those tasks fork.

`*TRACEFS_OPTION_FUNCTION_TRACE*` When enabled, the latency tracers will trace functions.

`*TRACEFS_OPTION_HEX*` Display numbers in a hexadecimal format.

`*TRACEFS_OPTION_IRQ_INFO*` Display the interrupt, preempt count, need resched data.

`*TRACEFS_OPTION_LATENCY_FORMAT*` Display additional information about the latency.

`*TRACEFS_OPTION_MARKERS*` When set, the `trace_marker` is enabled - writable (only by root).

`*TRACEFS_OPTION_OVERWRITE*` Controls what happens when the trace buffer is full. If set, the oldest events are discarded and overwritten. If disabled, then the newest events are discarded.

`*TRACEFS_OPTION_PAUSE_ON_TRACE*` When set, opening the trace file for read, will pause writing to the ring buffer. When the file is closed, tracing will be enabled again.

`*TRACEFS_OPTION_PRINTK_MSG_ONLY*` When set, `trace_printk()`s will only show the format and not their parameters.

`*TRACEFS_OPTION_PRINT_PARENT*` On function traces, display the calling (parent) function as well as the function being traced.

`*TRACEFS_OPTION_RAW*` Display raw numbers.

`*TRACEFS_OPTION_RECORD_CMD*` Save a mapping with a pid and corresponding command.

`*TRACEFS_OPTION_RECORD_TGID*` Save a mapping with a pid and corresponding Thread Group IDs.

`*TRACEFS_OPTION_STACKTRACE*` Record a stack trace after any trace event.

`*TRACEFS_OPTION_SYM_ADDR*` Display the function address as well as the function name.

`*TRACEFS_OPTION_SYM_OFFSET*` Display not only the function name, but also the offset in the function.

`*TRACEFS_OPTION_SYM_USEROBJ*` When `*TRACEFS_OPTION_USERSTACKTRACE*` is set, look up which object the address belongs to, and print the object and a relative address.

`*TRACEFS_OPTION_TRACE_PRINTK*` Disable `trace_printk()` from writing into the buffer.

`*TRACEFS_OPTION_USERSTACKTRACE*` Records a stack trace of the current user space thread after each trace event.

`*TRACEFS_OPTION_VERBOSE*` When `*TRACEFS_OPTION_LATENCY_FORMAT*` is enabled, print more detailed information.

Options, specific to function tracer:

`*TRACEFS_OPTION_FUNC_STACKTRACE*` Record a stack trace after every function.

Options, specific to function\_graph tracer:

`*TRACEFS_OPTION_FGRAPH_ABSTIME*` Display the timestamp at each line.

`*TRACEFS_OPTION_FGRAPH_CPU*` Display the CPU number of the CPU where the trace occurred.

`*TRACEFS_OPTION_FGRAPH_DURATION*` Display the duration of the amount of time at the end of each function, in microseconds.

`*TRACEFS_OPTION_FGRAPH_IRQS*` Trace functions that happen inside an interrupt.

`*TRACEFS_OPTION_FGRAPH_OVERHEAD*` Display a marker if a function takes longer than a certain amount of time.

`*TRACEFS_OPTION_FGRAPH_OVERRUN*` Display "overrun" of the call graph, in the case of functions missed due to big callstack.

`*TRACEFS_OPTION_FGRAPH_PROC*` Display the command of each process at every line.

`*TRACEFS_OPTION_FGRAPH_TAIL*` Display the function name on its return.

`*TRACEFS_OPTION_SLEEP_TIME*` Account time the task has been scheduled out as part of the function call.

`*TRACEFS_OPTION_GRAPH_TIME*` Display the time to call nested functions, if function profiler is enabled.

Options, specific to blk tracer:

\*TRACEFS\_OPTION\_BLK\_CGNAME\*  
\*TRACEFS\_OPTION\_BLK\_CGROUP\*  
\*TRACEFS\_OPTION\_BLK\_CLASSIC\* Display a more minimalistic output.

--

## FILES

-----

[verse]

--

\*tracefs.h\*

Header file to include in order to have access to the library APIs.

\*-ltracefs\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*libtracefs\*(3),

\*libtraceevent\*(3),

\*trace-cmd\*(1),

\_Documentation/trace/ftrace.rst\_ from the Linux kernel tree.

## AUTHOR

-----

[verse]

--

\*Steven Rostedt\* <rostedt@goodmis.org>

\*Tzvetomir Stoyanov\* <tz.stoyanov@gmail.com>

--

## REPORTING BUGS

-----

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-----

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libtracefs(3)

=====

## NAME

----

tracefs\_event\_systems, tracefs\_system\_events, tracefs\_event\_enable, tracefs\_event\_disable, tracefs\_event\_is\_enabled - Work with trace systems and events.

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
enum tracefs_event_state {
```

```
    TRACEFS_ERROR = -1,
```

```
    TRACEFS_ALL_DISABLED = 0,
```

```
    TRACEFS_ALL_ENABLED = 1,
```

```
    TRACEFS_SOME_ENABLED = 2,
```

```
};
```

```
char pass:[*]pass:[*]*tracefs_event_systems*(const char pass:[*]_tracing_dir_);
```

```
char pass:[*]pass:[*]*tracefs_system_events*(const char pass:[*]_tracing_dir_, const char pass:[*]_system_);
```

```
int *tracefs_event_enable*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_,  
    const char pass:[*]_event_);
```

```
int *tracefs_event_disable*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_,  
    const char pass:[*]_event_);
```

```
enum tracefs_enable_state *tracefs_event_is_enabled*(struct tracefs_instance pass:[*]_instance_,
```

```
    const char pass:[*]_system_, const char pass:[*]_event_);
```

--

## DESCRIPTION

-----

Trace systems and events related APIs.

The `*tracefs_event_systems()` function returns array of strings with the names of all registered trace systems, located in the given `_tracing_dir_` directory. This could be NULL or the location of the tracefs mount point for the trace systems of the local machine, or it may be a path to a copy of the tracefs directory from another machine. The last entry in the array is a NULL pointer. The array must be freed with `*tracefs_list_free()` API.

The `*tracefs_system_events()` function returns array of strings with the names of all registered trace events for given trace system specified by

`_system_`, located in the given `_tracing_dir_` directory. This could be NULL or the location of the tracefs mount point for the trace systems of the local machine, or it may be a path to a copy of the tracefs directory from another machine. The last entry in the array as a NULL pointer.

The array must be freed with `*tracefs_list_free()*` API.

The `*tracefs_event_enable()*` function enables a given event based on the `_system_` and `_event_` passed in for the given `_instance_`. If `_instance_` is NULL, then the top level tracing directory is used. If `_system_` and `_event_` are both NULL, then all events are enabled for the `_instance_`. If `_event_` is NULL then all events within the `_system_` are enabled. If `_system_` is NULL, then all systems are searched and any event within a system that matches `_event_` is enabled. Both `_system_` and `_event_` may be regular expressions as defined by `*regex*(3)`.

The `*tracefs_event_disable()*` function disables the events that match the `_system_` and `_event_` parameters for the given `_instance_`. What events are disabled follow the same rules as `*tracefs_event_enable()*` for matching events. That is, if `_instance_` is NULL, then the top level tracing directory is used. If both `_system_` and `_event_` are NULL then all events are disabled for the given `_instance_`, and so on.

The `*tracefs_event_is_enabled()*` returns if an event is enabled, a set of events are enabled, a system is enabled, or all events are enabled. If both `_system_` and `_event_` are NULL, then it returns the enable state of all events. If `_system_` is not NULL and `_event_` is NULL, then it will check if all the events in all the systems that `_system_` and return the enable state of those events. If `_system_` is NULL and `_event_` is not NULL, then it will match all the events in all systems that match `_event_` and return their enabled state. If both `_system_` and `_event_` are not NULL, then it will return the enabled state of all matching events. The enabled state is defined as:

`*TRACEFS_ERROR*` - An error occurred including no event were matched.

`*TRACEFS_ALL_DISABLED*` - All matching events are disabled.

`*TRACEFS_ALL_ENABLED*` - All matching events are enabled.

`*TRACEFS_SOME_ENABLED*` - Some matching events were enabled while others were not.

## RETURN VALUE

-----

The

`*tracefs_event_systems()*` and `*tracefs_system_events()*` functions return an array of strings. The last element in that array is a NULL pointer. The array must be freed with `*tracefs_list_free()*` API. In case of an error, NULL is returned.



Both `*tracefs_event_enable()*` and `*tracefs_event_disable()*` return 0 if they found any matching events (Note it does not check the previous status of the event. If `*tracefs_event_enable()*` finds an event that is already enabled, and there are no other errors, then it will return 0). If an error occurs, even if other events were found, it will return -1 and `errno` will be set. If no errors occur, but no events are found that match the `_system_` and `_event_` parameters, then -1 is returned and `errno` is not set.

The `*tracefs_event_is_enabled()*` returns the enabled status of the matching events or `TRACEFS_ERROR` on error.

#### EXAMPLE

```
-----
[source,c]
--
#include <tracefs.h>

char **systems = tracefs_event_systems(NULL);

if (systems) {
    int i = 0;
    /*
    Got registered trace systems from the top trace instance */
    while (systems[i]) {
        char **events = tracefs_system_events(NULL, systems[i]);
        if (events) {
            /* Got registered events in system[i] from the top trace instance */
            int j = 0;

            while (events[j]) {
                /* Got event[j] in system[i] from the top trace instance */
                j++;
            }
            tracefs_list_free(events);
        }
        i++;
    }
    tracefs_list_free(systems);
}
....
static int records_walk(struct tep_event *tep, struct tep_record *record, int cpu, void *context)
{
    /* Got recorded event on cpu */
    return 0;
}
...
struct tep_handle *tep = tracefs_local_events(NULL);
```

```
if (!tep) {
    /* Failed to initialise tep handler with local events */
    ...
}

errno = 0;
ret = tracefs_event_enable(NULL, "sched", NULL);
if (ret < 0 && !errno)
    printf("Could not find 'sched' events\n");
tracefs_event_enable(NULL, "irq", "irq_handler_(enter|exit)");

if (tracefs_iterate_raw_events(tep, NULL, NULL, 0, records_walk, NULL) <
0) {
    /* Error walking through the recorded raw events */
}
```

```
/* Disable all events */
```

```
tracefs_event_disable(NULL, NULL, NULL);
tep_free(tep);
```

```
--
```

## FILES

```
-----
```

```
[verse]
```

```
--
```

```
*tracefs.h*
```

Header file to include in order to have access to the library APIs.

```
*-ltracefs*
```

Linker switch to add when building a program that uses the library.

```
--
```

## SEE ALSO

```
-----
```

```
*libtracefs*(3),
```

```
*libtraceevent*(3),
```

```
*trace-cmd*(1)
```

## AUTHOR

```
-----
```

```
[verse]
```

```
--
```

```
*Steven Rostedt* <rostedt@goodmis.org>
```

```
*Tzvetomir Stoyanov* <tz.stoyanov@gmail.com>
```

```
--
```

## REPORTING BUGS

```
-----
```

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libtracefs(3)

=====

## NAME

----

tracefs\_cpu\_read\_buf, tracefs\_cpu\_buffered\_read\_buf, tracefs\_cpu\_flush\_buf  
- Reading trace\_pipe\_raw data returning a kbuffer

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
struct kbuffer pass:[*]*tracefs_cpu_read_buf*(struct tracefs_cpu pass:[*]_tcpu_, bool _nonblock_);  
struct kbuffer pass:[*]*tracefs_cpu_buffered_read_buf*(struct tracefs_cpu pass:[*]_tcpu_, bool _nonblock_);  
struct kbuffer pass:[*]*tracefs_cpu_flush_buf*(struct tracefs_cpu pass:[*]_tcpu_);
```

--

## DESCRIPTION

-----

This set of APIs can be used to read the raw data from the trace\_pipe\_raw files in the tracefs file system and return a kbuffer structure to read it with.

The \*tracefs\_cpu\_read\_buf()\* reads the trace\_pipe\_raw files associated to \_tcpu\_ and returns a kbuffer structure that can be used to iterate the events.

If \_nonblock\_ is set, and there's no data available, it will return immediately.

Otherwise

depending on how \_tcpu\_ was opened, it will block. If \_tcpu\_ was opened with nonblock set, then this \_nonblock\_ will make no difference.

The `*tracefs_cpu_buffered_read_buf()*` is basically the same as `*tracefs_cpu_read_buf()*` except that it uses a pipe through splice to buffer reads. This will batch reads keeping the reading from the ring buffer less intrusive to the system, as just reading all the time can cause quite a disturbance. Note, one difference between this and `*tracefs_cpu_read()*` is that it will read only in sub buffer pages. If the ring buffer has not filled a page, then it will not return anything, even with `_nonblock_` set. Calls to `*tracefs_cpu_flush_buf()*` or `*tracefs_cpu_flush()*` should be done to read the rest of the file at the end of the trace.

The `*tracefs_cpu_flush_buf()*` reads the `trace_pipe_raw` file associated by the `_tcpu_` and puts it into `_buffer_`, which must be the size of the sub buffer which is retrieved. This should be called at the end of tracing to get the rest of the data. This call will convert the file descriptor of `trace_pipe_raw` into non-blocking mode.

## RETURN VALUE

-----

The functions `*tracefs_cpu_read_buf()*`, `tracefs_cpu_buffered_read_buf()*` and `*tracefs_cpu_flush()*` returns a kbuffer descriptor that can be iterated over to find the events. Note, this descriptor is part of the `tracefs_cpu` structure and should not be freed. It will be freed. It returns NULL on error or if `nonblock` is set and there are no events available. In the case of no events, `errno` will be set with `EAGAIN`.

## EXAMPLE

-----

[source,c]

--

```
#include <stdlib.h>
```

```
#include <ctype.h>
```

```
#include <tracefs.h>
```

```
static void read_page(struct tep_handle *tep, struct kbuffer *kbuf)
```

```
{
```

```
    static struct trace_seq seq;
```

```
    struct tep_record record;
```

```
    if (seq.buffer)
```

```
        trace_seq_reset(&seq);
```

```
    else
```

```
        trace_seq_init(&seq);
```

```
    while ((record.data = kbuffer_read_event(kbuf, &record.ts))) {
```

```
        record.size = kbuffer_event_size(kbuf);
```

```
        kbuffer_next_event(kbuf, NULL);
```

```

tep_print_event(tep,
&seq, &record,
"%s-%d %9d\t%s: %s\n",
TEP_PRINT_COMM,
TEP_PRINT_PID,
TEP_PRINT_TIME,
TEP_PRINT_NAME,
TEP_PRINT_INFO);
trace_seq_do_printf(&seq);
trace_seq_reset(&seq);
}
}

int main (int argc, char **argv)
{
struct tracefs_cpu *tcpu;
struct tep_handle *tep;
struct kbuffer *kbuf;
int cpu;

if (argc < 2 || !isdigit(argv[1][0])) {
printf("usage: %s cpu\n\n", argv[0]);
exit(-1);
}

cpu = atoi(argv[1]);

tep = tracefs_local_events(NULL);
if (!tep) {
perror("Reading trace event formats");
exit(-1);
}

tcpu = tracefs_cpu_open(NULL, cpu, 0);
if (!tcpu) {
perror("Open CPU 0 file");
exit(-1);
}

while ((kbuf = tracefs_cpu_buffered_read_buf(tcpu, true))) {
read_page(tep, kbuf);
}

kbuf = tracefs_cpu_flush_buf(tcpu);
if (kbuf)
read_page(tep, kbuf);

tracefs_cpu_close(tcpu);

```

```
tep_free(tep);
```

```
return 0;
```

```
}
```

```
--
```

## FILES

```
-----
```

```
[verse]
```

```
--
```

```
*tracefs.h*
```

Header file to include in order to have access to the library APIs.

```
*-ltracefs*
```

Linker

switch to add when building a program that uses the library.

```
--
```

## SEE ALSO

```
-----
```

```
*tracefs_cpu_open*(3)
```

```
*tracefs_cpu_close*(3)
```

```
*tracefs_cpu_read*(3)
```

```
*tracefs_cpu_buffered_read*(3)
```

```
*tracefs_cpu_flush*(3)
```

```
*libtracefs*(3),
```

```
*libtraceevent*(3),
```

```
*trace-cmd*(1)
```

## AUTHOR

```
-----
```

```
[verse]
```

```
--
```

```
*Steven Rostedt* <rostedt@goodmis.org>
```

```
--
```

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libtracefs(3)

=====

NAME

----

tracefs\_function\_filter, tracefs\_function\_notrace, tracefs\_filter\_functions

- Functions to modify the the function trace filters

SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
int *tracefs_function_filter*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_filter_, const char pass:[*]_module_, int _flags_);
```

```
int *tracefs_function_notrace*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_filter_, const char pass:[*]_module_, int _flags_);
```

```
int *tracefs_filter_functions*(const char pass:[*]_filter_, const char pass:[*]_module_, char pass:[*]pass:[*]pass:[*]_list_);
```

--

DESCRIPTION

-----

`*tracefs_function_filter*` and `*tracefs_function_notrace*` can be used to limit the Linux kernel functions that would be traced by the function and function-graph tracers.

The `*tracefs_function_filter*` defines a list of functions that can be traced.

The `*tracefs_function_notrace*` defines a list of functions that will not be traced.

If a function is in both lists, it will not be traced.

They take an `_instance_`, that can be `NULL` for the top level tracing,

`_filter_`, a string that represents a filter that should be applied to define what functions are to be traced,

`_module_`, to limit the filtering on a specific module (or `NULL` to filter on all functions),

`_flags_` which holds control knobs on how the filters will be handled (see `*FLAGS*`) section below.

The `*tracefs_filter_functions*` returns a list of functions that can be filtered on via the `_filter_` and `_module_` that are supplied. If both `_filter_` and `_module_` are `NULL` then, all available functions that can be filtered is returned.

On success, `_list_` must be freed with `*tracefs_list_free()`(3).

The `_filter_` may be either a straight match of a function, a glob or regex(3). A glob is where `'pass:[*]'` matches zero or more characters, `'?'` will match zero or one character, and `'.'` only matches a period.

If the `_filter_` is determined to be a regex (where it contains anything other than alpha numeric characters, or `'.'`, `'pass:[*]'`, `'?'`) the `_filter_` will be processed as a regex(3) following the rules of regex(3), and `'.'` is not a period, but will match any one character. To force a regular expression, either prefix `_filter_` with a `'^'` or append it with a `'$'` as the `_filter_` does complete matches of the functions anyway.

If `_module_` is set and `_filter_` is NULL, this will imply the same as `_filter_` being equal to `"pass:[*]"`. Which will enable all functions for a given `_module_`. Otherwise the `_filter_` may be NULL if a previous call to `*tracefs_function_filter()` with the same `_instance_` had `*TRACEFS_FL_CONTINUE*` set and this call does not. This is useful to simply commit the previous filters. It may also be NULL if `*TRACEFS_FL_RESET*` is set and the previous call did not have the same `_instance_` and `*TRACEFS_FL_CONTINUE*` set. This is useful to just clear the filter.

## FLAGS

-----

The

`_flags_` parameter may have the following set, or be zero.

### `*TRACEFS_FL_RESET*` :

If `_flags_` contains `*TRACEFS_FL_RESET*`, then it will clear the filters that are currently set before applying `_filter_`. Otherwise, `_filter_` is added to the current set of filters already enabled. If this flag is set and the previous call to `tracefs_function_filter()` had the same `_instance_` and the `*TRACEFS_FL_CONTINUE*` flag was set, then the function will fail with a return of -1 and `errno` set to `EBUSY`.

### `*TRACEFS_FL_CONTINUE*` :

If `_flags_` contains `*TRACEFS_FL_CONTINUE*`, then `_filter_` will not take effect after a successful call to `tracefs_function_filter()`. This allows for multiple calls to `tracefs_function_filter()` to update the filter function and then a single call (one without the `*TRACEFS_FL_CONTINUE*` flag set) to commit all the filters.

It can be called multiple times to add more filters. A call without this flag set will commit the changes before returning (if the `_filter_` passed in successfully matched).

A `tracefs_function_filter()` call after one that had the `*TRACEFS_FL_CONTINUE*` flag set for the same instance will fail if `*TRACEFS_FL_RESET*` flag is set, as the reset flag is only applicable for the first filter to be added before committing.



**\*TRACEFS\_FL\_FUTURE\*** :

If `_flags_` contains **\*TRACEFS\_FL\_FUTURE\*** and `_module_` holds a string of a module, then if the module is not loaded it will attempt to write the filter with the module in the filter file. Starting in Linux v4.13 module functions could be added to the filter before they are loaded. The filter will be cached, and when the module is loaded, the filter will be set before the module executes, allowing to trace init functions of a module. This will only work if the `_filter_` is not a regular expression.

## RETURN VALUE

-----

For **\*tracefs\_function\_filter()\*** and **\*tracefs\_function\_notrace()\*** a return of 0 means success. If there is an error but the filtering was not started, then 1 is returned. If filtering was started but an error occurs, then -1 is returned. The state of the filtering may be in an unknown state.

If **\*TRACEFS\_FL\_CONTINUE\*** was set, and 0 or -1 was returned, then another call to **\*tracefs\_function\_filter()\*** must be done without **\*TRACEFS\_FL\_CONTINUE\*** set in order to commit (and close) the filtering.

For **\*tracefs\_filter\_functions()\***, a return of 0 means success, and the `_list_` parameter is filled with a list of function names that matched `_filter_` and `_module_`. `_list_` is a string array, where the last string pointer in the array is NULL. The `_list_` must be freed with **\*tracefs\_list\_free()\***. On failure, a negative is returned, and `_list_` is ignored.

## ERRORS

-----

**\*tracefs\_function\_filter()\*** can fail with the following errors:

**\*EINVAL\*** The filter is invalid or did not match any functions.

**\*EBUSY\*** The previous call of **\*tracefs\_function\_filter()\*** was called with the same instance and **\*TRACEFS\_FL\_CONTINUE\*** set and the current call had **\*TRACEFS\_FL\_RESET\*** set.

Other errors may also happen caused by internal system calls.

## EXAMPLE

-----

```
[source,c]
```

```
--
```

```
#include <stdio.h>
```

```

#include <errno.h>
#include <tracefs.h>

#define INST "dummy"

static const char *filters[] = { "run_init_process", "try_to_run_init_process", "dummy1", NULL };

int main(int argc, char *argv[])
{
    struct tracefs_instance *inst = tracefs_instance_create(INST);
    char **func_list;
    int ret;
    int i;

    if (!inst) {
        /* Error creating new trace instance */
    }

    if (tracefs_filter_functions("**lock*", NULL, &func_list) < 0) {
        printf("Failed to read filter functions\n");
        goto out;
    }
    printf("Ignoring the following functions:\n");
    for (i = 0; func_list[i]; i++)
        printf(" %s\n", func_list[i]);
    tracefs_list_free(func_list);

    /* Do not trace any function with the word "lock" in it */
    ret = tracefs_function_notrace(inst, "**lock*", NULL, TRACEFS_FL_RESET);
    if (ret) {
        printf("Failed to set the notrace filter\n");
        goto out;
    }

    /* First reset the filter */
    ret = tracefs_function_filter(inst, NULL, NULL,

        TRACEFS_FL_RESET | TRACEFS_FL_CONTINUE);
    if (ret) {
        printf("Failed to reset the filter\n");
        /* Make sure it is closed, -1 means filter was started */
        if (ret < 0)
            tracefs_function_filter(inst, NULL, NULL, 0);
    }

    for (i = 0; filters[i]; i++) {
        ret = tracefs_function_filter(inst, filters[i], NULL,
            TRACEFS_FL_CONTINUE);
    }
}

```

```

if (ret) {
    if (errno == EINVAL)
        printf("Filter %s did not match\n", filters[i]);
    else
        printf("Failed writing %s\n", filters[i]);
    }
}

ret = tracefs_function_filter(inst, "*", "ext4", 0);
if (ret) {
    printf("Failed to set filters for ext4\n");
    /* Force the function to commit previous filters */
    tracefs_function_filter(inst, NULL, NULL, 0);
}

```

out:

```

tracefs_instance_destroy(inst);
return ret;
}
--

```

## FILES

-----

[verse]

--

\*tracefs.h\*

Header file to include in order to have access to the library APIs.

\*-ltracefs\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*libtracefs\*(3),

\*libtraceevent\*(3),

\*trace-cmd\*(1)

## AUTHOR

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libtracefs(3)

=====

## NAME

----

tracefs\_local\_events, tracefs\_local\_events\_system, tracefs\_fill\_local\_events, tracefs\_load\_cmdlines, tracefs\_load\_headers -

Initialize a tep handler with trace events from the local system.

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
struct tep_handle pass:[*]*tracefs_local_events*(const char pass:[*]_tracing_dir_);
```

```
struct tep_handle pass:[*]*tracefs_local_events_system*(const char pass:[*]_tracing_dir_, const char pass:[*]_const pass:[*]_sys_names_);
```

```
int *tracefs_fill_local_events*(const char pass:[*]_tracing_dir_, struct tep_handle pass:[*]_tep_, int pass:[*]_parsing_failures_);
```

```
int *tracefs_load_cmdlines*(const char pass:[*]_tracing_dir_, struct tep_handle pass:[*]_tep_);
```

```
int *tracefs_load_headers*(const char pass:[*]_tracing_dir_, struct tep_handle pass:[*]_tep_);
```

--

## DESCRIPTION

-----

Functions for initializing a tep handler with trace events from the local

system.

The `*tracefs_local_events()*` function allocates a new `_tep_` handler and initializes it with events from all trace systems, located in the given `_tracing_dir_` directory. This could be `NULL` or the location of the `tracefs` mount point for the trace systems of the local machine, or it may be a path to a copy of the `tracefs` directory from another machine.

The `*tracefs_local_events_system()*` function allocates a new `_tep_` handler and initializes it with events from specified trace systems `_sys_names_`, located in the given `_tracing_dir_` directory. This could be `NULL` or the location of the `tracefs` mount point for the trace systems of the local machine, or it may be a path to a copy of the `tracefs` directory from another machine. The `_sys_names_` argument is an array of trace system names, that will be used for `_tep_` handler initialization. The last element in that array must be a `NULL` pointer.

The `*tracefs_fill_local_events()*` function initializes already allocated `_tep_` handler with events from all trace systems, located in the given `_tracing_dir_` directory. This could be `NULL` or the location of the `tracefs` mount point for the trace systems of the local machine, or it may be a path to a copy of the `tracefs` directory from another machine. The `_tep_` argument must be a pointer to already allocated `tep` handler, that is going to be initialized. The `_parsing_failures_` argument could be `NULL` or a pointer to an integer, where the number of failures while parsing the event files are returned.

The above functions will also load the mappings between pids and the process command line names. In some cases the `_tep_` handle is created with one of the above before tracing begins. As the mappings get updated during the trace, there may be a need to read the mappings again after the trace. The `*tracefs_load_cmdlines()*` does just that. The `_tracing_dir_` is the directory of the mount point to load from, or `NULL` to use the mount point of the `tracefs` file system.

The `*tracefs_load_headers()*` will read the "header\_page" of the events directory that will update the `_tep_` handle with information on how to parse the tracing ring buffer sub-buffer.

#### RETURN VALUE

-----

The `*tracefs_local_events()*` and `*tracefs_local_events_system()*` functions return pointer to allocated and initialized `_tep_` handler, or `NULL` in case of an error. The returned `_tep_` handler must be freed with `*tep_free*(3)`.

The `*tracefs_fill_local_events()*` function returns -1 in case of an error or 0 otherwise.

The `*tracefs_load_cmdlines()*` function returns -1 in case of an error, or 0 otherwise.

#### EXAMPLE

```
-----
[source,c]
--
#include <tracefs.h>

struct tep_handle *tep;
...
tep = tracefs_local_events(NULL);
if (!tep) {
    /* Failed to initialise tep handler with local events from top instance */
    ...
}
...
tep_free(tep);
...
const char *systems[] = {"ftrace", "irq", NULL};
tep = tracefs_local_events_system(NULL, systems);
if (!tep) {
    /* Failed to initialise tep handler with local events
from
    * ftrace and irq systems in top instance.
    */
    ...
}
...
tep_free(tep);
...
int parsing_failures;
tep = tep_alloc();
if (!tep) {
    /* Failed to allocate a tep handler */
    ...
}
if (tracefs_fill_local_events(NULL, tep, &parsing_failures) < 0) {
    /* Failed to initialise tep handler with local events from top instance */
}
tracefs_load_cmdlines(NULL, tep);
...
tep_free(tep);
--
FILES
-----
[verse]
```

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

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**\*Steven Rostedt\*** <rostedt@goodmis.org>

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>

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libtracefs(3)

=====

NAME

----

tracefs\_hist\_alloc, tracefs\_hist\_alloc\_2d, tracefs\_hist\_alloc\_nd, tracefs\_hist\_alloc\_nd\_cnt, tracefs\_hist\_free, tracefs\_hist\_add\_key, tracefs\_hist\_add\_key\_cnt, tracefs\_hist\_add\_value - Create and destroy event histograms

SYNOPSIS

-----

[verse]

--

```
##include <tracefs.h>*
```

```
enum *tracefs_hist_key_type* {  
    *TRACEFS_HIST_KEY_NORMAL* = 0,  
    *TRACEFS_HIST_KEY_HEX*,  
    *TRACEFS_HIST_KEY_SYM*,
```



```

*TRACEFS_HIST_KEY_SYM_OFFSET*,
*TRACEFS_HIST_KEY_SYSCALL*,
*TRACEFS_HIST_KEY_EXECNAME*,
*TRACEFS_HIST_KEY_LOG*,
*TRACEFS_HIST_KEY_USECS*,
*TRACEFS_HIST_KEY_MAX*
};

struct *tracefs_hist_axis* {
    const char pass:[*]_key_;
    enum tracefs_hist_key_type _type_;
};

struct tracefs_hist pass:[*]*tracefs_hist_alloc*(struct tracefs_tep pass:[*] _tep_,
    const char pass:[*]_system_, const char pass:[*]_event_,
    const char pass:[*]_key_, enum tracefs_hist_key_type _type_);
struct tracefs_hist pass:[*]*tracefs_hist_alloc_2d*(struct
    tracefs_tep pass:[*] _tep_,
    const char pass:[*]_system_, const char pass:[*]_event_,
    const char pass:[*]_key1_, enum tracefs_hist_key_type _type1_,
    const char pass:[*]_key2_, enum tracefs_hist_key_type _type2_);
struct tracefs_hist pass:[*]*tracefs_hist_alloc_nd*(struct tracefs_tep pass:[*] _tep_,
    const char pass:[*]_system_, const char pass:[*]_event_,
    struct tracefs_hist_axis pass:[*]_axes_);
struct tracefs_hist pass:[*]*tracefs_hist_alloc_nd_cnt*(struct tep_handle pass:[*]_tep_,
    const char pass:[*]_system_, const char pass:[*]_event_name_,
    struct tracefs_hist_axis_cnt pass:[*]_axes_);
void *tracefs_hist_free*(struct tracefs_hist pass:[*]_hist_);

int *tracefs_hist_add_key*(struct tracefs_hist pass:[*]_hist_, const char pass:[*]_key_,
    enum tracefs_hist_key_type _type_);
int *tracefs_hist_add_key_cnt*(struct tracefs_hist pass:[*]_hist_, const char pass:[*]_key_,
    enum tracefs_hist_key_type _type_, int _cnt_);
int *tracefs_hist_add_value*(struct
    tracefs_hist pass:[*]_hist_, const char pass:[*]_value_);
--

```

## DESCRIPTION

-----

Event histograms are created by the trigger file in the event directory.

The syntax can be complex and difficult to get correct. This API handles the syntax, and facilitates the creation and interaction with the event histograms.

See <https://www.kernel.org/doc/html/latest/trace/histogram.html> for more information.

`*tracefs_hist_alloc*`() allocates a "struct tracefs\_hist" descriptor of a one-dimensional histogram and returns the address of it. This descriptor must be freed by `*tracefs_hist_free*`()).

The `_tep_` is a trace event handle (see `*tracefs_local_events*(3)`), that holds the `_system_` and `_event_` that the histogram will be attached to. The `_system_` is the

system or group of the event. The `_event_` is the event to attach the histogram to. The `_key_` is a field of the event that will be used as the key(dimension) of the histogram. The `_type_` is the type of the `_key_`. See KEY TYPES below.

`*tracefs_hist_alloc_2d*()` allocates a "struct tracefs\_hist" descriptor of a two-dimensional histogram and returns the address of it. This descriptor must be freed by `*tracefs_hist_free*()`. The `_tep_` is a trace event handle (see `*tracefs_local_events*(3)`), that holds the `_system_` and `_event_` that the histogram will be attached to. The `_system_` is the system or group of the event. The `_event_` is the event to attach the histogram to. The `_key1_` is the first field of the event that will be used as the key(dimension) of the histogram. The `_type1_` is the type of the `_key1_`. See KEY TYPES below. The `_key2_` is the second field of the event that will be used as the key(dimension) of the histogram. The `_type2_` is the type of the `_key2_`. See KEY TYPES below.

`*tracefs_hist_alloc_nd*()` allocates a "struct tracefs\_hist" descriptor of an N-dimensional histogram and returns the address of it. This descriptor must be freed by `*tracefs_hist_free*()`. The `_tep_` is a trace event handle (see `*tracefs_local_events*(3)`), that holds the `_system_` and `_event_` that the histogram will be attached to. The `_system_` is the system or group of the event. The `_event_` is the event to attach the histogram to. The `_axes_` is an array of `_key_ / _type_` pairs, defining the dimensions of the histogram.

`*tracefs_hist_alloc_nd_cnt*()` will initialize a histogram descriptor that will be attached to the `_system_/_event_`. This only initializes the descriptor with the given `_axes_` keys as primaries. This only initializes the descriptor, it does not start the histogram in the kernel. The difference between this and `*tracefs_hist_alloc_nd*()` is that the `_axes_` parameter is of type `*struct tracefs_hist_axis_cnt*` and not `*struct tracefs_hist_axis*`.

`*tracefs_hist_free*()` frees the `_tracefs_hist_` descriptor. Note, it does not stop or disable the running histogram if it was started. `*tracefs_hist_destroy*()` needs to be called to do so.

`*tracefs_hist_add_key*()` Adds a secondary or tertiary key to the histogram.

The

key passed to `*tracefs_hist_alloc_nd*()` is the primary key of the histogram. The first time this function is called, it will add a secondary key (or two dimensional histogram). If this function is called again on the same histogram, it will add a `_tertiary_` key (or three dimensional histogram). The `_hist_` parameter is the histogram descriptor to add the `_key_` to. The `_type_` is the type of key to add (See KEY TYPES below).

The `*tracefs_hist_add_key_cnt*()` is the same as `*tracefs_hist_add_key*()` except that it allows to add a counter for the given type. Currently, there's only the `*buckets*` type that requires a counter. When adding a key with the `buckets` type, `*tracefs_hist_add_key*()` is not sufficient, as the `*buckets*` type requires a counter or bucket size. Use `*tracefs_hist_add_key_cnt*()` when specifying a key that is broken up into buckets, and pass in the size of those buckets

into `_cnt_`.

`*tracefs_hist_add_value*`() will add a value to record. By default, the value is simply

the "hitcount" of the number of times a instance of the histogram's key was hit. The `_hist_` is the histogram descriptor to add the value to. The `_value_` is a field in the histogram to add to when an instance of the key is hit.

## KEY TYPES

-----

`*tracefs_hist_alloc_nd*`() and `*tracefs_hist_add_key*`() both add a key and requires that key to have a type. The types may be:

`*TRACEFS_HIST_KEY_NORMAL*` or zero (0) which is to not modify the type.

`*TRACEFS_HIST_KEY_HEX*` to display the key in hex.

`*TRACEFS_HIST_KEY_SYM*` to display the key as a kernel symbol (if found). If the key is an address, this is useful as it will display the function names instead of just a number.

`*TRACEFS_HIST_KEY_SYM_OFFSET*` similar to `*TRACEFS_HIST_KEY_SYM*` but will also include the offset of the function to match the exact address.

`*TRACEFS_HIST_KEY_SYSCALL*` If the key is a system call "id" (the number passed from user space to the kernel to tell it what system call it is calling), then the name of the system call is displayed.

`*TRACEFS_HIST_KEY_EXECNAME*` If "common\_pid" is the key (the pid of the executing task), instead of showing the number, show the name of the running task.

`*TRACEFS_HIST_KEY_LOG*` will display the key in a binary logarithmic scale.

`*TRACEFS_HIST_KEY_USECS*` for use with "common\_timestamp" or `TRACEFS_HIST_TIMESTAMP`, in which case it will show the timestamp in microseconds instead of nanoseconds.

## RETURN VALUE

-----

`*tracefs_hist_alloc_nd*`() returns an allocated histogram descriptor which must be freed by `*tracefs_hist_free*`() or NULL on error.

All the other functions return zero on success or -1 on error.

If `*tracefs_hist_start*`() returns an error, a message may be displayed in the kernel that can be retrieved by `*tracefs_error_last*`()

## EXAMPLE

```
-----
[source,c]
--
#include <stdlib.h>
#include <ctype.h>
#include <unistd.h>
#include <tracefs.h>

enum commands {
    START,
    PAUSE,
    CONT,
    RESET,
    DELETE,
    SHOW,
};

static void parse_system_event(char *group,
char **system, char **event)
{
    *system = strtok(group, "/");
    *event = strtok(NULL, "/");
    if (!*event) {
        *event = *system;
        *system = NULL;
    }
}

static int parse_keys(char *keys, struct tracefs_hist_axis_cnt **axes)
{
    char *sav = NULL;
    char *key;
    int cnt = 0;

    for (key = strtok_r(keys, ",", &sav); key; key = strtok_r(NULL, ",", &sav)) {
        struct tracefs_hist_axis_cnt *ax;
        char *att;

        ax = realloc(*axes, sizeof(*ax) * (cnt + 2));
        if (!ax) {
            perror("Failed to allocate axes");
            exit(-1);
        }
        ax[cnt].key = key;
        ax[cnt].type = 0;
        ax[cnt + 1].key = NULL;
    }
}
```

```

ax[cnt + 1].type = 0;

*axes = ax;

att = strchr(key, '.');
if (att) {
    *att++ = '\0';
    if (strcmp(att, "hex") == 0)
        ax[cnt].type = TRACEFS_HIST_KEY_HEX;
    else if (strcmp(att, "sym") == 0)
        ax[cnt].type = TRACEFS_HIST_KEY_SYM;
    else if (strcmp(att, "sym_offset") == 0)
        ax[cnt].type = TRACEFS_HIST_KEY_SYM_OFFSET;
    else if (strcmp(att, "syscall") == 0)
        ax[cnt].type = TRACEFS_HIST_KEY_SYSCALL;
    else
if (strcmp(att, "exec") == 0)
    ax[cnt].type = TRACEFS_HIST_KEY_EXECNAME;
    else if (strcmp(att, "log") == 0)
        ax[cnt].type = TRACEFS_HIST_KEY_LOG;
    else if (strcmp(att, "usecs") == 0)
        ax[cnt].type = TRACEFS_HIST_KEY_USECS;
    else if (strncmp(att, "buckets", 7) == 0) {
        if (att[7] != '=' && !isdigit(att[8])) {
            fprintf(stderr, "'buckets' key type requires '=<size>\n");
            exit(-1);
        }
        ax[cnt].type = TRACEFS_HIST_KEY_BUCKETS;
        ax[cnt].cnt = atoi(&att[8]);
    } else {
        fprintf(stderr, "Undefined attribute '%s'\n", att);
        fprintf(stderr, " Acceptable attributes:\n");
        fprintf(stderr, "  hex, sym, sym_offset, syscall, exe, log, usecs\n");
        exit(-1);
    }
}
cnt++;
}
return cnt;
}

```

```

static void process_hist(enum commands cmd, const char *instance_name,
    char *group, char *keys, char *vals, char *sort,
    char *ascend, char *desc)
{
    struct tracefs_instance *instance = NULL;
    struct tracefs_hist *hist;
    struct tep_handle *tep;

```

```

struct
tracefs_hist_axis_cnt *axes = NULL;
char *system;
char *event;
char *sav;
char *val;
int ret;
int cnt;

if (instance_name) {
instance = tracefs_instance_create(instance_name);
if (!instance) {
fprintf(stderr, "Failed instance create\n");
exit(-1);
}
}

tep = tracefs_local_events(NULL);
if (!tep) {
perror("Could not read events");
exit(-1);
}

parse_system_event(group, &system, &event);

if (cmd == SHOW) {
char *content;
content = tracefs_event_file_read(instance, system, event,
"hist", NULL);
if (!content) {
perror("Reading hist file");
exit(-1);
}
printf("%s\n", content);
free(content);
return;
}

if (!keys) {
fprintf(stderr, "Command needs -k option\n");
exit(-1);
}

cnt = parse_keys(keys, &axes);
if (!cnt) {
fprintf(stderr, "No keys??\n");
exit(-1);
}

```

```

/* buckets require the nd_cnt function */
switch (cnt) {
case 2:
if (axes[1].type == TRACEFS_HIST_KEY_BUCKETS)
    cnt = -1;
/* fall through */
case
1:
if (axes[0].type == TRACEFS_HIST_KEY_BUCKETS)
    cnt = -1;
}

/* Show examples of hist1d and hist2d */
switch (cnt) {
case 1:
hist = tracefs_hist_alloc(tep, system, event,
    axes[0].key, axes[0].type);
break;
case 2:
hist = tracefs_hist_alloc_2d(tep, system, event,
    axes[0].key, axes[0].type,
    axes[1].key, axes[1].type);
break;
default:
/* Really, 1 and 2 could use this too */
hist = tracefs_hist_alloc_nd_cnt(tep, system, event, axes);
}
if (!hist) {
fprintf(stderr, "Failed hist create\n");
exit(-1);
}

if (vals) {
sav = NULL;
for (val = strtok_r(vals, ",", &sav); val; val = strtok_r(NULL, ",", &sav)) {
ret = tracefs_hist_add_value(hist, val);
if (ret) {
fprintf(stderr, "Failed to add value %s\n", val);
exit(-1);
}
}
}

if (sort) {
sav = NULL;
for (val = strtok_r(sort, ",", &sav); val; val = strtok_r(NULL, ",", &sav)) {
ret = tracefs_hist_add_sort_key(hist, val);
}
}

```

```

if (ret) {
    fprintf(stderr,
"Failed to add sort key/val %s\n", val);
    exit(-1);
}
}
}

if (ascend) {
    sav = NULL;
    for (val = strtok_r(ascend, ",", &sav); val; val = strtok_r(NULL, ",", &sav)) {
        ret = tracefs_hist_sort_key_direction(hist, val, TRACEFS_HIST_SORT_ASCENDING);
        if (ret) {
            fprintf(stderr, "Failed to add ascending key/val %s\n", val);
            exit(-1);
        }
    }
}

if (desc) {
    sav = NULL;
    for (val = strtok_r(desc, ",", &sav); val; val = strtok_r(NULL, ",", &sav)) {
        ret = tracefs_hist_sort_key_direction(hist, val, TRACEFS_HIST_SORT_DESCENDING);
        if (ret) {
            fprintf(stderr, "Failed to add descending key/val %s\n", val);
            exit(-1);
        }
    }
}

tracefs_error_clear(instance);

switch (cmd) {
case START:
    ret = tracefs_hist_start(instance, hist);
    if (ret) {
        char *err = tracefs_error_last(instance);
        if (err)
            fprintf(stderr, "\n%s\n", err);
    }
    break;
case PAUSE:
    ret = tracefs_hist_pause(instance, hist);
    break;
case CONT:
    ret = tracefs_hist_continue(instance,
hist);
    break;
}

```



```

case RESET:
    ret = tracefs_hist_reset(instance, hist);
    break;
case DELETE:
    ret = tracefs_hist_destroy(instance, hist);
    break;
case SHOW:
    /* Show was already done */
    break;
}
if (ret)
    fprintf(stderr, "Failed: command\n");
exit(ret);
}

int main (int argc, char **argv, char **env)
{
    enum commands cmd;
    char *instance = NULL;
    char *cmd_str;
    char *event = NULL;
    char *keys = NULL;
    char *vals = NULL;
    char *sort = NULL;
    char *desc = NULL;
    char *ascend = NULL;

    if (argc < 2) {
        fprintf(stderr, "usage: %s command [-B instance][-e [system/]event][-k keys][-v vals][-s sort]\n", argv[0]);
        fprintf(stderr, "    [-a ascending][-d descending]\n");
        exit(-1);
    }

    cmd_str = argv[1];

    if (!strcmp(cmd_str, "start"))
        cmd = START;
    else if (!strcmp(cmd_str, "pause"))
        cmd = PAUSE;
    else if (!strcmp(cmd_str, "cont"))
        cmd = CONT;
    else if (!strcmp(cmd_str, "reset"))
        cmd = RESET;
    else if (!strcmp(cmd_str, "delete"))
        cmd = DELETE;
    else if
        (!strcmp(cmd_str, "show"))
        cmd = SHOW;

```

```

else {
    fprintf(stderr, "Unknown command %s\n", cmd_str);
    exit(-1);
}

for (;;) {
    int c;

    c = getopt(argc - 1, argv + 1, "e:k:v:B:s:d:a:");
    if (c == -1)
        break;

    switch (c) {
    case 'e':
        event = optarg;
        break;
    case 'k':
        keys = optarg;
        break;
    case 'v':
        vals = optarg;
        break;
    case 'B':
        instance = optarg;
        break;
    case 's':
        sort = optarg;
        break;
    case 'd':
        desc = optarg;
        break;
    case 'a':
        ascend = optarg;
        break;
    }
}
if (!event) {
    event = "kmem/kmalloc";
    if (!keys)
        keys = "call_site.sym,bytes_req";
    if (!vals)
        vals = "bytes_alloc";
    if (!sort)
        sort = "bytes_req,bytes_alloc";
    if (!desc)
        desc = "bytes_alloc";
}
process_hist(cmd, instance, event, keys, vals, sort, ascend, desc);

```

}

--

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE

ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1),**

**\*tracefs\_hist\_pause\*(3),**

**\*tracefs\_hist\_continue\*(3),**

**\*tracefs\_hist\_reset\*(3)**

## AUTHOR

-----

[verse]

--

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--

## REPORTING BUGS

-----

Report bugs to <linux-trace-devel@vger.kernel.org>

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-----

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## RESOURCES

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<https://git.kernel.org/pub/scm/libs/libtrace/libtracefs.git/>

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\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs-hist.txt

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libtracefs(3)

=====

NAME

----

tracefs\_instance\_get\_stat, tracefs\_instance\_put\_stat, tracefs\_buffer\_stat\_entries, tracefs\_buffer\_stat\_overrun, tracefs\_buffer\_stat\_commit\_overrun, tracefs\_buffer\_stat\_bytes, tracefs\_buffer\_stat\_event\_timestamp, tracefs\_buffer\_stat\_timestamp, tracefs\_buffer\_stat\_dropped\_events, tracefs\_buffer\_stat\_read\_events  
- Handling tracing buffer stats

SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
struct tracefs_buffer_stat pass:[*]*tracefs_instance_get_stat*(struct tracefs_instance pass:[*]_instance_, int _cpu_);  
void *tracefs_instance_put_stat*(struct tracefs_buffer_stat pass:[*]_tstat_);  
ssize_t *tracefs_buffer_stat_entries*(struct tracefs_buffer_stat pass:[*]_tstat_);  
ssize_t *tracefs_buffer_stat_overrun*(struct tracefs_buffer_stat pass:[*]_tstat_);  
ssize_t *tracefs_buffer_stat_commit_overrun*(struct tracefs_buffer_stat pass:[*]_tstat_);  
ssize_t *tracefs_buffer_stat_bytes*(struct  
    tracefs_buffer_stat pass:[*]_tstat_);  
long long *tracefs_buffer_stat_event_timestamp*(struct tracefs_buffer_stat pass:[*]_tstat_);  
long long *tracefs_buffer_stat_timestamp*(struct tracefs_buffer_stat pass:[*]_tstat_);  
ssize_t *tracefs_buffer_stat_dropped_events*(struct tracefs_buffer_stat pass:[*]_tstat_);  
ssize_t *tracefs_buffer_stat_read_events*(struct tracefs_buffer_stat pass:[*]_tstat_);  
--
```

DESCRIPTION

-----

This set of functions read and parse the tracefs/per\_cpu/cpuX/stats file. These files hold the statistics of the per CPU ring buffer, such as how many events are in the ring buffer, how many have been read and so on.

The `*tracefs_instance_get_stat()*` function will read and parse a given statistics file for a given `_instance_` and `_cpu_`. As the ring buffer is split into per\_cpu buffers, the information is only associated to the given `_cpu_`. The returned `tracefs_buffer_stat` pointer can be used with the other `*tracefs_buffer_stat*` functions and must be freed with `*tracefs_instance_put_stat()*`.

The

`*tracefs_instance_put_stat()*` will free the resources allocated for the given `_stat_` that was created by `*tracefs_instance_get_stat()*`.

The `*tracefs_buffer_stat_entries()*` returns the number of events that are currently in the ring buffer associated with `_tstat_`.

The `*tracefs_buffer_stat_overrun()*` returns the number of events that were lost by the ring buffer writer overrunning the reader.

The `*tracefs_buffer_stat_commit_overrun()*` returns the number of events that were lost because the ring buffer was too small and an interrupt interrupted a lower context event being recorded and it added more events than the ring buffer could hold. Note this is not a common occurrence and when it happens it means that something was not set up properly.

The `*tracefs_buffer_stat_bytes()*` returns the number of bytes that the current events take up. Note, it includes the meta data for the events, but does not include the meta data for the sub-buffers.

The `*tracefs_buffer_stat_event_timestamp()*` returns the timestamp of the last event in the ring buffer.

The `*tracefs_buffer_stat_timestamp()*` returns the current timestamp of the ring buffer. Note, it is only read when `*tracefs_instance_get_stat()*` is called. It will have the timestamp of the ring buffer when that function was called.

The `*tracefs_buffer_stat_dropped_events()*` returns the number of events that were dropped if overwrite mode is disabled. It will show the events that were lost because the writer caught up to the reader and could not write any more events.

The `*tracefs_buffer_stat_read_events()*` returns the number of events that were consumed by a reader.

## RETURN VALUE

-----

The `*tracefs_instance_get_stat()*` returns a `tracefs_buffer_stat` structure that can be used to retrieve the statistics via the other functions. It must be freed with `*tracefs_instance_put_stat()*`.

The other functions that return different values from the `tracefs_buffer_stat` structure all return the value, or  
-1 if the value was not found.

## EXAMPLE

-----

```

[source,c]
--
#include <stdlib.h>
#include <unistd.h>
#include <tracefs.h>

int main(int argc, char **argv)
{
    char *trace;
    char buf[1000];
    int ret;
    int i;

    for (i = 0; i < sizeof(buf) - 1; i++) {
        buf[i] = '0' + i % 10;
    }
    buf[i] = '\0';

    tracefs_instance_clear(NULL);

    for (i = 0; i < 4; i++) {
        ret = tracefs_printf(NULL, "%s\n", buf);
        if (ret < 0)
            perror("write");
    }

    trace = tracefs_instance_file_read(NULL, "trace", NULL);
    printf("%s\n", trace);
    free(trace);

    for (i = 0; i < sysconf(_SC_NPROCESSORS_CONF); i++) {
        struct tracefs_buffer_stat *tstat;
        ssize_t entries, eread;

        tstat = tracefs_instance_get_stat(NULL, i);
        if (!tstat)
            continue;

        entries = tracefs_buffer_stat_entries(tstat);
        eread = tracefs_buffer_stat_read_events(tstat);
        if (!entries && !eread) {
            tracefs_instance_put_stat(tstat);
            continue;
        }

        printf("CPU: %d\n", i);
        printf("\tentries: %zd\n", entries);
        printf("\toverrun: %zd\n",

```

```
tracefs_buffer_stat_overrun(tstat);
printf("\tcommit_overrun: %zd\n", tracefs_buffer_stat_commit_overrun(tstat));
printf("\tbodyes: %zd\n", tracefs_buffer_stat_bytes(tstat));
printf("\tevent_timestamp: %lld\n", tracefs_buffer_stat_event_timestamp(tstat));
printf("\ttimestamp: %lld\n", tracefs_buffer_stat_timestamp(tstat));
printf("\tdropped_events: %zd\n", tracefs_buffer_stat_dropped_events(tstat));
printf("\tread_events: %zd\n", tstat->read_events);
```

```
tracefs_instance_put_stat(tstat);
}
}
```

--

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>

--

## REPORTING BUGS

-----

Report bugs to <linux-trace-devel@vger.kernel.org>

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\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs-instances-stat.txt

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libtracefs(3)

=====

NAME

----

tracefs\_synth\_echo\_cmd, tracefs\_synth\_get\_start\_hist, tracefs\_synth\_get\_name, tracefs\_synth\_raw\_fmt, tracefs\_synth\_show\_event, tracefs\_synth\_show\_start\_hist, tracefs\_synth\_show\_end\_hist, tracefs\_synth\_get\_event - Retrieve data of synthetic events.

SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
int *tracefs_synth_echo_cmd*(struct trace_seq pass:[*]_seq_, struct tracefs_synth pass:[*]_synth_);  
struct tracefs_hist pass:[*]*tracefs_synth_get_start_hist*(struct tracefs_synth pass:[*]_synth_);
```

```
const char pass:[*]*tracefs_synth_get_name*(struct tracefs_synth pass:[*]_synth_);  
int *tracefs_synth_raw_fmt*(struct trace_seq pass:[*]_seq_, struct tracefs_synth pass:[*]_synth_);  
const char pass:[*]*tracefs_synth_show_event*(struct tracefs_synth pass:[*]_synth_);  
const char pass:[*]*tracefs_synth_show_start_hist*(struct tracefs_synth pass:[*]_synth_);  
const char pass:[*]*tracefs_synth_show_end_hist*(struct  
tracefs_synth pass:[*]_synth_);  
struct tep_event pass:[*]*tracefs_synth_get_event*(struct tep_handle pass:[*]_tep_, struct tracefs_synth  
pass:[*]_synth_);
```

--

DESCRIPTION

-----

Synthetic events are dynamic events that are created by matching two other events which triggers a synthetic event. One event is the starting event which some field is recorded, and when the second event is executed, if it has a field (or fields) that matches the starting event's field (or fields) then it will trigger the synthetic event. The field values other than the matching fields may be passed from the starting event to the end event to perform calculations on, or to simply pass as a parameter to the synthetic event.



One common use case is to set "sched\_waking" as the starting event. This event is triggered when a process is awoken. Then set "sched\_switch" as the ending event. This event is triggered when a new task is scheduled on the CPU. By setting the "common\_pid" of both events as the matching fields, the time between the two events is considered the wake up latency of that process. Use `*TRACEFS_TIMESTAMP*` as a field for both events to calculate the delta in nanoseconds, or use `*TRACEFS_TIMESTAMP_USECS*` as the compare fields for both events to calculate the delta in microseconds. This is used as the example below.

See `*tracefs_synth_alloc*(3)` for allocation of synthetic events, and `*tracefs_synth_create*()` for creating the synthetic event on the system.

`*tracefs_synth_echo_cmd*()` acts like `*tracefs_synth_create*()`, but instead of creating the synthetic event in the system, it will write the echo commands to manually create it in the `_seq_` given.

`*tracefs_synth_get_start_hist*()` returns a struct `tracefs_hist` descriptor describing the histogram used to create the synthetic event.

[verse]

```
--
enum tracefs_synth_handler {
    *TRACEFS_SYNTH_HANDLE_MATCH*,
    *TRACEFS_SYNTH_HANDLE_MAX*,
    *TRACEFS_SYNTH_HANDLE_CHANGE*,
};
--
```

`*tracefs_synth_get_name*()` returns the name of the synthetic event or NULL on error. The returned string belongs to the synth event object and is freed with the event by `*tracefs_synth_free*()`.

`*tracefs_synth_raw_fmt*()` writes the raw format strings (dynamic event and histograms) of the synthetic event in the `_seq_` given.

`*tracefs_synth_show_event*()` returns the format of the dynamic event used by the synthetic event or NULL on error. The returned string belongs to the synth event object and is freed with the event by `*tracefs_synth_free*()`.

`*tracefs_synth_show_start_hist*()` returns the format of the start histogram used by the synthetic event or NULL on error. The returned string belongs to the synth event object and is freed with the event by `*tracefs_synth_free*()`.

`*tracefs_synth_show_end_hist*()` returns the format of the end histogram used by the synthetic event or NULL on error. The returned string belongs to the synth event object and is freed with the event by `*tracefs_synth_free*()`.

The `*tracefs_synth_get_event*()` function returns a tep event, describing the given synthetic event. The API detects any newly created or removed dynamic events. The returned pointer to tep event is controlled by `@tep` and must not be freed.

## RETURN VALUE

-----

`*tracefs_synth_get_name*()`, `*tracefs_synth_show_event*()`, `*tracefs_synth_show_start_hist*()` and `*tracefs_synth_show_end_hist*()` return a string owned by the synth event object.

The `*tracefs_synth_get_event*()` function returns a pointer to a tep event or NULL in case of an error or if the requested synthetic event is missing. The returned pointer to tep event is controlled by `@tep` and must not be freed.

All other functions return zero on success or -1 on error.

## ERRORS

-----

The following errors are for all the above calls:

`*EPERM*` Not run as root user when required.

`*EINVAL*` Either a parameter is not valid (NULL when it should not be) or a field that is not compatible for calculations.

`*ENODEV*` An event or one of its fields is not found.

`*EBADE*`

The fields of the start and end events are not compatible for either matching or comparing.

`*ENOMEM*` not enough memory is available.

And more errors may have happened from the system calls to the system.

## EXAMPLE

-----

See `*tracefs_sql*(3)` for a more indepth use of some of this code.

[source,c]

--

```
#include <stdlib.h>
```

```
#include <tracefs.h>
```

```
#define start_event "sched_waking"
```

```
#define start_field "pid"
```

```

#define end_event "sched_switch"
#define end_field "next_pid"

#define match_name "pid"

static struct tracefs_synth *synth;

static void make_event(void)
{
    struct tep_handle *tep;

    /* Load all events from the system */
    tep = tracefs_local_events(NULL);

    /* Initialize the synthetic event */
    synth = tracefs_synth_alloc(tep, "wakeup_lat",
        NULL, start_event,
        NULL, end_event,
        start_field, end_field,
        match_name);

    /* The tep is no longer needed */
    tep_free(tep);

    /* Save the "prio" field as "prio" from the start event */
    tracefs_synth_add_start_field(synth,
        "prio", NULL);

    /* Save the "next_comm" as "comm" from the end event */
    tracefs_synth_add_end_field(synth, "next_comm", "comm");

    /* Save the "prev_prio" as "prev_prio" from the end event */
    tracefs_synth_add_end_field(synth, "prev_prio", NULL);

    /*
     * Take a microsecond time difference between end and start
     * and record as "delta"
     */
    tracefs_synth_add_compare_field(synth, TRACEFS_TIMESTAMP_USECS,
        TRACEFS_TIMESTAMP_USECS,
        TRACEFS_SYNTH_DELTA_END, "delta");

    /* Only record if start event "prio" is less than 100 */
    tracefs_synth_append_start_filter(synth, TRACEFS_FILTER_COMPARE,
        "prio", TRACEFS_COMPARE_LT, "100");

    /*

```

```

* Only record if end event "next_prio" is less than 50
* or the previous task's prio was not greater than or equal to 100.
* next_prio < 50 || !(prev_prio >= 100)
*/
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_COMPARE,
    "next_prio", TRACEFS_COMPARE_LT, "50");
tracefs_synth_append_end_filter(synth,
TRACEFS_FILTER_OR, NULL, 0, NULL);
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_NOT, NULL, 0, NULL);
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_OPEN_PAREN, NULL, 0, NULL);
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_COMPARE,
    "prev_prio", TRACEFS_COMPARE_GE, "100");
/*
* Note, the above only added: "next_prio < 50 || !(prev_prio >= 100"
* That's because, when the synth is executed, the remaining close parenthesis
* will be added. That is, the string will end up being:
* "next_prio < 50 || !(prev_prio >= 100)" when one of tracefs_sync_create()
* or tracefs_sync_echo_cmd() is run.
*/
}

/* Display how to create the synthetic event */
static void show_event(void)
{
    struct trace_seq s;

    trace_seq_init(&s);

    tracefs_synth_echo_cmd(&s, synth);
    trace_seq_terminate(&s);
    trace_seq_do_printf(&s);
    trace_seq_destroy(&s);
}

int main (int argc, char **argv)
{
    make_event();

    if (argc > 1) {
        if (!strcmp(argv[1], "create")) {
            /* Create the
            synthetic event */
            tracefs_synth_create(synth);
        } else if (!strcmp(argv[1], "delete")) {
            /* Delete the synthetic event */
            tracefs_synth_destroy(synth);
        } else {
            printf("usage: %s [create|delete]\n", argv[0]);

```

```

    exit(-1);
}
} else
show_event();

tracefs_synth_free(synth);

return 0;
}
--

```

## FILES

-----

[verse]

--

\*tracefs.h\*

Header file to include in order to have access to the library APIs.

\*-ltracefs\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*libtracefs\*(3),  
\*libtraceevent\*(3),  
\*trace-cmd\*(1),  
\*tracefs\_hist\_alloc\*(3),  
\*tracefs\_hist\_alloc\_2d\*(3),  
\*tracefs\_hist\_alloc\_nd\*(3),  
\*tracefs\_hist\_free\*(3),  
\*tracefs\_hist\_add\_key\*(3),  
\*tracefs\_hist\_add\_value\*(3),  
\*tracefs\_hist\_add\_name\*(3),  
\*tracefs\_hist\_start\*(3),  
\*tracefs\_hist\_destory\*(3),  
\*tracefs\_hist\_add\_sort\_key\*(3),  
\*tracefs\_hist\_sort\_key\_direction\*(3),  
\*tracefs\_synth\_alloc\*(3),  
\*tracefs\_synth\_add\_match\_field\*(3),  
\*tracefs\_synth\_add\_compare\_field\*(3),  
\*tracefs\_synth\_add\_start\_field\*(3),  
\*tracefs\_synth\_add\_end\_field\*(3),  
\*tracefs\_synth\_append\_start\_filter\*(3),  
\*tracefs\_synth\_append\_end\_filter\*(3),  
\*tracefs\_synth\_free\*(3),  
\*tracefs\_synth\_create\*(3),  
\*tracefs\_synth\_destroy\*(3),  
\*tracefs\_synth\_complete\*(3),

\*tracefs\_synth\_trace\*(3),  
\*tracefs\_synth\_snapshot\*(3),  
\*tracefs\_synth\_save\*(3),

## AUTHOR

-----

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--

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--

## REPORTING BUGS

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Report bugs to <linux-trace-devel@vger.kernel.org>

## LICENSE

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## RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtracefs.git/>

## COPYING

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Found in path(s):

\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs-synth-info.txt

No license file was found, but licenses were detected in source scan.

libtracefs(3)

=====

## NAME

----

tracefs\_print\_init, tracefs\_print\_close, tracefs\_printf, tracefs\_vprintf -  
Open, close and write formatted strings in the trace buffer.

## SYNOPSIS

-----

[verse]

--

\*#include <tracefs.h>\*

```
int *tracefs_print_init*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_printf*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_fmt_, ...);
int *tracefs_vprintf*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_fmt_, va_list _ap_);
void *tracefs_print_close*(struct tracefs_instance pass:[*]_instance_);
```

--

## DESCRIPTION

-----

Set of functions to write formatted strings in the trace buffer.

See Documentation/trace/ftrace.rst from the Linux kernel tree for more information about writing data from user space in the trace buffer. All these APIs have `_instance_` as a first argument. If `NULL` is passed as `_instance_`, the top trace instance is used.

The

`*tracefs_print_init()*` function initializes the library for writing into the trace buffer of the selected `_instance_`. It is not mandatory to call this API before writing strings, any of the `printf` APIs will call it automatically, if the library is not yet initialized. But calling `*tracefs_print_init()*` in advance will speed up the writing.

The `*tracefs_printf()*` function writes a formatted string in the trace buffer of the selected `_instance_`. The `_fmt_` argument is a string in `printf` format, followed by variable arguments `...`.

The `*tracefs_vprintf()*` function writes a formatted string in the trace buffer of the selected `_instance_`. The `_fmt_` argument is a string in `printf` format, followed by list `_ap_` of arguments.

The `*tracefs_print_close()*` function closes the resources, used by the library for writing in the trace buffer of the selected instance.

## RETURN VALUE

-----

The `*tracefs_print_init()*`, `*tracefs_printf()*`, and `*tracefs_vprintf()*` functions return 0 if the operation is successful, or -1 in case of an error.

## EXAMPLE

-----

[source,c]

--

```
#include <tracefs.h>
```

```
if (tracefs_print_init(NULL) < 0) {
/* Failed to initialize the library for writing in the trace buffer of the top trace instance */
}
```

```
void foo_print(char *format, ...)
```

```
{
```

```
va_list ap;
va_start(ap, format);
if (tracefs_vprintf(NULL, format, ap) < 0) {
    /* Failed to print in the trace buffer */
}
va_end(ap);
}
```

```
void foo_print_string(char *message)
{
    if (tracefs_printf(NULL, "Message from user space: %s", message) < 0) {
        /* Failed to print in the trace buffer */
    }
}
```

```
tracefs_print_close();
```

```
--
```

## FILES

```
-----
```

```
[verse]
```

```
--
```

```
*tracefs.h*
```

Header file to include in order to have access to the library APIs.

```
*-ltracefs*
```

Linker switch to add when building a program that uses the library.

```
--
```

## SEE ALSO

```
-----
```

```
*libtracefs*(3),
```

```
*libtraceevent*(3),
```

```
*trace-cmd*(1),
```

Documentation/trace/ftrace.rst from the Linux kernel tree

## AUTHOR

```
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[verse]
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```

```
*Steven Rostedt* <rostedt@goodmis.org>
```

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*Tzvetomir Stoyanov*
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```
<tz.stoyanov@gmail.com>
```

```
--
```

## REPORTING BUGS

```
-----
```

Report bugs to <linux-trace-devel@vger.kernel.org>

## LICENSE

```
-----
```



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## RESOURCES

-----

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Found in path(s):

\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs-marker.txt

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libtracefs(3)

=====

## NAME

----

libtracefs - Linux kernel trace file system library

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

Locations of tracing files and directories:

```
char pass:[*]*tracefs_get_tracing_file*(const char pass:[*]_name_);
void *tracefs_put_tracing_file*(char pass:[*]_name_);
const char pass:[*]*tracefs_tracing_dir*(void);
const char pass:[*]*tracefs_debug_dir*(void);
int *tracefs_set_tracing_dir*(char pass:[*]_tracing_dir_)
int *tracefs_tracing_dir_is_mounted*(bool _mount_, const char pass:[**]_path_);
```

Trace instances:

```
struct tracefs_instance pass:[*]*tracefs_instance_create*(const char pass:[*]_name_);
int *tracefs_instance_destroy*(struct tracefs_instance pass:[*]_instance_);
struct tracefs_instance pass:[*]*tracefs_instance_alloc*(const char pass:[*]_tracing_dir_, const char
pass:[*]_name_);
void *tracefs_instance_free*(struct tracefs_instance pass:[*]_instance_);
char
pass:[**]*tracefs_instances*(const char pass:[*]_regex_);
void *tracefs_instance_clear*(struct tracefs_instance pass:[*]_instance_);
void *tracefs_instance_reset*(struct tracefs_instance pass:[*]_instance_);
bool *tracefs_instance_is_new*(struct tracefs_instance pass:[*]_instance_);
```

```

bool *tracefs_file_exists*(struct tracefs_instance pass:[*]_instance_, char pass:[*]_name_);
bool *tracefs_dir_exists*(struct tracefs_instance pass:[*]_instance_, char pass:[*]_name_);
char pass:[*]*tracefs_instance_get_file*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_);
char pass:[*]*tracefs_instance_get_dir*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_instance_file_open*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_, int _mode_);
int *tracefs_instance_file_write*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_, const char
pass:[*]_str_);
int *tracefs_instance_file_write_number*(struct tracefs_instance pass:[*]_instance_,
const char pass:[*]_file_, size_t _val_);
int *tracefs_instance_file_append*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_, const char
pass:[*]_str_);
int *tracefs_instance_file_clear*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_);
char pass:[*]*tracefs_instance_file_read*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_, int
pass:[*]_psize_);
int *tracefs_instance_file_read_number*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_, long
long int pass:[*]_res_);
const char pass:[*]*tracefs_instance_get_name*(struct tracefs_instance pass:[*]_instance_);
const char pass:[*]*tracefs_instance_get_trace_dir*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_instances_walk*(int (pass:[*]_callback_)(const char pass:[*], void pass:[*]), void pass:[*]_context_);
bool *tracefs_instance_exists*(const char pass:[*]_name_);
int *tracefs_instance_set_affinity*(struct tracefs_instance
pass:[*]_instance_, const char pass:[*]_cpu_str_);
int *tracefs_instance_set_affinity_set*(struct tracefs_instance pass:[*]_instance_, cpu_set_t pass:[*]_set_, size_t
_set_size_);
int *tracefs_instance_set_affinity_raw*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_mask_);
char pass:[*]*tracefs_instance_get_affinity*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_instance_get_affinity_set*(struct tracefs_instance pass:[*]_instance_, cpu_set_t pass:[*]_set_, size_t
_set_size_);
char pass:[*]*tracefs_instance_get_affinity_raw*(struct tracefs_instance pass:[*]_instance_);
size_t *tracefs_instance_get_buffer_size*(struct tracefs_instance pass:[*]_instance_, int _cpu_);
int *tracefs_instance_set_buffer_size*(struct tracefs_instance pass:[*]_instance_, size_t _size_, int _cpu_);
int *tracefs_instance_get_buffer_percent*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_instance_set_buffer_percent*(struct tracefs_instance pass:[*]_instance_, int
_val_);

```

Trace events:

```

char pass:[*]pass:[*]*tracefs_event_systems*(const char pass:[*]_tracing_dir_);
char pass:[*]pass:[*]*tracefs_system_events*(const char pass:[*]_tracing_dir_, const char pass:[*]_system_);
int *tracefs_event_enable*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_,
const char pass:[*]_event_);
int *tracefs_event_disable*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_,
const char pass:[*]_event_);
enum tracefs_enable_state *tracefs_event_is_enabled*(struct tracefs_instance pass:[*]_instance_,
const char pass:[*]_system_, const char pass:[*]_event_);
int *tracefs_iterate_raw_events*(struct tep_handle pass:[*]_tep_, struct tracefs_instance pass:[*]_instance_,
cpu_set_t pass:[*]_cpus_, int _cpu_size_, int (pass:[*]_callback_)(struct tep_event pass:[*], struct tep_record
pass:[*], int, void pass:[*]), void pass:[*]_callback_context_);
void *tracefs_iterate_stop*(struct

```

```

tracefs_instance pass:[*]_instance_);
int *tracefs_follow_event*(struct tep_handle pass:[*]_tep_, struct tracefs_instance pass:[*]_instance_,
    const char pass:[*]_system_, const char pass:[*]_event_name_,
    int (pass:[*]_callback_)(struct tep_event pass:[*],
        struct tep_record pass:[*],
        int, void pass:[*]),
    void pass:[*]_callback_data_);
int *tracefs_follow_missed_events*(struct tracefs_instance pass:[*]_instance_,
    int (pass:[*]_callback_)(struct tep_event pass:[*],
        struct tep_record pass:[*],
        int, void pass:[*]),
    void pass:[*]_callback_data_);
int *tracefs_follow_event_clear*(struct tracefs_instance pass:[*]_instance_,
    const char pass:[*]_system_, const char pass:[*]_event_name_);
int *tracefs_follow_missed_events_clear*(struct tracefs_instance pass:[*]_instance_);
struct tep_handle pass:[*]*tracefs_local_events*(const char pass:[*]_tracing_dir_);
struct tep_handle pass:[*]*tracefs_local_events_system*(const
    char pass:[*]_tracing_dir_, const char pass:[*] const pass:[*]_sys_names_);
int *tracefs_fill_local_events*(const char pass:[*]_tracing_dir_, struct tep_handle pass:[*]_tep_, int
    pass:[*]_parsing_failures_);
int *tracefs_load_cmdlines*(const char pass:[*]_tracing_dir_, struct tep_handle pass:[*]_tep_);
int *tracefs_load_headers*(const char pass:[*]_tracing_dir_, struct tep_handle pass:[*]_tep_);
char pass:[*]*tracefs_event_get_file*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_, const
    char pass:[*]_event_,
    const char pass:[*]_file_);
char pass:[*]*tracefs_event_file_read*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_,
    const char pass:[*]_event_,
    const char pass:[*]_file_, int pass:[*]_psize_);
int *tracefs_event_file_write*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_, const char
    pass:[*]_event_,
    const char pass:[*]_file_, const char pass:[*]_str_);
int *tracefs_event_file_append*(struct
    tracefs_instance pass:[*]_instance_, const char pass:[*]_system_, const char pass:[*]_event_,
    const char pass:[*]_file_, const char pass:[*]_str_);
int *tracefs_event_file_clear*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_, const char
    pass:[*]_event_,
    const char pass:[*]_file_);
bool *tracefs_event_file_exists*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_, const char
    pass:[*]_event_,
    const char pass:[*]_file_);

```

Snapshot buffer:

```

int *tracefs_snapshot_snap*(struct tracefs_instance pass:[*]instance);
int *tracefs_snapshot_clear*(struct tracefs_instance pass:[*]instance);
int *tracefs_snapshot_free*(struct tracefs_instance pass:[*]instance);
int *tracefs_iterate_snapshot_events*(struct tep_handle pass:[*]_tep_, struct tracefs_instance pass:[*]_instance_,
    cpu_set_t pass:[*]_cpus_, int _cpu_size_,
    int (pass:[*]_callback_)(struct tep_event pass:[*], struct tep_record pass:[*],

```

```

int, void pass:[*]),
    void pass:[*]_callback_context_);
struct tracefs_cpu pass:[*]*tracefs_cpu_snapshot_open*(struct tracefs_instance pass:[*]_instance_,
    int _cpu_, bool _nonblock_);

```

#### Event filters:

```

int *tracefs_filter_string_append*(struct tep_event pass:[*]_event_, char pass:[**]_filter_,
    struct tracefs_filter_type_, const char pass:[*]_field_,
    enum tracefs_synth_compare_compare_, const char pass:[*]_val_);
int *tracefs_filter_string_verify*(struct tep_event pass:[*]_event_, const char pass:[*]_filter_, char pass:[**]_err_);
int *tracefs_event_filter_apply*(struct tracefs_instance pass:[*]_instance_, struct tep_event pass:[*]_event_, const
char pass:[*]_filter_);
int *tracefs_event_filter_clear*(struct tracefs_instance pass:[*]_instance_, struct tep_event pass:[*]_event_);

```

#### Function filters:

```

int *tracefs_function_filter*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_filter_, const char
pass:[*]_module_, int _flags_);
int *tracefs_function_notrace*(struct
tracefs_instance pass:[*]_instance_, const char pass:[*]_filter_, const char pass:[*]_module_, int _flags_);
int *tracefs_filter_functions*(const char pass:[*]_filter_, const char pass:[*]_module_, char
pass:[*]_pass:[*]_pass:[*]_list_);

```

#### PID filters:

```

int *tracefs_filter_pid_function*(struct tracefs_instance pass:[*]_instance_, int _pid_,
    bool _reset_, bool _notrace_);
int *tracefs_filter_pid_function_clear*(struct tracefs_instance pass:[*]_instance_, bool _notrace_);
int *tracefs_filter_pid_events*(struct tracefs_instance pass:[*]_instance_, int _pid_,
    bool _reset_, bool _notrace_);
int *tracefs_filter_pid_events_clear*(struct tracefs_instance pass:[*]_instance_, bool _notrace_);

```

#### Trace helper functions:

```

void *tracefs_list_free*(char pass:[*]_pass:[*]_list_);
char pass:[**]*tracefs_list_add*(char **_list_, const char *_string_);
int *tracefs_list_size*(char pass:[**]_list_);
char pass:[*]*tracefs_get_clock*(struct tracefs_instance pass:[*]_instance_);
int
*tracefs_trace_is_on*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_trace_on*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_trace_off*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_trace_on_get_fd*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_trace_on_fd*(int _fd_);
int *tracefs_trace_off_fd*(int _fd_);

```

#### Trace stream:

```

ssize_t *tracefs_trace_pipe_stream*(int _fd_, struct tracefs_instance pass:[*]_instance_, int _flags_);
ssize_t *tracefs_trace_pipe_print*(struct tracefs_instance pass:[*]_instance_, int _flags_);
void *tracefs_trace_pipe_stop*(struct tracefs_instance pass:[*]_instance_);

```

Memory mapping the ring buffer:

```
bool *tracefs_cpu_is_mapped*(struct tracefs_cpu pass:[*]tcpu);
bool *tracefs_mapped_is_supported*(void);
int *tracefs_cpu_map*(struct tracefs_cpu pass:[*]tcpu);
void *tracefs_cpu_unmap*(struct tracefs_cpu pass:[*]tcpu);
struct tracefs_cpu pass:[*]*tracefs_cpu_open_mapped*(struct tracefs_instance pass:[*]instance,
    int
    cpu, bool nonblock);
```

Trace options:

```
const struct tracefs_options_mask pass:[*]*tracefs_options_get_supported*(struct tracefs_instance
pass:[*]_instance_);
bool *tracefs_option_is_supported*(struct tracefs_instance pass:[*]_instance_, enum tracefs_option_id _id_);
const struct tracefs_options_mask pass:[*]*tracefs_options_get_enabled*(struct tracefs_instance
pass:[*]_instance_);
bool *tracefs_option_is_enabled*(struct tracefs_instance pass:[*]_instance_, enum tracefs_option_id _id_);
bool *tracefs_option_mask_is_set*(const struct tracefs_options_mask *options, enum tracefs_option_id id);
int *tracefs_option_enable*(struct tracefs_instance pass:[*]_instance_, enum tracefs_option_id _id_);
int *tracefs_option_disable*(struct tracefs_instance pass:[*]_instance_, enum tracefs_option_id _id_);
const char pass:[*]*tracefs_option_name*(enum tracefs_option_id _id_);
enum tracefs_option_id *tracefs_option_id*(const char pass:[*]_name_);
```

Ftrace tracers:

```
char
pass:[*]pass:[*]*tracefs_tracers*(const char pass:[*]_tracing_dir_);
char pass:[**] *tracefs_instance_tracers*(struct tracefs_instance pass:[*]_instance_);
bool *tracefs_tracer_available*(const char pass:[*]_tracing_dir_, const char pass:[*]_tracer_);
int *tracefs_tracer_set*(struct tracefs_instance pass:[*]_instance_, enum tracefs_tracers _tracer_);
int *tracefs_tracer_set*(struct tracefs_instance pass:[*]_instance_, enum tracefs_tracers _tracer_, const char
pass:[*]_name_);
int *tracefs_tracer_clear*(struct tracefs_instance pass:[*]_instance_);
```

Writing data in the trace buffer:

```
int *tracefs_print_init*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_printf*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_fmt_, ...);
int *tracefs_vprintf*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_fmt_, va_list _ap_);
void *tracefs_print_close*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_binary_init*(struct tracefs_instance pass:[*]_instance_);
int
*tracefs_binary_write*(struct tracefs_instance pass:[*]_instance_, void pass:[*]_data_, int _len_);
void *tracefs_binary_close*(struct tracefs_instance pass:[*]_instance_);
```

Control library logs:

```
int *tracefs_set_loglevel*(enum tep_loglevel _level_);
```

Read the ring buffer statistics:

```
struct tracefs_buffer_stat pass:[*]*tracefs_instance_get_stat*(struct tracefs_instance pass:[*]_instance_, int _cpu_);
void *tracefs_instance_put_stat*(struct tracefs_buffer_stat pass:[*]_tstat_);
```

```

ssize_t *tracefs_buffer_stat_entries*(struct tracefs_buffer_stat pass:[*]_tstat_);
ssize_t *tracefs_buffer_stat_overrun*(struct tracefs_buffer_stat pass:[*]_tstat_);
ssize_t *tracefs_buffer_stat_commit_overrun*(struct tracefs_buffer_stat pass:[*]_tstat_);
ssize_t *tracefs_buffer_stat_bytes*(struct tracefs_buffer_stat pass:[*]_tstat_);
long long *tracefs_buffer_stat_event_timestamp*(struct tracefs_buffer_stat pass:[*]_tstat_);
long long *tracefs_buffer_stat_timestamp*(struct tracefs_buffer_stat
pass:[*]_tstat_);
ssize_t *tracefs_buffer_stat_dropped_events*(struct tracefs_buffer_stat pass:[*]_tstat_);
ssize_t *tracefs_buffer_stat_read_events*(struct tracefs_buffer_stat pass:[*]_tstat_);

```

Dynamic event generic APIs:

```

struct *tracefs_dynevent*;
enum *tracefs_dynevent_type*;
int *tracefs_dynevent_create*(struct tracefs_dynevent pass:[*]_devent_);
int *tracefs_dynevent_destroy*(struct tracefs_dynevent pass:[*]_devent_, bool _force_);
int *tracefs_dynevent_destroy_all*(unsigned int _types_, bool _force_);
void *tracefs_dynevent_free*(struct tracefs_dynevent pass:[*]_devent_);
void *tracefs_dynevent_list_free*(struct tracefs_dynevent pass:[*]_pass:[*]_events_);
struct tracefs_dynevent pass:[*]*tracefs_dynevent_get*(enum tracefs_dynevent_type _type_, const char
pass:[*]_system_, const char pass:[*]_event_);
struct tracefs_dynevent pass:[*]_pass:[*]*tracefs_dynevent_get_all*(unsigned int _types_, const char
pass:[*]_system_);
enum tracefs_dynevent_type *tracefs_dynevent_info*(struct
tracefs_dynevent pass:[*]_devent_, char pass:[*]_pass:[*]_system_, char pass:[*]_pass:[*]_event_, char
pass:[*]_pass:[*]_prefix_, char pass:[*]_pass:[*]_addr_, char pass:[*]_pass:[*]_format_);
struct tep_event pass:[*]*tracefs_dynevent_get_event*(struct tep_handle pass:[*]_tep_, struct tracefs_dynevent
pass:[*]_devent_);

```

Event probes (eprobes):

```

struct tracefs_dynevent pass:[*] *tracefs_eprobe_alloc*(const char pass:[*]_system_, const char pass:[*]_event_,
const char pass:[*]_target_system_, const char pass:[*]_target_event_, const char pass:[*]_fetchargs_);

```

Uprobes, Kprobes and Kretprobes:

```

struct tracefs_dynevent pass:[*] *tracefs_kprobe_alloc*(const char pass:[*]_system_, const char pass:[*]_event_,
const char pass:[*]_addr_, const char pass:[*]_format_);
struct tracefs_dynevent pass:[*] *tracefs_kretprobe_alloc*(const char pass:[*]_system_, const char pass:[*]_event_,
const char pass:[*]_addr_, const char pass:[*]_format_, unsigned int _max_);
int *tracefs_kprobe_raw*(const
char pass:[*]_system_, const char pass:[*]_event_, const char pass:[*]_addr_, const char pass:[*]_format_);
int *tracefs_kretprobe_raw*(const char pass:[*]_system_, const char pass:[*]_event_, const char pass:[*]_addr_,
const char pass:[*]_format_);
*tracefs_uprobe_alloc*(const char pass:[*]_system_, const char pass:[*]_event_,
const char pass:[*]_file_, unsigned long long _offset_, const char pass:[*]_fetchargs_)
*tracefs_uretprobe_alloc*(const char pass:[*]_system_, const char pass:[*]_event_,
const char pass:[*]_file_, unsigned long long _offset_, const char pass:[*]_fetchargs_);
int *tracefs_kprobe_destroy*(const char pass:[*]_system_, const char pass:[*]_event_,
const char pass:[*]_addr_, const char pass:[*]_format_, bool _force_);

```

Synthetic events:

```
struct tracefs_synth pass:[*]*tracefs_sql*(struct tep_handle pass:[*]_tep_, const char pass:[*]_name_,
    const char pass:[*]_sql_buffer_, char pass:[*]_err_);
struct tracefs_synth pass:[*]*tracefs_synth_alloc*(struct
tep_handle pass:[*]_tep_,
    const char pass:[*]_name_,
    const char pass:[*]_start_system_,
    const char pass:[*]_start_event_,
    const char pass:[*]_end_system_,
    const char pass:[*]_end_event_,
    const char pass:[*]_start_match_field_,
    const char pass:[*]_end_match_field_,
    const char pass:[*]_match_name_);
int *tracefs_synth_add_match_field*(struct tracefs_synth pass:[*]_synth_,
    const char pass:[*]_start_match_field_,
    const char pass:[*]_end_match_field_,
    const char pass:[*]_name_);
int *tracefs_synth_add_compare_field*(struct tracefs_synth pass:[*]_synth_,
    const char pass:[*]_start_compare_field_,
    const char pass:[*]_end_compare_field_,
    enum tracefs_synth_calc _calc_,
    const char pass:[*]_name_);
int *tracefs_synth_add_start_field*(struct tracefs_synth pass:[*]_synth_,
    const char pass:[*]_start_field_,
    const char pass:[*]_name_);
int *tracefs_synth_add_end_field*(struct
tracefs_synth pass:[*]_synth_,
    const char pass:[*]_end_field_,
    const char pass:[*]_name_);
int *tracefs_synth_append_start_filter*(struct tracefs_synth pass:[*]_synth_,
    struct tracefs_filter _type_,
    const char pass:[*]_field_,
    enum tracefs_synth_compare _compare_,
    const char pass:[*]_val_);
int *tracefs_synth_append_end_filter*(struct tracefs_synth pass:[*]_synth_,
    struct tracefs_filter _type_,
    const char pass:[*]_field_,
    enum tracefs_synth_compare _compare_,
    const char pass:[*]_val_);
void *tracefs_synth_free*(struct tracefs_synth pass:[*]_synth_);
int *tracefs_synth_create*(struct tracefs_synth pass:[*]_synth_);
int *tracefs_synth_destroy*(struct tracefs_synth pass:[*]_synth_);
int *tracefs_synth_set_instance*(struct tracefs_synth pass:[*]_synth_, struct tracefs_instance pass:[*]_instance_);
int *tracefs_synth_echo_cmd*(struct trace_seq pass:[*]_seq_, struct
tracefs_synth pass:[*]_synth_);
bool *tracefs_synth_complete*(struct tracefs_synth pass:[*]_synth_);
struct tracefs_hist pass:[*]*tracefs_synth_get_start_hist*(struct tracefs_synth pass:[*]_synth_);
int *tracefs_synth_trace*(struct tracefs_synth pass:[*]_synth_,
```

```

enum tracefs_synth_handler _type_, const char pass:[*]_var_);
int *tracefs_synth_snapshot*(struct tracefs_synth pass:[*]_synth_,
    enum tracefs_synth_handler _type_, const char pass:[*]_var_);
int *tracefs_synth_save*(struct tracefs_synth pass:[*]_synth_,
    enum tracefs_synth_handler _type_, const char pass:[*]_var_,
    char pass:[**]_save_fields_);
const char pass:[*]*tracefs_synth_get_name*(struct tracefs_synth pass:[*]_synth_);
int *tracefs_synth_raw_fmt*(struct trace_seq pass:[*]_seq_, struct tracefs_synth pass:[*]_synth_);
const char pass:[*]*tracefs_synth_show_event*(struct tracefs_synth pass:[*]_synth_);
const char pass:[*]*tracefs_synth_show_start_hist*(struct tracefs_synth pass:[*]_synth_);
const
char pass:[*]*tracefs_synth_show_end_hist*(struct tracefs_synth pass:[*]_synth_);
struct tep_event pass:[*]*tracefs_synth_get_event*(struct tep_handle pass:[*]_tep_, struct tracefs_synth
pass:[*]_synth_);

```

Ftrace errors reporting:

```

char pass:[*]*tracefs_error_last*(struct tracefs_instance pass:[*]_instance_);
char pass:[*]*tracefs_error_all*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_error_clear*(struct tracefs_instance pass:[*]_instance_);

```

Histograms:

```

struct tracefs_hist pass:[*]*tracefs_hist_alloc*(struct tracefs_tep pass:[*]_tep_,
    const char pass:[*]_system_, const char pass:[*]_event_,
    const char pass:[*]_key_, enum tracefs_hist_key_type _type_);
struct tracefs_hist pass:[*]*tracefs_hist_alloc_2d*(struct tracefs_tep pass:[*]_tep_,
    const char pass:[*]_system_, const char pass:[*]_event_,
    const char pass:[*]_key1_, enum tracefs_hist_key_type _type1_,
    const char pass:[*]_key2_, enum tracefs_hist_key_type _type2_);
struct tracefs_hist
pass:[*]*tracefs_hist_alloc_nd*(struct tracefs_tep pass:[*]_tep_,
    const char pass:[*]_system_, const char pass:[*]_event_,
    struct tracefs_hist_axis pass:[*]_axes_);
struct tracefs_hist pass:[*]*tracefs_hist_alloc_nd_cnt*(struct tep_handle pass:[*]_tep_,
    const char pass:[*]_system_, const char pass:[*]_event_name_,
    struct tracefs_hist_axis_cnt pass:[*]_axes_);
void *tracefs_hist_free*(struct tracefs_hist pass:[*]_hist_);
int *tracefs_hist_add_key*(struct tracefs_hist pass:[*]_hist_, const char pass:[*]_key_,
    enum tracefs_hist_key_type _type_);
int *tracefs_hist_add_key_cnt*(struct tracefs_hist pass:[*]_hist_, const char pass:[*]_key_,
    enum tracefs_hist_key_type _type_, int _cnt_);
int *tracefs_hist_add_value*(struct tracefs_hist pass:[*]_hist_, const char pass:[*]_value_);
int *tracefs_hist_add_sort_key*(struct tracefs_hist pass:[*]_hist_,
    const char pass:[*]_sort_key_);
int *tracefs_hist_set_sort_key*(struct tracefs_hist pass:[*]_hist_,

    const char pass:[*]_sort_key_, ...);
int *tracefs_hist_sort_key_direction*(struct tracefs_hist pass:[*]_hist_,
    const char pass:[*]_sort_key_,

```



```

enum tracefs_hist_sort_direction _dir_);
int *tracefs_hist_add_name*(struct tracefs_hist pass:[*]_hist_, const char pass:[*]_name_);
int *tracefs_hist_append_filter*(struct tracefs_hist pass:[*]_hist_,
enum tracefs_filter_type_,
const char pass:[*]_field_,
enum tracefs_compare_compare_,
const char pass:[*]_val_);
int *tracefs_hist_echo_cmd*(struct trace_seq pass:[*]_s_, struct tracefs_instance pass:[*]_instance_,
struct tracefs_hist pass:[*]_hist_,
enum tracefs_hist_command_command_);
int *tracefs_hist_command*(struct tracefs_instance pass:[*]_instance_,
struct tracefs_hist pass:[*]_hist_,
enum tracefs_hist_command_command_);
const char pass:[*]*tracefs_hist_get_name*(struct tracefs_hist pass:[*]_hist_);
const char pass:[*]*tracefs_hist_get_event*(struct
tracefs_hist pass:[*]_hist_);
const char pass:[*]*tracefs_hist_get_system*(struct tracefs_hist pass:[*]_hist_);
int *tracefs_hist_start*(struct tracefs_instance pass:[*]_instance_, struct tracefs_hist pass:[*]_hist_);
int *tracefs_hist_destroy*(struct tracefs_instance pass:[*]_instance_, struct tracefs_hist pass:[*]_hist_);
int *tracefs_hist_pause*(struct tracefs_instance pass:[*]_instance_, struct tracefs_hist pass:[*]_hist_);
int *tracefs_hist_continue*(struct tracefs_instance pass:[*]_instance_, struct tracefs_hist pass:[*]_hist_);
int *tracefs_hist_reset*(struct tracefs_instance pass:[*]_instance_, struct tracefs_hist pass:[*]_hist_);

```

Recording of trace\_pipe\_raw files:

```

struct tracefs_cpu pass:[*]*tracefs_cpu_open*(struct tracefs_instance pass:[*]_instance_,
int _cpu_, bool _nonblock_);
struct tracefs_cpu pass:[*]*tracefs_cpu_alloc_fd*(int _fd_, int _subbuf_size_, bool _nonblock_);
void *tracefs_cpu_close*(struct tracefs_cpu pass:[*]_tcpu_);
void
*tracefs_cpu_free_fd*(struct tracefs_cpu pass:[*]_tcpu_);
int *tracefs_cpu_read_size*(struct tracefs_cpu pass:[*]_tcpu_);
int *tracefs_cpu_read*(struct tracefs_cpu pass:[*]_tcpu_, void pass:[*]_buffer_, bool _nonblock_);
int *tracefs_cpu_buffered_read*(struct tracefs_cpu pass:[*]_tcpu_, void pass:[*]_buffer_, bool _nonblock_);
int *tracefs_cpu_write*(struct tracefs_cpu pass:[*]_tcpu_, int _wfd_, bool _nonblock_);
int *tracefs_cpu_stop*(struct tracefs_cpu pass:[*]_tcpu_);
int *tracefs_cpu_flush*(struct tracefs_cpu pass:[*]_tcpu_, void pass:[*]_buffer_);
int *tracefs_cpu_flush_write*(struct tracefs_cpu pass:[*]_tcpu_, int _wfd_);
int *tracefs_cpu_pipe*(struct tracefs_cpu pass:[*]_tcpu_, int _wfd_, bool _nonblock_);
struct kbuffer pass:[*]*tracefs_cpu_read_buf*(struct tracefs_cpu pass:[*]_tcpu_, bool _nonblock_);
struct kbuffer pass:[*]*tracefs_cpu_buffered_read_buf*(struct tracefs_cpu pass:[*]_tcpu_, bool _nonblock_);
struct kbuffer pass:[*]*tracefs_cpu_flush_buf*(struct
tracefs_cpu pass:[*]_tcpu_);

```

Helper functions for modifying the ring buffer sub-buffers:

```

size_t *tracefs_instance_get_subbuf_size*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_instance_set_subbuf_size*(struct tracefs_instance pass:[*]_instance_, size_t _size_);

```

Helper functions for guest tracing:

```
char pass:[*]*tracefs_find_cid_pid*(int _cid_);
char pass:[*]*tracefs_instance_find_cid_pid*(struct tracefs_instance pass:[*]_instance_, int _cid_);
int *tracefs_time_conversion*(int _cpu_, int pass:[*]_shift_, int pass:[*]_multi_, long long pass:[*]offset);
--
```

## DESCRIPTION

-----

The libtracefs(3) library provides APIs to access kernel trace file system.

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

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-----

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--

## REPORTING BUGS

-----

Report bugs to <linux-trace-devel@vger.kernel.org>

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-----

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## RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtracefs.git/>

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\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs.txt

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/\*\*

```
* tracefs_uprobe_alloc - Allocate new user probe (uprobe)
* @system: The system name (NULL for the default uprobes)
* @event: The name of the event to create
* @file: The full path to the binary file, where the uprobe will be set
* @offset: Offset within the @file
* @fetchargs: String with arguments, that will be fetched with the uprobe
*
* Allocate new uprobe context that will be in the @system group
* (or uprobes if @system is NULL) and with @event name. The new uprobe will be
* attached to @offset within the @file. The arguments described in @fetchargs
* will fetched with the uprobe. See linux/Documentation/trace/uprobracer.rst
* for more details.
*
* The uprobe is not created in the system.
*
* Return a pointer to a uprobe context on success, or NULL on error.
* The returned pointer must be freed with tracefs_dynevent_free()
*
*/
```

Found in path(s):

\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/src/tracefs-uprobes.c

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libtracefs(3)

=====

NAME

----

tracefs\_synth\_create, tracefs\_synth\_destroy, tracefs\_synth\_complete,  
tracefs\_synth\_trace, tracefs\_synth\_snapshot, tracefs\_synth\_save, tracefs\_synth\_set\_instance,  
- Creation of synthetic events

SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
int *tracefs_synth_create*(struct tracefs_synth pass:[*]_synth_);
```

```

int *tracefs_synth_destroy*(struct tracefs_synth pass:[*]_synth_);
bool *tracefs_synth_complete*(struct tracefs_synth pass:[*]_synth_);

int *tracefs_synth_set_instance*(struct tracefs_synth pass:[*]_synth_, struct tracefs_instance pass:[*]_instance_);
int *tracefs_synth_trace*(struct tracefs_synth pass:[*]_synth_,
    enum tracefs_synth_handler _type_, const char pass:[*]_var_);
int *tracefs_synth_snapshot*(struct tracefs_synth pass:[*]_synth_,
    enum tracefs_synth_handler _type_, const char pass:[*]_var_);
int *tracefs_synth_save*(struct tracefs_synth pass:[*]_synth_,
    enum tracefs_synth_handler _type_, const char pass:[*]_var_,
    char pass:[**]_save_fields_);
--

```

## DESCRIPTION

-----

Synthetic events are dynamic events that are created by matching two other events which triggers a synthetic event. One event is the starting event which some field is recorded, and when the second event is executed, if it has a field (or fields) that matches the starting event's field (or fields) then it will trigger the synthetic event. The field values other than the matching fields may be passed from the starting event to the end event to perform calculations on, or to simply pass as a parameter to the synthetic event.

One common use case is to set "sched\_waking" as the starting event. This event is triggered when a process is awoken. Then set "sched\_switch" as the ending event. This event is triggered when a new task is scheduled on the CPU. By setting the "common\_pid" of both events as the matching fields, the time between the two events is considered

the wake up latency of that process. Use `*TRACEFS_TIMESTAMP*` as a field for both events to calculate the delta in nanoseconds, or use `*TRACEFS_TIMESTAMP_USECS*` as the compare fields for both events to calculate the delta in microseconds. This is used as the example below.

`*tracefs_synth_create*`() creates the synthetic event in the system. By default, the histogram triggers are created in the top trace instance, as any synthetic event can be used globally across all instances. In case an application wants to keep the histogram triggers out of the top level instance, it can use `*tracefs_synth_set_instance*`() to have the histograms used for creating the synthetic event in an instance other than the top level. A synthetic event descriptor must be created with `*tracefs_synth_alloc*`(3) before this can be used to create it on the system.

`*tracefs_synth_destroy*`() destroys the synthetic event. It will attempt to stop the running of it in its instance (top by default), but if its running in another instance this may fail as busy.

`*tracefs_synth_complete*`() returns true if the synthetic event `_synth_` has both

a starting and ending event.

`*tracefs_synth_trace*`() Instead of doing just a trace on matching of the start and end events, do the `_type_handler` where `*TRACEFS_SYNTH_HANDLE_MAX*` will do a trace when the given variable `_var_` hits a new max for the matching keys. Or `*TRACEFS_SYNTH_HANDLE_CHANGE*` for when the `_var_` changes. `_var_` must be one of the `_name_` elements used in `*tracefs_synth_add_end_field*(3)`.

`*tracefs_synth_snapshot*`() When the given variable `_var_` is either a new max if `_handler_` is `*TRACEFS_SYNTH_HANDLE_MAX*` or simply changed if `*TRACEFS_SYNTH_HANDLE_CHANGE*` then take a "snapshot" of the buffer. The snapshot moves the normal "trace" buffer into a "snapshot" buffer, that can be accessed via the "snapshot" file in the top level tracefs directory, or one of the instances. `_var_` changes. `_var_` must be one of the `_name_` elements used in `*tracefs_synth_add_end_field*(3)`.

`*tracefs_synth_save*`()  
When the given variable `_var_` is either a new max if `_handler_` is `*TRACEFS_SYNTH_HANDLE_MAX*` or simply changed if `*TRACEFS_SYNTH_HANDLE_CHANGE*` then save the given `_save_fields_` list. The fields will be stored in the histogram "hist" file of the event that can be retrieved with `*tracefs_event_file_read*(3)`. `_var_` must be one of the `_name_` elements used in `*tracefs_synth_add_end_field*(3)`.

`*tracefs_synth_set_instance*`() Set the trace instance, where the histogram triggers that create the synthetic event will be created. By default, the top instance is used. This API must be called before the call to `*tracefs_synth_create*`(), in order to use the new instance when creating the event. Note, that even if the synthetic event is created in an instance, it is still visible by all other instances including the top level. That is, other instances can enable the created synthetic event and have it traced in the buffers that belong to the instance that enabled it.

## RETURN VALUE

-----

All functions return zero on success or -1 on error.

## ERRORS

-----

The following errors are for all the above calls:

`*EPERM*` Not run as root user when required.

`*EINVAL*` Either a parameter is not valid (NULL when it should not be) or a field that is not compatible for calculations.

`*ENODEV*` An event or one of its fields is not found.

\*EBADE\* The fields of the start and end events are not compatible for either matching or comparing.

\*ENOMEM\* not enough memory is available.

And more errors may have happened from the system calls to the system.

#### EXAMPLE

-----

See `*tracefs_sql*(3)` for a more indepth use of some of this code.

[source,c]

--

```
#include <stdlib.h>
```

```
#include <tracefs.h>
```

```
#define start_event "sched_waking"
```

```
#define start_field "pid"
```

```
#define end_event "sched_switch"
```

```
#define end_field "next_pid"
```

```
#define match_name "pid"
```

```
static struct tracefs_synth *synth;
```

```
static void make_event(void)
```

```
{
```

```
    struct tep_handle *tep;
```

```
    /* Load all
```

```
    events from the system */
```

```
    tep = tracefs_local_events(NULL);
```

```
    /* Initialize the synthetic event */
```

```
    synth = tracefs_synth_alloc(tep, "wakeup_lat",
```

```
        NULL, start_event,
```

```
        NULL, end_event,
```

```
        start_field, end_field,
```

```
        match_name);
```

```
    /* The tep is no longer needed */
```

```
    tep_free(tep);
```

```
    /* Save the "prio" field as "prio" from the start event */
```

```
    tracefs_synth_add_start_field(synth, "prio", NULL);
```

```

/* Save the "next_comm" as "comm" from the end event */
tracefs_synth_add_end_field(synth, "next_comm", "comm");

/* Save the "prev_prio" as "prev_prio" from the end event */
tracefs_synth_add_end_field(synth, "prev_prio", NULL);

/*
 * Take a microsecond time difference between end and start
 * and record as "delta"
 */
tracefs_synth_add_compare_field(synth, TRACEFS_TIMESTAMP_USECS,
    TRACEFS_TIMESTAMP_USECS,
    TRACEFS_SYNTH_DELTA_END, "delta");

/* Only record if start event "prio" is less than 100 */
tracefs_synth_append_start_filter(synth, TRACEFS_FILTER_COMPARE,

    "prio", TRACEFS_COMPARE_LT, "100");

/*
 * Only record if end event "next_prio" is less than 50
 * or the previous task's prio was not greater than or equal to 100.
 * next_prio < 50 || !(prev_prio >= 100)
 */
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_COMPARE,
    "next_prio", TRACEFS_COMPARE_LT, "50");
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_OR, NULL, 0, NULL);
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_NOT, NULL, 0, NULL);
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_OPEN_PAREN, NULL, 0, NULL);
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_COMPARE,
    "prev_prio", TRACEFS_COMPARE_GE, "100");
/*
 * Note, the above only added: "next_prio < 50 || !(prev_prio >= 100"
 * That's because, when the synth is executed, the remaining close parenthesis
 * will be added. That is, the string will end up being:
 * "next_prio < 50 || !(prev_prio >= 100)" when one of tracefs_sync_create()
 * or tracefs_sync_echo_cmd()
 * is run.
 */
}

/* Display how to create the synthetic event */
static void show_event(void)
{
    struct trace_seq s;

    trace_seq_init(&s);

```

```

tracefs_synth_echo_cmd(&s, synth);
trace_seq_terminate(&s);
trace_seq_do_printf(&s);
trace_seq_destroy(&s);
}

int main (int argc, char **argv)
{
    make_event();

    if (argc > 1) {
        if (!strcmp(argv[1], "create")) {
            /* Create the synthetic event */
            tracefs_synth_create(synth);
        } else if (!strcmp(argv[1], "delete")) {
            /* Delete the synthetic event */
            tracefs_synth_destroy(synth);
        } else {
            printf("usage: %s [create|delete]\n", argv[0]);
            exit(-1);
        }
    } else
        show_event();

    tracefs_synth_free(synth);

    return 0;
}
--

```

## FILES

----

[verse]

--

\*tracefs.h\*

Header file to include in order to have access to the library APIs.

\*-ltracefs\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*libtracefs\*(3),

\*libtraceevent\*(3),

\*trace-cmd\*(1),

\*tracefs\_hist\_alloc\*(3),

\*tracefs\_hist\_alloc\_2d\*(3),



\*tracefs\_hist\_alloc\_nd\*(3),  
\*tracefs\_hist\_free\*(3),  
\*tracefs\_hist\_add\_key\*(3),  
\*tracefs\_hist\_add\_value\*(3),  
\*tracefs\_hist\_add\_name\*(3),  
\*tracefs\_hist\_start\*(3),  
\*tracefs\_hist\_destory\*(3),  
\*tracefs\_hist\_add\_sort\_key\*(3),  
\*tracefs\_hist\_sort\_key\_direction\*(3),  
\*tracefs\_synth\_alloc\*(3),  
\*tracefs\_synth\_add\_match\_field\*(3),  
\*tracefs\_synth\_add\_compare\_field\*(3),  
\*tracefs\_synth\_add\_start\_field\*(3),  
\*tracefs\_synth\_add\_end\_field\*(3),  
\*tracefs\_synth\_append\_start\_filter\*(3),  
\*tracefs\_synth\_append\_end\_filter\*(3),  
\*tracefs\_synth\_free\*(3),  
\*tracefs\_synth\_echo\_cmd\*(3),  
\*tracefs\_synth\_get\_start\_hist\*(3),  
\*tracefs\_synth\_get\_name\*(3),  
\*tracefs\_synth\_raw\_fmt\*(3),  
\*tracefs\_synth\_show\_event\*(3),  
\*tracefs\_synth\_show\_start\_hist\*(3),  
\*tracefs\_synth\_show\_end\_hist\*(3),  
\*tracefs\_synth\_get\_event\*(3),

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--

## REPORTING BUGS

-----

Report bugs

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libtracefs(3)

=====

## NAME

----

tracefs\_kprobe\_alloc, tracefs\_kretprobe\_alloc, tracefs\_kprobe\_raw, tracefs\_kretprobe\_raw, tracefs\_kprobe\_destroy -

Allocate, get, create, and remove kprobes

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
struct tracefs_dynevent pass:[*]
```

```
*tracefs_kprobe_alloc*(const char pass:[*]_system_, const char pass:[*]_event_,  
    const char pass:[*]_addr_, const char pass:[*]_format_);
```

```
struct tracefs_dynevent pass:[*]
```

```
*tracefs_kretprobe_alloc*(const char pass:[*]_system_, const char pass:[*]_event_,  
    const char pass:[*]_addr_, const char pass:[*]_format_, unsigned int _max_);
```

```
int *tracefs_kprobe_raw*(const char pass:[*]_system_, const char pass:[*]_event_,  
    const char pass:[*]_addr_, const char pass:[*]_format_);
```

```
int *tracefs_kretprobe_raw*(const char pass:[*]_system_, const char pass:[*]_event_,  
    const char pass:[*]_addr_, const char pass:[*]_format_);
```

```
int *tracefs_kprobe_destroy*(const  
    char pass:[*]_system_, const char pass:[*]_event_,  
    const char pass:[*]_addr_, const char pass:[*]_format_, bool _force_);
```

--

## DESCRIPTION

-----

\*tracefs\_kprobe\_alloc\*() allocates a new kprobe context. The kprobe is not configured in the system.

The kprobe can be added to the system by passing in the returned descriptor into

\*tracefs\_dynevent\_create(3)\*.

The new kprobe will be in the `_system_` group (or kprobes if `_system_` is NULL) and have the name of `_event_` (or `_addr_` if `_event_` is NULL). The kprobe will be inserted to `_addr_` (function name, with or without offset, or a address), and the `_format_` will define the format of the kprobe. See the

Linux documentation file under: Documentation/trace/kprobetrace.rst

`*tracefs_kretprobe_alloc*`() is the same as `*tracefs_kprobe_alloc*`, but allocates context for kretprobe. It has one additional parameter, which is optional, `_max_` - maxactive count. See description of kretprobes in the Documentation/trace/kprobetrace.rst file.

`*tracefs_kprobe_raw*`() will create a kprobe event. If `_system_` is NULL, then the default "kprobes" is used for the group (event system). Otherwise if `_system_` is specified then the kprobe will be created under the group by that name. The `_event_` is the name of the kprobe event to create. The `_addr_` can be a function, a function and offset, or a kernel address. This is where the location of the kprobe will be inserted in the kernel. The `_format_` is the kprobe format as specified as FETCHARGS in the Linux kernel source in the Documentation/trace/kprobetrace.rst document.

`*tracefs_kretprobe_raw*`() is the same as `*tracefs_kprobe_raw*`(), except that it creates a kretprobe instead of a kprobe. The difference is also described in the Linux kernel source in the Documentation/trace/kprobetrace.rst file.

`*tracefs_kprobe_destroy*`() will destroy a specific kprobe or kretprobe created by `*tracefs_kprobe_raw*`() or `*tracefs_kretprobe_raw*`() with the same parameters.

## RETURN VALUE

-----

`*tracefs_kprobe_raw*`()

and `*tracefs_kretprobe_raw*`() return 0 on success, or -1 on error.

If a parsing error occurs on `*tracefs_kprobe_raw*`() or `*tracefs_kretprobe_raw*`() then `*tracefs_error_last*`(3) may be used to retrieve the error message explaining the parsing issue.

The `*tracefs_kprobe_alloc*`() and `*tracefs_kretprobe_alloc*`() APIs return a pointer to an allocated `tracefs_dynevent` structure, describing the probe. This pointer must be freed by `*tracefs_dynevent_free*`(3). Note, this only allocates a descriptor representing the kprobe. It does not modify the running system.

The `*tracefs_kprobe_destroy*`() returns 0 on success or -1 on error if it was not able to successful destory (or find) the kprobe or kretprobe.

## ERRORS

-----

The following errors are for all the above calls:

`*EPERM*` Not run as root user

`*ENODEV*` Kprobe events are not configured for the running kernel.

\*ENOMEM\* Memory allocation error.

\*tracefs\_kprobe\_raw\*(), \*tracefs\_kretprobe\_raw\*(), \*tracefs\_kprobe\_alloc\*(),  
and

\*tracefs\_kretprobe\_alloc\*() can fail with the following errors:

\*EBADMSG\* if `_addr_` is NULL.

\*EINVAL\* Most likely a parsing error occurred (use `*tracefs_error_last*(3)` to possibly see what that error was).

Other errors may also happen caused by internal system calls.

#### EXAMPLE

-----

[source,c]

--

```
#include <stdlib.h>
```

```
#include <unistd.h>
```

```
#include <sys/wait.h>
```

```
#include <tracefs.h>
```

```
static struct tep_event *open_event;
```

```
static struct tep_format_field *file_field;
```

```
static struct tep_event *openret_event;
```

```
static struct tep_format_field *ret_field;
```

```
static int callback(struct tep_event *event, struct tep_record *record,
```

```
    int cpu, void *data)
```

```
{
```

```
    struct trace_seq seq;
```

```
    trace_seq_init(&seq);
```

```
    tep_print_event(event->tep, &seq, record, "%d-%s: ", TEP_PRINT_PID, TEP_PRINT_COMM);
```

```
    if (event->id == open_event->id) {
```

```
        trace_seq_puts(&seq, "open file=");
```

```
        tep_print_field(&seq, record->data, file_field);
```

```
        trace_seq_puts(&seq, "\n");
```

```
    } else if (event->id ==
```

```
openret_event->id) {
```

```
        unsigned long long ret;
```

```
        tep_read_number_field(ret_field, record->data, &ret);
```

```
        trace_seq_printf(&seq, "open ret=%lld\n", ret);
```

```
    } else {
```

```
        goto out;
```

```

}

trace_seq_terminate(&seq);
trace_seq_do_printf(&seq);
out:
trace_seq_destroy(&seq);

return 0;
}

static pid_t run_exec(char **argv, char **env)
{
pid_t pid;

pid = fork();
if (pid)
return pid;

execve(argv[0], argv, env);
perror("exec");
exit(-1);
}

const char *mykprobe = "my_kprobes";

enum kprobe_type {
KPROBE,
KRETPROBE,
};

static void __kprobe_create(enum kprobe_type type, const char *event,
const char *addr, const char *fmt)
{
char *err;
int r;

if (type == KPROBE)
r = tracefs_kprobe_raw(mykprobe, event, addr, fmt);
else
r = tracefs_kretprobe_raw(mykprobe, event, addr, fmt);
if (r < 0) {
err = tracefs_error_last(NULL);
perror("Failed to create kprobe:");
if (err && strlen(err))
fprintf(stderr, "%s\n", err);
}
}
}

```

```

static void kprobe_create(const char *event, const
char *addr,
    const char *fmt)
{
    __kprobe_create(KPROBE, event, addr, fmt);
}

static void kretprobe_create(const char *event, const char *addr,
    const char *fmt)
{
    __kprobe_create(KRETPROBE, event, addr, fmt);
}

int main (int argc, char **argv, char **env)
{
    struct tracefs_instance *instance;
    struct tep_handle *tep;
    const char *sysnames[] = { mykprobe, NULL };
    pid_t pid;

    if (argc < 2) {
        printf("usage: %s command\n", argv[0]);
        exit(-1);
    }

    instance = tracefs_instance_create("exec_open");
    if (!instance) {
        perror("creating instance");
        exit(-1);
    }

    tracefs_dynevent_destroy_all	TRACEFS_DYNEVENT_KPROBE | TRACEFS_DYNEVENT_KRETPROBE,
true);

    kprobe_create("open", "do_sys_openat2",
        "file=+0($arg2):ustring flags=+0($arg3):x64 mode=+8($arg3):x64\n");

    kretprobe_create("openret", "do_sys_openat2", "ret=% ax");

    tep = tracefs_local_events_system(NULL, sysnames);
    if (!tep) {
        perror("reading events");
        exit(-1);
    }
    open_event = tep_find_event_by_name(tep,
mykprobe, "open");
    file_field = tep_find_field(open_event, "file");

```

```

openret_event = tep_find_event_by_name(tep, mykprobe, "openret");
ret_field = tep_find_field(openret_event, "ret");

tracefs_event_enable(instance, mykprobe, NULL);
pid = run_exec(&argv[1], env);

/* Let the child start to run */
sched_yield();

do {
    tracefs_load_cmdlines(NULL, tep);
    tracefs_iterate_raw_events(tep, instance, NULL, 0, callback, NULL);
} while (waitpid(pid, NULL, WNOHANG) != pid);

/* Will disable the events */
tracefs_dynevent_destroy_all(TRACEFS_DYNEVENT_KPROBE | TRACEFS_DYNEVENT_KRETPROBE,
true);
tracefs_instance_destroy(instance);
tep_free(tep);

return 0;
}
--

```

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

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--

## REPORTING BUGS

-----

Report bugs to <linux-trace-devel@vger.kernel.org>

## LICENSE

-----

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## RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtracefs.git/>

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Found in path(s):

\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs-kprobes.txt

No license file was found, but licenses were detected in source scan.

libtracefs(3)

=====

## NAME

----

tracefs\_instance\_set\_affinity, tracefs\_instance\_set\_affinity\_set, tracefs\_instance\_set\_affinity\_raw, tracefs\_instance\_get\_affinity, tracefs\_instance\_get\_affinity\_set, tracefs\_instance\_get\_affinity\_raw  
- Sets or retrieves the affinity for an instance or top level for what CPUs enable tracing.

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
int *tracefs_instance_set_affinity*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_cpu_str_);  
int *tracefs_instance_set_affinity_set*(struct tracefs_instance pass:[*]_instance_, cpu_set_t pass:[*]_set_, size_t  
_set_size_);
```

```
int *tracefs_instance_set_affinity_raw*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_mask_);
```

```
char pass:[*]*tracefs_instance_get_affinity*(struct tracefs_instance pass:[*]_instance_);
```

```
int *tracefs_instance_get_affinity_set*(struct tracefs_instance pass:[*]_instance_, cpu_set_t pass:[*]_set_,  
size_t _set_size_);
```

```
char pass:[*]*tracefs_instance_get_affinity_raw*(struct tracefs_instance pass:[*]_instance_);
```

--



## DESCRIPTION

-----  
These functions set or retrieve the CPU affinity that limits what CPUs will have tracing enabled for a given instance defined by the `_instance_` parameter. If `_instance_` is NULL, then the top level instance is affected.

The `*tracefs_instance_set_affinity()*` function takes a string `_cpu_str_` that is a list of CPUs to set the affinity for. If `_cpu_str_` is NULL, then all the CPUs in the system will be set. The format of `_cpu_str_` is a comma delimited string of decimal numbers with no spaces. A range may be specified by a hyphen.

For example: "1,4,6-8"

The numbers do not need to be in order except for ranges, where the second number must be equal to or greater than the first.

The `*tracefs_instance_set_affinity_set()*` function takes a CPU set defined by `*CPU_SET*(3)`. The size of the set defined by `_set_size_` is the size in bytes of `_set_`. If `_set_` is NULL then all the CPUs on the system will be set, and `_set_size_` is ignored.

The `*tracefs_instance_set_affinity_raw()*` function takes a string that holds a hexadecimal bitmask, where each 32 bits is separated by a comma. For a machine with more than 32 CPUs, to set CPUs 1-10 and CPU 40:

"100,000007fe"

Where the above is a hex representation of bits 1-10 and bit 40 being set.

The `*tracefs_instance_get_affinity()*` will retrieve the affinity in a human readable form.

For example: "1,4,6-8"

The string returned must be freed with `*free*(3)`.

The `*tracefs_instance_get_affinity_set()*` will set all the bits in the passed in CPU set (from `*CPU_SET*(3)`). Note it will not clear any bits that are already set in the set but the CPUs are not. If only the bits for the CPUs that are enabled should be set, a `CPU_ZERO_S()` should be performed on the set before calling this function.

The `*tracefs_instance_get_affinity_raw()*` will simply read the instance tracing cpumask and return that string. The returned string must be freed with `*free*(3)`.

## RETURN VALUE

-----

All the set functions return 0 on success and -1 on error.

The functions `*tracefs_instance_get_affinity()*` and `*tracefs_instance_get_affinity_raw()*` returns an allocated string that must be freed with `*free*(3)`, or NULL on error.

The function `*tracefs_instance_get_affinity_set()*` returns the number of CPUs that were found set, or -1 on error.

## ERRORS

-----

The following errors are for all the above calls:

`*EFBIG*` if a CPU is set that is greater than what is in the system.

`*EINVAL*` One of the parameters was invalid.

The following errors are for `*tracefs_instance_set_affinity*()` and `*tracefs_instance_set_affinity_set*()`:

`*ENOMEM*` Memory allocation error.

`*ENODEV*` dynamic events of requested type are not configured for the running kernel.

The following errors are just for `*tracefs_instance_set_affinity*()`

`*EACCES*` The `_cpu_str_` was modified by another thread when processing it.

## EXAMPLE

-----

```
[source,c]
```

```
--
```

```
#include  
<sched.h>  
#include <stdio.h>  
#include <stdlib.h>  
#include <tracefs.h>
```

```
int main (int argc, char **argv)  
{  
    struct trace_seq seq;  
    cpu_set_t *set;  
    size_t set_size;  
    char *c;  
    int cpu1;  
    int cpu2;  
    int i;
```

```

c = tracefs_instance_get_affinity(NULL);
printf("The affinity was %s\n", c);
free(c);

if (argc < 2) {
    tracefs_instance_set_affinity(NULL, NULL);
    exit(0);
}
/* Show example using a set */
if (argc == 2 && !strchr(argv[1],',')) {
    cpu1 = atoi(argv[1]);
    c = strchr(argv[1], '-');
    if (c++)
        cpu2 = atoi(c);
    else
        cpu2 = cpu1;
    if (cpu2 < cpu1) {
        fprintf(stderr, "Invalid CPU range\n");
        exit(-1);
    }
    set = CPU_ALLOC(cpu2 + 1);
    set_size = CPU_ALLOC_SIZE(cpu2 + 1);
    CPU_ZERO_S(set_size, set);
    for (; cpu1 <= cpu2; cpu1++)
        CPU_SET(cpu1, set);
    tracefs_instance_set_affinity_set(NULL, set, set_size);
    CPU_FREE(set);
    exit(0);
}

trace_seq_init(&seq);
for (i = 1; i < argc; i++) {
    if (i > 1)
        trace_seq_putc(&seq, ',');
    trace_seq_puts(&seq,
argv[i]);
}
trace_seq_terminate(&seq);
tracefs_instance_set_affinity(NULL, seq.buffer);
trace_seq_destroy(&seq);
exit(0);

return 0;
}
--
FILES
-----

```

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

AUTHOR

-----

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--

REPORTING BUGS

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Report bugs to <linux-trace-devel@vger.kernel.org>

LICENSE

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RESOURCES

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<https://git.kernel.org/pub/scm/libs/libtrace/libtracefs.git/>

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**\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs-instances-affinity.txt**

No license file was found, but licenses were detected in source scan.

libtracefs(3)

=====

NAME

----

tracefs\_sql - Create a synthetic event via an SQL statement

## SYNOPSIS

```
-----  
[verse]  
--  
*#include <tracefs.h>*
```

```
struct tracefs_synth pass:[*]*tracefs_sql*(struct tep_handle pass:[*]_tep_, const char pass:[*]_name_,  
    const char pass:[*]_sql_buffer_, char pass:[**]_err_);  
--
```

## DESCRIPTION

-----

Synthetic events are dynamically created events that attach two existing events together via one or more matching fields between the two events. It can be used to find the latency between the events, or to simply pass fields of the first event on to the second event to display as one event.

The Linux kernel interface to create synthetic events is complex, and there needs to be a better way to create synthetic events that is easy and can be understood via existing technology.

If you think of each event as a table, where the fields are the column of the table and each instance of the event as a row, you can understand how SQL can be used to attach two events together and form another event (table). Utilizing the SQL `*SELECT* *FROM* *JOIN* *ON* [ *WHERE* ]` syntax, a synthetic event can easily be created from two different events.

For simple SQL queries to make a histogram instead of a synthetic event, see HISTOGRAMS below.

`*tracefs_sql*()` takes in a `_tep_` handler (See `_tep_local_events_(3)`) that is used to verify the events within the `_sql_buffer_` expression. The `_name_` is the name of the synthetic event to create. If `_err_` points to an address of a string, it will be filled with a detailed message on any type of parsing error, including fields that do not belong to an event, or if the events or fields are not properly compared.

The example program below is a fully functional parser where it will create a synthetic event from a SQL syntax passed in via the command line or a file.

The SQL format is as follows:

```
*SELECT* <fields> *FROM* <start-event> *JOIN* <end-event>  
*ON* <matching-fields> *WHERE* <filter>
```

Note, although the examples show the SQL commands in uppercase, they are not required to

be so. That is, you can use "SELECT" or "select" or "sEIEct".

For example:

```
[source,c]
--
SELECT syscalls.sys_enter_read.fd, syscalls.sys_exit_read.ret FROM syscalls.sys_enter_read
JOIN syscalls.sys_exit_read
ON syscalls.sys_enter_read.common_pid = syscalls.sys_exit_write.common_pid
--
```

Will create a synthetic event that with the fields:

```
u64 fd; s64 ret;
```

Because the function takes a `_tep_` handle, and usually all event names are unique, you can leave off the system (group) name of the event, and `*tracefs_sql*()` will discover the system for you.

That is, the above statement would work with:

```
[source,c]
--
SELECT sys_enter_read.fd, sys_exit_read.ret FROM sys_enter_read JOIN sys_exit_read
ON sys_enter_read.common_pid = sys_exit_write.common_pid
--
```

The `*AS*` keyword can be used to name the fields as well as to give an alias to the events,

such that the above can be simplified even more as:

```
[source,c]
--
SELECT start.fd, end.ret FROM sys_enter_read AS start JOIN sys_exit_read AS end ON start.common_pid =
end.common_pid
--
```

The above aliases `_sys_enter_read_` as `*start*` and `_sys_exit_read_` as `*end*` and uses those aliases to reference the event throughout the statement.

Using the `*AS*` keyword in the selection portion of the SQL statement will define what those fields will be called in the synthetic event.

```
[source,c]
--
SELECT start.fd AS filed, end.ret AS return FROM sys_enter_read AS start JOIN sys_exit_read AS end
ON start.common_pid = end.common_pid
--
```

The above labels the `_fd_` of `_start_` as `*filed*` and the `_ret_` of `_end_` as `*return*` where the synthetic event that is created will now have the fields:

```
u64 filed; s64 return;
```

The fields can also be calculated with results passed to the synthetic event:

```
[source,c]
--
select start.truesize, end.len, (start.truesize - end.len) as diff from napi_gro_receive_entry as
start
JOIN netif_receive_skb as end ON start.skbaddr = end.skbaddr
--
```

Which would show the `*truesize*` of the `_napi_gro_receive_entry_` event, the actual `_len_` of the content, shown by the `_netif_receive_skb_`, and the delta between the two and expressed by the field `*diff*`.

The code also supports recording the timestamps at either event, and performing calculations on them. For wakeup latency, you have:

```
[source,c]
--
select start.pid, (end.TIMESTAMP_USECS - start.TIMESTAMP_USECS) as lat from sched_waking as start
JOIN sched_switch as end ON start.pid = end.next_pid
--
```

The above will create a synthetic event that records the `_pid_` of the task being woken up, and the time difference between the `_sched_waking_` event and the `_sched_switch_` event. The `*TIMESTAMP_USECS*` will truncate the time down to microseconds as the timestamp usually recorded in the tracing buffer has nanosecond resolution. If you do not want that truncation, use `*TIMESTAMP*` instead of `*TIMESTAMP_USECS*`.

Because  
it is so common to have:

```
[source,c]
--
(end.TIMESTAMP_USECS - start.TIMESTAMP_USECS)
--
```

The above can be represented with `*TIMESTAMP_DELTA_USECS*` or if nanoseconds are OK, you can use `*TIMESTAMP_DELTA*`. That is, the previous select can also be represented by:

```
[source,c]
--
select start.pid, TIMESTAMP_DELTA_USECS as lat from sched_waking as start JOIN sched_switch as end ON
start.pid = end.next_pid
```

--

Finally, the \*WHERE\* clause can be added, that will let you add filters on either or both events.

[source,c]

--

```
select start.pid, (end.TIMESTAMP_USECS - start.TIMESTAMP_USECS) as lat from sched_waking as start
  JOIN sched_switch as end ON start.pid = end.next_pid
  WHERE start.prio < 100 && (!(end.prev_pid < 1 || end.prev_prio > 100) || end.prev_pid == 0)
```

--

\*NOTE\*

Although both events can be used together in the \*WHERE\* clause, they must not be mixed outside the top most "&&" statements. You can not OR (||) the events together, where a filter of one event is OR'd to a filter

of the other event. This does not make sense, as the synthetic event requires both events to take place to be recorded. If one is filtered out, then the synthetic event does not execute.

[source,c]

--

```
select start.pid, (end.TIMESTAMP_USECS - start.TIMESTAMP_USECS) as lat from sched_waking as start
  JOIN sched_switch as end ON start.pid = end.next_pid
  WHERE start.prio < 100 && end.prev_prio < 100
```

--

The above is valid.

Where as the below is not.

[source,c]

--

```
select start.pid, (end.TIMESTAMP_USECS - start.TIMESTAMP_USECS) as lat from sched_waking as start
  JOIN sched_switch as end ON start.pid = end.next_pid
  WHERE start.prio < 100 || end.prev_prio < 100
```

--

If the kernel supports it, you can pass around a stacktrace between events.

[source, c]

--

```
select start.prev_pid as pid, (end.TIMESTAMP_USECS - start.TIMESTAMP_USECS) as delta,
start.STACKTRACE as stack
  FROM sched_switch as start JOIN sched_switch as end ON start.prev_pid = end.next_pid
  WHERE start.prev_state
```



```
== 2
```

```
--
```

The above will record a stacktrace when a task is in the UNINTERRUPTIBLE (blocked) state, and trigger the synthetic event when it is scheduled back in, recording the time delta that it was blocked for. It will record the stacktrace of where it was when it scheduled out along with the delta.

## KEYWORDS AS EVENT FIELDS

```
-----
```

In some cases, an event may have a keyword. For example, regcache\_drop\_region has "from" as a field and the following will not work

```
[source,c]
```

```
--
```

```
select from from regcache_drop_region
```

```
--
```

In such cases, add a backslash to the conflicting field, and this will tell the parser that the "from" is a field and not a keyword:

```
[source,c]
```

```
--
```

```
select \from from regcache_drop_region
```

```
--
```

## HISTOGRAMS

```
-----
```

Simple SQL statements without the \*JOIN\* \*ON\* may also be used, which will create a histogram instead. When doing this, the struct tracefs\_hist descriptor can be retrieved from the returned synthetic event descriptor via the \*tracefs\_synth\_get\_start\_hist\*(3).

In

order to utilize the histogram types (see xxx) the CAST command of SQL can be used.

That is:

```
[source,c]
```

```
--
```

```
select CAST(common_pid AS comm), CAST(id AS syscall) FROM sys_enter
```

```
--
```

Which produces:

```
[source,c]
```

```
--
```

```
# echo 'hist:keys=common_pid.execname,id.syscall' > events/raw_syscalls/sys_enter/trigger
```

```
# cat events/raw_syscalls/sys_enter/hist
```

```
{ common_pid: bash      [ 18248], id: sys_setpgid      [109] } hitcount:    1
{ common_pid: sendmail  [ 1812], id: sys_read          [ 0] } hitcount:    1
{ common_pid: bash      [ 18247], id: sys_getpid      [ 39] } hitcount:    1
{ common_pid: bash      [ 18247], id: sys_dup2        [ 33] } hitcount:    1
{ common_pid: gmain     [ 13684], id: sys_inotify_add_watch [254] } hitcount:    1
{ common_pid: cat       [ 18247], id: sys_access      [ 21] } hitcount:
  1
{ common_pid: bash      [ 18248], id: sys_getpid      [ 39] } hitcount:    1
{ common_pid: cat       [ 18247], id: sys_fadvise64  [221] } hitcount:    1
{ common_pid: sendmail  [ 1812], id: sys_openat      [257] } hitcount:    1
{ common_pid: less      [ 18248], id: sys_munmap      [ 11] } hitcount:    1
{ common_pid: sendmail  [ 1812], id: sys_close      [ 3] } hitcount:    1
{ common_pid: gmain     [ 1534], id: sys_poll        [ 7] } hitcount:    1
{ common_pid: bash      [ 18247], id: sys_execve     [ 59] } hitcount:    1
--
```

Note, string fields may not be cast.

The possible types to cast to are:

**\*HEX\*** - convert the value to use hex and not decimal

**\*SYM\*** - convert a pointer to symbolic (kallsyms values)

**\*SYM-OFFSET\*** - convert a pointer to symbolic  
and include the offset.

**\*SYSCALL\*** - convert the number to the mapped system call name

**\*EXECNAME\*** or **\*COMM\*** - can only be used with the `common_pid` field. Will show the task name of the process.

**\*LOG\*** or **\*LOG2\*** - bucket the key values in a log 2 values (1, 2, 3-4, 5-8, 9-16, 17-32, ...)

The above fields are not case sensitive, and "LOG2" works as good as "log".

A special CAST to `__COUNTER_` or `__COUNTER__` will make the field a value and not a key. For example:

```
[source,c]
```

```
--
```

```
SELECT common_pid, CAST(bytes_req AS __COUNTER_) FROM kmalloc
```

```
--
```

Which will create

```
[source,c]
--
echo 'hist:keys=common_pid:vals=bytes_req' > events/kmem/kmalloc/trigger

cat events/kmem/kmalloc/hist

{ common_pid: 1812 } hitcount: 1 bytes_req: 32
{ common_pid: 9111 } hitcount: 2 bytes_req: 272
{ common_pid: 1768 } hitcount: 3 bytes_req: 1112
{ common_pid: 0 } hitcount: 4 bytes_req: 512
{ common_pid: 18297 }
hitcount: 11 bytes_req: 2004
--
```

## RETURN VALUE

-----

Returns 0 on success and -1 on failure. On failure, if `_err_` is defined, it will be allocated to hold a detailed description of what went wrong if the error was caused by a parsing error, or that an event, field does not exist or is not compatible with what it was combined with.

## CREATE A TOOL

-----

The below example is a functional program that can be used to parse SQL commands into synthetic events.

```
[source, c]
--
man tracefs_sql | sed -ne '/^EXAMPLE/,/FILES/ { /EXAMPLE/d ; /FILES/d ; p}' > sqlhist.c
gcc -o sqlhist sqlhist.c `pkg-config --cflags --libs libtracefs`
--
```

Then you can run the above examples:

```
[source, c]
--
sudo ./sqlhist 'select start.pid, (end.TIMESTAMP_USECS - start.TIMESTAMP_USECS) as lat from sched_waking
as start
JOIN sched_switch as end ON start.pid = end.next_pid
WHERE start.prio < 100 || end.prev_prio < 100'
--
EXAMPLE
-----
[source,c]
--
```

```

#include
<stdio.h>
#include <stdlib.h>
#include <stdarg.h>
#include <string.h>
#include <errno.h>
#include <unistd.h>
#include <tracefs.h>

static void usage(char **argv)
{
    fprintf(stderr, "usage: %s [-ed][-n name][-s][-S fields][-m var][-c var][-T][-t dir][-f file | sql-command-line]\n"
        " -n name - name of synthetic event 'Anonymous' if left off\n"
        " -t dir - use dir instead of /sys/kernel/tracing\n"
        " -e - execute the commands to create the synthetic event\n"
        " -m - trigger the action when var is a new max.\n"
        " -c - trigger the action when var changes.\n"
        " -s - used with -m or -c to do a snapshot of the tracing buffer\n"
        " -S - used with -m or -c to save fields of the end event (comma delimited)\n"
        " -T - used with -m or -c to do both a snapshot and a trace\n"
        " -f file - read sql lines from file otherwise from the command line\n"
        "         if file is '-' then read from standard input.\n",
        argv[0]);
    exit(-1);
}

enum action {
    ACTION_DEFAULT =
    0,
    ACTION_SNAPSHOT = (1 << 0),
    ACTION_TRACE = (1 << 1),
    ACTION_SAVE = (1 << 2),
    ACTION_MAX = (1 << 3),
    ACTION_CHANGE = (1 << 4),
};

#define ACTIONS ((ACTION_MAX - 1))

static int do_sql(const char *instance_name,
    const char *buffer, const char *name, const char *var,
    const char *trace_dir, bool execute, int action,
    char **save_fields)
{
    struct tracefs_synth *synth;
    struct tep_handle *tep;
    struct trace_seq seq;
    enum tracefs_synth_handler handler;
    char *err;

```

```

int ret;

if ((action & ACTIONS) && !var) {
    fprintf(stderr, "Error: -s, -S and -T not supported without -m or -c");
    exit(-1);
}

if (!name)
    name = "Anonymous";

trace_seq_init(&seq);
tep = tracefs_local_events(trace_dir);
if (!tep) {
    if (!trace_dir)
        trace_dir = "tracefs directory";
    perror(trace_dir);
    exit(-1);
}

synth = tracefs_sql(tep, name, buffer, &err);
if (!synth) {
    perror("Failed creating synthetic event!");
    if (err)
        fprintf(stderr, "%s", err);
    free(err);
    exit(-1);
}

if
(tracefs_synth_complete(synth)) {
    if (var) {
        if (action & ACTION_MAX)
            handler = TRACEFS_SYNTH_HANDLE_MAX;
        else
            handler = TRACEFS_SYNTH_HANDLE_CHANGE;

        if (action & ACTION_SAVE) {
            ret = tracefs_synth_save(synth, handler, var, save_fields);
            if (ret < 0) {
                err = "adding save";
                goto failed_action;
            }
        }
        if (action & ACTION_TRACE) {
            /*
             * By doing the trace before snapshot, it will be included
             * in the snapshot.
             */

```

```

ret = tracefs_synth_trace(synth, handler, var);
if (ret < 0) {
    err = "adding trace";
    goto failed_action;
}
}
if (action & ACTION_SNAPSHOT) {
    ret = tracefs_synth_snapshot(synth, handler, var);
    if (ret < 0) {
        err = "adding snapshot";
failed_action:
        perror(err);
        if (errno == ENODEV)
            fprintf(stderr, "ERROR: '%s' is not a variable\n",
                var);
        exit(-1);
    }
}
}
}
tracefs_synth_echo_cmd(&seq, synth);
if (execute) {
    ret = tracefs_synth_create(synth);
    if
(ret < 0) {
        fprintf(stderr, "%s\n", tracefs_error_last(NULL));
        exit(-1);
    }
}
} else {
    struct tracefs_instance *instance = NULL;
    struct tracefs_hist *hist;

    hist = tracefs_synth_get_start_hist(synth);
    if (!hist) {
        perror("get_start_hist");
        exit(-1);
    }
    if (instance_name) {
        if (execute)
            instance = tracefs_instance_create(instance_name);
        else
            instance = tracefs_instance_alloc(trace_dir,
                instance_name);
        if (!instance) {
            perror("Failed to create instance");
            exit(-1);
        }
    }
}
}

```

```

tracefs_hist_echo_cmd(&seq, instance, hist, 0);
if (execute) {
    ret = tracefs_hist_start(instance, hist);
    if (ret < 0) {
        fprintf(stderr, "%s\n", tracefs_error_last(instance));
        exit(-1);
    }
}
}
}

```

```

tracefs_synth_free(synth);

```

```

trace_seq_do_printf(&seq);
trace_seq_destroy(&seq);
return 0;
}

```

```

int main (int argc, char **argv)
{
    char *trace_dir = NULL;
    char *buffer = NULL;
    char buf[BUFSIZ];
    int buffer_size
    = 0;
    const char *file = NULL;
    const char *instance = NULL;
    bool execute = false;
    char **save_fields = NULL;
    const char *name;
    const char *var;
    int action = 0;
    char *tok;
    FILE *fp;
    size_t r;
    int c;
    int i;

    for (;;) {
        c = getopt(argc, argv, "ht:f:en:m:c:sS:TB:");
        if (c == -1)
            break;

        switch(c) {
            case 'h':
                usage(argv);
            case 't':
                trace_dir = optarg;
                break;

```

```

case 'f':
    file = optarg;
    break;
case 'e':
    execute = true;
    break;
case 'm':
    action |= ACTION_MAX;
    var = optarg;
    break;
case 'c':
    action |= ACTION_CHANGE;
    var = optarg;
    break;
case 's':
    action |= ACTION_SNAPSHOT;
    break;
case 'S':
    action |= ACTION_SAVE;
    tok = strtok(optarg, ",");
    while (tok) {
        save_fields = tracefs_list_add(save_fields, tok);
        tok = strtok(NULL, ",");
    }
    if (!save_fields) {
        perror(optarg);
        exit(-1);
    }
    break;
case 'T':
    action |= ACTION_TRACE | ACTION_SNAPSHOT;
    break;
case 'B':
    instance = optarg;
    break;
case
'n':
    name = optarg;
    break;
}
}

if ((action & (ACTION_MAX|ACTION_CHANGE)) == (ACTION_MAX|ACTION_CHANGE)) {
    fprintf(stderr, "Can not use both -m and -c together\n");
    exit(-1);
}
if (file) {
    if (!strcmp(file, "-"))

```



```

    fp = stdin;
else
    fp = fopen(file, "r");
if (!fp) {
    perror(file);
    exit(-1);
}
while ((r = fread(buf, 1, BUFSIZ, fp)) > 0) {
    buffer = realloc(buffer, buffer_size + r + 1);
    strncpy(buffer + buffer_size, buf, r);
    buffer_size += r;
}
fclose(fp);
if (buffer_size)
    buffer[buffer_size] = '\0';
} else if (argc == optind) {
    usage(argv);
} else {
    for (i = optind; i < argc; i++) {
        r = strlen(argv[i]);
        buffer = realloc(buffer, buffer_size + r + 2);
        if (i != optind)
            buffer[buffer_size++] = ' ';
        strcpy(buffer + buffer_size, argv[i]);
        buffer_size += r;
    }
}

do_sql(instance, buffer, name, var, trace_dir, execute, action, save_fields);
free(buffer);

return 0;
}
--

```

## FILES

-----

[verse]

--

\*tracefs.h\*

Header

file to include in order to have access to the library APIs.

\*-ltracefs\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*sqlhist\*(1),  
\*libtracefs\*(3),  
\*libtraceevent\*(3),  
\*trace-cmd\*(1),  
\*tracefs\_synth\_init\*(3),  
\*tracefs\_synth\_add\_match\_field\*(3),  
\*tracefs\_synth\_add\_compare\_field\*(3),  
\*tracefs\_synth\_add\_start\_field\*(3),  
\*tracefs\_synth\_add\_end\_field\*(3),  
\*tracefs\_synth\_append\_start\_filter\*(3),  
\*tracefs\_synth\_append\_end\_filter\*(3),  
\*tracefs\_synth\_create\*(3),  
\*tracefs\_synth\_destroy\*(3),  
\*tracefs\_synth\_free\*(3),  
\*tracefs\_synth\_echo\_cmd\*(3),  
\*tracefs\_hist\_alloc\*(3),  
\*tracefs\_hist\_alloc\_2d\*(3),  
\*tracefs\_hist\_alloc\_nd\*(3),  
\*tracefs\_hist\_free\*(3),  
\*tracefs\_hist\_add\_key\*(3),  
\*tracefs\_hist\_add\_value\*(3),  
\*tracefs\_hist\_add\_name\*(3),  
\*tracefs\_hist\_start\*(3),  
\*tracefs\_hist\_destory\*(3),  
\*tracefs\_hist\_add\_sort\_key\*(3),  
\*tracefs\_hist\_sort\_key\_direction\*(3)

## AUTHOR

-----

[verse]

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--

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-----

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\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs-sql.txt

No license file was found, but licenses were detected in source scan.

libtracefs(3)

=====

## NAME

----

tracefs\_uprobe\_alloc, tracefs\_uretprobe\_alloc - Allocate new user (return) probe

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
struct tracefs_dynevent pass:[*]
```

```
*tracefs_uprobe_alloc*(const char pass:[*]_system_, const char pass:[*]_event_,  
    const char pass:[*]_file_, unsigned long long _offset_, const char pass:[*]_fetchargs_)
```

```
struct tracefs_dynevent pass:[*]
```

```
*tracefs_uretprobe_alloc*(const char pass:[*]_system_, const char pass:[*]_event_,  
    const char pass:[*]_file_, unsigned long long _offset_, const char pass:[*]_fetchargs_)
```

--

## DESCRIPTION

-----

\*tracefs\_uprobe\_alloc\*() allocates a new uprobe context. It will be in the `_system_` group (or uprobes if `_system_` is NULL) and with `_event_` name. The uprobe will be attached to `_offset_` within the `_file_`. The list of arguments, described in `_fetchargs_`, will be fetched with the uprobe.

The returned pointer to

the user probe context must be freed with `*tracefs_dynevent_free*()`.

The uprobe is not configured in the system, `tracefs_dynevent_*` set of APIs can be used to configure it.

The `*tracefs_uretprobe_alloc*()` behaves the same as `*tracefs_uprobe_alloc*()`, the only difference is that it allocates context to user return probe (uretprobe).

## RETURN VALUE

-----

The `*tracefs_uprobe_alloc*()` and `*tracefs_uretprobe_alloc*()` APIs return a pointer to an allocated `tracefs_dynevent` structure, describing the user probe. This pointer must be freed with

\*tracefs\_dynevent\_free\*(3). Note, this only allocates a descriptor representing the uprobes. It does not modify the running system. On error NULL is returned.

#### EXAMPLE

-----

[source,c]

--

```
#include <stdlib.h>
#include <unistd.h>
#include <sys/wait.h>

#include <tracefs.h>

static int callback(struct tep_event *event, struct tep_record *record,
    int cpu, void *data)
{
    struct trace_seq seq;

    trace_seq_init(&seq);
    tep_print_event(event->tep,
        &seq, record, "%d-%s: %s",
        TEP_PRINT_PID, TEP_PRINT_COMM, TEP_PRINT_NAME);
    trace_seq_puts(&seq, "\n");

    trace_seq_terminate(&seq);
    trace_seq_do_printf(&seq);
    trace_seq_destroy(&seq);

    return 0;
}

static pid_t run_exec(char **argv, char **env)
{
    pid_t pid;

    pid = fork();
    if (pid)
        return pid;

    execve(argv[0], argv, env);
    perror("exec");
    exit(-1);
}

const char *myprobe = "my_urobes";

int main (int argc, char **argv, char **env)
```

```

{
struct tracefs_dynevent *uprobe, *uretprobe;
struct tep_handle *tep;
struct tracefs_instance *instance;
const char *sysnames[] = { myprobe, NULL };
long addr;
pid_t pid;

if (argc < 3) {
printf("usage: %s file_offset command\n", argv[0]);
exit(-1);
}
addr = strtol(argv[1], NULL, 0);

instance = tracefs_instance_create("exec_open");
if (!instance) {
perror("creating instance");
exit(-1);
}

tracefs_dynevent_destroy_all(TRACEFS_DYNEVENT_UPROBE|TRACEFS_DYNEVENT_URETPROBE, true);

uprobe = tracefs_uprobe_alloc(myprobe, "user_probe",
argv[2], addr, NULL);
uretprobe = tracefs_uretprobe_alloc(myprobe, "user_retprobe", argv[2], addr, NULL);
if (!uprobe || !uretprobe) {
perror("allocating user probes");
exit(-1);
}

if (tracefs_dynevent_create(uprobe) ||
tracefs_dynevent_create(uretprobe)) {
perror("creating user probes");
exit(-1);
}

tep = tracefs_local_events_system(NULL, sysnames);
if (!tep) {
perror("reading events");
exit(-1);
}

tracefs_event_enable(instance, myprobe, "user_probe");
tracefs_event_enable(instance, myprobe, "user_retprobe");

pid = run_exec(&argv[2], env);

/* Let the child start to run */

```

```
    sched_yield();

do {
    tracefs_load_cmdlines(NULL, tep);
    tracefs_iterate_raw_events(tep, instance, NULL, 0, callback, NULL);
} while (waitpid(pid, NULL, WNOHANG) != pid);

/* disable and destroy the events */
tracefs_dynevent_destroy(uprobe, true);
tracefs_dynevent_destroy(uretprobe, true);
tracefs_dynevent_free(uprobe);
tracefs_dynevent_free(uretprobe);
tracefs_instance_destroy(instance);

return
0;
}
--
```

## FILES

-----

[verse]

--

\*tracefs.h\*

Header file to include in order to have access to the library APIs.

\*-ltracefs\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*libtracefs\*(3),

\*libtraceevent\*(3),

\*trace-cmd\*(1)

## AUTHOR

-----

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\*Steven Rostedt\* <rostedt@goodmis.org>

\*Tzvetomir Stoyanov\* <tz.stoyanov@gmail.com>

--

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No license file was found, but licenses were detected in source scan.

libtracefs(3)

=====

## NAME

----

`tracefs_instance_get_subbuf_size`, `tracefs_instance_set_subbuf_size` - Helper functions for working with ring buffer sub buffers.

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
size_t *tracefs_instance_get_subbuf_size*(struct tracefs_instance pass:[*]_instance_);
```

```
int *tracefs_instance_set_subbuf_size*(struct tracefs_instance pass:[*]_instance_, size_t _size_);
```

--

## DESCRIPTION

-----

Helper functions for working with the sub-buffers of the tracing ring buffer.

The tracing ring buffer is broken up into *\*sub-buffers\**. An event can not be bigger than the data section of the sub-buffer (see *\*tep\_get\_sub\_buffer\_data\_size\*(3)*).

By default, the ring buffer uses the architectures *\*page\_size\** as the default size of the sub-buffer, but this can be limiting if there is a need for large events, for example, the application wants to write large strings into the `trace_marker` file.

The

*\*tracefs\_instance\_get\_subbuf\_size()\** returns the current size in kilobytes fo the ring buffer sub-buffers.

The `*tracefs_instance_set_subbuf_size()*` will write the size in kilobytes of what the new sub-buffer size should be. Note, that this is only a hint to what the minimum sub-buffer size should be. It also does not take into account the meta-data that is used by the sub-buffer, so the size written should be no less than 16 bytes more than the maximum event size that will be used. The kernel will likely make the sub-buffer size larger than specified, as it may need to align the size for implementation purposes.

## RETURN VALUE

-----

The `*tracefs_instance_get_subbuf_size()*` returns the size of the current sub-buffer for the given `_instance_` ring buffer or -1 on error.

The `*tracefs_instance_set_subbuf_size()*` will return 0 if it successfully set the `_instance_` ring buffer sub-buffer size in kilobytes, or -1 on error.

## EXAMPLE

-----

[source,c]

--

```
#include <stdlib.h>
```

```
#include
```

```
<tracefs.h>
```

```
#include <errno.h>
```

```
int main(int argc, char **argv)
```

```
{
```

```
    struct tep_handle *tep;
```

```
    ssize_t save_subsize;
```

```
    ssize_t subsize;
```

```
    char *trace;
```

```
    char buf[3000];
```

```
    int meta_size;
```

```
    int ret;
```

```
    int i;
```

```
    tep = tep_alloc();
```

```
    ret = tracefs_load_headers(NULL, tep);
```

```
    tep_free(tep);
```

```
    if (ret < 0) {
```

```
        perror("reading headers");
```

```
        exit(-1);
```

```
    }
```

```
    meta_size = tep_get_sub_buffer_size(tep) - tep_get_sub_buffer_data_size(tep);
```



```

save_subsize = tracefs_instance_get_subbuf_size(NULL);
if (save_subsize < 0) {
    printf("Changing sub-buffer size not available\n");
    exit(-1);
}

subsize = save_subsize * 1024;

/* Have at least 4 writes fit on a sub-buffer */
if (subsize - meta_size < sizeof(buf) * 4 ) {
    subsize = ((sizeof(buf) * 4 + meta_size) + 1023) / 1024;
    tracefs_instance_set_subbuf_size(NULL, subsize);
}

for (i = 0; i < sizeof(buf) - 1; i++) {
    buf[i] = '0' + i % 10;
}
buf[i] = '\0';

tracefs_instance_clear(NULL);

for (i = 0; i < 4; i++) {
    ret = tracefs_printf(NULL, "%s\n", buf);
    if
    (ret < 0)
        perror("write");
}

trace = tracefs_instance_file_read(NULL, "trace", NULL);
printf("%s\n", trace);
free(trace);

printf("Buffer size was: %zd * 1024\n",
       tracefs_instance_get_subbuf_size(NULL));

tracefs_instance_set_subbuf_size(NULL, save_subsize);
}
--
FILES
-----
[verse]
--
*tracefs.h*
Header file to include in order to have access to the library APIs.
*-ltracefs*
Linker switch to add when building a program that uses the library.
--

```

## SEE ALSO

-----  
\*libtracefs\*(3),  
\*libtraceevent\*(3),  
\*trace-cmd\*(1)

## AUTHOR

-----  
[verse]  
--  
\*Steven Rostedt\* <rostedt@goodmis.org>  
\*Tzvetomir Stoyanov\* <tz.stoyanov@gmail.com>  
--

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1.8.0/Documentation/libtracefs-instances-subbuf.txt

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libtracefs(3)

=====

## NAME

----  
tracefs\_option\_enable, tracefs\_option\_disable, tracefs\_option\_name -  
Various trace option functions.

## SYNOPSIS

-----  
[verse]  
--

```
*#include <tracefs.h>*
```

```
int *tracefs_option_enable*(struct tracefs_instance pass:[*]_instance_, enum tracefs_option_id _id_);  
int *tracefs_option_disable*(struct tracefs_instance pass:[*]_instance_, enum tracefs_option_id _id_);  
const char pass:[*]*tracefs_option_name*(enum tracefs_option_id _id_);  
--
```

## DESCRIPTION

-----

This set of APIs can be used to enable and disable ftrace options and to get the name of an option.

The `*tracefs_option_enable()` function enables the option with `_id_` in the given `_instance_`. If `_instance_` is NULL, the option is enabled in the top trace instance.

The `*tracefs_option_disable()` function disables the option with `_id_` in the given `_instance_`. If `_instance_` is NULL, the option is disabled in the top trace instance.

The

`*tracefs_option_name()` function returns a string, representing the option with `_id_`. The string must *not* be freed.

## RETURN VALUE

-----

The `*tracefs_option_enable()` and `*tracefs_option_disable()` functions return 0 if the state of the option is set successfully, or -1 in case of an error.

The `*tracefs_option_name()` function returns string with option name, or "unknown" in case of an error. The returned string must *not* be freed.

## EXAMPLE

-----

[source,c]

--

```
#include <tracefs.h>
```

...

```
if (tracefs_option_enable(NULL, TRACEFS_OPTION_ANNOTATE)) {  
    /* Failed to enable annotate option in top trace instance */  
}
```

...

```
if (tracefs_option_disable(NULL, TRACEFS_OPTION_CONTEXT_INFO)) {  
    /* Failed to disable context info option in top trace instance */  
}
```

...

```
char *name = tracefs_option_name(TRACEFS_OPTION_FUNC_STACKTRACE);  
if (strcmp(name, "unknown")) {  
    /* Cannot get the name of the option */  
}
```

--

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>

--

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libtracefs(3)

=====

## NAME

----

tracefs\_iterate\_raw\_events, tracefs\_iterate\_stop, tracefs\_follow\_event, tracefs\_follow\_missed\_events, tracefs\_follow\_event\_clear, tracefs\_follow\_missed\_events\_clear, tracefs\_iterate\_snapshot\_events - Iterate over events in the ring buffer

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
int *tracefs_iterate_raw_events*(struct tep_handle pass:[*]_tep_, struct tracefs_instance pass:[*]_instance_,  
    cpu_set_t pass:[*]_cpus_, int _cpu_size_,  
    int (pass:[*]_callback_)(struct tep_event pass:[*], struct tep_record pass:[*], int, void pass:[*]),  
    void pass:[*]_callback_context_);
```

```
void *tracefs_iterate_stop*(struct tracefs_instance pass:[*]_instance_);
```

```
int *tracefs_follow_event*(struct tep_handle pass:[*]_tep_, struct tracefs_instance pass:[*]_instance_,  
    const char pass:[*]_system_, const char pass:[*]_event_name_,  
    int (pass:[*]_callback_)(struct tep_event pass:[*],
```

```
    struct tep_record pass:[*],  
    int, void pass:[*]),  
    void pass:[*]_callback_data_);
```

```
int *tracefs_follow_missed_events*(struct tracefs_instance pass:[*]_instance_,  
    int (pass:[*]_callback_)(struct tep_event pass:[*],  
    struct tep_record pass:[*],  
    int, void pass:[*]),  
    void pass:[*]_callback_data_);
```

```
int *tracefs_follow_event_clear*(struct tracefs_instance pass:[*]_instance_,  
    const char pass:[*]_system_, const char pass:[*]_event_name_);
```

```
int *tracefs_follow_missed_events_clear*(struct tracefs_instance pass:[*]_instance_);
```

```
int *tracefs_iterate_snapshot_events*(struct tep_handle pass:[*]_tep_, struct tracefs_instance pass:[*]_instance_,  
    cpu_set_t pass:[*]_cpus_, int _cpu_size_,  
    int (pass:[*]_callback_)(struct tep_event pass:[*], struct tep_record pass:[*], int, void pass:[*]),  
    void pass:[*]_callback_context_);
```

--

## DESCRIPTION

-----

Trace iterator over raw events.

The `*tracefs_iterate_raw_events()*` function will read the `tracefs_raw` data buffers and call the specified `_callback_` function for every event it encounters. Events are iterated in sorted order: oldest first. An initialized `_tep_handler` is required (See `*tracefs_local_events*(3)`). If `_instance_` is NULL, then the toplevel `tracefs` buffer is used, otherwise the buffer for the corresponding `_instance_` is read. To filter only on a subset of CPUs, `_cpus_` and `_cpu_size_` may be set to only call `_callback_` with events that occurred on the CPUs specified, otherwise if `_cpus_` is NULL then the `_callback_` function will be called for all events, and `_cpu_size_` is ignored. The `_callback_` function will be called with the following parameters: A pointer to a struct `tep_event` that corresponds to the type of event the record is; The record representing the event; The CPU that the event occurred on; and a pointer to user specified `_callback_context_`. If the `_callback_` returns non-zero, the iteration stops.

The `*tracefs_iterate_snapshot_events()*` works the same as `*tracefs_iterate_raw_events()*` except that it works on the snapshot buffer.

Use `*tracefs_iterate_stop()*` to force a executing `*tracefs_iterate_raw_events()*` to halt. This can be called from either a callback that is called by the iterator (even though a return of non-zero will stop it), or from another thread.

The `*tracefs_follow_event()*` is used with `*tracefs_iterate_raw_events()*` but instead of the callback being called for every event, it is only called for the specified `_system_ / _event_name_` given to the function. The `_callback_` is the same as for `*tracefs_iterate_raw_events()*`, and the passed in `_callback_context_` will be passed to the `_callback_` as well. Note, if it returns something other than 0, it will stop the loop before the `_callback_` of `*tracefs_iterate_raw_events()*` is called.

The `*tracefs_follow_missed_events()*` will call the `_callback_` when missed events are detected. It will set the `_record_` parameter of the callback to the record that came after the missed events and `_event_` will be of the type of event `_record_` is. `_cpu_` will be set to the CPU that missed the events, and `_callback_data_` will be the content that was passed in to the function.

The `*tracefs_follow_event_clear()*` will remove followers from `_instance_` that match `_system_` and `_event_name_`. If `_system_` and `_event_name_` are both NULL, then it will remove all event followers associated to `_instance_`. If just `_system_` is NULL, then it will remove all followers that follow events that match `_event_name_`. If just `_event_name_` is NULL, then it will remove all followers that are attached to events that are apart of a system that matches `_system_`.

The `*tracefs_follow_missed_events_clear()*` will remove all followers for missed

events.

## RETURN VALUE

-----

The `*tracefs_iterate_raw_events()` function returns -1 in case of an error or 0 otherwise.

Both `*tracefs_follow_event_clear()` and `*tracefs_follow_missed_events_clear()` return 0 on success and -1 on error, or if it found no followers that match and should be removed.

## EXAMPLE

-----

[source,c]

--

```
#include <unistd.h>
#include <tracefs.h>
#include <stdbool.h>
#include <signal.h>
```

```
struct my_struct {
    bool stopped;
};
```

```
#define MAX_COUNT 500000
static int counter;
```

```
static int callback(struct tep_event *event, struct tep_record *record,
    int cpu, void *data)
```

```
{
    struct my_struct *my_data = data;
    static struct trace_seq seq;
```

```
    if (counter++ > MAX_COUNT) {
        my_data->stopped = true;
        return 1;
    }
```

```
    if (!seq.buffer)
        trace_seq_init(&seq);
```

```
    tep_print_event(event->tep, &seq, record, "%16s-%5d [%03d] %6.1000d %s: %s\n",
        TEP_PRINT_COMM, TEP_PRINT_PID, TEP_PRINT_CPU,
        TEP_PRINT_TIME, TEP_PRINT_NAME, TEP_PRINT_INFO);
    trace_seq_terminate(&seq);
    trace_seq_do_printf(&seq);
    trace_seq_reset(&seq);
    return 0;
```

```

}

static int sched_callback(struct tep_event *event, struct tep_record *record,
    int cpu, void *data)
{
    static struct tep_format_field *prev_pid;
    static struct tep_format_field *next_pid;
    unsigned long
    long pid;
    int this_pid = *(int *)data;

    if (!prev_pid) {
        prev_pid = tep_find_field(event, "prev_pid");
        next_pid = tep_find_field(event, "next_pid");
        if (!prev_pid || !next_pid) {
            fprintf(stderr, "No pid fields??\n");
            return -1;
        }
    }

    tep_read_number_field(prev_pid, record->data, &pid);
    if (pid == this_pid)
        printf("WE ARE LEAVING!\n");
    tep_read_number_field(next_pid, record->data, &pid);
    if (pid == this_pid)
        printf("WE ARE ARRIVING!\n");
    return 0;
}

static int missed_callback(struct tep_event *event, struct tep_record *record,
    int cpu, void *data)
{
    printf("OOPS! cpu %d dropped ", cpu);
    if (record->missed_events > 0)
        printf("%lld ", record->missed_events);
    printf("events\n");
    return 0;
}

static struct tracefs_instance *instance;
static struct my_struct my_data;

static void sig(int s)
{
    tracefs_iterate_stop(instance);
    my_data.stopped = true;
}

```



```

int main (int argc, char **argv, char **env)
{
    struct tep_handle *tep;
    int this_pid = getpid();

    instance
    = tracefs_instance_create("my-buffer");
    if (!instance)
        return -1;

    signal(SIGINT, sig);

    tracefs_event_enable(instance, NULL, NULL);
    sleep(1);
    tracefs_event_disable(instance, NULL, NULL);
    tep = tracefs_local_events(NULL);
    tep_load_plugins(tep);
    tracefs_follow_missed_events(instance, missed_callback, NULL);
    tracefs_follow_event(tep, instance, "sched", "sched_switch", sched_callback, &this_pid);
    tracefs_iterate_raw_events(tep, instance, NULL, 0, callback, &my_data);

    /* Note, the clear here is to show how to clear all followers
     * in case tracefs_iterate_raw_events() is called again, but
     * does not want to include the followers. It's not needed
     * here because tracefs_instance_free() will clean them up.
     */
    tracefs_follow_event_clear(instance, NULL, NULL);
    tracefs_follow_missed_events_clear(instance);

    tracefs_instance_destroy(instance);
    tracefs_instance_free(instance);

    if (my_data.stopped) {
        if (counter > MAX_COUNT)
            printf("Finished max count\n");
        else
            printf("Finished
via signal\n");
    }

    return 0;
}
--
FILES
-----
[verse]
--
*tracefs.h*

```

Header file to include in order to have access to the library APIs.

`*-ltracefs*`

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

`*libtracefs*(3)`,

`*libtraceevent*(3)`,

`*trace-cmd*(1)`

## AUTHOR

-----

[verse]

--

`*Steven Rostedt* <rostedt@goodmis.org>`

`*Tzvetomir Stoyanov* <tz.stoyanov@gmail.com>`

--

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libtracefs(3)

=====

## NAME

----

`tracefs_cpu_open_mapped`, `tracefs_cpu_is_mapped`, `tracefs_mapped_is_supported`, `tracefs_cpu_map`, `tracefs_cpu_unmap` - Memory mapping of the ring buffer

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
bool *tracefs_cpu_is_mapped*(struct tracefs_cpu pass:[*]tcpu);
bool *tracefs_mapped_is_supported*(void);
int *tracefs_cpu_map*(struct tracefs_cpu pass:[*]tcpu);
void *tracefs_cpu_unmap*(struct tracefs_cpu pass:[*]tcpu);
struct tracefs_cpu pass:[*]*tracefs_cpu_open_mapped*(struct tracefs_instance pass:[*]instance,
    int cpu, bool nonblock);
--
```

## DESCRIPTION

-----

If the `trace_pipe_raw` supports memory mapping, this is usually a more efficient method to stream data from the kernel ring buffer than by reading it, as it does not require copying the memory that is being read.

If memory mapping is supported by the kernel and the application asks to use the memory mapping via

either `*tracefs_cpu_map()*` or by `*tracefs_cpu_open_mapped()*` then the functions `*tracefs_cpu_read*(3)` and `*tracefs_cpu_read_buf*(3)` will use the mapping directly instead of calling the read system call.

Note, mapping will cause `*tracefs_cpu_buffered_read*(3)` and `*tracefs_cpu_buffered_read_buf*(3)` to act just like `*tracefs_cpu_read*(3)` and `*tracefs_cpu_read_buf*(3)` respectively as it doesn't make sense to use a splice pipe when mapped. The kernel will do a copy for splice reads on mapping, and then another copy in the function when it can avoid the copying if the ring buffer is memory mapped.

If the `_tcpu_` is memory mapped it will also force `*tracefs_cpu_write*(3)` and `*tracefs_cpu_pipe*(3)` to copy from the mapping instead of using splice. Thus care must be used when determining to map the ring buffer or not, and why it does not get mapped by default.

The `*tracefs_cpu_is_mapped()*` function will return true if `_tcpu_` currently has its ring buffer memory mapped and false otherwise. This does not return whether or not that the kernel supports memory mapping, but that can usually be determined by calling `*tracefs_cpu_map()*`.

The `*tracefs_mapped_is_supported()*` returns true if the ring buffer can be memory mapped.

The `*tracefs_cpu_map()*` function will attempt to map the ring buffer associated to `_tcpu_` if it is not already mapped.

The `*tracefs_cpu_unmap()*` function will unmap the ring buffer associated to `_tcpu_` if it is mapped.

The `*tracefs_cpu_open_mapped()*` is equivalent to calling `*tracefs_cpu_open*(3)` followed by `*tracefs_cpu_map()*` on the returned `_tcpu_` of `*tracefs_cpu_open*(3)`. Note, this will still succeed if the mapping fails, in which case it acts the same as `*tracefs_cpu_open*(3)`. If knowing if the mapping succeed or not, `*tracefs_cpu_is_mapped()*` should be called on the return `_tcpu_`.

## RETURN VALUE

-----

`*tracefs_cpu_is_mapped()*` returns true if the given `_tcpu_` has its ring buffer memory mapped or false otherwise.

`*tracefs_mapped_is_supported()*`  
returns true if the tracing ring buffer can be memory mapped or false if it cannot be or an error occurred.

`*tracefs_cpu_map()*` returns 0 on success and -1 on error in mapping. If 0 is returned then `*tracefs_cpu_is_mapped()*` will return true afterward, or false if the mapping failed.

`*tracefs_cpu_open_mapped()*` returns an allocated `tracefs_cpu` on success of creation regardless if it succeed in mapping the ring buffer or not. It returns NULL for the same reasons `*tracefs_cpu_open*(3)` returns NULL. If success of mapping is to be known, then calling `*tracefs_cpu_is_mapped()*` afterward is required.

## EXAMPLE

-----

[source,c]

--

```
#include <stdlib.h>
```

```
#include <ctype.h>
```

```
#include <tracefs.h>
```

```
static void read_subbuf(struct tep_handle *tep, struct kbuffer *kbuf)
```

```
{
```

```
    static struct trace_seq seq;
```

```
    struct tep_record record;
```

```
    int missed_events;
```

```
    if (seq.buffer)
```

```
        trace_seq_reset(&seq);
```

```
    else
```

```
        trace_seq_init(&seq);
```

```
    while ((record.data = kbuffer_read_event(kbuf, &record.ts))) {
```

```

record.size
= kbuffer_event_size(kbuf);
missed_events = kbuffer_missed_events(kbuf);
if (missed_events) {
    printf("[MISSED EVENTS");
    if (missed_events > 0)
        printf(": %d]\n", missed_events);
    else
        printf("]\n");
}
kbuffer_next_event(kbuf, NULL);
tep_print_event(tep, &seq, &record,
    "%s-%d %6.1000d\t%s: %s\n",
    TEP_PRINT_COMM,
    TEP_PRINT_PID,
    TEP_PRINT_TIME,
    TEP_PRINT_NAME,
    TEP_PRINT_INFO);
trace_seq_do_printf(&seq);
trace_seq_reset(&seq);
}
}

```

```

int main (int argc, char **argv)
{
    struct tracefs_cpu *tcpu;
    struct tep_handle *tep;
    struct kbuffer *kbuf;
    bool mapped;
    int cpu;

    if (argc < 2 || !isdigit(argv[1][0])) {
        printf("usage: %s cpu\n\n", argv[0]);
        exit(-1);
    }

    cpu = atoi(argv[1]);

    tep = tracefs_local_events(NULL);
    if (!tep) {
        perror("Reading trace event formats");
        exit(-1);
    }

    tcpu = tracefs_cpu_open_mapped(NULL, cpu, 0);
    if (!tcpu) {
        perror("Open CPU 0 file");
        exit(-1);
    }
}

```

```

}

/*
 * If this kernel supports mapping, use normal
read,
 * otherwise use the piped buffer read, although if
 * the mapping succeeded, tracefs_cpu_buffered_read_buf()
 * acts the same as tracefs_cpu_read_buf(). But this is just
 * an example on how to use tracefs_cpu_is_mapped().
 */
mapped = tracefs_cpu_is_mapped(tcpu);
if (!mapped)
    printf("Was not able to map, falling back to buffered read\n");
while ((kbuf = mapped ? tracefs_cpu_read_buf(tcpu, true) :
    tracefs_cpu_buffered_read_buf(tcpu, true))) {
    read_subbuf(tep, kbuf);
}

kbuf = tracefs_cpu_flush_buf(tcpu);
if (kbuf)
    read_subbuf(tep, kbuf);

tracefs_cpu_close(tcpu);
tep_free(tep);

return 0;
}
--

```

## FILES

-----

[verse]

--

\*tracefs.h\*

Header file to include in order to have access to the library APIs.

\*-ltracefs\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*tracefs\_cpu\_open\*(3),

\*tracefs\_cpu\_read\*(3),

\*tracefs\_cpu\_read\_buf\*(3),

\*tracefs\_cpu\_buffered\_read\*(3),

\*tracefs\_cpu\_buffered\_read\_buf\*(3),

\*libtracefs\*(3),

\*libtraceevent\*(3),

\*trace-cmd\*(1)

## AUTHOR

-----

[verse]

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\*Steven

Rostedt\* <rostedt@goodmis.org>

--

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libtracefs(3)

=====

## NAME

----

tracefs\_filter\_pid\_function, tracefs\_filter\_pid\_events, tracefs\_filter\_pid\_function\_clear, tracefs\_filter\_pid\_events\_clear -

Add and remove PID filtering for functions and events

## SYNOPSIS

-----

[verse]

--

\*#include <tracefs.h>\*

```
int *tracefs_filter_pid_function*(struct tracefs_instance pass:[*]_instance, _int _pid_,
    bool _reset_, bool _notrace_);
```

```
int *tracefs_filter_pid_function_clear*(struct tracefs_instance pass:[*]_instance_, bool _notrace_);
int *tracefs_filter_pid_events*(struct tracefs_instance pass:[*]_instance_, int _pid_,
    bool _reset_, bool _notrace_);
int *tracefs_filter_pid_events_clear*(struct tracefs_instance pass:[*]_instance_, bool _notrace_);
--
```

## DESCRIPTION

-----

Both events and functions can be filtered by PID, but they are done separately. PID filtering for functions affect the function and function\_graph tracer, where as PID filtering for

events affect all events such as \_sched\_switch\_ and \_sched\_waking\_.

If the \*TRACEFS\_OPTION\_FUNCTION\_FORK\* is enabled (see \*tracefs\_option\_enable\*(3)), any PID that is set as part of the function PID filtering will automatically have its children added when they are spawned, as well as the PID removed when they exit. If the \*TRACEFS\_OPTION\_EVENT\_FORK\* is set, the same is true for event PID filtering. This also includes the \_notrace\_ option where the child threads and processes of PIDs that are labled as notrace will also not be traced.

The \*tracefs\_filter\_pid\_function()\* affects function PID filtering and \*tracefs\_filter\_pid\_events()\* affects the PID event filtering. For both functions, they add a \_pid\_ to be filtered in the given \_instance\_. If \_reset\_ is true, then any PIDs already being filtered will be removed, otherwise the \_pid\_ is simply added to the filtering. If \_notrace\_ is true, then the PID is added to the list of PIDs that are not to be traced. Note, that \_reset\_ only affects the

list associated with \_notrace\_. That is, if both \_reset\_ and \_notrace\_ are true, then it will not affect PIDs that are to be traced. Same is if \_reset\_ is true and \_notrace\_ is false, it will not affect PIDs that are not to be traced.

The \*tracefs\_filter\_pid\_function\_clear()\* affects function PID filtering and \*tracefs\_filter\_pid\_events\_clear()\* affects the PID event filtering. For both functions it will clear all the PIDs that are being filtered for the given filter. If \_notrace\_ is true it clears all the PIDs that are not to be traced otherwise if it is false, it clears all the PIDs that are to be traced.

## RETURN VALUE

-----

All the functions return 0 on success and -1 on error.

## EXAMPLE

-----

[source,c]

--

```
#include <stdlib.h>
```

```
#include <stdio.h>
```

```
#include <ctype.h>
```

```
#include <tracefs.h>
```



```

static void usage(char **argv)
{
    fprintf(stderr, "usage: %s [-e|-f][-c|-n] pid [pid ...]\n", argv[0]);
    fprintf(stderr, "  -e enable event filter\n");
    fprintf(stderr, "  -f enable
function filter\n");
    fprintf(stderr, "    (default is both, function and event)\n");
    fprintf(stderr, "  -c clear the filter\n");
    fprintf(stderr, "  -n notrace filter\n");
    exit(-1);
}

```

```

int main (int argc, char **argv)
{
    bool events = false;
    bool funcs = false;
    bool neg = false;
    bool clear = false;
    bool reset = true;
    int i;

    for (i = 1; i < argc && argv[i][0] == '-'; i++) {
        char *arg = argv[i];
        int c;
        for (c = 1; arg[c]; c++) {
            switch (arg[c]) {
                case 'e': events = true; break;
                case 'f': funcs = true; break;
                case 'n': neg = true; break;
                case 'c': clear = true; break;
                default:
                    usage(argv);
            }
        }
        if (c == 1)
            usage(argv);
    }
}

```

```

if (i == argc && !clear)
    usage(argv);

```

```

if (!events && !funcs) {
    events = true;
    funcs = true;
}

```

```

if (clear) {

```

```

if (events)
    tracefs_filter_pid_events_clear(NULL, neg);
if (funcs)
    tracefs_filter_pid_function_clear(NULL, neg);
exit(0);
}

for (; i < argc; i++) {
    int pid = atoi(argv[i]);

    if (events)
        tracefs_filter_pid_events(NULL,
pid, reset, neg);
    if (funcs)
        tracefs_filter_pid_function(NULL, pid, reset, neg);

    reset = false;
}

exit(0);
}

```

--

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1),**

**\*tracefs\_hist\_alloc\*(3),**

**\*tracefs\_hist\_alloc\_2d\*(3),**

**\*tracefs\_hist\_alloc\_nd\*(3),**

**\*tracefs\_hist\_free\*(3),**

**\*tracefs\_hist\_add\_key\*(3),**

**\*tracefs\_hist\_add\_value\*(3),**

**\*tracefs\_hist\_add\_name\*(3),**

**\*tracefs\_hist\_start\*(3),**

**\*tracefs\_hist\_destory\*(3),**

\*tracefs\_hist\_add\_sort\_key\*(3),  
\*tracefs\_hist\_sort\_key\_direction\*(3)

## AUTHOR

-----

[verse]

--

\*Steven Rostedt\* <rostedt@goodmis.org>

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1.8.0/Documentation/libtracefs-filter-pid.txt

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libtracefs(3)

=====

## NAME

----

tracefs\_file\_exists, tracefs\_dir\_exists,

tracefs\_instance\_get\_file, tracefs\_instance\_get\_dir - Work with files directories in tracing instances.

## SYNOPSIS

-----

[verse]

--

\*#include <tracefs.h>\*

bool \*tracefs\_file\_exists\*(struct tracefs\_instance pass:[\*]\_instance\_, char pass:[\*]\_name\_);

bool \*tracefs\_dir\_exists\*(struct tracefs\_instance pass:[\*]\_instance\_, char pass:[\*]\_name\_);

```
char pass:[*]*tracefs_instance_get_file*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_);
char pass:[*]*tracefs_instance_get_dir*(struct tracefs_instance pass:[*]_instance_);
```

--

## DESCRIPTION

-----

This set of APIs can be used to work with trace files in all trace instances. Each of these APIs take an `_instance_` argument, that can be NULL to act on the top level instance. Otherwise, it acts on an instance created with `*tracefs_instance_create*(3)`

The `*tracefs_file_exists()*` function checks if a file with `_name_` exists in `_instance_`.

The `*tracefs_dir_exists()*` function checks if a directory with `_name_` exists in `_instance_`.

The `*tracefs_instance_get_file()*` function returns the full path of the file with given `_name_` in `_instance_`. Note, it does not check if the file exists in the instance.

The `*tracefs_instance_get_dir()*` function returns the full path of the directory with given `_name_` in `_instance_`. Note, it does not check if the directory exists in the instance.

## RETURN VALUE

-----

The `*tracefs_file_exists()*` and `*tracefs_dir_exists()*` functions return true if the file / directory exist in the given instance or false if it does not exist.

The `*tracefs_instance_get_file()*` and `*tracefs_instance_get_dir()*` functions return a string or NULL in case of an error. The returned string must be freed with `*tracefs_put_tracing_file()*`.

## EXAMPLE

-----

[source,c]

--

```
#include <tracefs.h>
```

```
struct tracefs_instance *inst = tracefs_instance_create("foo");
```

```
if
```

```
(!inst) {
```

```
    /* Error creating a new trace instance */
```

```
    ...
```

```
}
```

```
if (tracefs_file_exists(inst, "trace_clock")) {
```

```

/* The instance foo supports trace clock */
char *path, *clock;
int size;

path = tracefs_instance_get_file(inst, "trace_clock")
if (!path) {
    /* Error getting the path to trace_clock file in instance foo */
    ...
}
...
tracefs_put_tracing_file(path);

clock = tracefs_instance_file_read(inst, "trace_clock", &size);
if (!clock) {
    /* Failed to read trace_clock file in instance foo */
    ...
}
...
free(clock);

if (tracefs_instance_file_write(inst, "trace_clock", "global") != strlen("global")) {
    /* Failed to set global trace clock in instance foo */
    ...
}
else {
    /* The instance foo does not support trace clock */
}

if (tracefs_dir_exists(inst, "options")) {
    /* The instance foo supports trace options */
    char *path = tracefs_instance_get_file(inst, "options");
    if (!path) {
        /* Error getting the path to options directory
in instance foo */
        ...
    }

    tracefs_put_tracing_file(path);
} else {
    /* The instance foo does not support trace options */
}

...

if (tracefs_instance_is_new(inst))
    tracefs_instance_destroy(inst);
else
    tracefs_instance_free(inst);

```

```

...

long long int res;
if (tracefs_instance_file_read_number(NULL, "tracing_on", &res) == 0) {
    if (res == 0) {
        /* tracing is disabled in the top instance */
    } else if (res == 1) {
        /* tracing is enabled in the top instance */
    } else {
        /* Unknown tracing state of the top instance */
    }
} else {
    /* Failed to read integer from tracing_on file */
}

...

int fd;
fd = tracefs_instance_file_open(NULL, "tracing_on", O_WRONLY);
if (fd >= 0) {
    /* Got file descriptor to the tracing_on file from the top instance for writing */
    ...
    close(fd);
}
--
FILES
-----
[verse]
--
*tracefs.h*
Header file to include in order to have access to the library APIs.
*-ltracefs*
Linker switch to add when building a program that uses
the library.
--

SEE ALSO
-----
*libtracefs*(3),
*libtraceevent*(3),
*trace-cmd*(1)

AUTHOR
-----
[verse]
--
*Steven Rostedt* <rostedt@goodmis.org>
*Tzvetomir Stoyanov* <tz.stoyanov@gmail.com>

```

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libtracefs(3)

=====

## NAME

----

tracefs\_options\_get\_supported, tracefs\_option\_is\_supported, tracefs\_options\_get\_enabled, tracefs\_option\_is\_enabled, tracefs\_option\_mask\_is\_set, tracefs\_option\_id

- Get and check ftrace options.

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
const struct tracefs_options_mask pass:[*]*tracefs_options_get_supported*(struct tracefs_instance
pass:[*]_instance_);
bool *tracefs_option_is_supported*(struct tracefs_instance pass:[*]_instance_, enum tracefs_option_id id);
const struct tracefs_options_mask pass:[*]*tracefs_options_get_enabled*(struct tracefs_instance
pass:[*]_instance_);
bool *tracefs_option_is_enabled*(struct tracefs_instance pass:[*]_instance_, enum tracefs_option_id id);
bool *tracefs_option_mask_is_set*(const struct tracefs_options_mask *options, enum tracefs_option_id id);
enum tracefs_option_id *tracefs_option_id*(const char pass:[*]_name_);
```

--

## DESCRIPTION

-----

This

set of APIs can be used to get and check current ftrace options. Supported ftrace options may depend on the kernel version and the kernel configuration.

The `*tracefs_options_get_supported()*` function gets all ftrace options supported by the system in the given `_instance_`. If `_instance_` is NULL, supported options of the top trace instance are returned. The set of supported options is the same in all created trace instances, but may be different than the top trace instance.

The `*tracefs_option_is_supported()/` function checks if the option with given `_id_` is supported by the system in the given `_instance_`. If `_instance_` is NULL, the top trace instance is used. If an option is supported at the top trace instance, it may not be supported in a created trace instance.

The `*tracefs_options_get_enabled()*` function gets all ftrace options, currently enabled in the given `_instance_`. If `_instance_` is NULL, enabled options of the top trace instance are returned.

The `*tracefs_option_is_enabled()*` function checks if the option with given `_id_` is enabled in the given `_instance_`. If `_instance_` is NULL, the top trace instance is used.

The `*tracefs_option_mask_is_set()*` function checks if the bit, corresponding to the option with `_id_` is set in the `_options_` bitmask returned from `*tracefs_option_get_enabled()*` and `*tracefs_option_is_supported()*`.

The `*tracefs_option_id()*` converts an option `_name_` into its corresponding id, if it is found. This allows to find the option `_id_` to use in the other functions if only the `_name_` is known.

## RETURN VALUE

-----

The `*tracefs_options_get_supported()*` and `*tracefs_options_get_enabled()*` functions, on success, return a pointer to the bitmask within the instance, or a global bitmask for the top level, or NULL in case of an error. As the returned bitmask is part of the instance structure (or a global variable) and must not be freed or modified.

The `*tracefs_option_is_supported()*` and `*tracefs_option_is_enabled()*` functions return true if the option is supported / enabled, or false otherwise.

The `*tracefs_option_mask_is_set()*` returns true if the corresponding option is set in the mask or false otherwise.

The `*tracefs_option_id()*` returns the corresponding id defined by `*tracefs_options*(3)` from the given `_name_`. If the `_name_` can not be found, then `TRACEFS_OPTION_INVALID` is returned.

## EXAMPLE

-----

[source,c]



```

--
#include <tracefs.h>
...
const struct tracefs_options_mask *options;
...
options = tracefs_options_get_supported(NULL);
if (!options) {
    /* Failed to get supported options */
} else {
    ...
}
...
options = tracefs_options_get_enabled(NULL);
if (!options) {
    /* Failed to get options, enabled in the top instance */
} else {
    ...
}
if (tracefs_options_mask_is_set(options, TRACEFS_OPTION_LATENCY_FORMAT)) {
    ...
}
...

if (tracefs_option_is_supported(NULL, TRACEFS_OPTION_LATENCY_FORMAT)) {
    /* Latency format option is supported */
}

...

if (tracefs_option_is_enabled(NULL, TRACEFS_OPTION_STACKTRACE))
{
    /* Stacktrace option is enabled in the top instance */
}

--
FILES
-----
[verse]
--
*tracefs.h*
Header file to include in order to have access to the library APIs.
*-ltracefs*
Linker switch to add when building a program that uses the library.
--

SEE ALSO
-----
*libtracefs*(3),

```

\*libtraceevent\*(3),

\*trace-cmd\*(1)

## AUTHOR

-----

[verse]

--

\*Steven Rostedt\* <rostedt@goodmis.org>

\*Tzvetomir Stoyanov\* <tz.stoyanov@gmail.com>

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libtracefs(3)

=====

## NAME

----

tracefs\_binary\_init, tracefs\_binary\_close, tracefs\_binary\_write -

Open, close and write binary data in the trace buffer.

## SYNOPSIS

-----

[verse]

--

\*#include <tracefs.h>\*

int \*tracefs\_binary\_init\*(struct tracefs\_instance pass:[\*]\_instance\_);

int \*tracefs\_binary\_write\*(struct tracefs\_instance pass:[\*]\_instance\_, void pass:[\*]\_data\_, int \_len\_);

```
void *tracefs_binary_close*(struct tracefs_instance pass:[*]_instance_);
```

```
--
```

## DESCRIPTION

```
-----
```

Set of functions to write binary data in the trace buffer.

See Documentation/trace/fttrace.rst from the Linux kernel tree for more information about writing data from user space in the trace buffer. All these APIs have `_instance_` as a first argument. If `NULL` is passed as `_instance_`, the top trace instance is used.

The `*tracefs_binary_init()*` function initializes the library for writing into the trace buffer of the selected `_instance_`.

It is not mandatory to call this API before writing data, the

`*tracefs_binary_write()*` will call it automatically, if the library is not yet initialized.

But calling `*tracefs_binary_init()*` in advance will speed up the writing.

The `*tracefs_binary_write()*` function writes a binary data in the trace buffer of the selected `_instance_`. The `_data_` points to the data with length `_len_`, that is going to be written in the trace buffer.

The `*tracefs_binary_close()*` function closes the resources, used by the library for writing in the trace buffer of the selected instance.

## RETURN VALUE

```
-----
```

The `*tracefs_binary_init()*`, and `*tracefs_binary_write()*` functions return 0 if the operation is successful, or -1 in case of an error.

## EXAMPLE

```
-----
```

```
[source,c]
```

```
--
```

```
#include <tracefs.h>
```

```
if (tracefs_binary_init(NULL) < 0) {
```

```
/* Failed to initialize the library for writing in the trace buffer of the top trace instance */
```

```
}
```

```
unsigned int data = 0xdeadbeef;
```

```
if (tracefs_binary_write(NULL, &data, sizeof(data))
```

```
< 0) {
```

```
/* Failed to write in the trace buffer */
```

```
}
```

```
tracefs_binary_close();
```

```
--
```

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1),**

Documentation/trace/ftrace.rst from the Linux kernel tree

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>

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libtracefs(3)

=====

NAME

----

tracefs\_instance\_get\_name, tracefs\_instance\_get\_trace\_dir, tracefs\_instances\_walk, tracefs\_instance\_exists, tracefs\_instance\_get\_buffer\_size, tracefs\_instance\_set\_buffer\_size, tracefs\_instance\_get\_buffer\_percent, tracefs\_instance\_set\_buffer\_percent - Helper functions for working with tracing instances.

SYNOPSIS

-----

[verse]

--

\*#include <tracefs.h>\*

```

const char pass:[*]*tracefs_instance_get_name*(struct tracefs_instance pass:[*]_instance_);
const char pass:[*]*tracefs_instance_get_trace_dir*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_instances_walk*(int (pass:[*]_callback_)(const char pass:[*], void pass:[*]), void pass:[*]_context_);
bool *tracefs_instance_exists*(const char pass:[*]_name_);
size_t *tracefs_instance_get_buffer_size*(struct tracefs_instance pass:[*]_instance_, int _cpu_);
int *tracefs_instance_set_buffer_size*(struct tracefs_instance pass:[*]_instance_,
size_t _size_, int _cpu_);
int *tracefs_instance_get_buffer_percent*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_instance_set_buffer_percent*(struct tracefs_instance pass:[*]_instance_, int _val_);
--

```

## DESCRIPTION

-----

Helper functions for working with trace instances.

The `*tracefs_instance_get_name()` function returns the name of the given `_instance_`. Note that the top instance has no name, the function returns NULL for it.

The `*tracefs_instance_get_trace_dir()` function returns the tracing directory, where the given `_instance_` is configured.

The `*tracefs_instances_walk()` function walks through all configured tracing instances in the system and calls `_callback_` for each one of them. The `_context_` argument is passed to the `_callback_`, together with the instance name. If the `_callback_` returns non-zero, the iteration stops. Note, the `_callback_` is not called for the top instance.

The `*tracefs_instance_exists()` function checks if an instance with the given `_name_` exists in the system.

The `*tracefs_instance_get_buffer_size()` returns the size of the ring buffer. If `_cpu_` is negative, it returns the total size of all the per CPU ring buffers, otherwise it returns the size of the per CPU ring buffer for `_cpu_`.

The `*tracefs_instance_set_buffer_size()` function sets the size of the ring buffer. If `_cpu_` is negative, then it sets all the per CPU ring buffers to `_size_` (note the total size is the number of CPUs \* `_size_`). If `_cpu_` is specified, then it only sets the size of the per CPU ring buffer.

The `*tracefs_instance_set_buffer_percent()` sets the buffer percent value of the tracing ring buffer for `_instance_` or the top level buffer if `_instance_` is NULL. The buffer percent decides when readers on `*tracefs_cpu_read*(3)`, `*tracefs_cpu_buffered_read*(3)`, `*tracefs_cpu_write*(3)` and `*tracefs_cpu_pipe*(3)` will block when O\_NONBLOCK is not set. The value of `_val_` must be between 0 and 100, where:

[verse]

--

0 - block until there's  
any data in the ring buffer  
1 - block until 1% of the ring buffer sub-buffers are filled  
50 - block until 50% of the ring buffer sub-buffers are filled  
100 - block until the entire ring buffer is filled

--

Note, any number from 0 to 100 can be used where it is the percentage of the ring buffer that must be filled before a blocked reader will be notified that there's data to be retrieved.

The `*tracefs_instance_get_buffer_percent()` retrieves the current buffer percent setting of the tracing ring buffer for `_instance_` or the top level buffer if `_instance_` is NULL.

## RETURN VALUE

-----

The `*tracefs_instance_get_name()` returns a string or NULL in case of the top instance. The returned string must `_not_` be freed.

The `*tracefs_instance_get_trace_dir()` returns a string or NULL in case of an error. The returned string must `_not_` be freed.

The `*tracefs_instances_walk()` function returns 0, if all instances were iterated, 1 if the iteration was stopped by the `_callback_`, or -1 in case of an error.

The `*tracefs_instance_exists()` returns true if an instance with the given `_name_` exists in the system or false otherwise.

The `*tracefs_instance_get_buffer_size()` returns the size of the ring buffer depending on the `_cpu_` value passed in, or -1 on error.

The `*tracefs_instance_set_buffer_size()` returns zero on success and -1 on error.

## EXAMPLE

-----

[source,c]

--

```
#include <tracefs.h>
```

```
struct tracefs_instance *inst;
```

```
....
```

```
char *name = tracefs_instance_get_name(inst);
```

```
if(name) {
```

```
    /* Got name of the instance */
```

```

}
char *dir = tracefs_instance_get_trace_dir(inst);
if(dir) {
    /* Got tracing directory of the instance */
}
...
static int instance_walk(char *name, void *context)
{
    /* Got instance with name */
    return 0;
}
...
if (tracefs_instances_walk(instance_walk, NULL) < 0) {
    /* Error walking through the instances */
}
...
if (tracefs_instance_exists("foo")) {
    /* There is instance with name foo in the system */
} else {
    /* There is no instance
with name foo in the system */
}
--
FILES
-----
[verse]
--
*tracefs.h*
Header file to include in order to have access to the library APIs.
*-ltracefs*
Linker switch to add when building a program that uses the library.
--

SEE ALSO
-----
*libtracefs*(3),
*libtraceevent*(3),
*trace-cmd*(1)

AUTHOR
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[verse]
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*Steven Rostedt* <rostedt@goodmis.org>
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--
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```



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libtracefs(3)

=====

## NAME

----

tracefs\_cpu\_read\_size, tracefs\_cpu\_read, tracefs\_cpu\_buffered\_read, tracefs\_cpu\_write, tracefs\_cpu\_stop, tracefs\_cpu\_flush, tracefs\_cpu\_flush\_write, tracefs\_cpu\_pipe  
- Reading trace\_pipe\_raw data

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
int *tracefs_cpu_read_size*(struct tracefs_cpu pass:[*]_tcpu_);  
int *tracefs_cpu_read*(struct tracefs_cpu pass:[*]_tcpu_, void pass:[*]_buffer_, bool _nonblock_);  
int *tracefs_cpu_buffered_read*(struct tracefs_cpu pass:[*]_tcpu_, void pass:[*]_buffer_, bool _nonblock_);  
int *tracefs_cpu_write*(struct tracefs_cpu pass:[*]_tcpu_, int _wfd_, bool _nonblock_);  
int *tracefs_cpu_stop*(struct tracefs_cpu pass:[*]_tcpu_);  
int *tracefs_cpu_flush*(struct tracefs_cpu pass:[*]_tcpu_, void pass:[*]_buffer_);  
int *tracefs_cpu_flush_write*(struct tracefs_cpu pass:[*]_tcpu_, int _wfd_);  
int *tracefs_cpu_pipe*(struct tracefs_cpu pass:[*]_tcpu_, int _wfd_,  
    bool _nonblock_);
```

--

## DESCRIPTION

-----

This set of APIs can be used to read the raw data from the `trace_pipe_raw` files in the `tracefs` file system.

The `*tracefs_cpu_read_size()*` returns the subbuffer size of the `trace_pipe_raw`. This returns the minimum size of the buffer that is passed to the below functions.

The `*tracefs_cpu_read()*` reads the `trace_pipe_raw` files associated to `_tcpu_` into `_buffer_`. `_buffer_` must be at least the size of the sub buffer of the ring buffer, which is returned by `*tracefs_cpu_read_size()*`. If `_nonblock_` is set, and there's no data available, it will return immediately. Otherwise depending on how `_tcpu_` was opened, it will block. If `_tcpu_` was opened with `nonblock` set, then this `_nonblock_` will make no difference.

The `*tracefs_cpu_buffered_read()*` is basically the same as `*tracefs_cpu_read()*` except that it uses a pipe through `splice` to buffer reads. This will batch reads keeping the reading from the ring buffer less intrusive to the system, as just reading all the time can cause quite a disturbance. Note, one difference between this and `*tracefs_cpu_read()*` is that it will read only in sub buffer pages. If the ring buffer has not filled a page, then it will not return anything, even with `_nonblock_` set. Calls to `*tracefs_cpu_flush()*` should be done to read the rest of the file at the end of the trace.

The `*tracefs_cpu_write()*` will pipe the data from the `trace_pipe_raw` file associated with `_tcpu_` into the `_wfd_` file descriptor. If `_nonblock_` is set, then it will not block on if there's nothing to write. Note, it will only write sub buffer size data to `_wfd_`. Calls to `tracefs_cpu_flush_write()` are needed to write out the rest.

The `*tracefs_cpu_stop()*` will attempt to unblock a task blocked on `_tcpu_` reading it. On older kernels, it may not do anything for the pipe reads, as older kernels do not wake up tasks waiting on the ring buffer. Returns 0 if it definitely woke up any possible waiters, but returns 1 if it is not sure it worked and waiters may need to have a signal sent to them.

The `*tracefs_cpu_flush()*` reads the `trace_pipe_raw` file associated by the `_tcpu_` and puts it into `_buffer_`, which must be the size of the sub buffer which is retrieved by `*tracefs_cpu_read_size()*`. This should be called at the end of tracing to get the rest of the data. This call will convert the file descriptor of `trace_pipe_raw` into non-blocking mode.

The `*tracefs_cpu_flush_write()*` same as `*trace_cpu_flush()*` except it takes a file descriptor `_wfd_` to flush the data into.

The `*tracefs_cpu_pipe()*` is similar to `*tracefs_cpu_write()*` but the `_wfd_` file descriptor must be a pipe. This call is an optimization of `*tracefs_cpu_write()*` that uses two calls to `*splice*(2)` in order to connect the `trace_pipe_raw` file descriptor with the write file

descriptor. `*splice*(2)` requires that one of the passed in file descriptors is a pipe. If the application wants to pass the data to an existing pipe, there's no reason for there to be two `*splice*(2)` system calls and `*tracefs_cpu_pipe()*` can simply use a single call to `_wfd_`.

## RETURN VALUE

-----

The `*tracefs_cpu_open()*` returns a struct `tracefs_cpu` descriptor that can be used by the other functions or `NULL` on error.

The `*tracefs_cpu_read_size()*` returns the minimum size of the buffers to be used with `*tracefs_cpu_read()*`, `*tracefs_cpu_buffered_read()*` and `*tracefs_cpu_flush()*`. Returns negative on error.

The `*tracefs_cpu_read()*` returns the number of bytes read, or negative on error.

The `*tracefs_cpu_buffered_read()*` returns the number of bytes read or negative on error.

The `*tracefs_cpu_write()*` returns the number of bytes written to the file or negative on error.

The `*tracefs_cpu_stop()*` returns zero if any waiters were guaranteed to be woken up from waiting on input, or returns one if this is an older kernel that does not supply that guarantee, and a signal may need to be sent to any waiters. Returns negative on error.

The `*tracefs_cpu_flush()*` returns the number of bytes read or negative on error.

The `*tracefs_cpu_flush_write()*` returns the number of bytes written to the file or negative on error.

## EXAMPLE

-----

[source,c]

--

```
#define _LARGEFILE64_SOURCE
#include <stdlib.h>
#include <ctype.h>
#include <pthread.h>
#include <unistd.h>
#include <tracefs.h>
```

```
struct thread_data {
    struct tracefs_cpu *tcpu;
    int done;
    int fd;
```

```

};

static void *thread_run(void *arg)
{
    struct thread_data *data = arg;
    struct tracefs_cpu *tcpu = data->tcpu;
    int fd = data->fd;
    int ret;

    while (!data->done) {
        ret = tracefs_cpu_write(tcpu, fd, false);
        printf("wrote %d\n", ret);
    }
    return NULL;
}

int main (int argc, char **argv)
{
    struct tracefs_instance *instance;
    struct thread_data data;
    pthread_t thread;
    char *file;
    int secs = 10;
    int cpu;
    int ret;

    if (argc < 3 || !isdigit(argv[1][0])) {
        printf("usage: %s cpu file_destination [sleep secs]\n\n", argv[0]);
        exit(-1);
    }

    cpu = atoi(argv[1]);
    file = argv[2];

    if (argc > 3)
        secs
        = atoi(argv[3]);

    instance = tracefs_instance_create("cpu_write");
    if (!instance) {
        perror("create instance");
        exit(-1);
    }

    memset(&data, 0, sizeof(data));

    data.tcpu = tracefs_cpu_open(instance, cpu, 0);
    if (!data.tcpu) {

```

```

    perror("Open instance");
    exit(-1);
}

data.fd = open(file, O_WRONLY | O_CREAT | O_TRUNC | O_LARGEFILE, 0644);
if (data.fd < 0) {
    perror(file);
    exit(-1);
}

pthread_create(&thread, NULL, thread_run, &data);

sleep(secs);

data.done = 1;
printf("stopping\n");
ret = tracefs_cpu_stop(data.tcpu);

printf("joining %d\n", ret);
pthread_join(thread, NULL);

tracefs_trace_off(instance);
do {
    ret = tracefs_cpu_flush_write(data.tcpu, data.fd);
    printf("flushed %d\n", ret);
} while (ret > 0);
tracefs_trace_on(instance);

tracefs_cpu_close(data.tcpu);
close(data.fd);

return 0;
}
--
FILES
-----
[verse]
--
*tracefs.h*
Header file to include in order to have access to the library APIs.
*-ltracefs*
Linker switch to add when building a
program that uses the library.
--

SEE ALSO
-----
*tracefs_cpu_open*(3)

```

\*tracefs\_cpu\_close\*(3)  
\*tracefs\_cpu\_read\_buf\*(3)  
\*tracefs\_cpu\_buffered\_read\_buf\*(3)  
\*tracefs\_cpu\_flush\_buf\*(3)  
\*libtracefs\*(3),  
\*libtraceevent\*(3),  
\*trace-cmd\*(1)

## AUTHOR

-----

[verse]

--

\*Steven Rostedt\* <rostedt@goodmis.org>

--

## REPORTING BUGS

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\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs-cpu.txt

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libtracefs(3)

=====

## NAME

----

tracefs\_eprobe\_alloc - Allocate new event probe (eprobe)

## SYNOPSIS

-----

[verse]

--

\*#include <tracefs.h>\*

```

struct tracefs_dynevent pass:[*]
*tracefs_eprobe_alloc*(const char pass:[*]_system_, const char pass:[*]_event_,
    const char pass:[*]_target_system_, const char pass:[*]_target_event_,
    const char pass:[*]_fetchargs_);
--

```

## DESCRIPTION

\*tracefs\_eprobe\_alloc\*() allocates a new eprobe context. The eprobe is not configured in the system. The new eprobe will be in the `_system_` group (or eprobes if `_system_` is NULL) and have the name of `_event_`. The eprobe will be attached to `_target_event_`, located in `_target_system_`. The list of arguments, described in `_fetchargs_`, will be fetched from `_target_event_`. The returned pointer to the event probe must be freed with `*tracefs_dynevent_free*`().

## RETURN VALUE

The `*tracefs_eprobe_alloc*`() API returns a pointer to an allocated `tracefs_dynevent` structure, describing the event probe. This pointer must be freed by `*tracefs_dynevent_free*`(3). Note, this only allocates a descriptor representing the eprobe. It does not modify the running system. On error NULL is returned.

## EXAMPLE

```

[source,c]
--
#include <stdlib.h>
#include <unistd.h>
#include <sys/wait.h>

#include <tracefs.h>

static struct tep_event *open_event;
static struct tep_format_field *file_field;

static int callback(struct tep_event *event, struct tep_record *record,
    int cpu, void *data)
{
    struct trace_seq seq;

    trace_seq_init(&seq);
    tep_print_event(event->tep, &seq, record, "%d-%s: ", TEP_PRINT_PID, TEP_PRINT_COMM);

    if (event->id == open_event->id) {
        trace_seq_puts(&seq, "open file=");
        tep_print_field(&seq, record->data, file_field);
    }
}

```

```

    trace_seq_puts(&seq, "\n");
}

trace_seq_terminate(&seq);
trace_seq_do_printf(&seq);
trace_seq_destroy(&seq);

return 0;
}

static pid_t run_exec(char **argv,
char **env)
{
    pid_t pid;

    pid = fork();
    if (pid)
        return pid;

    execve(argv[0], argv, env);
    perror("exec");
    exit(-1);
}

const char *myprobe = "my_eprobes";

int main (int argc, char **argv, char **env)
{
    struct tracefs_dynevent *eprobe;
    struct tracefs_instance *instance;
    struct tep_handle *tep;
    const char *sysnames[] = { myprobe, NULL };
    pid_t pid;

    if (argc < 2) {
        printf("usage: %s command\n", argv[0]);
        exit(-1);
    }

    instance = tracefs_instance_create("exec_open");
    if (!instance) {
        perror("creating instance");
        exit(-1);
    }

    tracefs_dynevent_destroy_all(TRACEFS_DYNEVENT_EPROBE, true);

    eprobe = tracefs_eprobe_alloc(myprobe, "sopen", "syscalls", "sys_enter_openat2",

```



```

        "file="+0($filename):ustring");
if (!probe) {
    perror("allocating event probe");
    exit(-1);
}

if (tracefs_dynevent_create(eprobe)) {
    perror("creating event probe");
    exit(-1);
}

tep = tracefs_local_events_system(NULL, sysnames);
if (!tep) {
    perror("reading events");
    exit(-1);
}

open_event
= tep_find_event_by_name(tep, myprobe, "sopen");
file_field = tep_find_field(open_event, "file");

tracefs_event_enable(instance, myprobe, "sopen");
pid = run_exec(&argv[1], env);

/* Let the child start to run */
sched_yield();

do {
    tracefs_load_cmdlines(NULL, tep);
    tracefs_iterate_raw_events(tep, instance, NULL, 0, callback, NULL);
} while (waitpid(pid, NULL, WNOHANG) != pid);

/* Will disable the events */
tracefs_dynevent_destroy(eprobe, true);
tracefs_dynevent_free(eprobe);
tracefs_instance_destroy(instance);
tep_free(tep);

return 0;
}
--

```

## FILES

-----

[verse]

--

\*tracefs.h\*

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>

--

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**\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs-eprobes.txt**

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libtracefs(3)

=====

## NAME

----

tracefs\_snapshot\_snap, tracefs\_snapshot\_clear, tracefs\_snapshot\_free -

API to create, clear and read snapshots

## SYNOPSIS

```
-----  
[verse]  
--  
*#include <tracefs.h>*
```

```
int *tracefs_snapshot_snap*(struct tracefs_instance pass:[*]instance);  
int *tracefs_snapshot_clear*(struct tracefs_instance pass:[*]instance);  
int *tracefs_snapshot_free*(struct tracefs_instance pass:[*]instance);  
--
```

## DESCRIPTION

-----

The Linux kernel tracing provides a "snapshot" feature. The kernel has two ring buffers. One that is written to by the tracing system and another one that is the "snapshot" buffer. When a snapshot happens, the two buffers are swapped, and the current snapshot buffer becomes the one being written to, and the buffer that was being written to becomes the saved snapshot.

Note, the snapshot buffer is allocated the first time it is taken, so it is best to take a snapshot at the start before one is needed so that it is allocated and a snapshot is ready, then the snapshot will happen immediately.

The `*tracefs_snapshot_snap()*` will allocate (if not already allocated) the snapshot buffer and then take a "snapshot" (swap the main buffer that's being written to with the allocated snapshot buffer). It will do this to the given `_instance_` buffer or the top instance if `_instance_` is NULL.

The `*tracefs_snapshot_clear()*` will erase the content of the snapshot buffer for the given `_instance_` or the top level instance if `_instance_` is NULL.

The `*tracefs_snapshot_free()*` will free the allocated snapshot for the given `_instance_` or the top level instance if `_instance_` is NULL. That is, if another call to `*tracefs_snapshot_snap()*` is done after this, then it will need to allocate the snapshot buffer again before it can take a snapshot. This function should be used to free up the kernel memory used by the snapshot buffer when no longer in use.

## RETURN VALUE

-----

The `*tracefs_snapshot_snap()*`, `*tracefs_snapshot_clear()*` and the `*tracefs_snapshot_free()*` all return 0 on success and -1 on failure.

## EXAMPLE

-----

```

[source,c]
--
#include <stdlib.h>
#include <stdio.h>
#include <tracefs.h>

static int callback(struct tep_event *event, struct tep_record *record, int cpu, void *data)
{
    static struct trace_seq seq;
    struct tep_handle *tep = event->tep;

    if (!seq.buffer)
        trace_seq_init(&seq);

    trace_seq_reset(&seq);

    tep_print_event(tep, &seq, record, "[%03d] %s-%d %6.1000d\t%s: %s\n",
        TEP_PRINT_CPU,
        TEP_PRINT_COMM,
        TEP_PRINT_PID,
        TEP_PRINT_TIME,
        TEP_PRINT_NAME,
        TEP_PRINT_INFO);
    trace_seq_do_printf(&seq);
    return 0;
}

int main (int argc, char **argv)
{
    struct tracefs_instance *instance;
    struct tep_handle *tep;
    char *line = NULL;
    size_t len = 0;
    int ret;

    instance = tracefs_instance_create("my_snapshots");
    if (!instance) {
        perror("creating instance");
        exit(-1);
    }

    tep = tracefs_local_events(NULL);
    if (!tep) {
        perror("reading
event formats");
        goto out;
    }
}

```

```

/* Make sure the snapshot buffer is allocated */
ret = tracefs_snapshot_snap(instance);
if (ret < 0)
    goto out;

ret = tracefs_event_enable(instance, "sched", NULL);
if (ret < 0) {
    perror("enabling event");
    goto out;
}

for (;;) {
    printf("Hit enter without text to take snapshot!\n");
    printf("Enter any text to display the snapshot\n");
    printf("Enter 'quit' to exit\n");
    getline(&line, &len, stdin);
    ret = tracefs_snapshot_snap(instance);
    if (ret < 0) {
        perror("taking snapshot");
        goto out;
    }
    if (!line)
        break;
    if (strlen(line) < 2)
        continue;
    if (strcmp(line, "quit", 4) == 0)
        break;
    tracefs_iterate_snapshot_events(tep, instance, NULL, 0, callback, NULL);
}

free(line);

tracefs_instance_clear(instance);

out:
tracefs_snapshot_free(instance);
tracefs_event_disable(instance, "sched", NULL);
tracefs_instance_destroy(instance);
tracefs_instance_free(instance);

exit(0);
}
--
FILES
-----
[verse]
--
*tracefs.h*

```

## Header

file to include in order to have access to the library APIs.

`*-ltracefs*`

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

`*tracefs_iterate_snapshot_events*(3)`

`*libtracefs*(3)`,

`*libtraceevent*(3)`,

`*trace-cmd*(1)`

## AUTHOR

-----

[verse]

--

`*Steven Rostedt* <rostedt@goodmis.org>`

--

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libtracefs(3)

=====

## NAME

----

`tracefs_filter_string_append`, `tracefs_filter_string_verify`, `tracefs_event_filter_apply`, `tracefs_event_filter_clear` -

Add, verify and apply event filters

## SYNOPSIS

```
-----  
[verse]  
--  
*#include <tracefs.h>*
```

```
int *tracefs_filter_string_append*(struct tep_event pass:[*]_event_, char pass:[**]_filter_,  
    struct tracefs_filter _type_, const char pass:[*]_field_,  
    enum tracefs_synth_compare _compare_, const char pass:[*]_val_);  
int *tracefs_filter_string_verify*(struct tep_event pass:[*]_event_, const char pass:[*]_filter_, char pass:[**]_err_);  
int *tracefs_event_filter_apply*(struct tracefs_instance pass:[*]_instance_, struct tep_event pass:[*]_event_, const  
char pass:[*]_filter_);  
int *tracefs_event_filter_clear*(struct tracefs_instance pass:[*]_instance_, struct tep_event pass:[*]_event_);  
--
```

## DESCRIPTION

```
-----
```

`*tracefs_filter_string_append*()` is a way to create and verify event filters for a given event. It will verify that the `_field_` belongs to the event and that the `_compare_` option that is used is valid for the type of the field, as well as `_val_`. For the `_type_` that is not of `*TRACEFS_FILTER_COMPARE*`, it will build the logical string and also make sure that the syntax is correct. For example, there are no more close parenthesis than open parenthesis. An AND (`&&`) or OR (`||`) is not misplaced, etc.

`*tracefs_synth_append_start_filter*()` creates a filter or appends to it for the starting event. Depending on `_type_`, it will build a string of tokens for parenthesis or logic statements, or it may add a comparison of `_field_` to `_val_` based on `_compare_`.

If `_type_` is:

- `*TRACEFS_FILTER_COMPARE*` - See below
- `*TRACEFS_FILTER_AND*` - Append "`&&`" to the filter
- `*TRACEFS_FILTER_OR*` - Append "`||`" to the filter
- `*TRACEFS_FILTER_NOT*` - Append "`!`" to the filter
- `*TRACEFS_FILTER_OPEN_PAREN*` - Append "(" to the filter
- `*TRACEFS_FILTER_CLOSE_PAREN*`
  - Append ")" to the filter

`_field_`, `_compare_`, and `_val_` are ignored unless `_type_` is equal to `*TRACEFS_FILTER_COMPARE*`, then `_compare_` will be used for the following:

`*TRACEFS_COMPARE_EQ*` - `_field_ == _val_`

`*TRACEFS_COMPARE_NE*` - `_field_ != _val_`

\*TRACEFS\_COMPARE\_GT\* - `_field_ > _val_`

\*TRACEFS\_COMPARE\_GE\* - `_field_ >= _val_`

\*TRACEFS\_COMPARE\_LT\* - `_field_ < _val_`

\*TRACEFS\_COMPARE\_LE\* - `_field_ <pass:[=] _val_`

\*TRACEFS\_COMPARE\_RE\* - `_field_ ~ "_val_"` : where `_field_` is a string.

\*TRACEFS\_COMPARE\_AND\* - `_field_ & _val_` : where `_field_` is a flags field.

`*tracefs_filter_string_verify*`() will parse `_filter_` to make sure that the fields are for the `_event_`, and that the syntax is correct. If there's an error in the syntax, and `_err_` is not NULL, then it will be allocated with an error message stating what was found wrong with the filter. `_err_` must be freed with `*free*`().

`*tracefs_event_filter_apply*`() applies given `_filter_` string on `_event_` in given `_instance_`.

`*tracefs_event_filter_clear*`()

clear all filters on `_event_` in given `_instance_`.

## RETURN VALUE

-----

`*tracefs_filter_string_append*`() returns 0 on success and -1 on error.

`*tracefs_filter_string_verify*`() returns 0 on success and -1 on error. if there is an error, and `_errno_` is not `*ENOMEM*`, then `_err_` is allocated and will contain a string describing what was found wrong with `_filter_`. `_err_` must be freed with `*free*`().

`*tracefs_event_filter_apply*`() returns 0 on success and -1 on error.

`*tracefs_event_filter_clear*`() returns 0 on success and -1 on error.

## EXAMPLE

-----

[source,c]

--

```
#include <stdlib.h>
```

```
#include <stdio.h>
```

```
#include <ctype.h>
```

```
#include <tracefs.h>
```

```
static void usage(char **argv)
```

```
{
```



```

fprintf(stderr, "usage: %s [system] event filter\n", argv[0]);
exit(-1);
}

int main (int argc, char **argv)
{
    struct tep_handle *tep;
    struct tep_event *event;
    const char *system = NULL;
    const char *event_name;
    const char *filter;
    char *new_filter = NULL;
    char *err = NULL;
    int
    i;

    if (argc < 3)
        usage(argv);

    if (argc < 4) {
        event_name = argv[1];
        filter = argv[2];
    } else {
        system = argv[1];
        event_name = argv[2];
        filter = argv[3];
    }

    /* Load all events from the system */
    tep = tracefs_local_events(NULL);
    if (!tep) {
        perror("tep");
        exit(-1);
    }

    event = tep_find_event_by_name(tep, system, event_name);
    if (!event) {
        fprintf(stderr, "Event %s%s%s not found\n",
            system ? system : "", system ? " " : "",
            event_name);
        exit(-1);
    }

    if (tracefs_filter_string_verify(event, filter, &err) < 0) {
        perror("tracecfs_event_verify_filter");
        if (err)
            fprintf(stderr, "%s", err);
        free(err);
    }
}

```

```

exit(-1);
}

for (i = 0; filter[i]; i++) {
char buf[strlen(filter)];
char *field = NULL;
char *val = NULL;
enum tracefs_filter type;
enum tracefs_compare compare = 0;
int start_i, n;
int quote;
bool backslash;

while (isspace(filter[i]))
i++;

switch(filter[i]) {
case '(':
type = TRACEFS_FILTER_OPEN_PAREN;
break;
case
)':
type = TRACEFS_FILTER_CLOSE_PAREN;
break;
case '!':
type = TRACEFS_FILTER_NOT;
break;
case '&':
type = TRACEFS_FILTER_AND;
i++;
break;
case '|':
type = TRACEFS_FILTER_OR;
i++;
break;
default:
type = TRACEFS_FILTER_COMPARE;

while (isspace(filter[i]))
i++;

start_i = i;
for (; filter[i]; i++) {
switch(filter[i]) {
case 'a' ... 'z':
case 'A' ... 'Z':
case '0' ... '9':
case '_':

```

```

    continue;
}
break;
}

n = i - start_i;
field = buf;
strncpy(field, filter + start_i, n);
field[n++] = '\0';

val = buf + n;

while (isspace(filter[i]))
    i++;

start_i = i;
switch(filter[i++]) {
case '>':
    compare = TRACEFS_COMPARE_GT;
    if (filter[i] == '=') {
        i++;
        compare = TRACEFS_COMPARE_GE;
    }
    break;
case '<':
    compare = TRACEFS_COMPARE_LT;
    if (filter[i] == '=') {
        i++;
        compare = TRACEFS_COMPARE_LE;
    }
    break;
case '=':
    compare
= TRACEFS_COMPARE_EQ;
    i++;
    break;
case '!':
    compare = TRACEFS_COMPARE_NE;
    i++;
    break;
case '~':
    compare = TRACEFS_COMPARE_RE;
    break;
case '&':
    compare = TRACEFS_COMPARE_AND;
    break;
}

```

```

while (isspace(filter[i]))
    i++;

quote = 0;
backslash = false;
start_i = i;
for (; filter[i]; i++) {
    if (quote) {
        if (backslash)
            backslash = false;
        else if (filter[i] == '\\')
            backslash = true;
        else if (filter[i] == quote)
            quote = 0;
        continue;
    }
    switch(filter[i]) {
        case '"': case '\':
            quote = filter[i];
            continue;
        case 'a' ... 'z':
        case 'A' ... 'Z':
        case '0' ... '9':
        case '_':
            continue;
    }
    break;
}
n = i - start_i;
strncpy(val, filter + start_i, n);
val[n] = '\0';
break;
}
n = tracefs_filter_string_append(event, &new_filter, type,
    field, compare, val);
if (n < 0) {
    fprintf(stderr, "Failed making new filter:\n'%s'\n",
        new_filter
? new_filter : "(null)");
    exit(-1);
}
}

if (tracefs_event_filter_apply(NULL, event, new_filter))
    fprintf(stderr, "Failed to apply filter on event");

tep_free(tep);

```

```
printf("Created new filter: '%s'\n", new_filter);
free(new_filter);

exit(0);
}
--
```

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1),**

**\*tracefs\_hist\_alloc\*(3),**

**\*tracefs\_hist\_alloc\_2d\*(3),**

**\*tracefs\_hist\_alloc\_nd\*(3),**

**\*tracefs\_hist\_free\*(3),**

**\*tracefs\_hist\_add\_key\*(3),**

**\*tracefs\_hist\_add\_value\*(3),**

**\*tracefs\_hist\_add\_name\*(3),**

**\*tracefs\_hist\_start\*(3),**

**\*tracefs\_hist\_destory\*(3),**

**\*tracefs\_hist\_add\_sort\_key\*(3),**

**\*tracefs\_hist\_sort\_key\_direction\*(3)**

## AUTHOR

-----

[verse]

--

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--

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libtracefs(3)

=====

## NAME

----

tracefs\_instance\_file\_open,  
tracefs\_instance\_file\_write, tracefs\_instance\_file\_write\_number, tracefs\_instance\_file\_append,  
tracefs\_instance\_file\_clear,  
tracefs\_instance\_file\_read, tracefs\_instance\_file\_read\_number - Work with files in tracing instances.

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
int *tracefs_instance_file_open*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_, int _mode_);  
int *tracefs_instance_file_write*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_, const char  
pass:[*]_str_);  
int *tracefs_instance_file_write_number*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_, size_t  
_val_);  
int *tracefs_instance_file_append*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_, const char  
pass:[*]_str_);  
int *tracefs_instance_file_clear*(struct tracefs_instance pass:[*]_instance_,  
const char pass:[*]_file_);  
char pass:[*]*tracefs_instance_file_read*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_, int  
pass:[*]_psize_);  
int *tracefs_instance_file_read_number*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_file_, long  
long int pass:[*]_res_);
```

--

## DESCRIPTION

-----

This set of APIs can be used to work with trace files in all trace instances. Each of these APIs take an `_instance_` argument, that can be NULL to act on the top level instance. Otherwise, it acts on an instance created with `*tracefs_instance_create*(3)`

The `*tracefs_instance_file_open()*` function opens `trace_file_` from given `_instance_` and returns a file descriptor to it. The file access `_mode_` can be specified, see `*open*(3)` for more details. If `-1` is passed as `_mode_`, default `O_RDWR` is used.

The `*tracefs_instance_file_write()*` function writes a string `_str_` in a `_file_` from the given `_instance_`, without the terminating NULL character. When opening the file, this function tries to truncate the size of the file to zero, which clears all previously existing settings.

The `*tracefs_instance_file_write_number()*` function converts `_val_` into a string and then writes it to the given file. This is a helper function that does the number conversion to string and then calls `*tracefs_instance_file_write()*`.

The `*tracefs_instance_file_append()*` function writes a string `_str_` in a `_file_` from the given `_instance_`, without the terminating NULL character. This function is similar to `*tracefs_instance_file_write()*`, but the existing content of the is not cleared. Thus the new settings are appended to the existing ones (if any).

The `*tracefs_instance_file_clear()*` function tries to truncate the size of the file to zero, which clears all previously existing settings. If the file has content that does not get cleared in this way, this will not have any effect.

The `*tracefs_instance_file_read()*` function reads the content of a `_file_` from the given `_instance_`.

The `*tracefs_instance_file_read_number()*` function reads the content of a `_file_` from the given `_instance_` and converts it to a long long integer, which is stored in `_res_`.

## RETURN VALUE

-----

The `*tracefs_instance_file_open()*` function returns a file descriptor to the opened file. It must be closed with `*close*(3)`. In case of an error, `-1` is returned.

The `*tracefs_instance_file_write()*` function returns the number of written bytes, or `-1` in case of an error.

The `*tracefs_instance_file_write_number()*` function returns `0` on success and `-1` on error.

The `*tracefs_instance_file_append()*` function returns the number of written bytes, or -1 in case of an error.

The `*tracefs_instance_file_clear()*` function returns 0 on success, or -1 in case of an error.

The `*tracefs_instance_file_read()*` function returns a pointer to a NULL terminated string, read from the file, or NULL in case of an error. The returned string must be freed with `free()`.

The `*tracefs_instance_file_read_number()*` function returns 0 if a valid integer is read from the file and stored in `_res_` or -1 in case of an error.

#### EXAMPLE

```
-----
[source,c]
--
#include <tracefs.h>

struct tracefs_instance *inst = tracefs_instance_create("foo");
if (!inst) {
    /* Error creating a new trace instance */
    ...
}

if (tracefs_file_exists(inst,"trace_clock")) {
    /* The instance foo supports trace clock */
    char *path, *clock;
    int size;

    path = tracefs_instance_get_file(inst, "trace_clock")
    if (!path) {
        /* Error getting the path to trace_clock file in instance foo */
        ...
    }
    ...
    tracefs_put_tracing_file(path);

    clock = tracefs_instance_file_read(inst, "trace_clock", &size);
    if (!clock) {
        /* Failed to read trace_clock file in instance foo */
        ...
    }
    ...
    free(clock);

    if (tracefs_instance_file_write(inst, "trace_clock", "global") != strlen("global")) {
        /* Failed to set gloabl trace clock in instance foo */
    }
}
```



```

...
}
} else {
/* The instance foo does not
support trace clock */
}

if (tracefs_dir_exists(inst,"options")) {
/* The instance foo supports trace options */
char *path = tracefs_instance_get_file(inst, "options");
if (!path) {
/* Error getting the path to options directory in instance foo */
...
}

tracefs_put_tracing_file(path);
} else {
/* The instance foo does not support trace options */
}

...

if (tracefs_instance_is_new(inst))
tracefs_instance_destroy(inst);
else
tracefs_instance_free(inst);
...

long long int res;
if (tracefs_instance_file_read_number(NULL, "tracing_on", &res) == 0) {
if (res == 0) {
/* tracing is disabled in the top instance */
} else if (res == 1) {
/* tracing is enabled in the top instance */
} else {
/* Unknown tracing state of the top instance */
}
} else {
/* Failed to read integer from tracing_on file */
}

...

int fd;
fd = tracefs_instance_file_open(NULL, "tracing_on", O_WRONLY);
if (fd >= 0) {
/* Got file descriptor to the tracing_on

```

file from the top instance for writing \*/

```
...
close(fd);
}
```

--

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>

--

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**1.8.0/Documentation/libtracefs-instances-file-manip.txt**

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libtracefs(3)

=====

## NAME

----

tracefs\_error\_last, tracefs\_error\_all, tracefs\_error\_clear -  
functions to read and clear the tracefs error log.

## SYNOPSIS

-----

[verse]

--

```
*/include <tracefs.h>*
```

```
char pass:[*]*tracefs_error_last*(struct tracefs_instance pass:[*]_instance_);  
char pass:[*]*tracefs_error_all*(struct tracefs_instance pass:[*]_instance_);  
int *tracefs_error_clear*(struct tracefs_instance pass:[*]_instance_);
```

--

## DESCRIPTION

-----

The `*tracefs_error_last*`() returns the last error message in the tracefs error log. Several actions that require proper syntax written into the tracefs file system may produce error messages in the error log. This function will show the most recent error in the error log.

The `*tracefs_error_all*`() returns all messages saved in the error log. Note, this may not be all messages that were ever produced, as the kernel only keeps a limited amount of messages, and older ones may be discarded by the kernel.

The `*tracefs_error_clear*`() will clear the error log.

## RETURN VALUE

-----

Both `*tracefs_error_last*`() and `*tracefs_error_all*`() will return an allocated string an error exists in the log, otherwise NULL is returned. If an error occurs, `errno` will be set, otherwise if there is no error messages to display then `errno` is not touched.

`*tracefs_error_clear*`() returns 0 on success or -1 on error.

## EXAMPLE

-----

[source,c]

```

--
#include <stdlib.h>
#include <unistd.h>
#include <errno.h>

#include <tracefs.h>

int main (int argc, char **argv, char **env)
{
    struct tracefs_dynevent *kevent;
    char *system = NULL;
    char *kprobe;
    char *format;
    char *addr;
    int arg = 1;
    int ret;

    if (argc < 4) {
        printf("usage: %s [system] kprobe addr fmt\n", argv[0]);
        exit(-1);
    }

    if (argc > 5)
        system = argv[arg++];

    kprobe = argv[arg++];
    addr = argv[arg++];
    format = argv[arg++];

    tracefs_error_clear(NULL);
    kevent = tracefs_dynevent_get(TRACEFS_DYNEVENT_KPROBE,
    system, kprobe);
    if (kevent) {
        tracefs_dynevent_destroy(kevent, true);
        tracefs_dynevent_free(kevent);
    }

    ret = tracefs_kprobe_raw(system, kprobe, addr, format);
    if (ret < 0) {
        char *err;

        perror("Failed creating kprobe");
        errno = 0;
        err = tracefs_error_last(NULL);
        if (err)
            fprintf(stderr, "%s\n", err);
        else if (errno)
            perror("Failed reading error log");
    }
}

```

```
free(err);
}
```

```
exit(ret);
}
```

--

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

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libtracefs(3)

=====

## NAME

----

tracefs\_tracers, tracefs\_tracer\_available, tracefs\_get\_clock, tracefs\_list\_free, tracefs\_list\_add, tracefs\_list\_size - Helper functions for working with trace file system.

## SYNOPSIS

-----

[verse]

--

```
*/#include <tracefs.h>*
```

```
char pass:[*]pass:[*]*tracefs_tracers*(const char pass:[*]_tracing_dir_);
bool *tracefs_tracer_available*(const char pass:[*]_tracing_dir_, const char pass:[*]_tracer_);
char pass:[*]*tracefs_get_clock*(struct tracefs_instance pass:[*]_instance_);
void *tracefs_list_free*(char pass:[*]pass:[*]_list_);
char pass:[**]*tracefs_list_add*(char **_list_, const char *_string_);
int *tracefs_list_size*(char pass:[**]_list_);
--
```

## DESCRIPTION

-----

Various useful functions for working with trace file system.

The `*tracefs_tracers()` function returns array of strings with the names of supported tracer plugins, located in the given `_tracing_dir_` directory. This could be NULL or the location of the tracefs mount point for the trace systems of the local machine, or it may be a path to a copy of the tracefs directory from another machine. The last entry in the array as a NULL pointer. The array must be freed with `*tracefs_list_free()` API.

The `*tracefs_tracer_available()` returns true if the `_tracer_` is available in the given `_tracing_dir_` directory, and false otherwise.

The `*tracefs_get_clock()` function returns name of the current trace clock, used in the given `_instance_`. If `_instance_` is NULL, the clock of the main trace instance is returned. The returned string must be freed with `free()`.

The `*tracefs_list_free()` function frees an array of strings, returned by `*tracefs_event_systems()`, `*tracefs_system_events()` and `*tracefs_tracers()` APIs.

The `*tracefs_list_add()*` function adds `_string_` to the `string _list_`. If `_list_` is `NULL`, then a new list is created with the first element a copy of `_string_`, and the second element will be a `NULL` pointer.

If `_list_` is

not `NULL`, then it is reallocated to include a new element and a `NULL` terminator, and the new allocated array is returned. The list passed in should be ignored, as it will be freed if a new one was allocated.

The `*tracefs_list_size()*` is a fast way to find out the number of elements in a string array that is to be freed with `*tracefs_list_free()*`. Note, this depends on meta data that is created for these lists and will not work on normal string arrays like `argv`.

## RETURN VALUE

-----

The `*tracefs_tracers()*` returns array of strings. The last element in that array is a `NULL` pointer. The array must be freed with `*tracefs_list_free()*` API. In case of an error, `NULL` is returned.

The `*tracefs_tracer_available()*` returns true if the `_tracer_` is available, and false otherwise.

The `*tracefs_get_clock()*` returns string, that must be freed with `free()`, or `NULL` in case of an error.

The `*tracefs_list_add()*` returns an allocated string array that must be freed with `*tracefs_list_free()*` on success or `NULL` on error. If `NULL` is returned, then the passed in `_list_` is untouched. Thus, `*tracefs_list_add()*` should be treated similarly to `*realloc*(3)`.

The `*tracefs_list_size()*` returns the number of strings in the `_list_`. The passed in list must be one that is to be freed with `*tracefs_list_free()*` as the list has meta data that is used to determine the size and this does not work on any normal string array like `argv`.

## EXAMPLE

-----

```
[source,c]
```

```
--
```

```
#include <tracefs.h>
```

```
char **tracers = tracefs_tracers(NULL);
```

```
if (tracers) {
```

```
    /* Got tracer plugins from the top trace instance */
```

```
    ...
```

```
    tracefs_list_free(tracers);
}
....
char *clock = tracefs_get_clock(NULL);

if (clock) {
    /* Got current trace clock of the top trace instance */
    ...
    free(clock);
}
--
```

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

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**\*Steven**

Rostedt\* <rostedt@goodmis.org>

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>

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libtracefs(3)

=====

NAME

----

tracefs\_find\_cid\_pid, tracefs\_instance\_find\_cid\_pid, tracefs\_time\_conversion - helper functions to handle tracing guests

SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
char pass:[*]*tracefs_find_cid_pid*(int _cid_);
```

```
char pass:[*]*tracefs_instance_find_cid_pid*(struct tracefs_instance pass:[*]_instance_, int _cid_);
```

```
int *tracefs_time_conversion*(int _cpu_, int pass:[*]_shift_, int pass:[*]_multi_, long long pass:[*]_offset);
```

--

DESCRIPTION

-----

The `*tracefs_find_cid_pid*`() will use tracing to follow the wakeups of connecting to the given `_cid_` in order to find the pid of the guest thread that belongs to the vsocket cid. It will then read the proc file system to find the thread leader, and it will return the pid of the thread leader.

The `*tracefs_instance_find_cid_pid*`() is the same as `*tracefs_find_cid_pid*`() but defines the instance to use to perform the tracing in.

If NULL it will use the top level

buffer to perform the tracing.

The `*tracefs_time_conversion*`() will return the values used by the kernel to convert the raw time stamp counter into nanoseconds for the given `_cpu_`. Pointers for `_shift_`, `_multi_` and `_offset_` can be NULL to be ignored, otherwise they are set with the shift, multiplier and offset respectively.

RETURN VALUE

-----

Both `*tracefs_find_cid_pid*`() and `*tracefs_instance_find_cid_pid*`() will return the

pid of the guest main thread that belongs to the `_cid_`, or -1 on error (or not found).

#### EXAMPLE

-----

[source,c]

--

```
#include <stdlib.h>
```

```
#include <unistd.h>
```

```
#include <tracefs.h>
```

```
#define MAX_CID 256
```

```
static void find_cid(struct tracefs_instance *instance, int cid)
```

```
{
```

```
    int pid;
```

```
    pid = tracefs_instance_find_cid_pid(instance, cid);
```

```
    if (pid >= 0)
```

```
        printf("%d\t%d\n", cid, pid);
```

```
}
```

```
static int find_cids(void)
```

```
{
```

```
    struct tracefs_instance *instance;
```

```
    char *name;
```

```
    int cid;
```

```
    int ret;
```

```
    ret = asprintf(&name, "vsock_find-%d\n", getpid());
```

```
    if
```

```
        (ret < 0)
```

```
            return ret;
```

```
    instance = tracefs_instance_create(name);
```

```
    free(name);
```

```
    if (!instance)
```

```
        return -1;
```

```
    for (cid = 0; cid < MAX_CID; cid++)
```

```
        find_cid(instance, cid);
```

```
    tracefs_event_disable(instance, NULL, NULL);
```

```
    tracefs_instance_destroy(instance);
```

```
    tracefs_instance_free(instance);
```

```
    return 0;
```

```
}
```

```
struct time_info {
```

```

int shift;
int multi;
};

static void show_time_conversion(void)
{
    struct time_info *tinfo;
    int cpus;
    int cpu;
    int ret;

    cpus = sysconf(_SC_NPROCESSORS_CONF);
    tinfo = calloc(cpus, sizeof(*tinfo));
    if (!tinfo)
        exit(-1);

    for (cpu = 0; cpu < cpus; cpu++) {
        ret = tracefs_time_conversion(cpu,
            &tinfo[cpu].shift,
            &tinfo[cpu].multi,
            NULL);
        if (ret)
            break;
    }
    if (cpu != cpus) {
        if (!cpu) {
            perror("tracefs_time_conversion");
            exit(-1);
        }
        printf("Only read %d of %d CPUs", cpu, cpus);
        cpus = cpu + 1;
    }

    /* Check if all the shift and mult values are the same */
    for (cpu = 1; cpu < cpus; cpu++) {
        if (tinfo[cpu - 1].shift != tinfo[cpu].shift)
            break;
        if (tinfo[cpu - 1].multi != tinfo[cpu].multi)
            break;
    }

    if (cpu == cpus) {
        printf("All cpus have:\n");
        printf(" shift: %d\n", tinfo[0].shift);
        printf(" multi: %d\n", tinfo[0].multi);
        printf("\n");
        return;
    }
}

```

```
}

for (cpu = 0; cpu < cpus; cpu++) {
    printf("CPU: %d\n", cpu);
    printf(" shift: %d\n", tinfo[cpu].shift);
    printf(" multi: %d\n", tinfo[cpu].multi);
    printf("\n");
}
}
```

```
int main(int argc, char *argv[])
{
    show_time_conversion();
    find_cids();
    exit(0);
}
```

--

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>

--

## REPORTING BUGS

-----

Report bugs to <linux-trace-devel@vger.kernel.org>

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```
* /opt/cola/permits/2148525098_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs-guest.txt
```

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libtracefs(3)

=====

## NAME

----

tracefs\_get\_tracing\_file, tracefs\_put\_tracing\_file, tracefs\_tracing\_dir, tracefs\_debug\_dir, tracefs\_set\_tracing\_dir, tracefs\_tracing\_dir\_is\_mounted - Find and set locations of trace directory and files.

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
char pass:[*]*tracefs_get_tracing_file*(const char pass:[*]_name_);
void *tracefs_put_tracing_file*(char pass:[*]_name_);
const char pass:[*]*tracefs_tracing_dir*(void);
const char pass:[*]*tracefs_debug_dir*(void);
int *tracefs_set_tracing_dir*(char pass:[*]_tracing_dir_)
int *tracefs_tracing_dir_is_mounted*(bool _mount_, const char pass:[**]_path_);
```

--

## DESCRIPTION

-----

This set of APIs can be used to find the full path of the trace file system mount point and trace files in it.

The `*tracefs_set_tracing_dir()*` function sets a custom location of the system's tracing directory mount point. Usually, the library auto detects it

using the information from the `/proc/mounts` file. Use this API only if the mount point is not standard and cannot be detected by the library. The `_tracing_dir_`

argument can be NULL, in that case the custom location is deleted and the library auto detection logic is used.

The `*tracefs_get_tracing_file()*` function returns the full path of the file with given `_name_` in the trace file system. The function works only with files in the tracefs main directory, it is not trace instance aware. It is recommended to use `*tracefs_instance_get_file()*` and `*tracefs_instance_get_dir()*` instead. The returned string must be freed with `*tracefs_put_tracing_file()*`.

The `*tracefs_put_tracing_file()*` function frees trace file name, returned by `*tracefs_get_tracing_file()*`.

The `*tracefs_tracing_dir()*` function returns the full path to the trace file system. In the first function call, the mount point of the tracing file system is located, cached and returned. It will mount it, if it is not mounted.

On any subsequent call the cached path is returned.

The return string must `_not_` be freed.

The `*tracefs_debug_dir()*` is similar to `*tracefs_tracing_dir()*` except that it will return where the debugfs file system is mounted. If it is not mounted it will try to mount it. The return string must `_not_` be freed.

`*tracefs_tracing_dir_is_mounted()*` returns 1 if the tracing directory is already mounted and 0 if it is not. If `_mount_` is true, it will try to mount it if it is not, and returns 0 if it successfully mounted it and -1 if it did not. If `_path_` is set, it will be assigned to the path where it mounted it. `_path_` is internal and should not be freed.

## RETURN VALUE

-----

The `*tracefs_set_tracing_dir()*` function returns 0 on success, -1 otherwise.

The `*tracefs_get_tracing_file()*` function returns a string or NULL in case of an error. The returned string must be freed with `*tracefs_put_tracing_file()*`.

The `*tracefs_tracing_dir()*` function returns a constant string or NULL in case of an error. The returned string must `_not_` be freed.

The `*tracefs_debug_dir()*` function returns a constant string or NULL in case of an error. The returned string must `_not_` be freed.

The `*tracefs_tracing_dir_is_mounted()*` returns 1 if the tracing directory is already mounted, 0 if it is not, and -1 on error.

## EXAMPLE

```
-----  
[source,c]  
--  
#include <tracefs.h>  
...  
char *trace_on = tracefs_get_tracing_file("tracing_on");  
if (trace_on) {  
    ...  
    tracefs_put_tracing_file(trace_on);  
}  
...  
const char *trace_dir = tracefs_tracing_dir();  
  
--
```

## FILES

```
-----  
[verse]  
--  
*tracefs.h*  
Header file to include in order to have access to the library APIs.  
*-ltracefs*  
Linker switch to add when building a program that uses the library.  
--
```

## SEE ALSO

```
-----  
*libtracefs*(3),  
*libtraceevent*(3),  
*trace-cmd*(1)
```

## AUTHOR

```
-----  
[verse]  
--  
*Steven Rostedt* <rostedt@goodmis.org>  
*Tzvetomir Stoyanov* <tz.stoyanov@gmail.com>  
--
```

## REPORTING BUGS

```
-----  
Report bugs to <linux-trace-devel@vger.kernel.org>
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libtracefs(3)

=====

## NAME

----

tracefs\_synth\_alloc, tracefs\_synth\_add\_match\_field, tracefs\_synth\_add\_compare\_field, tracefs\_synth\_add\_start\_field, tracefs\_synth\_add\_end\_field, tracefs\_synth\_append\_start\_filter, tracefs\_synth\_append\_end\_filter, tracefs\_synth\_free,  
- Creation of a synthetic event descriptor

## SYNOPSIS

-----

[verse]

--

\*#include <tracefs.h>\*

```
struct tracefs_synth pass:[*]*tracefs_synth_alloc*(struct tep_handle pass:[*]_tep_,
    const char pass:[*]_name_,
    const char pass:[*]_start_system_,
    const char pass:[*]_start_event_,
    const char pass:[*]_end_system_,
    const char pass:[*]_end_event_,
    const char pass:[*]_start_match_field_,
    const char pass:[*]_end_match_field_,
    const char pass:[*]_match_name_);
int *tracefs_synth_add_match_field*(struct tracefs_synth pass:[*]_synth_,
    const char pass:[*]_start_match_field_,
    const char pass:[*]_end_match_field_,

    const char pass:[*]_name_);
int *tracefs_synth_add_compare_field*(struct tracefs_synth pass:[*]_synth_,
    const char pass:[*]_start_compare_field_,
    const char pass:[*]_end_compare_field_,
    enum tracefs_synth_calc _calc_;
```



```

    const char pass:[*]_name_);
int *tracefs_synth_add_start_field*(struct tracefs_synth pass:[*]_synth_,
    const char pass:[*]_start_field_,
    const char pass:[*]_name_);
int *tracefs_synth_add_end_field*(struct tracefs_synth pass:[*]_synth_,
    const char pass:[*]_end_field_,
    const char pass:[*]_name_);
int *tracefs_synth_append_start_filter*(struct tracefs_synth pass:[*]_synth_,
    struct tracefs_filter _type_,
    const char pass:[*]_field_,
    enum tracefs_synth_compare _compare_,
    const char pass:[*]_val_);
int *tracefs_synth_append_end_filter*(struct tracefs_synth pass:[*]_synth_,
    struct tracefs_filter _type_,
    const char pass:[*]_field_,
    enum tracefs_synth_compare
    _compare_,
    const char pass:[*]_val_);
void *tracefs_synth_free*(struct tracefs_synth pass:[*]_synth_);
--

```

## DESCRIPTION

-----

Synthetic events are dynamic events that are created by matching two other events which triggers a synthetic event. One event is the starting event which some field is recorded, and when the second event is executed, if it has a field (or fields) that matches the starting event's field (or fields) then it will trigger the synthetic event. The field values other than the matching fields may be passed from the starting event to the end event to perform calculations on, or to simply pass as a parameter to the synthetic event.

One common use case is to set "sched\_waking" as the starting event. This event is triggered when a process is awoken. Then set "sched\_switch" as the ending event. This event is triggered when a new task is scheduled on the CPU. By setting the "common\_pid" of both events as the matching fields, the time between the two events

is considered the wake up latency of that process. Use `*TRACEFS_TIMESTAMP*` as a field for both events to calculate the delta in nanoseconds, or use `*TRACEFS_TIMESTAMP_USECS*` as the compare fields for both events to calculate the delta in microseconds. This is used as the example below.

`*tracefs_synth_alloc*`() allocates and initializes a synthetic event.

It does not create the synthetic event, but supplies the minimal information to do so. See `*tracefs_synth_create*`(3) for how to create the synthetic event in the system. It requires a `_tep_` handler that can be created by `*tracefs_local_events*`(3) for more information. The `_name_` holds the name of the synthetic event that will be created. The `_start_system_` is the name of the system for the starting event. It may be NULL and the first event

with the name of `_start_event_` will be chosen. The `_end_system_` is the name of the system for the ending event. It may be NULL and the first event with the name of `_end_event_` will be chosen as the ending event. If `_match_name_` is given, then this will be the field of the created synthetic event that holds the matching keys of the starting event's `_start_match_field_` and the ending event's `_end_match_field_`. If `_match_name_` is NULL, then it will not be recorded in the created synthetic event.

`*tracefs_synth_add_match_field*`() will add a second key to match between the starting event and the ending event. If `_name_` is given, then the content of the matching field will be saved by this `_name_` in the synthetic event. The `_start_match_field_` is the field of the starting event to match with the ending event's `_end_match_field_`.

`*tracefs_synth_add_compare_field*`() is used to compare the `_start_compare_field_` of the starting event with the `_end_compare_field_` of the ending event. The `_name_` must be given so that the result will be saved by the synthetic event. It makes no sense to not pass this to the synthetic event after doing the work of the compared fields, as it serves no other purpose. The `_calc_` parameter can be one of:

`*TRACEFS_SYNTH_DELTA_END*` - calculate the difference between the content in the `_end_compare_field_` from the content of the `_start_compare_field_`.

`_name_ = _end_compare_field_ - _start_compare_field_`

`*TRACEFS_SYNTH_DELTA_START*` - calculate the difference between the content in the `_start_compare_field_` from the content of the `_end_compare_field_`.

`_name_ = _start_compare_field_ - _end_compare_field_`

`*TRACEFS_SYNTH_ADD*` - Add the content of the `_start_compare_field_` to the content of the `_end_compare_field_`.

`_name_ = _start_compare_field_ + _end_compare_field_`

`*tracefs_synth_add_start_field*`() - Records the `_start_field_` of the starting event as `_name_` in the synthetic event. If `_name_` is NULL, then the name used will be the same as `_start_field_`.

`*tracefs_synth_add_end_field*`() - Records the `_end_field_` of the ending event as `_name_` in the synthetic event. If `_name_` is NULL, then the name used will be the same as `_end_field_`.

`*tracefs_synth_append_start_filter*`()

creates a filter or appends to it for the starting event. Depending on `_type_`, it will build a string of tokens for parenthesis or logic statements, or it may add a comparison of `_field_` to `_val_` based on `_compare_`.

If `_type_` is:

- `*TRACEFS_FILTER_COMPARE*` - See below
- `*TRACEFS_FILTER_AND*` - Append "&&" to the filter
- `*TRACEFS_FILTER_OR*` - Append "||" to the filter
- `*TRACEFS_FILTER_NOT*` - Append "!" to the filter
- `*TRACEFS_FILTER_OPEN_PAREN*` - Append "(" to the filter
- `*TRACEFS_FILTER_CLOSE_PAREN*` - Append ")" to the filter

`_field_`, `_compare_`, and `_val_` are ignored unless `_type_` is equal to

`*TRACEFS_FILTER_COMPARE*`, then `_compare` will be used for the following:

`*TRACEFS_COMPARE_EQ*` - `_field_ == _val_`

`*TRACEFS_COMPARE_NE*` - `_field_ != _val_`

`*TRACEFS_COMPARE_GT*` - `_field_ > _val_`

`*TRACEFS_COMPARE_GE*` - `_field_ >= _val_`

`*TRACEFS_COMPARE_LT*` - `_field_ < _val_`

`*TRACEFS_COMPARE_LE*` - `_field_ <pass:[=] _val_`

`*TRACEFS_COMPARE_RE*`  
- `_field_ ~ "_val_"` : where `_field_` is a string.

`*TRACEFS_COMPARE_AND*` - `_field_ & _val_` : where `_field_` is a flags field.

`*tracefs_synth_append_end_filter*()` is the same as `*tracefs_synth_append_start_filter*` but filters on the ending event.

`*tracefs_synth_free*()` frees the allocated descriptor returned by `*tracefs_synth_alloc*()`.

## RETURN VALUE

-----

`*tracefs_synth_alloc*()` returns an allocated struct `tracefs_synth` descriptor on success or NULL on error.

All other functions that return an integer returns zero on success or -1 on error.

## ERRORS

-----

The following errors are for all the above calls:

\*EPERM\* Not run as root user when required.

\*EINVAL\* Either a parameter is not valid (NULL when it should not be) or a field that is not compatible for calculations.

\*ENODEV\* An event or one of its fields is not found.

\*EBADE\* The fields of the start and end events are not compatible for either matching or comparing.

\*ENOMEM\* not enough memory is available.

And

more errors may have happened from the system calls to the system.

#### EXAMPLE

-----

[source,c]

--

```
#include <stdlib.h>
```

```
#include <tracefs.h>
```

```
#define start_event "sched_waking"
```

```
#define start_field "pid"
```

```
#define end_event "sched_switch"
```

```
#define end_field "next_pid"
```

```
#define match_name "pid"
```

```
static struct tracefs_synth *synth;
```

```
static void make_event(void)
```

```
{
```

```
    struct tep_handle *tep;
```

```
    /* Load all events from the system */
```

```
    tep = tracefs_local_events(NULL);
```

```
    /* Initialize the synthetic event */
```

```
    synth = tracefs_synth_alloc(tep, "wakeup_lat",
```

```
        NULL, start_event,
```

```
        NULL, end_event,
```

```
        start_field, end_field,
```

```
        match_name);
```

```

/* The tep is no longer needed */
tep_free(tep);

/* Save the "prio" field as "prio" from the start event */
tracefs_synth_add_start_field(synth, "prio", NULL);

/* Save the "next_comm" as "comm" from the end event */
tracefs_synth_add_end_field(synth, "next_comm", "comm");

/* Save the "prev_prio" as "prev_prio" from the end event */
tracefs_synth_add_end_field(synth,
"prev_prio", NULL);

/*
* Take a microsecond time difference between end and start
* and record as "delta"
*/
tracefs_synth_add_compare_field(synth, TRACEFS_TIMESTAMP_USECS,
TRACEFS_TIMESTAMP_USECS,
TRACEFS_SYNTH_DELTA_END, "delta");

/* Only record if start event "prio" is less than 100 */
tracefs_synth_append_start_filter(synth, TRACEFS_FILTER_COMPARE,
"prio", TRACEFS_COMPARE_LT, "100");

/*
* Only record if end event "next_prio" is less than 50
* or the previous task's prio was not greater than or equal to 100.
* next_prio < 50 || !(prev_prio >= 100)
*/
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_COMPARE,
"next_prio", TRACEFS_COMPARE_LT, "50");
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_OR, NULL, 0, NULL);
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_NOT, NULL, 0, NULL);
tracefs_synth_append_end_filter(synth, TRACEFS_FILTER_OPEN_PAREN, NULL, 0, NULL);
tracefs_synth_append_end_filter(synth,
TRACEFS_FILTER_COMPARE,
"prev_prio", TRACEFS_COMPARE_GE, "100");
/*
* Note, the above only added: "next_prio < 50 || !(prev_prio >= 100"
* That's because, when the synth is executed, the remaining close parenthesis
* will be added. That is, the string will end up being:
* "next_prio < 50 || !(prev_prio >= 100)" when one of tracefs_sync_create()
* or tracefs_sync_echo_cmd() is run.
*/
}

```

```

/* Display how to create the synthetic event */
static void show_event(void)
{
    struct trace_seq s;

    trace_seq_init(&s);

    tracefs_synth_echo_cmd(&s, synth);
    trace_seq_terminate(&s);
    trace_seq_do_printf(&s);
    trace_seq_destroy(&s);
}

int main (int argc, char **argv)
{
    make_event();

    if (argc > 1) {
        if (!strcmp(argv[1], "create")) {
            /* Create the synthetic event */
            tracefs_synth_create(synth);
        } else if (!strcmp(argv[1], "delete")) {
            /* Delete the synthetic event */
            tracefs_synth_destroy(synth);
        } else {
            printf("usage: %s [create|delete]\n",
                argv[0]);
            exit(-1);
        }
    } else
        show_event();

    tracefs_synth_free(synth);

    return 0;
}
--

FILES
-----
[verse]
--
*tracefs.h*
Header file to include in order to have access to the library APIs.
*-ltracefs*
Linker switch to add when building a program that uses the library.
--

```

## SEE ALSO

-----

\*tracefs\_synth\_create\*(3),  
\*tracefs\_synth\_destroy\*(3),  
\*tracefs\_synth\_echo\_cmd\*(3),  
\*libtracefs\*(3),  
\*libtraceevent\*(3),  
\*trace-cmd\*(1),  
\*tracefs\_hist\_alloc\*(3),  
\*tracefs\_hist\_alloc\_2d\*(3),  
\*tracefs\_hist\_alloc\_nd\*(3),  
\*tracefs\_hist\_free\*(3),  
\*tracefs\_hist\_add\_key\*(3),  
\*tracefs\_hist\_add\_value\*(3),  
\*tracefs\_hist\_add\_name\*(3),  
\*tracefs\_hist\_start\*(3),  
\*tracefs\_hist\_destory\*(3),  
\*tracefs\_hist\_add\_sort\_key\*(3),  
\*tracefs\_hist\_sort\_key\_direction\*(3),  
\*tracefs\_synth\_create\*(3),  
\*tracefs\_synth\_destroy\*(3),  
\*tracefs\_synth\_complete\*(3),  
\*tracefs\_synth\_trace\*(3),  
\*tracefs\_synth\_snapshot\*(3),  
\*tracefs\_synth\_save\*(3),  
\*tracefs\_synth\_echo\_cmd\*(3),  
\*tracefs\_synth\_get\_start\_hist\*(3),  
\*tracefs\_synth\_get\_name\*(3),  
\*tracefs\_synth\_raw\_fmt\*(3),  
\*tracefs\_synth\_show\_event\*(3),  
\*tracefs\_synth\_show\_start\_hist\*(3),  
\*tracefs\_synth\_show\_end\_hist\*(3),  
\*tracefs\_synth\_get\_event\*(3),

## AUTHOR

-----

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--

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libtracefs(3)

=====

## NAME

----

tracefs\_trace\_pipe\_stream, tracefs\_trace\_pipe\_print, tracefs\_trace\_pipe\_stop - redirect the stream of trace data to an output or stdout.

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
ssize_t *tracefs_trace_pipe_stream*(int _fd_, struct tracefs_instance pass:[*]_instance_, int _flags_);
```

```
ssize_t *tracefs_trace_pipe_print*(struct tracefs_instance pass:[*]_instance_, int _flags_);
```

```
void *tracefs_trace_pipe_stop*(struct tracefs_instance pass:[*]_instance_);
```

--

## DESCRIPTION

-----

If NULL is passed as `_instance_`, the top trace instance is used.

The reading of the `trace_pipe` file can be stopped by calling `*tracefs_trace_pipe_stop()*` which could be placed in a signal handler in case the application wants to stop the reading, for example, with the user pressing Ctrl-C.

The `*tracefs_trace_pipe_stream()*` function redirects the stream of trace data to an output



file. The "splice"

system call is used to move the data without copying between kernel address space and user address space. The `_fd_` is the file descriptor of the output file and `_flags_` is a bit mask of flags to be passed to the open system call of the trace\_pipe file (see `*open(2)*`). If flags contain `O_NONBLOCK`, then that is also passed to the splice calls that may read the file to the output stream file descriptor. Note, `O_RDONLY` is or'd to the `_flags_` and only `O_NONBLOCK` is useful for this parameter.

The `*tracefs_trace_pipe_print()*` function is similar to `*tracefs_trace_pipe_stream()*`, but the stream of trace data is redirected to stdout.

## RETURN VALUE

-----

The `*tracefs_trace_pipe_stream()*`, and `*tracefs_trace_pipe_print()*` functions return the number of bytes transferred if the operation is successful, or -1 in case of an error.

## EXAMPLE

-----

```
[source,c]
--
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <signal.h>
#include <fcntl.h>

#include <tracefs.h>

void
stop(int sig)
{
    tracefs_trace_pipe_stop(NULL);
}

int main(int argc, char **argv)
{
    mode_t mode = S_IRUSR | S_IWUSR | S_IRGRP | S_IROTH;
    const char *filename;
    int fd;
    int ret;

    if (argc < 2) {
        fprintf(stderr, "usage: %s output_file\n", argv[0]);
        exit(-1);
    }
    filename = argv[1];
    fd = creat(filename, mode);
```

```
if (fd < 0) {
    perror(filename);
    exit(-1);
}
signal(SIGINT, stop);
ret = tracefs_trace_pipe_stream(fd, NULL, SPLICE_F_NONBLOCK);
close(fd);

return ret;
}
```

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1),**

Documentation/trace/ftrace.rst from the Linux kernel tree

## AUTHOR

-----

[verse]

--

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--

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libtracefs(3)

=====

## NAME

----

tracefs\_event\_get\_file, tracefs\_event\_file\_read, tracefs\_event\_file\_write, tracefs\_event\_file\_append, tracefs\_event\_file\_clear, tracefs\_event\_file\_exists - Work with trace event files.

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
char pass:[*]*tracefs_event_get_file*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_, const char pass:[*]_event_,
```

```
    const char pass:[*]_file_);
```

```
char pass:[*]*tracefs_event_file_read*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_, const char pass:[*]_event_,
```

```
    const char pass:[*]_file_, int pass:[*]_psize_);
```

```
int *tracefs_event_file_write*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_, const char pass:[*]_event_,
```

```
    const char pass:[*]_file_, const char pass:[*]_str_);
```

```
int *tracefs_event_file_append*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_, const char pass:[*]_event_,
```

```
    const char pass:[*]_file_, const char pass:[*]_str_);
```

```
int *tracefs_event_file_clear*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_, const char pass:[*]_event_,
```

```
    const char pass:[*]_file_);
```

```
bool *tracefs_event_file_exists*(struct tracefs_instance pass:[*]_instance_, const char pass:[*]_system_, const char pass:[*]_event_,
```

```
    const char pass:[*]_file_);
```

--

## DESCRIPTION

-----

These are functions for accessing tracefs event specific files.

These functions act similar to the tracefs instance file functions

but are easier to get to if the system and events are known before hand.

The `*tracefs_event_get_file()*` returns the full path of the `_file_` for the given `_system_` and `_event_` that is within the given `_instance_`. If `_instance_` is NULL, then the file for the `_event_` for the top level instance is returned. Note, there is no check to see if the file actually exists or even if the system and event exist. It only creates the path name for such an event if it did exist. This acts similar to the `*tracefs_instance_get_file*(3)`, but is to be used to get to event files if the `_system_` and `_event_` are already known.

The `*tracefs_event_file_read()*` reads the content for the `_event_ _file_` for the given `_instance_` or the top level instance if `_instance_` is NULL. The content of the file is returned and `_psize_` is set to the amount of data that was read. The returned content must be freed with `*free*(3)`. This acts similar to the `*tracefs_instance_file_read*(3)`, but is to be used to read the event file if the `_system_` and `_event_` are already known.

The `*tracefs_event_file_write()*` writes `_str_` to the `_event_ _file_`. It will truncate anything that is already in that file. This acts similar to the `*tracefs_instance_file_write*(3)`, but is to be used to read the event file if the `_system_` and `_event_` are already known.

The `*tracefs_event_file_append()*` appends `_str_` to the `_event_ _file_`. It will not clear out the file as it writes `_string_`. This acts similar to the `*tracefs_instance_file_append*(3)`, but is to be used to read the event file if the `_system_` and `_event_` are already known.

The `*tracefs_event_file_clear()*` clears the content of the `_event_ _file_`. This acts similar to the `*tracefs_instance_file_clear*(3)`, but is to be used to read the event file if the `_system_` and `_event_` are already known.

The `*tracefs_event_file_exists()*` returns true if the `_event_ _file_` exists, and false otherwise. This acts similar to the `*tracefs_instance_file_exists*(3)`, but is to be used to read the event file if the `_system_` and `_event_` are already known.

## RETURN VALUE

-----

`*tracefs_event_get_file()*` returns the path of the given `_system_/_event_ _file_` on success and NULL on error. The return value must be freed with `*tracefs_put_tracing_file*(3)`.

`*tracefs_event_file_read()*` reads the content of the `_system_/_event_ _file_` or NULL on error. The return pointer must be freed with `*free*(3)`.

`*tracefs_event_file_write()*` and `*tracefs_event_file_append()*` returns the number of bytes written to the `_system_/_event_ _file_` or negative on error.

`*tracefs_event_file_clear()*` returns zero on success and -1 on error.

`*tracefs_event_file_exists()*` returns true if the `_system_/_event_ _file_` exists for the given `_instance_` (or top level if `_instance_` is NULL) or false otherwise.

#### EXAMPLE

-----

[source,c]

--

```
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <tracefs.h>
```

```
int main(int argc, char **argv)
```

```
{
    char *system;
    char *event;
    char *file;
    char *cmd = NULL;
    char *buf;
    char *str;
    char ch = 'r';
    int size;
```

```
    if (argc < 4) {
        printf("usage: %s sytem event file [(-a|-w) write | -c]\n"
            "  reads the system/event file or writes if [write is supplied]\n",
            argv[0]);
        exit(0);
    }
```

```
    system = argv[1];
    event = argv[2];
    file = argv[3];
    if (argc > 4)
        cmd = argv[4];
```

```
    if (!tracefs_event_file_exists(NULL, system, event,
        file)) {
        fprintf(stderr, "File %s/%s/%s does not exist\n",
```

```

    system, event, file);
exit(-1);
}

if (cmd) {
if (cmd[0] != '-')
    ch = cmd[0];
else
    ch = cmd[1];
if (!ch)
    ch = 'c';
}

switch (ch) {
case 'r':
buf = tracefs_event_file_read(NULL, system, event, file, &size);
if (buf)
    printf("%s", buf);
else
    fprintf(stderr, "Failed to read %s/%s/%s\n",
        system, event, file);
free(buf);
break;
case 'w':
case 'a':
if (argc < 6) {
    fprintf(stderr, "%s command requires something to write\n",
        ch == 'w' ? "write" : "append");
    exit(-1);
}
if (ch == 'w')
    size = tracefs_event_file_write(NULL, system, event, file, argv[5]);
else
    size = tracefs_event_file_append(NULL, system, event, file, argv[5]);
if (size < 0) {
    fprintf(stderr, "Failed to write '%s' to %s/%s/%s\n",
        argv[5], system, event, file);
    exit(-1);
}
break;
case 'c':
if (tracefs_event_file_clear(NULL, system, event, file) < 0) {
    fprintf(stderr, "Failed
to clear %s/%s/%s\n",
        system, event, file);
    exit(-1);
}
break;

```

```
default:
    fprintf(stderr, "Unknown command '%c'\n", ch);
    exit(-1);
}
exit(0);
}
```

--

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>

--

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libtracefs(3)

=====

## NAME

----

tracefs\_set\_loglevel - Set log level of the library

## SYNOPSIS

-----

[verse]

--

```
*/#include <tracefs.h>*
```

```
int *tracefs_set_loglevel*(enum tep_loglevel _level_);
```

--

## DESCRIPTION

-----

The `*tracefs_set_loglevel()*` function sets the level of the library logs that will be printed on the console. See `_libtraceevent(3)_` for detailed description of the log levels. Setting the log level to specific value means that logs from the previous levels will be printed too. For example `_TEP_LOG_WARNING_` will print any logs with severity `_TEP_LOG_WARNING_`, `_TEP_LOG_ERROR_` and `_TEP_LOG_CRITICAL_`. The default log level is `_TEP_LOG_CRITICAL_`. When a new level is set, it is also propagated to the `libtraceevent`.

## EXAMPLE

-----

[source,c]

--

```
#include <tracefs.h>
```

```
tracefs_set_loglevel(TEP_LOG_ALL);
```

...

```
/* call libtracefs or libtraceevent APIs and observe any logs they produce */
```

...

```
tracefs_set_loglevel(TEP_LOG_CRITICAL);
```

--

## FILES

-----

[verse]

--

`*tracefs.h*`

Header

file to include in order to have access to the library APIs.

`*-ltracefs*`



Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*libtracefs\*(3),  
\*libtraceevent\*(3),  
\*trace-cmd\*(1)

## AUTHOR

-----

[verse]

--

\*Steven Rostedt\* <rostedt@goodmis.org>  
\*Tzvetomir Stoyanov\* <tz.stoyanov@gmail.com>

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libtracefs(3)

=====

## NAME

----

tracefs\_hist\_start, tracefs\_hist\_destroy, tracefs\_hist\_pause,  
tracefs\_hist\_continue, tracefs\_hist\_reset - Pause, continue, or clear an existing histogram

## SYNOPSIS

-----

```
[verse]
--
*#include <tracefs.h>*

int *tracefs_hist_start*(struct tracefs_instance pass:[*]_instance_, struct tracefs_hist pass:[*]_hist_);
int *tracefs_hist_destroy*(struct tracefs_instance pass:[*]_instance_, struct tracefs_hist pass:[*]_hist_);
int *tracefs_hist_pause*(struct tracefs_instance pass:[*]_instance_, struct tracefs_hist pass:[*]_hist_);
int *tracefs_hist_continue*(struct tracefs_instance pass:[*]_instance_, struct tracefs_hist pass:[*]_hist_);
int *tracefs_hist_reset*(struct tracefs_instance pass:[*]_instance_, struct tracefs_hist pass:[*]_hist_);

--
```

## DESCRIPTION

-----

*\*tracefs\_hist\_start()\** is called to actually start the histogram *\_hist\_*.  
The *\_instance\_* is the instance to start the histogram  
in, NULL if it  
should start at the top level.

*\*tracefs\_hist\_pause()\** is called to pause the histogram *\_hist\_*.  
The *\_instance\_* is the instance to pause the histogram in, NULL if it  
is in the top level.

*\*tracefs\_hist\_continue()\** is called to continue a paused histogram *\_hist\_*.  
The *\_instance\_* is the instance to continue the histogram, NULL if it  
is in the top level.

*\*tracefs\_hist\_reset()\** is called to clear / reset the histogram *\_hist\_*.  
The *\_instance\_* is the instance to clear the histogram, NULL if it  
is in the top level.

*\*tracefs\_hist\_destroy()\** is called to delete the histogram where it will no longer  
exist. The *\_instance\_* is the instance to delete the histogram from, NULL if it  
is in the top level.

## RETURN VALUE

-----

All the return zero on success or -1 on error.

## EXAMPLE

-----

```
[source,c]
--
#include <stdlib.h>
#include <tracefs.h>
```

```
enum commands {
```

```
START,  
PAUSE,  
CONT,  
RESET,  
DELETE,  
SHOW,  
};
```

```
int main (int argc, char **argv, char **env)  
{  
    struct tracefs_instance  
    *instance;  
    struct tracefs_hist *hist;  
    struct tep_handle *tep;  
    enum commands cmd;  
    char *cmd_str;  
    int ret;  
  
    if (argc < 2) {  
        fprintf(stderr, "usage: %s command\n", argv[0]);  
        exit(-1);  
    }  
  
    cmd_str = argv[1];  
  
    if (!strcmp(cmd_str, "start"))  
        cmd = START;  
    else if (!strcmp(cmd_str, "pause"))  
        cmd = PAUSE;  
    else if (!strcmp(cmd_str, "cont"))  
        cmd = CONT;  
    else if (!strcmp(cmd_str, "reset"))  
        cmd = RESET;  
    else if (!strcmp(cmd_str, "delete"))  
        cmd = DELETE;  
    else if (!strcmp(cmd_str, "show"))  
        cmd = SHOW;  
    else {  
        fprintf(stderr, "Unknown command %s\n", cmd_str);  
        exit(-1);  
    }  
  
    tep = tracefs_local_events(NULL);  
    if (!tep) {  
        perror("Reading tracefs");  
        exit(-1);  
    }  
}
```

```

instance = tracefs_instance_create("hist_test");
if (!instance) {
    fprintf(stderr, "Failed instance create\n");
    exit(-1);
}

hist = tracefs_hist_alloc_2d(tep, "kmem", "kmalloc",
    "call_site", TRACEFS_HIST_KEY_SYM,
    "bytes_req", 0);
if (!hist) {
    fprintf(stderr, "Failed hist create\n");
    exit(-1);
}

ret
= tracefs_hist_add_value(hist, "bytes_alloc");
ret |= tracefs_hist_add_sort_key(hist, "bytes_req");
ret |= tracefs_hist_add_sort_key(hist, "bytes_alloc");

ret |= tracefs_hist_sort_key_direction(hist, "bytes_alloc",
    TRACEFS_HIST_SORT_DESCENDING);
if (ret) {
    fprintf(stderr, "Failed modifying histogram\n");
    exit(-1);
}

tracefs_error_clear(instance);

switch (cmd) {
case START:
    ret = tracefs_hist_start(instance, hist);
    if (ret) {
        char *err = tracefs_error_last(instance);
        if (err)
            fprintf(stderr, "\n%s\n", err);
    }
    break;
case PAUSE:
    ret = tracefs_hist_pause(instance, hist);
    break;
case CONT:
    ret = tracefs_hist_continue(instance, hist);
    break;
case RESET:
    ret = tracefs_hist_reset(instance, hist);
    break;
case DELETE:
    ret = tracefs_hist_destroy(instance, hist);

```

```

break;
case SHOW: {
char *content;
content = tracefs_event_file_read(instance, "kmem", "kmalloc",
    "hist", NULL);
ret = content ?
0 : -1;
if (content) {
printf("%s\n", content);
free(content);
}
break;
}
}
if (ret)
fprintf(stderr, "Failed: command\n");
exit(ret);
}

```

--

## FILES

-----

[verse]

--

\*tracefs.h\*

Header file to include in order to have access to the library APIs.

\*-ltracefs\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*libtracefs\*(3),

\*libtraceevent\*(3),

\*trace-cmd\*(1),

\*tracefs\_hist\_alloc\*(3),

\*tracefs\_hist\_alloc\_2d\*(3),

\*tracefs\_hist\_alloc\_nd\*(3),

\*tracefs\_hist\_free\*(3),

\*tracefs\_hist\_add\_key\*(3),

\*tracefs\_hist\_add\_value\*(3),

\*tracefs\_hist\_add\_name\*(3),

\*tracefs\_hist\_start\*(3),

\*tracefs\_hist\_destory\*(3),

\*tracefs\_hist\_add\_sort\_key\*(3),

\*tracefs\_hist\_sort\_key\_direction\*(3)

## AUTHOR

-----

[verse]

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libtracefs(3)

=====

## NAME

----

tracefs\_trace\_is\_on, tracefs\_trace\_on, tracefs\_trace\_off, tracefs\_trace\_on\_get\_fd, tracefs\_trace\_on\_fd, tracefs\_trace\_off\_fd - Functions to enable or disable tracing.

## SYNOPSIS

-----

[verse]

```
--
*#include <tracefs.h>*

int *tracefs_trace_is_on*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_trace_on*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_trace_off*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_trace_on_get_fd*(struct tracefs_instance pass:[*]_instance_);
int *tracefs_trace_on_fd*(int _fd_);
int *tracefs_trace_off_fd*(int _fd_);
--
```

## DESCRIPTION

-----

This set of functions can be used to check, enable or disable writing to the ring buffer in the given trace instance. The tracing is enabled when writing to the ring buffer is enabled.

The `*tracefs_trace_is_on()` function checks if tracing is enabled for the given `_instance_`. If `_instance_` is NULL, the top instance is used.

The `*tracefs_trace_on()` and `*tracefs_trace_off()` functions set the tracing in the `_instance_` to enable or disable state. If `_instance_` is NULL, the top instance is used.

The `*tracefs_trace_on_get_fd()` function returns a file descriptor to the "tracing\_on" file from the given `_instance_`. If `_instance_` is NULL, the top trace instance is used. The returned descriptor can be used for fast enabling or disabling the tracing of the instance.

The `*tracefs_trace_on_fd()` and `*tracefs_trace_off_fd()` functions set the tracing state to enable or disable using the given `_fd_`. This file descriptor must be opened for writing with `*tracefs_trace_on_get_fd*(3)` of the desired trace instance. These functions are faster than `*tracefs_trace_on*` and `*tracefs_trace_off*`.

## RETURN VALUE

-----

The `*tracefs_trace_is_on()` function returns 0 if tracing is disable, 1 if it is enabled or -1 in case of an error.

The `*tracefs_trace_on_get_fd()` function returns a file descriptor to "tracing\_on" file for reading and writing, which must be closed wuth `close()`. In case of an error -1 is returned.

The `*tracefs_trace_on()`, `*tracefs_trace_off()`, `*tracefs_trace_on_fd()` and `*tracefs_trace_off_fd()` functions return -1 in case of an error or 0 otherwise.

## EXAMPLE

-----

[source,c]

--

```

#include <tracefs.h>

int ret;

ret = tracefs_trace_is_on(NULL);
if (ret == 0) {
    /* Tracing is disabled in the top instance */
} else if (ret == 1) {
    /* Tracing is enabled in the top instance */
} else {
    /* Error getting tracing state of the top instance */
}

...

if (!tracefs_trace_on(NULL)) {
    /* Enabled tracing in the top instance */

    ...

    if (!tracefs_trace_off(NULL)) {
        /* Disabled tracing in the top instance */
    } else {
        /* Error disabling tracing in the top instance */
    }
} else {
    /* Error enabling tracing in the top instance */
}

...

int fd = tracefs_trace_on_get_fd(NULL);

if (fd < 0) {
    /* Error opening
tracing_on file */
}

...

if (!tracefs_trace_on_fd(fd)) {
    /* Enabled tracing in the top instance */

    ...

    if (!tracefs_trace_off_fd(fd)) {
        /* Disabled tracing in the top instance */
    } else {
        /* Error disabling tracing in the top instance */
    }
}

```



```
} else {  
/* Error enabling tracing in the top instance */  
}
```

...

```
close(fd);
```

--

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

**\*Steven Rostedt\*** <rostedt@goodmis.org>

**\*Tzvetomir Stoyanov\*** <tz.stoyanov@gmail.com>

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libtracefs(3)

=====

NAME

----

tracefs\_cpu\_open, tracefs\_cpu\_close, tracefs\_cpu\_alloc\_fd, tracefs\_cpu\_free\_fd, tracefs\_cpu\_snapshot\_open -  
Opening trace\_pipe\_raw data for reading

SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
struct tracefs_cpu pass:[*]*tracefs_cpu_open*(struct tracefs_instance pass:[*]_instance_,  
        int _cpu_, bool _nonblock_);  
void *tracefs_cpu_close*(struct tracefs_cpu pass:[*]_tcpu_);
```

```
struct tracefs_cpu pass:[*]*tracefs_cpu_alloc_fd*(int _fd_, int _subbuf_size_, bool _nonblock_);  
void *tracefs_cpu_free_fd*(struct tracefs_cpu pass:[*]_tcpu_);
```

```
struct tracefs_cpu pass:[*]*tracefs_cpu_snapshot_open*(struct tracefs_instance pass:[*]_instance_,  
        int _cpu_, bool _nonblock_);
```

--

DESCRIPTION

-----

This set of APIs can be used to open the raw data from the trace\_pipe\_raw files in the tracefs file system in order to read them with the \*tracefs\_cpu\_read\*(3) functions.

The

\*tracefs\_cpu\_open()\* creates a descriptor that can read the tracefs trace\_pipe\_raw file for a given \_cpu\_ in a given \_instance\_. If \_instance\_ is NULL then the toplevel trace\_pipe\_raw file is used.

The \*tracefs\_cpu\_close()\* closes all the file descriptors associated to the trace\_pipe\_raw opened by \*tracefs\_cpu\_open()\*.

The \*tracefs\_cpu\_alloc\_fd()\* will create a tracefs\_cpu descriptor from an existing file descriptor \_fd\_. This is useful to use when connecting to a socket or pipe where the other end is feeding raw tracing data in the same format as the trace\_pipe\_raw

file would (like in guest to host tracing). The caller is responsible for determining the `_subbuf_size_` that will be used to break up the sub-buffers being read by the file descriptor. The `_nonblock_` is treated the same as the same parameter in `*tracefs_cpu_open()*`.

The `*tracefs_cpu_free_fd()*` is used to free the descriptor returned by `*tracefs_cpu_alloc_fd()*`. It does all the clean up that `*tracefs_cpu_close()*` performs, and that could also be used to free up the descriptor created by `*tracefs_cpu_alloc_fd()*` but will also close the file descriptor passed in. Note that `*tracefs_cpu_free_fd()*` should not be used on the descriptor returned by `*tracefs_cpu_open()*` as it will not close the file descriptor created by it.

The `*tracefs_cpu_snapshot_open()*` is similar to `*tracefs_cpu_open()*` except that it opens the snapshot buffer (see `*tracefs_snapshot_snap*(3)`). The snapshot buffer does not have a writer to it, it is only created by a snapshot action that swaps the current ring buffer with the snapshot buffer. The `_nonblock_`, when false, acts a little differently here too. Reads are not affected by the "buffer\_percent" file. If the snapshot buffer is empty, it will block until a new snapshot happens.

## RETURN VALUE

-----

The `*tracefs_cpu_open()*` and `*tracefs_cpu_snapshot_open()*` both return a struct `tracefs_cpu` descriptor that can be used by the other functions or NULL on error.

The `*tracefs_cpu_alloc_fd()*` returns a struct `tracefs_cpu` descriptor that can be used by the `*tracefs_cpu_read*(3)` related functions, where the descriptor will be reading the passed in `_fd_` file descriptor.

## EXAMPLE

-----

See `*tracefs_cpu_read*(3)` for an example.

## FILES

-----

[verse]

--

`*tracefs.h*`

Header file to include in order to have access to the library APIs.

`*-ltracefs*`

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

`*libtracefs*(3)`,

`*libtraceevent*(3)`,

\*trace-cmd\*(1)

## AUTHOR

-----

[verse]

--

\*Steven Rostedt\* <rostedt@goodmis.org>

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libtracefs(3)

=====

## NAME

----

tracefs\_instance\_tracers, tracefs\_tracer\_set, tracefs\_tracer\_clear - Enable or disable a tracer in an instance or the top level

## SYNOPSIS

-----

[verse]

--

\*#include <tracefs.h>\*

char pass:[\*\*] \*tracefs\_instance\_tracers\*(struct tracefs\_instance pass:[\*]\_instance\_);

int \*tracefs\_tracer\_set\*(struct tracefs\_instance pass:[\*]\_instance\_, enum tracefs\_tracers \_tracer\_);

int \*tracefs\_tracer\_set\*(struct tracefs\_instance pass:[\*]\_instance\_, enum tracefs\_tracers \_tracer\_, const char pass:[\*]\_name\_);

```
int *tracefs_tracer_clear*(struct tracefs_instance pass:[*]_instance_);
```

```
--
```

## DESCRIPTION

```
-----
```

`*tracefs_instance_tracers*` will return a list of available tracers for a given `_instance_` (note, an instance may not have the same set of available tracers as the top level). If `_instance_` is NULL, then the list of available tracers returned will be for the top level.

`*tracefs_tracer_set*` enables a tracer in the given instance, defined by the `_instance_` parameter. If `_instance_` is NULL, then the top level instance is changed. If `_tracer_` is set to `*TRACEFS_TRACER_CUSTOM*` then a `_name_` string must be passed in as the third parameter, and that is written into the instance to enable the tracer with that name. This is useful for newer or custom kernels that contain tracers that are not yet identified by the `tracefs_tracers` enum.

`*tracefs_tracer_clear*` disables the tracer for the given instance defined by the `_instance_` variable, or the top level instance if it is NULL. This is the same as calling `*tracefs_tracer_set*` with `TRACEFS_TRACER_NOP` as the `_tracer_` parameter.

## TRACEFS\_TRACER ENUMS

```
-----
```

The currently defined enums that are accepted are:

`*TRACEFS_TRACER_NOP*` :

This is the idle tracer, which does nothing and is used to clear any active tracer.

`*TRACEFS_TRACER_FUNCTION*` :

Enables most functions in the kernel to be traced.

`*TRACEFS_TRACER_FUNCTION_GRAPH*`

:

Enables most functions in the kernel to be traced as well as the return of the function.

`*TRACEFS_TRACER_IRQSOFF*` :

Tracers the latency of interrupts disabled.

`*TRACEFS_TRACER_PREEMPTOFF*` :

Tracers the latency of preemption disabled (the time in the kernel that tasks can not be scheduled from the CPU).

**\*TRACEFS\_TRACER\_PREEMPTIRQSOFF\*** :

Traces the combined total latency of when interrupts are disabled as well as when preemption is disabled.

**\*TRACEFS\_TRACER\_WAKEUP\*** :

Traces the latency of when the highest priority task takes to wake up.

**\*TRACEFS\_TRACER\_WAKEUP\_RT\*** :

Traces the latency of when the highest priority real-time task takes to wake up. All other tasks are ignored.

**\*TRACEFS\_TRACER\_WAKEUP\_DL\*** :

Traces the latency of when the highest priority DEADLINE task takes to wake up. All other tasks are ignored.

**\*TRACEFS\_TRACER\_MMIOTRACE\*** :

Traces the interaction of devices with the kernel.

**\*TRACEFS\_TRACER\_HWLAT\*** :

Detects latency caused by the hardware that is outside the scope of the kernel.

**\*TRACEFS\_TRACER\_BRANCH\*** :

Traces when likely or unlikely branches are taken.

**\*TRACEFS\_TRACER\_BLOCK\*** :

Special tracer for the block devices.

Note that the above tracers may not be available in the kernel and `*tracefs_tracer_set()*` will return an error with `errno` set to `ENODEV`, if the kernel does not support the `_tracer_` option, or the custom one if `TRACEFS_TRACER_CUSTOM` is used.

## RETURN VALUE

-----

Returns 0 on success, or -1 on error.

## ERRORS

-----

`*tracefs_tracer_set*()` can fail with the following errors:

**\*EINVAL\*** The `_tracer_` parameter is outside the scope of what is defined.

**\*ENOMEM\*** Memory allocation error.

**\*ENOENT\*** Tracers are not supported on the running kernel.

\*ENODEV\* The specified tracer is not supported on the running kernel.

Other errors may also happen caused by internal system calls.

#### EXAMPLE

-----

[source,c]

--

```
#include <stdlib.h>
```

```
#include <stdio.h>
```

```
#include <getopt.h>
```

```
#include <errno.h>
```

```
#include <tracefs.h>
```

```
int main(int argc, char *argv[])
```

```
{
```

```
    struct
```

```
    tracefs_instance *inst = NULL;
```

```
    enum tracefs_tracers t = TRACEFS_TRACER_NOP;
```

```
    const char *cust = NULL;
```

```
    const char *buf = NULL;
```

```
    char **tracers;
```

```
    int ret;
```

```
    int ch;
```

```
    int i;
```

```
    while ((ch = getopt(argc, argv, "nfgiwdc:B:")) > 0) {
```

```
        switch (ch) {
```

```
            case 'f': t = TRACEFS_TRACER_FUNCTION; break;
```

```
            case 'g': t = TRACEFS_TRACER_FUNCTION_GRAPH; break;
```

```
            case 'i': t = TRACEFS_TRACER_PREEMPTIRQSOFF; break;
```

```
            case 'w': t = TRACEFS_TRACER_WAKEUP_RT; break;
```

```
            case 'd': t = TRACEFS_TRACER_WAKEUP_DL; break;
```

```
            case 'c':
```

```
                t = TRACEFS_TRACER_CUSTOM;
```

```
                cust = optarg;
```

```
                break;
```

```
            case 'B':
```

```
                buf = optarg;
```

```
                break;
```

```
            case 'n':
```

```
                /* nop */
```

```
                break;
```

```
            default:
```

```
                printf("Unknow arg %c\n", ch);
```

```
                exit(-1);
```

```
        }
```

```
    }
```

```

if (buf) {
    inst = tracefs_instance_create(buf);
    if (!inst) {
        printf("failed to create instance\n");
        exit(-1);
    }
}

if (t == TRACEFS_TRACER_CUSTOM)
    ret = tracefs_tracer_set(inst, t, cust);
else
    ret = tracefs_tracer_set(inst, t);

if (ret < 0) {
    if (errno
    == ENODEV) {
        if (cust)
            printf("Tracer '%s' not supported by kernel\n", cust);
        else
            printf("Tracer not supported by kernel\n");
        tracers = tracefs_instance_tracers(inst);
        printf("Available tracers:");
        for (i = 0; tracers && tracers[i]; i++)
            printf(" %s", tracers[i]);
        tracefs_list_free(tracers);
        printf("\n");
    } else
        perror("Error");
    if (inst) {
        tracefs_instance_destroy(inst);
        tracefs_instance_free(inst);
    }
    exit(-1);
}

tracefs_instance_free(inst);

exit(0);
}
--

```

## FILES

-----

[verse]

--

\*tracefs.h\*

Header file to include in order to have access to the library APIs.



**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

[verse]

--

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--

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libtracefs(3)

=====

## NAME

----

tracefs\_instance\_create, tracefs\_instance\_destroy, tracefs\_instance\_alloc, tracefs\_instance\_free, tracefs\_instance\_is\_new, tracefs\_instances, tracefs\_instance\_clear, tracefs\_instance\_reset - Manage trace instances.

## SYNOPSIS

```
-----  
[verse]  
--  
*#include <tracefs.h>*
```

```
struct tracefs_instance pass:[*]*tracefs_instance_create*(const char pass:[*]_name_);  
int *tracefs_instance_destroy*(struct tracefs_instance pass:[*]_instance_);  
struct tracefs_instance pass:[*]*tracefs_instance_alloc*(const char pass:[*]_tracing_dir_, const char  
pass:[*]_name_);  
void *tracefs_instance_free*(struct tracefs_instance pass:[*]_instance_);  
bool *tracefs_instance_is_new*(struct tracefs_instance pass:[*]_instance_);  
char pass:[**]*tracefs_instances*(const char pass:[*]_regex_);  
void *tracefs_instance_clear*(struct tracefs_instance pass:[*]_instance_);  
void *tracefs_instance_reset*(struct tracefs_instance  
pass:[*]_instance_);
```

```
--
```

## DESCRIPTION

-----

This set of functions can be used to manage trace instances. A trace instance is a sub buffer used by the Linux tracing system. Given a unique name, the events enabled in an instance do not affect the main tracing system, nor other instances, as events enabled in the main tracing system or other instances do not affect the given instance.

The `*tracefs_instance_create()` function allocates and initializes a new `tracefs_instance` structure and returns it. If the instance with `_name_` does not yet exist in the system, it will be created. The `_name_` could be `NULL`, then the new `tracefs_instance` structure is initialized for the top instance. Note that the top instance cannot be created in the system, if it does not exist.

The `*tracefs_instance_destroy()` removes the instance from the system, but does not free the structure. `*tracefs_instance_free()` must still be called on `_instance_`.

The `tracefs_instance_alloc()` function allocates a new `tracefs_instance` structure for existing trace instance. If the instance does not exist in the system, the function fails. The `_tracing_dir_` parameter points to the system trace directory. It can be `NULL`, then default system trace directory is used. This parameter is useful to allocate instances to trace directories, copied from another machine. The `_name_` is the name of the instance, or `NULL` for the top instance in the given `_tracing_dir_`.

The `*tracefs_instance_free()` function frees the `tracefs_instance` structure,

without removing the trace instance from the system.

The `*tracefs_instance_is_new()*` function checks if the given `_instance_` is newly created by `*tracefs_instance_create()*`, or it has been in the system before that.

The `*tracefs_instances*()` function returns a list of instances that exist in the system that match the regular expression `_regex_`. If `_regex_` is NULL, then it will match all instances that exist. The returned list must be freed with `*tracefs_list_free*(3)`. Note, if no instances are found an empty list is returned and that too needs to be free with `*tracefs_list_free*(3)`.

The `*tracefs_instance_clear()*` function clears the ring buffer of the given `_instance_` or the top level ring buffer if `_instance_` is NULL.

The `*tracefs_instance_reset*()` function resets the given `_instance_` to its default state.

## RETURN VALUE

-----

The `*tracefs_instance_create()*` and `*tracefs_instance_alloc()*` functions return a pointer to a newly allocated `tracefs_instance` structure. It must be freed with `*tracefs_instance_free()*`.

The `*tracefs_instance_destroy()*` function returns 0 if it succeeds to remove the instance, otherwise it returns -1 if the instance does not exist or it fails to remove it.

The `*tracefs_instance_is_new()*` function returns true if the `*tracefs_instance_create()*` that allocated `_instance_` also created the trace instance in the system, or false if the trace instance already existed in the system when `_instance_` was allocated by `*tracefs_instance_create()*` or `*tracefs_instance_alloc()*`.

The `*tracefs_instances*()` returns a list of instance names that exist on the system. The list must be freed with `*tracefs_list_free*(3)`. An empty list is returned if no instance exists that matches `_regex_`, and this needs to be freed with `*tracefs_list_free*(3)` as well. NULL is returned on error.

The `*tracefs_instance_clear()*` returns 0 if it successfully cleared the ring buffer, or -1 on error.

## EXAMPLE

-----

[source,c]

--

```
#include <tracefs.h>
```

```

struct tracefs_instance *inst = tracefs_instance_create("foo");
if (!inst) {
    /* Error creating a new trace instance */
    ...
}

...

if (tracefs_instance_is_new(inst))
    tracefs_instance_destroy(inst);
tracefs_instance_free(inst);
...

struct tracefs_instance *inst = tracefs_instance_alloc(NULL, "bar");
if (!inst) {
    /* Error allocating 'bar' trace instance */
    ...
}

...
tracefs_instance_reset(inst);
tracefs_instance_free(inst);

```

## FILES

-----

[verse]

--

**\*tracefs.h\***

Header file

to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

## AUTHOR

-----

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libtracefs(3)

=====

NAME

----

tracefs\_dynevent\_create, tracefs\_dynevent\_destroy, tracefs\_dynevent\_destroy\_all, tracefs\_dynevent\_free, tracefs\_dynevent\_list\_free, tracefs\_dynevent\_get, tracefs\_dynevent\_get\_all, tracefs\_dynevent\_info, tracefs\_dynevent\_get\_event - Create, destroy, free and get dynamic events.

SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
struct *tracefs_dynevent*;
```

```
enum *tracefs_dynevent_type*;
```

```
int *tracefs_dynevent_create*(struct tracefs_dynevent pass:[*]_devent_);
```

```
int *tracefs_dynevent_destroy*(struct tracefs_dynevent pass:[*]_devent_, bool _force_);
```

```
int *tracefs_dynevent_destroy_all*(unsigned int _types_, bool _force_);
```

```

void *tracefs_dynevent_free*(struct tracefs_dynevent pass:[*]_devent_);
void *tracefs_dynevent_list_free*(struct tracefs_dynevent pass:[*]pass:[*]_events_);
struct tracefs_dynevent pass:[*]*tracefs_dynevent_get*(enum tracefs_dynevent_type _type_, const char
pass:[*]_system_,
const char pass:[*]_event_);
struct tracefs_dynevent pass:[*]pass:[*]*tracefs_dynevent_get_all*(unsigned int _types_, const char
pass:[*]_system_);
enum tracefs_dynevent_type *tracefs_dynevent_info*(struct tracefs_dynevent pass:[*]_dynevent_, char
pass:[*]pass:[*]_system_, char pass:[*]pass:[*]_event_, char pass:[*]pass:[*]_prefix_, char pass:[*]pass:[*]_addr_,
char pass:[*]pass:[*]_format_);
struct tep_event pass:[*]*tracefs_dynevent_get_event*(struct tep_handle pass:[*]_tep_, struct tracefs_dynevent
pass:[*]_dynevent_);
--

```

## DESCRIPTION

-----

The `*tracefs_dynevent_create*`() function creates dynamic event `_devent_` in the system.

The `*tracefs_dynevent_destroy*`() function removes dynamic event `_devent_` from the system. If `_force_` is true, the function will attempt to disable all events in all trace instances, before removing the dynamic event. The `_devent_` context is not freed, use `*tracefs_dynevent_free*`() to free it.

The `*tracefs_dynevent_destroy_all*`() function removes all dynamic events of given types from the system. The `_types_` parameter is a type of specific dynamic event, or a bitmask of dynamic events types `*tracefs_dynevent_type*`, that will be removed. If `_types_` is 0, dynamic events from all types will be removed. If `_force_` is true, the function will attempt to disable all events in all trace instances, before removing the dynamic events.

The `*tracefs_dynevent_get*`() function allocates and returns a single instance of a dynamic event that matches the given `*type*`, `*system*` and `*event*` that is passed to it. NULL is returned if there is no match. The returned event is what is found in the system, and must be freed with `*tracefs_dynevent_free*`(). If `*system*` is NULL, then the first `*event*` of any system of the given type that has the name of `*event*` will be returned.

The `*tracefs_dynevent_get_all*`() function allocates and returns an array of pointers to dynamic events of given types that exist in the system. The last element of the array is a NULL pointer.

The array must be freed with `*tracefs_dynevent_list_free*`(). If there are no events a NULL pointer is returned. The `_types_` parameter is a type of specific dynamic event, or a bitmask of dynamic events types `*tracefs_dynevent_type*`, that will be retrieved. If `_types_` is 0, dynamic events from all types will be retrieved.

The `*tracefs_dynevent_free*`() function frees a dynamic event context `_devent_`.

The `*tracefs_dynevent_list_free*`() function frees an array of pointers to dynamic event, returned by `*tracefs_dynevent_get_all*`() API.

The `*tracefs_dynevent_info*()` function returns the type and information of a given dynamic event `_dynevent_`. If any of the `_system_`, `_event_`, `_prefix_`, `_addr_` or `_format_` arguments are not NULL, then strings are allocated and returned back via these arguments. The `_system_` and `_event_` holds the system and the name of the dynamic event. If `_prefix_` is non NULL, then it will hold an allocated string that holds the prefix portion of the dynamic event (the content up to the ":", excluding it).

If `_addr_` is non NULL, it will hold the address or function that the dynamic event is attached to, if relevant for this event type. If `_format_` is non NULL, it will hold the format string of the dynamic event. Note, that the content in `_group_`, `_event_`, `_prefix_`, `_addr_`, and `_format_` must be freed with `free(3)` if they are set.

The `*tracefs_dynevent_get_event*()` function returns a tep event, describing the given dynamic event. The API detects any newly created or removed dynamic events. The returned pointer to tep event is controlled by `@tep` and must not be freed.

## RETURN VALUE

-----

`*tracefs_dynevent_create*()` returns 0 on success, or -1 on error. If a parsing error occurs then `*tracefs_error_last*(3)` may be used to retrieve the error message explaining the parsing issue.

`*tracefs_dynevent_destroy*()` and `*tracefs_dynevent_destroy_all*()` return 0 on success, or -1 on error. If `_force_` is enabled, the functions may fail on disabling the events.

`*tracefs_dynevent_get*()` function returns an allocated dynamic event from the system that matches the type, system and event given.

`*tracefs_dynevent_get_all*()` function returns allocated array of pointers to dynamic events, or NULL in case of an error or in case there are no events in the system. That array must be freed by `*tracefs_dynevent_list_free*()`.

`*tracefs_dynevent_info*()` returns the type of the given dynamic event or `TRACEFS_DYNEVENT_UNKNOWN` on error. If `_system_`, `_event_`, `_prefix_`, `_addr_`, or `_format_` are non NULL, they will contain allocated strings that must be freed by `free(3)`.

The `*tracefs_dynevent_get_event*()` function returns a pointer to a tep event or NULL in case of an error or if the requested dynamic event is missing. The returned pointer to tep event is controlled by `@tep` and must not be freed.

## ERRORS

-----

The following errors are for all the above calls:

`*ENODEV*` dynamic events of requested type are not configured for the running kernel.

`*ENOMEM*`



Memory allocation error.

\*tracefs\_dynevent\_create\*() can fail with the following errors:

\*EINVAL\* Most likely a parsing error occurred (use \*tracefs\_error\_last\*(3) to possibly see what that error was).

Other errors may also happen caused by internal system calls.

#### EXAMPLE

-----

[source,c]

--

```
#include <stdlib.h>
```

```
#include <unistd.h>
```

```
#include <sys/wait.h>
```

```
#include <tracefs.h>
```

```
static struct tep_event *open_event;
```

```
static struct tep_format_field *file_field;
```

```
static struct tep_event *openret_event;
```

```
static struct tep_format_field *ret_field;
```

```
static int callback(struct tep_event *event, struct tep_record *record,
```

```
int cpu, void *data)
```

```
{
```

```
struct trace_seq seq;
```

```
trace_seq_init(&seq);
```

```
tep_print_event(event->tep, &seq, record, "%d-%s: ", TEP_PRINT_PID, TEP_PRINT_COMM);
```

```
if (event->id == open_event->id) {
```

```
trace_seq_puts(&seq, "open file=");
```

```
tep_print_field(&seq, record->data, file_field);
```

```
trace_seq_puts(&seq, "\n");
```

```
} else if (event->id == openret_event->id)
```

```
{
```

```
unsigned long long ret;
```

```
tep_read_number_field(ret_field, record->data, &ret);
```

```
trace_seq_printf(&seq, "open ret=%lld\n", ret);
```

```
} else {
```

```
goto out;
```

```
}
```

```
trace_seq_terminate(&seq);
```

```
trace_seq_do_printf(&seq);
```

```

out:
trace_seq_destroy(&seq);

return 0;
}

static pid_t run_exec(char **argv, char **env)
{
pid_t pid;

pid = fork();
if (pid)
return pid;

execve(argv[0], argv, env);
perror("exec");
exit(-1);
}

const char *mykprobe = "my_kprobes";

int main (int argc, char **argv, char **env)
{
struct tracefs_dynevent *kprobe, *kretprobe;
const char *sysnames[] = { mykprobe, NULL };
struct tracefs_instance *instance;
struct tep_handle *tep;
pid_t pid;

if (argc < 2) {
printf("usage: %s command\n", argv[0]);
exit(-1);
}

instance = tracefs_instance_create("exec_open");
if (!instance) {
perror("creating instance");
exit(-1);
}

tracefs_dynevent_destroy_all	TRACEFS_DYNEVENT_KPROBE | TRACEFS_DYNEVENT_KRETPROBE,
true);

kprobe = tracefs_kprobe_alloc(mykprobe,
"open", "do_sys_openat2",
"file=+0($arg2):usttring flags=+0($arg3):x64 mode=+8($arg3):x64\n");
kretprobe = tracefs_kretprobe_alloc(mykprobe, "openret", "do_sys_openat2", "ret=%ax", 0);
if (!kprobe || !kretprobe) {

```

```

perror("allocating dynamic events");
exit(-1);
}

if (tracefs_dynevent_create(kprobe) || tracefs_dynevent_create(kretprobe)){
char *err = tracefs_error_last(NULL);
perror("Failed to create kprobes:");
if (err && strlen(err))
    fprintf(stderr, "%s\n", err);
exit(-1);
}

tep = tracefs_local_events_system(NULL, sysnames);
if (!tep) {
perror("reading events");
exit(-1);
}
open_event = tep_find_event_by_name(tep, mykprobe, "open");
file_field = tep_find_field(open_event, "file");

openret_event = tep_find_event_by_name(tep, mykprobe, "openret");
ret_field = tep_find_field(openret_event, "ret");

tracefs_event_enable(instance, mykprobe, NULL);
pid = run_exec(&argv[1], env);

/* Let the child start to run */
sched_yield();

do {
    tracefs_load_cmdlines(NULL,
    tep);
    tracefs_iterate_raw_events(tep, instance, NULL, 0, callback, NULL);
} while (waitpid(pid, NULL, WNOHANG) != pid);

/* Will disable the events */
tracefs_dynevent_destroy_all	TRACEFS_DYNEVENT_KPROBE | TRACEFS_DYNEVENT_KRETPROBE,
true);
tracefs_dynevent_free(kprobe);
tracefs_dynevent_free(kretprobe);
tracefs_instance_destroy(instance);
tep_free(tep);

return 0;
}
--

```

FILES

-----

[verse]

--

**\*tracefs.h\***

Header file to include in order to have access to the library APIs.

**\*-ltracefs\***

Linker switch to add when building a program that uses the library.

--

SEE ALSO

-----

**\*libtracefs\*(3),**

**\*libtraceevent\*(3),**

**\*trace-cmd\*(1)**

AUTHOR

-----

[verse]

--

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--

REPORTING BUGS

-----

Report bugs to <linux-trace-devel@vger.kernel.org>

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-----

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RESOURCES

-----

<https://git.kernel.org/pub/scm/libs/libtrace/libtracefs.git/>

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**\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs-dyevents.txt**

No license file was found, but licenses were detected in source scan.

libtracefs(3)

=====

## NAME

----

tracefs\_hist\_add\_sort\_key, tracefs\_hist\_set\_sort\_key, tracefs\_hist\_sort\_key\_direction,  
tracefs\_hist\_add\_name, tracefs\_hist\_append\_filter, tracefs\_hist\_echo\_cmd, tracefs\_hist\_command,  
tracefs\_hist\_get\_name, tracefs\_hist\_get\_event, tracefs\_hist\_get\_system - Update and describe an event histogram

## SYNOPSIS

-----

[verse]

--

```
*#include <tracefs.h>*
```

```
int *tracefs_hist_add_sort_key*(struct tracefs_hist pass:[*]_hist_,  
    const char pass:[*]_sort_key_);
```

```
int *tracefs_hist_set_sort_key*(struct tracefs_hist pass:[*]_hist_,  
    const char pass:[*]_sort_key_, ...);
```

```
int *tracefs_hist_sort_key_direction*(struct tracefs_hist pass:[*]_hist_,  
    const char pass:[*]_sort_key_,  
    enum tracefs_hist_sort_direction _dir_);
```

```
int *tracefs_hist_add_name*(struct tracefs_hist pass:[*]_hist_, const char pass:[*]_name_);
```

```
int *tracefs_hist_append_filter*(struct tracefs_hist pass:[*]_hist_,
```

```
    enum tracefs_filter_type_,  
    const char pass:[*]_field_,  
    enum tracefs_compare_compare_,  
    const char pass:[*]_val_);
```

```
int *tracefs_hist_echo_cmd*(struct trace_seq pass:[*]_s_, struct tracefs_instance pass:[*]_instance_,  
    struct tracefs_hist pass:[*]_hist_,  
    enum tracefs_hist_command_command_);
```

```
int *tracefs_hist_command*(struct tracefs_instance pass:[*]_instance_,  
    struct tracefs_hist pass:[*]_hist_,  
    enum tracefs_hist_command_command_);
```

```
const char pass:[*]*tracefs_hist_get_name*(struct tracefs_hist pass:[*]_hist_);
```

```
const char pass:[*]*tracefs_hist_get_event*(struct tracefs_hist pass:[*]_hist_);
```

```
const char pass:[*]*tracefs_hist_get_system*(struct tracefs_hist pass:[*]_hist_);
```

--

## DESCRIPTION

-----

Event histograms are created by the trigger file in the event directory.

The syntax can be complex and difficult to get correct. This API handles the syntax, and facilitates the creation and interaction with the event histograms.

See

<https://www.kernel.org/doc/html/latest/trace/histogram.html> for more information.

`*tracefs_hist_add_sort_key*()` will add a key to sort on. The `_hist_` is the histogram descriptor to add the sort key to. The `_sort_key_` is a string that must match either an already defined key of the histogram, or an already defined value. If `_hist_` already has sorting keys (previously added) the new `_sort_key_` will have lower priority (be secondary or so on) when sorting.

`*tracefs_hist_set_sort_key*()` will reset the list of key to sort on. The `_hist_` is the histogram descriptor to reset the sort key to. The `_sort_key_` is a string that must match either an already defined key of the histogram, or an already defined value. Multiple sort keys may be added to denote a secondary, sort order and so on, but all sort keys must match an existing key or value, or be `TRACEFS_HIST_HITCOUNT`. The last parameter of `*tracefs_hist_add_sort_key*()` must be `NULL`.

`*tracefs_hist_sort_key_direction*()` allows to change the direction of an existing sort key of `_hist_`. The `_sort_key_` is the sort key to change, and `_dir_` can be either `TRACEFS_HIST_SORT_ASCENDING` or `TRACEFS_HIST_SORT_DESCENDING`, to make the direction of the sort key either ascending or descending respectively.

`*tracefs_hist_add_name*()` adds a name to a histogram. A histogram may be named and if the name matches between more than one event, and they have compatible keys, the multiple histograms with the same name will be merged into a single histogram (shown by either event's hist file). The `_hist_` is the histogram to name, and the `_name_` is the name to give it.

`*tracefs_hist_append_filter*()` creates a filter or appends to it for the histogram event. Depending on `_type_`, it will build a string of tokens for parenthesis or logic statements, or it may add a comparison of `_field_` to `_val_` based on `_compare_`.

If `_type_` is:

- `*TRACEFS_FILTER_COMPARE*` - See below
- `*TRACEFS_FILTER_AND*` - Append "&&" to the filter
- `*TRACEFS_FILTER_OR*`
  - Append "||" to the filter
- `*TRACEFS_FILTER_NOT*` - Append "!" to the filter
- `*TRACEFS_FILTER_OPEN_PAREN*` - Append "(" to the filter
- `*TRACEFS_FILTER_CLOSE_PAREN*` - Append ")" to the filter

`_field_`, `_compare_`, and `_val_` are ignored unless `_type_` is equal to

\*TRACEFS\_FILTER\_COMPARE\*, then `_compare_` will be used for the following:

\*TRACEFS\_COMPARE\_EQ\* - `_field_ == _val_`

\*TRACEFS\_COMPARE\_NE\* - `_field_ != _val_`

\*TRACEFS\_COMPARE\_GT\* - `_field_ > _val_`

\*TRACEFS\_COMPARE\_GE\* - `_field_ >= _val_`

\*TRACEFS\_COMPARE\_LT\* - `_field_ < _val_`

\*TRACEFS\_COMPARE\_LE\* - `_field_ <pass:[=] _val_`

\*TRACEFS\_COMPARE\_RE\* - `_field_ ~ "_val_"` : where `_field_` is a string.

\*TRACEFS\_COMPARE\_AND\* - `_field_ & _val_` : where `_field_` is a flags field.

\*trace\_hist\_echo\_cmd\*() prints the commands needed to create the given histogram in the given `_instance_`, or NULL for the top level, into the `_seq_`.

The command that is printed is described by `_command_` and shows the functionality that would

be done by \*tracefs\_hist\_command\*(3).

\*tracefs\_hist\_command\*() is called to process a command on the histogram `_hist_` for its event in the given `_instance_`, or NULL for the top level.

The `_cmd_` can be one of:

\*TRACEFS\_HIST\_CMD\_START\* or zero to start execution of the histogram.

\*TRACEFS\_HIST\_CMD\_PAUSE\* to pause the given histogram.

\*TRACEFS\_HIST\_CMD\_CONT\* to continue a paused histogram.

\*TRACEFS\_HIST\_CMD\_CLEAR\* to reset the values of a histogram.

\*TRACEFS\_HIST\_CMD\_DESTROY\* to destroy the histogram (undo a START).

The below functions are wrappers to `tracefs_hist_command()` to make the calling conventions a bit easier to understand what is happening.

## KEY TYPES

-----

\*tracefs\_hist\_alloc\_nd\*() and \*tracefs\_hist\_add\_key\*() both add a key and requires that key to have a type. The types may be:

\*TRACEFS\_HIST\_KEY\_NORMAL\* or zero (0) which is to not modify the type.

`*TRACEFS_HIST_KEY_HEX*` to display the key in hex.

`*TRACEFS_HIST_KEY_SYM*` to display the key as a kernel symbol (if found). If the key is an address, this is useful as it will display the function names instead of just a number.

`*TRACEFS_HIST_KEY_SYM_OFFSET*` similar to `*TRACEFS_HIST_KEY_SYM*` but will also include the offset of the function to match the exact address.

`*TRACEFS_HIST_KEY_SYSCALL*` If the key is a system call "id" (the number passed from user space to the kernel to tell it what system call it is calling), then the name of the system call is displayed.

`*TRACEFS_HIST_KEY_EXECNAME*` If "common\_pid" is the key (the pid of the executing task), instead of showing the number, show the name of the running task.

`*TRACEFS_HIST_KEY_LOG*` will display the key in a binary logarithmic scale.

`*TRACEFS_HIST_KEY_USECS*` for use with "common\_timestamp" or `TRACEFS_HIST_TIMESTAMP`, in which case it will show the timestamp in microseconds instead of nanoseconds.

## RETURN VALUE

-----

`*tracefs_hist_get_name*`() returns the name of the histogram or NULL on error.

The returned string belongs to the histogram object and is freed with the histogram by `*tracefs_hist_free*`().

`*tracefs_hist_get_event*`() returns the event name of the histogram or NULL on error.

The returned string belongs to the histogram object and is freed with the histogram by `*tracefs_hist_free*`().

`*tracefs_hist_get_system*`() returns the system name of the histogram or NULL on error.

The returned string belongs to the histogram object and is freed with the histogram by `*tracefs_hist_free*`().

`*tracefs_hist_alloc_nd*`() returns an allocated histogram descriptor which must be freed by `*tracefs_hist_free*`() or NULL on error.

`*tracefs_hist_get_name*`(), `*tracefs_hist_get_event*`() and `*tracefs_hist_get_system*`() return strings owned by the histogram object.

All the other functions return zero on success or -1 on error.

## EXAMPLE

-----



```

[source,c]
--
#include <stdlib.h>
#include <unistd.h>
#include <tracefs.h>

enum commands {
    START,
    PAUSE,
    CONT,
    RESET,
    DELETE,
    SHOW,
};

static void parse_system_event(char *group, char
**system, char **event)
{
    *system = strtok(group, "/");
    *event = strtok(NULL, "/");
    if (!*event) {
        *event = *system;
        *system = NULL;
    }
}

static int parse_keys(char *keys, struct tracefs_hist_axis **axes)
{
    char *sav = NULL;
    char *key;
    int cnt = 0;

    for (key = strtok_r(keys, ",", &sav); key; key = strtok_r(NULL, ",", &sav)) {
        struct tracefs_hist_axis *ax;
        char *att;

        ax = realloc(*axes, sizeof(*ax) * (cnt + 2));
        if (!ax) {
            perror("Failed to allocate axes");
            exit(-1);
        }
        ax[cnt].key = key;
        ax[cnt].type = 0;
        ax[cnt + 1].key = NULL;
        ax[cnt + 1].type = 0;

        *axes = ax;
    }
}

```

```

att = strchr(key, '.');
if (att) {
    *att++ = '\0';
    if (strcmp(att, "hex") == 0)
        ax[cnt].type = TRACEFS_HIST_KEY_HEX;
    else if (strcmp(att, "sym") == 0)
        ax[cnt].type = TRACEFS_HIST_KEY_SYM;
    else if (strcmp(att, "sym_offset") == 0)
        ax[cnt].type = TRACEFS_HIST_KEY_SYM_OFFSET;
    else if (strcmp(att, "syscall") == 0)
        ax[cnt].type = TRACEFS_HIST_KEY_SYSCALL;
    else
        if (strcmp(att, "exec") == 0)
            ax[cnt].type = TRACEFS_HIST_KEY_EXECNAME;
        else if (strcmp(att, "log") == 0)
            ax[cnt].type = TRACEFS_HIST_KEY_LOG;
        else if (strcmp(att, "usecs") == 0)
            ax[cnt].type = TRACEFS_HIST_KEY_USECS;
        else {
            fprintf(stderr, "Undefined attribute '%s'\n", att);
            fprintf(stderr, " Acceptable attributes:\n");
            fprintf(stderr, "  hex, sym, sym_offset, syscall, exe, log, usecs\n");
            exit(-1);
        }
    }
    cnt++;
}
return cnt;
}

```

```

static void process_hist(enum commands cmd, const char *instance_name,
    char *group, char *keys, char *vals, char *sort,
    char *ascend, char *desc)
{
    struct tracefs_instance *instance = NULL;
    struct tracefs_hist *hist;
    struct tep_handle *tep;
    struct tracefs_hist_axis *axes = NULL;
    char *system;
    char *event;
    char *sav;
    char *val;
    int ret;
    int cnt;

    if (instance_name) {
        instance = tracefs_instance_create(instance_name);
        if (!instance) {

```

```

    fprintf(stderr, "Failed instance create\n");
    exit(-1);
}
}

tep
= tracefs_local_events(NULL);
if (!tep) {
    perror("Could not read events");
    exit(-1);
}

parse_system_event(group, &system, &event);

if (cmd == SHOW) {
    char *content;
    content = tracefs_event_file_read(instance, system, event,
        "hist", NULL);
    if (!content) {
        perror("Reading hist file");
        exit(-1);
    }
    printf("%s\n", content);
    free(content);
    return;
}

if (!keys) {
    fprintf(stderr, "Command needs -k option\n");
    exit(-1);
}

cnt = parse_keys(keys, &axes);
if (!cnt) {
    fprintf(stderr, "No keys??\n");
    exit(-1);
}

/* Show examples of hist1d and hist2d */
switch (cnt) {
case 1:
    hist = tracefs_hist_alloc(tep, system, event,
        axes[0].key, axes[0].type);
    break;
case 2:
    hist = tracefs_hist_alloc_2d(tep, system, event,
        axes[0].key, axes[0].type,
        axes[1].key, axes[1].type);
}

```

```

break;
default:
/* Really, 1 and 2 could use this too */
hist = tracefs_hist_alloc_nd(tep, system, event, axes);
}
if (!hist)
{
fprintf(stderr, "Failed hist create\n");
exit(-1);
}

if (vals) {
sav = NULL;
for (val = strtok_r(vals, ",", &sav); val; val = strtok_r(NULL, ",", &sav)) {
ret = tracefs_hist_add_value(hist, val);
if (ret) {
fprintf(stderr, "Failed to add value %s\n", val);
exit(-1);
}
}
}

if (sort) {
sav = NULL;
for (val = strtok_r(sort, ",", &sav); val; val = strtok_r(NULL, ",", &sav)) {
ret = tracefs_hist_add_sort_key(hist, val);
if (ret) {
fprintf(stderr, "Failed to add sort key/val %s\n", val);
exit(-1);
}
}
}

if (ascend) {
sav = NULL;
for (val = strtok_r(ascend, ",", &sav); val; val = strtok_r(NULL, ",", &sav)) {
ret = tracefs_hist_sort_key_direction(hist, val, TRACEFS_HIST_SORT_ASCENDING);
if (ret) {
fprintf(stderr, "Failed to add ascending key/val %s\n", val);
exit(-1);
}
}
}

if (desc) {
sav = NULL;
for (val = strtok_r(desc, ",", &sav); val; val = strtok_r(NULL, ",", &sav)) {
ret = tracefs_hist_sort_key_direction(hist,

```

```
val, TRACEFS_HIST_SORT_DESCENDING);
if (ret) {
    fprintf(stderr, "Failed to add descending key/val %s\n", val);
    exit(-1);
}
}
```

```
tracefs_error_clear(instance);
```

```
switch (cmd) {
case START:
    ret = tracefs_hist_start(instance, hist);
    if (ret) {
        char *err = tracefs_error_last(instance);
        if (err)
            fprintf(stderr, "\n%s\n", err);
    }
    break;
case PAUSE:
    ret = tracefs_hist_pause(instance, hist);
    break;
case CONT:
    ret = tracefs_hist_continue(instance, hist);
    break;
case RESET:
    ret = tracefs_hist_reset(instance, hist);
    break;
case DELETE:
    ret = tracefs_hist_destroy(instance, hist);
    break;
case SHOW:
    /* Show was already done */
    break;
}
if (ret)
    fprintf(stderr, "Failed: command\n");
exit(ret);
}
```

```
int main (int argc, char **argv, char **env)
{
    enum commands cmd;
    char *instance = NULL;
    char *cmd_str;
    char *event = NULL;
    char *keys = NULL;
    char *vals = NULL;
```

```

char *sort = NULL;
char *desc = NULL;
char *ascend
= NULL;

if (argc < 2) {
    fprintf(stderr, "usage: %s command [-B instance][-e [system/]event][-k keys][-v vals][-s sort]\n", argv[0]);
    fprintf(stderr, "    [-a ascending][-d descending]\n");
    exit(-1);
}

cmd_str = argv[1];

if (!strcmp(cmd_str, "start"))
    cmd = START;
else if (!strcmp(cmd_str, "pause"))
    cmd = PAUSE;
else if (!strcmp(cmd_str, "cont"))
    cmd = CONT;
else if (!strcmp(cmd_str, "reset"))
    cmd = RESET;
else if (!strcmp(cmd_str, "delete"))
    cmd = DELETE;
else if (!strcmp(cmd_str, "show"))
    cmd = SHOW;
else {
    fprintf(stderr, "Unknown command %s\n", cmd_str);
    exit(-1);
}

for (;;) {
    int c;

    c = getopt(argc - 1, argv + 1, "e:k:v:B:s:d:a:");
    if (c == -1)
        break;

    switch (c) {
    case 'e':
        event = optarg;
        break;
    case 'k':
        keys = optarg;
        break;
    case 'v':
        vals = optarg;
        break;
    case 'B':

```

```

instance = optarg;
break;
case 's':
    sort = optarg;
    break;
case 'd':
    desc = optarg;
    break;
case 'a':
    ascend
= optarg;
    break;
}
}
if (!event) {
    event = "kmem/kmalloc";
    if (!keys)
        keys = "call_site.sym,bytes_req";
    if (!vals)
        vals = "bytes_alloc";
    if (!sort)
        sort = "bytes_req,bytes_alloc";
    if (!desc)
        desc = "bytes_alloc";
}
process_hist(cmd, instance, event, keys, vals, sort, ascend, desc);
}
--

```

## FILES

-----

[verse]

--

\*tracefs.h\*

Header file to include in order to have access to the library APIs.

\*-ltracefs\*

Linker switch to add when building a program that uses the library.

--

## SEE ALSO

-----

\*libtracefs\*(3),

\*libtraceevent\*(3),

\*trace-cmd\*(1),

\*tracefs\_hist\_pause\*(3),

\*tracefs\_hist\_continue\*(3),

\*tracefs\_hist\_reset\*(3)

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-----

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--

## REPORTING BUGS

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## RESOURCES

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<https://git.kernel.org/pub/scm/libs/libtrace/libtracefs.git/>

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\* /opt/cola/permits/2148525098\_1724000771.4500844/0/libtracefs-1-8-0-orig-tar-xz/libtracefs-1.8.0/Documentation/libtracefs-hist-mod.txt

# 1.325 kbd 2.6.4-2ubuntu2

## 1.325.1 Available under license :

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## 1.329 lazr-restfulclient 0.14.6-1

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## 1.331 polkit 124-2ubuntu1

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# 1.332 sg3-utils 1.46-3ubuntu4

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Douglas Gilbert  
10th April 2012

## 1.333 fwupd-signed 1.52

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Format: <http://www.debian.org/doc/packaging-manuals/copyright-format/1.0/>

Upstream-Name: fwupd

Source: <https://github.com/hughsie/fwupd>

Comment:

This package exists to download a signed binary from the Ubuntu archive and  
publish it in .deb format. The actual bootloader source code may be found  
in the fwupd source package: `'apt-get source fwupd'`.

Files: \*

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## 1.337 libtextwrapinperl 0.06-10

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Upstream-Contact: Tomohiro KUBOTA <kubota@debian.org>

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## 1.338 python-typing-extensions 4.10.0-1

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In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <https://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations, which became Zope Corporation. In 2001, the Python Software Foundation (PSF, see <https://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property.

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1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
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2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
2.0.1	2.0+1.6.1	2001	PSF	yes
2.1.1	2.1+2.0.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3	2.1.2	2002	PSF	yes
2.2 and above	2.1.1	2001-now	PSF	yes

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```

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```

```
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```

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## 1.344.1 Available under license :

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Files: \*

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.

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## 1.345 free-type 2.13.2+dfsg-1build3

### 1.345.1 Available under license :

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```
/******
```

```
*
```

```
* rsvg-port.c
```

```
*
```

```
* Librsvg-based hook functions for OT-SVG rendering in FreeType  
* (implementation).
```

```
*
```

```
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* David Turner, Robert Wilhelm, Werner Lemberg, and Moazin Khatti.
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/\* Author: David Turner <david@freetype.org>

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/\*\*\*\*\*

\*  
\* grwin32.h graphics driver for Win32 platform (header)  
\*  
\* This is the driver for displaying inside a window under Win32,  
\* used by the graphics utility of the FreeType test suite.  
\*  
\* Written by Antoine Leca.  
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/\*  
\*\*\*\*\*  
\*/

\*  
\* grwin32.c graphics driver for Win32 platform  
\*  
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\* used by the graphics utility of the FreeType test suite.  
\*  
\* Written by Antoine Leca.  
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/\*  
\*\*\*\*\*  
\*/

\* grbeos.c graphics driver for BeOS platform. 0.1  
\*  
\* This is the driver for displaying inside a window under BeOS,  
\* used by the graphics utility of the FreeType test suite.  
\*  
\* Written by Michael Pfeiffer.  
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```
/*
 * This is a cheap replacement for getopt() because that routine is not
 * available on some platforms and behaves differently on other platforms.
 *
 * This code is hereby expressly placed in the public domain.
 * mleisher@crl.nmsu.edu (Mark Leisher)
 * 10 October 1997
 */
```

Found in path(s):

```
* /opt/cola/permits/2148594610_1727706026.1938062/0/freetype-2-13-2-dfsg-orig-ft2demos-tar-xz/ft2demos-2.13.2/src/mlgetopt.h
```

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```
/******
 *
 * grbatch.c Batch processing driver.
 *
 * This driver maintains the image in memory without displaying it,
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 *
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 *****/
```

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```

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```

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- \* /opt/cola/permits/2148594610\_1727706026.1938062/0/freetype-2-13-2-dfsg-orig-ft2demos-tar-xz/ft2demos-2.13.2/meson\_options.txt
- \* /opt/cola/permits/2148594610\_1727706026.1938062/0/freetype-2-13-2-dfsg-orig-ft2demos-tar-xz/ft2demos-2.13.2/meson.build
- \* /opt/cola/permits/2148594610\_1727706026.1938062/0/freetype-2-13-2-dfsg-orig-ft2demos-tar-xz/ft2demos-2.13.2/src/ftinspect/meson.build

No license file was found, but licenses were detected in source scan.

/\*

- \* This is an OpenSSL-compatible implementation of the RSA Data Security, Inc.
- \* MD5 Message-Digest Algorithm (RFC 1321).
- \*
- \* Homepage:
- \* <http://openwall.info/wiki/people/solar/software/public-domain-source-code/md5>
- \*
- \* Author:
- \* Alexander Peslyak, better known as Solar Designer <solar at openwall.com>
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/\*\*\*\*\*\*/

\*

\* grmac.c graphics driver for MacOS platform.

\*

\* This is the driver for displaying inside a window under MacOS,

\* used by the graphics utility of the FreeType test suite.

\*

\* Largely written by Just van Rossum, but derived from grwin32.c.

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\* David Turner, Robert Wilhelm, and Werner Lemberg.

\*

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2.13.2/graph/mac/grmac.c

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```
/*  
*  
* grx11.c graphics driver for X11.  
*  
* This is the driver for displaying inside a window under X11,  
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*  
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*/
```

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```
/*  
*  
* rsvg-port.h  
*  
* Librsvg based hook functions for OT-SVG rendering in FreeType  
* (headers).  
*  
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*/
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```
/*
 * This is an OpenSSL-compatible implementation of the RSA Data Security, Inc.
 * MD5 Message-Digest Algorithm (RFC 1321).
 *
 * Homepage:
 * http://openwall.info/wiki/people/solar/software/public-domain-source-code/md5
 *
 * Author:
 * Alexander Peslyak, better known as Solar Designer <solar at openwall.com>
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 *
 * This differs from Colin Plumb's older public domain implementation in that
 * no exactly 32-bit integer data type is required (any 32-bit or wider
 * unsigned integer data type will do), there's no compile-time endianness
 * configuration, and the function prototypes match OpenSSL's. No code from
 * Colin Plumb's implementation has been reused; this comment merely compares
 * the properties of the two independent implementations.
 *
 * The primary goals of this implementation are portability and ease of use.
 * It is meant to be fast, but not as fast as possible. Some known
 * optimizations are not included to reduce source code size and avoid
 * compile-time configuration.
 */
```

Found in path(s):

```
* /opt/cola/permits/2148594610_1727706026.1938062/0/freetype-2-13-2-dfsg-orig-ft2demos-tar-xz/ft2demos-2.13.2/src/md5.c
```

No license file was found, but licenses were detected in source scan.

2023-08-25 Werner Lemberg <wl@gnu.org>

```
* Version 2.13.2 released.
```

```
=====
```

Tag sources with 'VER-2-13-2'.

- \* README: Updated.
- \* meson.build: Updated.
- \* man/\*.1: Updated.

2023-08-25 Werner Lemberg <wl@gnu.org>

Fix clang warnings.

- \* graph/gblblit.c (gblender\_glyph\_upgray), src/ftmulti.c (Render\_All): Add cast.
- \* src/ftdump.c (get\_english\_name\_entry): Initialize `name`.

2023-08-24 Werner Lemberg <wl@gnu.org>

- \* subprojects/\*.wrap: Updated.

2023-08-17 Hugh McMaster <hugh.mcmaster@outlook.com>

ftlint.1: Instruct man(1) to run the groff `tbl` preprocessor

The latest version of groff (1.23.0) emits a warning when it detects the use of table macros (.TS, .TE) with no .TW (table width) macro defined:

```
tbl preprocessor failed, or it or soelim was not run; table(s) likely
not rendered (TE macro called with TW register undefined).
```

The warning occurs because the `tbl` preprocessor was not invoked by the `man` command. To fix the issue, we need to instruct man(1) to run the `tbl` preprocessor before rendering the source as text.

This issue was detected by Debian's Lintian tool.

2023-08-13 Hugh McMaster <hmc@debian.org>

- \* src/ftmulti.c: Miscellaneous spelling and readability fixes.
- \* Update comments.
- \* Fix a typo: dimentions -> dimensions.

2023-08-06 Charlie Jiang <w@chariri.moe>

[ftinspect] Fix default named instance handling.

Now the named instance selector no longer doubles the default named instance.

`FT\_Get\_Default\_Named\_Instance` is used to get the default NI index.  
The default one is labeled as " (default)".

\* src/ftinspect/widgets/tripletselector.cpp: Properly handle the new 1-based named instance indices. Label the default NI correctly.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:  
Add `Engine::defaultNamedInstanceIndex`.

\* src/ftinspect/engine/mmgx.cpp: Change comments.

2023-08-06 Charlie

Jiang <w@chariri.moe>

[ftinspect] Fix named instances switching.

\* src/ftinspect/engine/mmgx.cpp, src/ftinspect/engine/mmgx.hpp:  
Load the default values of MMGX axes from the named instance instead of the global default one.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:  
Switch the named instance using `FT\_Set\_Named\_Instance` when loading fonts.

2023-07-28 Alexei Podtelevnikov <apodtele@gmail.com>

\* src/ftbench.c (usage): Document the `-a` option.

2023-07-26 Charlie Jiang <w@chariri.moe>

[ftinspect] Fix the glyph index selector layout when the window resizes.

Fixes #26. When the window resizes, the invisible tabs don't get notified. Therefore, when the active tab changes, we need to trigger a manual relayouting of invisible tabs.

\* src/ftinspect/widgets/glyphindexselector.hpp,  
src/ftinspect/widgets/glyphindexselector.cpp:  
Extract public method `relayoutNavigation` from `resizeEvent`.

\* src/ftinspect/panels/abstracttab.hpp:  
Add `relayout` virtual method.

\* src/ftinspect/maingui.cpp: Call `AbstractTab::relayout` on the new tab when the active tab changes.

\* src/ftinspect/panels/singular.cpp, src/ftinspect/panels/singular.hpp,  
src/ftinspect/panels/continuous.cpp, src/ftinspect/panels/continuous.hpp:

Implement `relayout` method and call `relayoutNavigation` of the glyph index selector in `relayout`.

2023-07-26 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftdump.c (Print\_MM\_Info): Fix signedness mismatch.

2023-07-21 Jouk Jansen <joukj@hrem.nano.tudelft.nl>

\* vms\_make.com: Synchronize with similar changes in the FreeType library.

2023-07-16 Hin-Tak Leung <htl10@users.sourceforge.net>

src/rsvg-port.c: Correct usage of `FT\_Bool` vs `gboolean` comparison.

`TRUE` in this context is from glib headers (`glib-2.0/glib/gmacros.h`), imported indirectly from rsvg headers. It should not be used for comparison with `FT\_Bool` types. Other usages of `TRUE/FALSE` in this file is okay.

2023-07-08 Hin-Tak Leung <htl10@users.sourceforge.net>

rsvg-port.c: Simplify usage of `rsvg\_handle\_render\_\*`.

\* src/rsvg-port.c (rsvg\_port\_preset\_slot): Remove usage of `rsvg\_handle\_render\_document` (and `rsvg\_handle\_render\_cairo`). They are functionally the same as `rsvg\_handle\_render\_layer` (and `rsvg\_handle\_render\_cairo\_sub`) with argument id set to NULL.

2023-07-08 Hin-Tak Leung <htl10@users.sourceforge.net>

\* src/ttdebug.c (RunIns): Signature fix.

A somewhat similar change to what happened in the FreeType library:

```
commit 95d635eab1b08a0051de07b6c33067d2c1984848
```

```
Author: Werner Lemberg <wl@gnu.org>
```

```
Date: Sun May 7 08:34:32 2023 +0200
```

```
[truetype] Signature fixes.
```

2023-06-24 Werner Lemberg <wl@gnu.org>

\* Version 2.13.1 released.

=====

Tag sources with 'VER-2-13-1'.

- \* README: Updated.
- \* meson.build: Updated.
- \* man/\*.1: Updated.
- \* subprojects/zlib.wrap: Updated.

2023-06-24 Werner Lemberg <wl@gnu.org>

- \* src/rsvg-port.c (rsvg\_port\_preset\_slot): Fix C++ compilation warning.

2023-06-03 Hin-Tak Leung <htl10@users.sourceforge.net>

Fix out-of-memory conditions with newer 'librsvg'.

Excerpts from `rsvg\_handle\_get\_intrinsic\_dimensions` section in `librsvg/rsvg.h`:

...

Before librsvg 2.54.0, the `out\_has\_width` and `out\_has\_height` arguments would be set to true or false depending on whether the SVG document actually had `width` and `height` attributes, respectively.

However, since librsvg 2.54.0, `width` and `height` are now [geometry properties](<https://www.w3.org/TR/SVG2/geometry.html>) per the SVG2 specification; they are not plain attributes. SVG2 made it so that the initial value of those properties is `auto`, which is equivalent to specifying a value of `100%`. In this sense, even SVG documents which lack `width` or `height` attributes semantically have to make them default to `100%`. This is why since librsvg 2.54.0, `out\_has\_width` and `out\_has\_height` are always returned as `TRUE`, since with SVG2 all documents *have* a default width and height of `100%`.

...

- \* src/rsvg-port.c (rsvg\_port\_preset\_slot): Adjust for change of behavior of `rsvg\_handle\_get\_intrinsic\_dimensions` in librsvg 2.53+. We avoid `LIBRSVG\_CHECK\_VERSION` as it is possible to build against one version but run against another version.

2023-06-03 Hin-Tak Leung <htl10@users.sourceforge.net>

Fix 'librsvg' deprecation warnings.

- \* src/rsvg-port.c (rsvg\_port\_preset\_slot): Use `rsvg\_handle\_render\_document` instead of `rsvg\_handle\_render\_cairo`, and `rsvg\_handle\_render\_layer` instead of `rsvg\_handle\_render\_cairo\_sub`, as suggested by the warning, conditionally on newer librsvg 2.52+.

2023-05-22 Werner Lemberg <wl@gnu.org>

man/ftview.1: Improve documentation of option `-l`.

2023-05-19 Seigo Nonaka <nona@google.com>

\* src/ftmulti.c (main): Make program actually handle option `-a`.

2023-05-19 Seigo Nonaka <nona@google.com>

[ftbench] New option `-a` to apply design coordinates.

The performance of MM fonts is quite different in comparison to static fonts. To be able to get benchmarks for the former, add a new command-line option to pass design coordinates.

\* src/ftbench.c: Include `ftmm.h`.

(MAX\_MM\_AXES): New macro.

(multimaster, design\_pos, requested\_pos, requested\_cnt, used\_num\_axes): New global variables.

(get\_face): Load MM data if requested.

(parse\_design\_coords): New function.

\* man/ftbench.1: Updated.

2023-05-15 Werner Lemberg <wl@gnu.org>

[ftview] New key 'Z' to flip SVG rendering.

\* src/ftcommon.h (FTDemo\_Handle): New field `use_svg`.

\* src/ftcommon.c (FTDemo\_New, FTDemo\_Update\_Current\_Flags): Handle it.

\* src/ftview.c (Process\_Event): Make key 'Z' toggle SVG usage.

(event\_help, write\_header): Updated.

2023-05-14 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftbench] Set up cache earlier.

\* src/ftbench.c (main): Run `FTC_Manager_New` and `FTC_*Cache_New` earlier and decide the test availability accordingly.

(test\_\*\_cache, benchmark):

Do not check if cache is set.

2023-05-12 Alexei Podtelezhnikov <apodtele@gmail.com>

\*src/ftbench.c (test\_stroke): Test outline glyphs only.

2023-05-12 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftbench.c (main): Assure cache setup, clean exit.

2023-05-12 Ben Wagner <bungeman@chromium.org>

Correct type of icon\_span

The `icon\_span` is used as a `FT\_SpanFunc`. To avoid undefined behavior and a CFI sanitizer report, this function needs to be called through a pointer of the same type. Fix this by making `icon\_span` take the right parameter types and cast the argument in the function body.

\* src/ftcommon.c (icon\_span): take correct parameters and cast in function body. (FTDemo\_Icon): remove cast

2023-05-12 Ben Wagner <bungeman@chromium.org>

[graph] Correct function pointer types

Building the demos with the CFI sanitizer detects a number of uses of undefined behavior in the Minimalist Graphics Subsystem where an indirect function

call is made through a pointer of a different type.

All of these cases worked in practice since the differing argument types were the same size and would have the same pointer value at runtime.

Change the functions to take the correct types and downcast inside the function.

\* graph/beos/grbeos.cpp: remove casts

\* graph/mac/grmac.c: correct return type of `listen\_event`, remove casts

\* graph/os2/gros2pm.c: correct function signatures, downcast inside functions, remove function pointer casts

\* graph/win32/grwin32.c: ditto

\* graph/x11/grx11.c: ditto

2023-05-12 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftbench] Use proper `face\_requester`.

It is wrong to forfeit the face ownership to the cache manager. Fixes #29.



\* src/ftbench.c (face\_requester): Call `get face`.  
(main): Never pass `face` to the cache manager.

2023-05-10 Werner Lemberg <wl@gnu.org>

subprojects/\*.wrap: Updated.

2023-05-09 Jouk Jansen <joukj@hrem.nano.tudelft.nl>

vms\_make.com:  
Correctly handle 'libbz2'.

2023-05-08 Werner Lemberg <wl@gnu.org>

\* src/ftdump.c (Print\_Sfnt\_Tables): Insert spaces between bytes.

2023-05-08 Werner Lemberg <wl@gnu.org>

[ftdump] Show more variation font info.

\* src/ftdump.c (Print\_MM\_Axes): Rename to...  
(Print\_MM\_Info): ...this.  
Show Variation Font PostScript name prefix.  
Show named instances.

2023-05-08 Werner Lemberg <wl@gnu.org>

[ftdump] Code cleanup.

\* src/ftdump.c (Print\_MM\_Axes): Move code to find an English name entry  
to...  
(get\_english\_name\_entry): ... this new function.

2023-05-08 Werner Lemberg <wl@gnu.org>

\* src/output.c: Handle `0` specially.

Broken or intentionally invalidated fonts might contain NULL bytes at  
arbitrary places.

2023-05-05 suzuki toshiya <mpsuzuki@hiroshima-u.ac.jp>

[ftdump] Print CID-keyed font properties if available.

\* src/ftdump.c

(FT\_CID\_MAX): New macro.

(usage): Mention the CID coverage in ``-c'` and ``-C'` options.

(Print\_UInt\_Range): New function to print 2 numbers with a separator if needed.

(Print\_CIDs): New function to print the implemented CIDs in a compressed syntax. If a case ``gid_N < gid_M && CID_N > CID_M'` is found, `ftdump` aborts and guide the user to file the issue.

(Print\_ROS\_From\_Face): New function to print the Registry, Ordering, and Supplement of the CID-keyed fonts, if available. If ``-c'` or ``-C'` option is given, `Print_CIDs()` is invoked.

(main): Invoke `Print_ROS_From_Face()`.

2023-04-24 Alexei Podtelezhnikov <apodtele@gmail.com>

\* `src/ftgrid.c (grid_status_rescale)`: Use PPEM-based scaling.

The zoom becomes well defined for the given size but the ascender and descender lines might be offside.

2023-04-23 Alexei Podtelezhnikov <apodtele@gmail.com>

\* `src/ftview.c (Render_{All,Fancy,Stroke})`: Improve zero-width glyphs.

2023-04-23 Alexei Podtelezhnikov <apodtele@gmail.com>

\* `src/ftview.c (Render_{All,Fancy,Stroke})`: Tweak zero-width glyphs.

This helps to avoid collisions and unhides zero-width glyphs better.

2023-04-21 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftview] Use green empty boxes instead.

\* `src/ftview.c (status)`: Store green color.

(main): Initialize it.

(Render\_\*): Use it.

2023-04-21 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftview.c (main): Remove unnecessary code.

2023-03-27 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftlint.c (main): Handle rendering errors differently.

2023-03-27 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftlint.c (main): Fix segfault with bad command line.

2023-03-26 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftlint] Examine the outline shape complexity.

Measured as a ratio of the outline half-perimeter to the sum of its control box dimensions, the shape complexity is a useful metric. For example, an `T` and an `M` would have complexities of about 1.0 and 2.0, respectively.

\* src/ftlint.c (Examine): Implement the shape complexity calculation.

(main) Report the shape complexity.

\* man/ftlint.1:

Add a brief explanation.

2023-03-15 Charlie Jiang <w@chariri.moe>

[ftinspect] Support gray level scaling.

See commit 746d5be5: Convert to 256 grays. Slightly tweaked code style.

\* src/ftinspect/engine/rendering.cpp (RenderingEngine::convertBitmapTo8Bpp): Implement it.

2023-03-10 Jouk Jansen <joukj@hrem.nano.tudelft.nl>

Update VMS installation support.

2023-03-03 Charlie Jiang <w@chariri.moe>

[ftinspect] Fix uninitialized memory issue and reference misuse.

Fixes issue #23.

\* src/ftinspect/engine/rendering.cpp (RenderingEngine::convertBitmapTo8Bpp):

Properly initialize `FT\_Bitmap` since it is a value type.

(RenderingEngine::convertBitmapToQImage): Fix the accidental overwriting of the source bitmap when converting the bitmap format (only happens for `FT\_PIXEL\_MODE\_GRAY2` and `FT\_PIXEL\_MODE\_GRAY4`) due to a misuse of a C++

reference.

\* src/ftinspect/glyphcomponents/glyphcontinuous.cpp  
(GlyphContinuous::drawCacheGlyph): Fix a crash when the `QImage`  
was failed  
to produce.

2023-03-02 Werner Lemberg <wl@gnu.org>

\* graph/gblblit.c: Include ``<stdlib.h>``.

This is for the `abs` function.

2023-03-02 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Handle glyphs with 4 or 16 grays.

\* graph/gblblit.c (gblender\_glyph\_upgray): Convert to 256 grays.  
(gblender\_blit\_init): Call it if necessary.

2023-02-27 Werner Lemberg <wl@gnu.org>

TrueType mode v38 is gone.

Synchronize with FreeType commit 'Hide Infinality.' from 2023-Feb-17.

Both macros `TT\_INTERPRETER\_VERSION\_38` and `TT\_INTERPRETER\_VERSION\_40` have  
now the same value, leading to numerous compilation errors because we use  
these two macros as (different) case labels in switch statements.

\* src/ftbench.c (tt\_interpreter\_versions, header, usage, main): Don't use  
`TT\_INTERPRETER\_VERSION\_38`.  
\* src/ftcommon.c (FTDemo\_Hinting\_Engine\_Change, FTDemo\_Get\_Info): Ditto.  
\* src/ftdiff.c (ColumnStateRec, render\_state\_init, render\_state\_draw):  
Ditto.  
\* src/ftmulti.c  
(tt\_interpreter\_versions, main): Ditto.  
\* src/ttdebug.c (tt\_interpreter\_versions, Usage, main): Ditto.  
  
\* src/ftinspect/engine/engine.hpp (EngineDefaultValues): Ditto.  
\* src/ftinspect/engine/engine.cpp (Engine::queryEngine): Ditto.  
\* src/ftinspect/models/customcomboboxmodels.hpp (HintingModeComboBoxModel):  
Ditto.  
\* src/ftinspect/models/customcomboboxmodels.cpp  
(HintingModeComboBoxModel::HintingModeComboBoxModel): Ditto.  
\* src/ftinspect/panels/settingpanel.cpp (SettingPanel::setDefault): Ditto.

2023-02-13 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftmulti.c: Clean up loading and scaling.

2023-02-13 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftmulti.c (main, Init\_Display): Clean up GUI setup.

2023-02-13 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftmulti.c: Clean up and fix MSVC warnings.

2023-02-13 Alexei Podtelezhnikov <apodtele@gmail.com>

\* man/ftmulti.1: Updated.

2023-02-12 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftmulti] Enable  
fill rule flag testing.

Variation fonts often rely on overlapping contours. To reveal them, we enable turning the even-odd fill rule on and off. This flag is always off in FreeType by default but supported by the anti-aliased renderer.

\* src/ftmulti.c (Process\_Event): Reassign F3 to fill rule toggle, assign Tab to anti-aliasing toggle.  
(Render\_Glyph): Tinker with the fill rule flags before rendering.

2023-02-12 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftmulti.c: Clean up and fix warnings.

2023-02-12 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftmulti.c (Process\_Event): Miscellaneous tweaks.

Set default step at 1/40 which covers most preferable coordinates. Adjust the step by doubling or halving it. Round all large-range coordinates, not just MM. Wrap the coordinates around.

2023-02-12 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftmulti.c (Render\_All, Render\_Text, main): Layout tweaks.

2023-02-12 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftmulti]

Enable overlap flag testing.

Variation fonts often rely on overlapping contours, which require oversampling to render properly. FreeType relies on FT\_OUTLINE\_OVERLAP to trigger the expensive mitigation algorithm. This commit enables tinkering with the overlap flags and, therefore, the oversampling. Normally, the flags should be set by the font designers sparingly.

The bitmap strike toggle is no longer available, which has never been important for the variation font testing.

\* src/ftmulti.c (Process\_Event): Reassign F4 to overlap toggle.  
(Render\_Glyph): Tinker with the overlap flags before rendering.

2023-02-11 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftmulti.c (Init\_Display): Use automatic color depth.

2023-02-11 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftmulti.c (main): Synchronize options with the others.

2023-02-09 Werner Lemberg <wl@gnu.org>

\* Version 2.13.0 released.

=====

Tag sources with 'VER-2-13-0'.

\*

README: Updated.

\* meson.build: Updated.

\* man/\*.1: Updated.

2023-02-09 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/win32/grwin32.c (Message\_Process): Drop some sizing messages.

With the window procedure in a separate thread we only need to forward basic WM\_SIZE, which is sent frequently enough.

2023-02-08 Werner Lemberg <wl@gnu.org>

Fix various minor compiler warnings.

2023-02-08 Werner Lemberg <wl@gnu.org>

[ftgrid] Synchronize with FreeType git.

The changes are necessary due to the commit

...

Avoid reserved identifiers that are globally defined.

...

2023-02-08 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftmulti.c (Render\_All): Tighten right margin.

2023-02-07 Alexei Podtelezhnikov <apodtele@gmail.com>

[builds/windows] Add ftmulti.

\* builds/windows/msvc/ftmulti.vcxproj: New project.

\* builds/windows/msvc/ft2demos.sln: Add it to solutions.

2023-02-07 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph/win32] Minor driver improvements.

\*

graph/win32/grwin32.c: (gr\_win32\_device\_init): Do not set icon or background, which is covered anyway.

(Message\_Process) [WM\_PAINT]: Paint only updated rectangle.

2023-02-06 Werner Lemberg <wl@gnu.org>

\* src/ftmulti.c (Process\_Event): Simplify.

2023-02-06 Werner Lemberg <wl@gnu.org>

[ftmulti] More key reassignments.

This is a try to better harmonize with other demo programs, and to make the selection of axes more mnemonic.

\* src/ftmulti.c (MAX\_MM\_AXES): Set to 16.

(Process\_Event): Use keys 'aA' for axis 0, 'bB' for axis 1, ..., 'pP' for axis 16.

Use F1 for help, too.

Use 16, 256, and 4096 as the glyph index increments.

Also adjust other keys to avoid collisions.

(Help): Updated.

(main): Show mnemonic letter next to axis.

Updated.

2023-02-05 Werner Lemberg <wl@gnu.org>

[ftmulti] Display up to 15 axes.

Due to the support of the 'avar' version 2 OpenType extension it is expected that the number of axes in many fonts will increase because adding 'virtual axes' is cheap now.

\* src/ftmulti.c (MAX\_MM\_AXES): Set to 15.

(Help): Updated.

(Process\_Event): Handle keys '7890-=' for axes 6-8, '!@#\$\$%^' for axes 9-11, and '&\*(\*)\_+' for axes 12-14.

2023-02-05 Werner Lemberg <wl@gnu.org>

[ftmulti] Change layout to list axes vertically.

\* src/ftmulti.c (Render\_All, Render\_Text): Shift 'upper left corner' for glyph display up and to the right.

(main): Emit one axis per line at the left side of the screen.

2023-02-05 Werner Lemberg <wl@gnu.org>

\* graph/grevents.h (grKey): Add `grKeyHash` and `grKeyAmpersand`.

2023-02-04 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftcommon.c (my\_face\_requester): Recognize t1 file extension.

2023-02-04 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/win32/grwin32.c (Message\_Process): Return TRUE on WM\_SIZING.

2023-02-02 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph/win32] Improve error handling.

\* graph/win32/grwin32.c (gr\_win32\_surface\_resize): Change return type.

(gr\_win32\_surface\_init):

Ditto and handle failure gracefully.

2023-02-01 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftstring.c (write\_header): Change layout.

2023-01-30 Alexei Podtelezhnikov <apodtele@gmail.com>



\* src/ftlint.c (Analyze): Report void bitmaps.

2023-01-30 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftstring] Reduce floating point use.

\* src/ftcommon.c (FTDemo\_String\_Load): Use signed integers, not doubles.

\* src/ftstring.c (event\_angle\_change): Minor.

2023-01-30 Werner Lemberg <wl@gnu.org>

\* subprojects/libpng.wrap: Updated.

2023-01-29 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftstring.c (write\_header): Always report kerning info.

2023-01-28 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftstring] New feature: simple string editor.

It only handles printable ASCII characters and backspace to erase them.

\* src/ftstring.c (Process\_Event): Use Enter key to initiate this mode.

(Process\_TTY): Intercept and handle relevant keys  
while editing.

(Render\_TTY): Special rendering mode while editing.

(main, event\_help): Updated.

2023-01-28 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftstring.c (event\_render\_mode\_change): Remove report.

2023-01-28 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/win32/grwin32.c (key\_translators): Sort virtual-key codes.

2023-01-27 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftstring.c (Render\_Waterfall): Avoid bitmap reloading.

This hides horrible performance of compressed PCF fonts.

2023-01-25 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftview.c (Render\_Waterfall): Fill the right margin.

The waterfall looks better if the string runs over the edge.

2023-01-25 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftgrid,ftstring,ftview] Option to select charmap by index.

\* src/ftcommon.c (FTDemo\_Install\_Font): Accept a charmap index.  
(FTDemo\_Make\_Encoding\_Tag): Fall back on a numeric value to return.

\* src/ftgrid.c, src/ftstring.c, src/ftview.c  
(usage): Updated.  
\* man/ftgrid.1, man/ftstring.1, man/ftview.1: Ditto.

2023-01-24 Alexei Podtelezhnikov <apodtele@gmail.com>

Typos.

2023-01-23 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftlint.c (Usage): Output to stderr, like others do.

2023-01-22 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftbench,ftgrid,ftmulti,ftview] Accept hexadecimal glyph indices.

This helps to use charcodes on the command line.

\* src/ftbench.c (main): Use sscanf with "%i".  
\* src/ftgrid.c (parse\_cmdline): Ditto.  
\* src/ftmulti.c (main): Ditto.  
\* src/ftview.c (parse\_cmdline): Ditto.

2023-01-21 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/win32/grwin32.c (gr\_win32\_surface\_init): Polish gray mode.

2023-01-21 Alexei Podtelezhnikov <apodtele@gmail.com>

Edit comments.

2023-01-20 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Explain the blender cache.

2023-01-18 Alexei Podtelezhnikov <apodtele@gmail.com>

Typos.

2023-01-17 Werner Lemberg <wl@gnu.org>

Update  
all copyright notices.

2023-01-17 Werner Lemberg <wl@gnu.org>

\* src/ftinspect/\*.chpp: Normalize copyright notices

This allows the use of FreeType's `update-copyright-year` script.

2023-01-17 Werner Lemberg <wl@gnu.org>

Minor comment typos.

2023-01-16 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftview.c (Process\_Event): Fix -Wswitch warning.

2023-01-14 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftview] Microoptimization.

\* src/ftview.c (parse\_cmdline, write\_header, Process\_Event, parse):  
Prioritize easy checks.

2023-01-14 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftview.c (Process\_Event): Trigger screen updates locally.  
(main, status): Cleaned up.

2023-01-14 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftview.c (Process\_Event): Minor refactoring.

2023-01-13 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftview.c (Process\_Event): Small harmonization.

2023-01-12 Alexei Podtelezhnikov <apodtele@gmail.com>

Typos.

2023-01-11

Alexei Podtelezhnikov <apodtele@gmail.com>

Minor comment.

2023-01-11 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftcommon.c (FTDemo\_Draw\_Header): Minor.

2023-01-11 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/\*.c: Pair up `grRefreshSurface` and `grListenSurface` calls.

2023-01-10 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftstring.c (main, write\_header): Reset custom header differently.

2023-01-10 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftstring] Fix error reporting.

\* src/ftstring.c (Render\_\*): Do not return or overwrite errors.  
(main): Updated accordingly.

2023-01-09 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftview.c: Remove obsolete comments.

2023-01-09 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftcommon.c (FTDemo\_Draw\_Header): Show sizing errors again.

2023-01-08 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftview, ftstring] Prevent locking on broken unsizable fonts.

\* src/ftstring.c (Render\_Waterfall):  
Break on error.

\* src/ftview.c (Render\_Waterfall): Break on error.

2023-01-06 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftview.c: Fix a warning.

2023-01-05 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftlint.c (main): Decorate opening and sizing errors.

2023-01-03 Werner Lemberg <wl@gnu.org>

\* src/ftcommon.c (FTDemo\_Draw\_Header): Handle invalid `size` objects.

2022-12-07 Werner Lemberg <wl@gnu.org>

\* subprojects/zlib.wrap: Micro-update from upstream.

2022-12-01 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftbench.c (main): Sync the render mode and the load target.

2022-11-30 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftbench.c (main): Honor render mode with FT\_LOAD\_RENDER.

2022-11-14 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftbench.c: Relocate and undo BBox rotations.

2022-11-13 Alexei Podtelezhnikov <apodtele@gmail.com>

\* man/ftbench.1: Minor updates.

2022-11-11 Alexei Podtelezhnikov <apodtele@gmail.com>

\*

src/ftbench.c (test\_get\_bbox): Use `FT\_Set\_Transform`.

2022-11-11 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftbench] Fix up charmap benchmarking.

\* src/ftbench.c (main): Parse and process the charmap index option.

(header): Report the active charmap index.

(usage): Document it.

(test\_cmap\_cache): Call `FTC\_CMapCache\_Lookup` with correct argument.

(test\_cmap\_iter): Do not count idle charmaps.

\* man/ftbench.1: Document the charmap selection.

2022-10-25 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftview] Improve error tracking.

\* src/ftcommon.c (FTDemo\_Error\_String): Spin off new function from...

(PanicZ): ... this function.

\* src/ftcommon.h (FTDemo\_Error\_String): Declare it.

\* src/ftview.c (Process\_Error): Count and track persistent errors.

(Render\_\*): Use it.

(main): Report the persistent error code and description.

2022-10-25 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftview.c (Render\_Stroke): Render bitmaps without stroking.

2022-10-24 Werner Lemberg

<wl@gnu.org>

Replace '1/50th' (and similar entries) with '1/64' in output and comments.

2022-10-20 Werner Lemberg <wl@gnu.org>

\* subprojects/zlib.wrap: Update to zlib version 1.2.13.

2022-10-08 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/x11/grx11.c (gr\_x11\_surface\_{init,done}): Use DefaultGC.

2022-10-07 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/x11/grx11.c (gr\_x11\_surface\_init): Ignore border and colormap.

The colormap is unused. The border is set by a window manager.

2022-10-03 Charlie Jiang <w@chariri.moe>

[ftinspect] Change unclear comments.

\* src/ftinspect/engine/fontinfo.hpp,  
src/ftinspect/glyphcomponents/glyphcontinuous.cpp: Clarify comments.

\* src/ftinspect/maingui.cpp: Actually the left widget does more than  
setting the margin, so the comment line about removing the left widget and  
layout is removed.

2022-10-03 Charlie Jiang <w@chariri.moe>

\* src/ftinspect/engine/engine.cpp: Fix CBBT/CBLC colored fonts.

Add

`FT\_LOAD\_COLOR` for those fonts.

2022-10-03 Werner Lemberg <wl@gnu.org>

[ftinspect] Format `src/ftinspect/\*`.

2022-10-03 Werner Lemberg <wl@gnu.org>

[ftinspect] Format `src/ftinspect/widgets/\*`.

2022-10-03 Werner Lemberg <wl@gnu.org>

[ftinspect] Format `src/ftinspect/panels/\*`.

2022-10-03 Werner Lemberg <wl@gnu.org>

[ftinspect] Format `src/ftinspect/models/\*`.

2022-10-03 Werner Lemberg <wl@gnu.org>

[ftinspect] Format `src/ftinspect/glyphcomponents/\*`.

2022-10-03 Werner Lemberg <wl@gnu.org>

[ftinspect] Format `src/ftinspect/engine/\*`.

2022-10-02 Werner Lemberg <wl@gnu.org>

[ftinspect] Format build files for cmake and meson.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Do it.  
Also sort entries.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Activate the color layers by default.

Don't deactivate it when color layers are absent. Also fix typo.

\* src/ftinspect/panels/settingpanel.cpp: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect]

Fix memory-related crash, and refactor outline-retaining...

graphics items. Also fix some compiler warnings.

\* src/ftinspect/glyphcomponents/glyphoutline.cpp,  
src/ftinspect/glyphcomponents/glyphoutline.hpp:  
Don't retain the `FT\_Outline\*` whose lifetime is bound to the glyph.  
Prepare the path in the ctor so the outline isn't saved.  
Add `GlyphUsingOutline` as the base class for all classes that have to  
retain a `FT\_Outline` object.

\* src/ftinspect/glyphcomponents/glyphpointnumbers.cpp,  
src/ftinspect/glyphcomponents/glyphpointnumbers.hpp,  
src/ftinspect/glyphcomponents/glyphpoints.cpp,  
src/ftinspect/glyphcomponents/glyphpoints.hpp: Refactored.

\* src/ftinspect/engine/engine.hpp, src/ftinspect/panels/singular.hpp,  
src/ftinspect/engine/rendering.hpp  
Add default values to initialize member fields.

\* src/ftinspect/panels/singular.cpp:  
Pass the `FT\_Library` into the graphics items.

\* src/ftinspect/models/fontinfomodels.cpp:  
Fix warning.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Add transformation and scaling info to the composite glyph view.

Note: Untested since no font with non-1.0 scale subglyphs is found.

\* src/ftinspect/engine/fontinfo.cpp, src/ftinspect/engine/fontinfo.hpp:  
Fetch transformation and scaling info from the font.

\* src/ftinspect/models/fontinfomodels.cpp,  
src/ftinspect/models/fontinfomodels.hpp:  
Change the "Position" column to "Position and Transformation".  
Display the transformation info.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Improve bitmap display in the glyph details pane.

Now the ppem square is displayed as light gray, ink box as blue,  
xy-axis as thin black lines.  
Adding ppem square improves displaying of non-spacing glyphs.

\* src/ftinspect/panels/glyphdetails.cpp:  
Pass the ppem box to the `GlyphBitmap` widget.

\* src/ftinspect/glyphcomponents/glyphbitmap.cpp,  
src/ftinspect/glyphcomponents/glyphbitmap.hpp:  
Add a `placeholderRect`  
to store the ppem square info. Layout the glyph  
bitmap on the basis of the ppem square.  
Draw auxiliary lines on the canvas.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Modify the about text and add actual version.

\* src/ftinspect/maingui.cpp: As described.



\* src/ftinspect/ftinspect.cpp: Pass the actual version.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:  
Add `dynamicLibraryVersion` func.

2022-09-25 Charlie Jiang <w@chariri.moe>

\* src/ftinspect/engine/engine.cpp: Minor formatting.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Fix random crash when closing fonts.

\* src/ftinspect/widgets/tripletselector.cpp: Disallow font indices below 0.  
It seems the CFF driver can't handle this properly.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Add "Font Info" tab.

\* src/ftinspect/panels/info.cpp, src/ftinspect/panels/info.hpp:  
New files, add the `InfoTab` class.

\* src/ftinspect/engine/fontinfo.cpp,  
src/ftinspect/engine/fontinfo.hpp:  
Add `SFNTTableInfo`, `FontBasicInfo`, `FontTypeEntries`, `FontFixedSize`  
and `CompositeGlyphInfo`. The `SFNTTableInfo` and `CompositeGlyphInfo`  
classes retrieve info without the related FreeType API, but directly  
parse the font data.

\* src/ftinspect/models/fontinfomodels.cpp,  
src/ftinspect/models/fontinfomodels.hpp:  
New files. Add models for the tables and the tree view in the info tab to  
use.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:  
Add `loadDefaults` function for the composite glyphs view to draw its  
small icon.  
Add `currentFontHasGlyphName`, `currentFontPSInfo`,  
`currentFontPSPrivateInfo` and `currentFontSFNTTableInfo` to obtain info.  
Add getters.

\* src/ftinspect/engine/fontinfonamesmapping.cpp: New file for name mapping.

\* src/ftinspect/engine/fontfilemanager.cpp,  
src/ftinspect/engine/fontfilemanager.hpp:  
Add `currentReloadDueToPeriodicUpdate` so the composite glyph

tree isn't

refreshed (which is a very expensive process) for the periodic updating of symbolic font files.

\* src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp:

Add the font info tab into the main window and wire events.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Add "Comparator View".

\* src/ftinspect/panels/comparator.cpp, src/ftinspect/panels/comparator.hpp:

New files, adding the `ComparatorTab`.

\* src/ftinspect/panels/settingpanel.cpp,

src/ftinspect/panels/settingpanel.hpp: Add comparator mode.

\* src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp:

Add comparator tab and modify `switchTab` to prevent unwanted window resizing, and to fix the tab bar position.

Modify `applySettings` to skip applying for comparator tab.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Add left/right click

behaviour to the continuous view.

Left clicking will open the glyph details pane, and right clicking will switch to the singular tab.

\* src/ftinspect/panels/glyphdetails.cpp,

src/ftinspect/panels/glyphdetails.hpp:

New files, add the `GlyphDetails` class.

\* src/ftinspect/glyphcomponents/glyphcontinuous.cpp,

src/ftinspect/glyphcomponents/glyphcontinuous.hpp:

Add `mouseReleaseEvent` event handler which emits the new `updateGlyphDetails` and `rightClickGlyph` signals.

\* src/ftinspect/glyphcomponents/glyphbitmap.cpp,

src/ftinspect/glyphcomponents/glyphbitmap.hpp:

Add `GlyphBitmapWidget` to show the enlarged bitmap.

\* src/ftinspect/panels/continuous.cpp, src/ftinspect/panels/continuous.hpp:

Add code to update the details panel, and wire up events.

\* src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp:  
Add code to initialize the glyph details panel, and wire up components and events.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

2022-09-25

Charlie Jiang <w@chariri.moe>

[ftinspect] Add "Continuous View".

Most new features in the continuous view are included in the commit, except the mouse left (details pane)/right (go to singular) click behaviour.

\* src/ftinspect/panels/continuous.cpp, src/ftinspect/panels/continuous.hpp:  
New files, the main continuous tab.

\* src/ftinspect/glyphcomponents/glyphcontinuous.cpp,  
src/ftinspect/glyphcomponents/glyphcontinuous.hpp:  
New files, adding the `GlyphContinuous` as the actual canvas for continuous rendering.

\* src/ftinspect/engine/stringrenderer.cpp,  
src/ftinspect/engine/stringrenderer.hpp:  
New files, adding `StringRenderer` to layout the strings and produce glyphs for the canvas to draw.

\* src/ftinspect/widgets/charmapcombobox.cpp,  
src/ftinspect/widgets/charmapcombobox.hpp:  
New files, add the `CharMapComboBox` widget.

\* src/ftinspect/engine/charmap.cppsrc/ftinspect/engine/charmap.hpp:  
New files, adding `CharMapInfo` class.

\*

src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:  
Add necessary fields and getters for string rendering.  
Retrieve charmap when loading fonts.

\* src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp:  
Add the continuous view to the main window.  
Call `ContinuousTab::highlightGlyph` when switching from singular to continuous view.

\* src/ftinspect/panels/settingpanel.cpp: Uncomment functional code.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

# This is a combination of 2 commits.

# This is the 1st commit message:

[ftinspect] Add "Continuous View".

Most new features in the continuous view are included in the commit, except the mouse left (details pane)/right (go to singular) click behaviour.

\* src/ftinspect/panels/continuous.cpp, src/ftinspect/panels/continuous.hpp:  
New files, the main continuous tab.

\* src/ftinspect/glyphcomponents/glyphcontinuous.cpp,  
src/ftinspect/glyphcomponents/glyphcontinuous.hpp:

New files, adding the `GlyphContinuous` as the actual canvas for continuous rendering.

\* src/ftinspect/engine/stringrenderer.cpp,  
src/ftinspect/engine/stringrenderer.hpp:  
New files, adding `StringRenderer` to layout the strings and produce glyphs for the canvas to draw.

\* src/ftinspect/widgets/charmapcombobox.cpp,  
src/ftinspect/widgets/charmapcombobox.hpp:  
New files, add the `CharMapComboBox` widget.

\* src/ftinspect/engine/charmap.cpp, src/ftinspect/engine/charmap.hpp:  
New files, adding `CharMapInfo` class.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:  
Add necessary fields and getters for string rendering.  
Retrieve charmap when loading fonts.

\* src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp:  
Add the continuous view to the main window.  
Call `ContinuousTab::highlightGlyph` when switching from singular to continuous view.

\* src/ftinspect/panels/settingpanel.cpp: Uncomment functional code.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

# This is the commit message #2:

\* src/ftinspect/engine/stringrenderer.cpp: Fix infinite loop.

Don't limit the glyph position and exit too early, or the loop in `render` function won't stop forever. Also, since the string can be moved by the mouse, there's no point to limit the line position in the canvas viewport.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Add SFNT `name` table retrieving.

\* src/ftinspect/engine/fontinfo.cpp, src/ftinspect/engine/fontinfo.hpp:  
New files, add `SFNTName` to retrieve `name` table.  
Conversions to `QString` from mainstream encodings are supported.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:  
Add `currentFontSFNTNames` and retrieve the `name` table when loading the font. Also pass the SFNT name table when loading palettes.

\* src/ftinspect/engine/mmgx.cpp, src/ftinspect/engine/paletteinfo.cpp:  
Uncomment functional  
code to make use of the `name` table.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Support MM/GX.

\* src/ftinspect/panels/settingpanelmmgx.cpp,  
src/ftinspect/panels/settingpanelmmgx.hpp:  
Add GUI widgets for MM/GX settings.

\* src/ftinspect/engine/mmgx.cpp, src/ftinspect/engine/mmgx.hpp:  
Add `MMGXAxisInfo` to retrieve axes info. However, the SFNT name table isn't implemented, so the SFNT based axis names are unavailable.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:  
Add `applyMMGXDesignCoords`. Add getters `currentFontMMGXState` and `currentFontMMGXAxes`. Info is retrieved when loading font.

\* src/ftinspect/panels/settingpanel.cpp,  
src/ftinspect/panels/settingpanel.hpp: Uncomment functional code.  
Remove `checkHintingMode` and `checkStemDarkening`. Applying of delayed settings is taken care by the `MainGUT`. So emitting `fontReloadNeeded`

simply will do the work.

\* src/ftinspect/maingui.cpp: Don't reset the cache so aggressively.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Add auxiliary lines for the grid view.

The aux lines will show advance and asc/descender.

\* src/ftinspect/glyphcomponents/grid.cpp,  
src/ftinspect/glyphcomponents/grid.hpp: Implement aux lines.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:  
Add `currentSizeAscDescPx`.

\* src/ftinspect/panels/singular.cpp, src/ftinspect/panels/singular.hpp:  
Pass parameters to the `Grid` graphics item.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Support opening files drag-dropping.

\* src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp: Add related code.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Support opening files via command-line.

\* src/ftinspect/engine/fontfilemanager.cpp,  
src/ftinspect/engine/fontfilemanager.hpp:

Add `loadFromCommandLine` func.

\* src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp:  
Add and call `loadCommandLine` func.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Support LCD rendering.

\* src/ftinspect/engine/rendering.cpp, src/ftinspect/engine/rendering.hpp:  
Implement `convertLCDToARGB` and `convertLCDVToARGB`.  
Add `lcdUsesBGR` property.

\* src/ftinspect/panels/settingpanel.cpp: Uncomment functional code.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Support color layers.

\* src/ftinspect/engine/rendering.cpp:

Add implementation of `tryDirectRenderColorLayers`.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:

Implement `loadPaletteInfos` and `loadPalette`.

Add `currentFontHasColorLayers` and a group of getters/setters supporting color layer rendering.

Also reorder fields as the number of fields grows.

\* src/ftinspect/panels/settingpanel.cpp,

src/ftinspect/panels/settingpanel.hpp:

Implement

`populatePalettes` and reorder functions.

Fix `checkPalette` about combo box enabling state and reset the cache when the palette settings change.

Uncomment functional code.

\* src/ftinspect/engine/paletteinfo.cpp,

src/ftinspect/engine/paletteinfo.hpp: New files adding `PaletteInfo`.

Retrieving palette names using SFNT name tables is not supported yet.

\* src/ftinspect/panels/singular.cpp:

Call `Engine::loadPalette` when drawing.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Support stem darkening.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:

Add `setStemDarkening` func.

\* src/ftinspect/panels/settingpanel.cpp: Uncomment function code.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Support tricky fonts.

For tricky fonts, we disable auto-hinter and limit the TT interpreter version.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:

Add ``currentFontTricky`` function and turn off hinting forcibly when the user turns it off in the GUI for tricky fonts.

\* `src/ftinspect/panels/settingpanel.cpp`: As described.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Support embedded bitmap and bitmap-only fonts.

Bitmap glyphs are already supported in the new rendering engine, so we make the option effective in the GUI. Also support bitmap-only fonts by coercing sizes to available ones and force embedded bitmaps.

\* `src/ftinspect/widgets/fontsizeselector.cpp`,  
`src/ftinspect/widgets/fontsizeselector.hpp`:  
Retrieve fixed sizes info from the engine and coerce to nearest available sizes when using bitmap-only fonts.

\* `src/ftinspect/engine/engine.cpp`, `src/ftinspect/engine/engine.hpp`:  
Add ``embeddedBitmapEnabled`` property and ``currentFontHasEmbeddedBitmap``,  
``currentFontBitmapOnly`` and ``currentFontFixedSizes`` getters.

\* `src/ftinspect/panels/settingpanel.cpp`: Uncomment functional code.

2022-09-25

Charlie Jiang <w@chariri.moe>

[ftinspect] Refactor ``Engine`` and fix the singular tab.

This comment brings the new glyph loading and bitmap rendering code. The bitmap rendering part is in ``RenderingEngine`` which can be obtained from the ``Engine``. The ``Engine`` now supports loading the glyph by loading with image cache and without image cache. The ``loadOutline`` function is removed.

Accompanying this change, some new features are introduced as well. Most notable the improvements in rendering: back/foreground color and gamma, support bitmap glyphs (not enabled in the UI). Support for LCD and color layer font is absent yet.

The singular tab is now enabled by uncommented functional code that was commented in the last commit.

In ``Engine``, a ``ftFallbackFace_`` is introduced for all non-rendering work, and the old ``ftSize_`` is only used for rendering. This helps dealing with non-scalable fonts since we can safely retrieve info with the fallback face.

\* `src/ftinspect/engine/engine.cpp`,



src/ftinspect/engine/engine.hpp:

Integrate the `RenderingEngine`.

Change `loadFont` to update the `ftFallbackFace\_` as well.

Change all info-retrieving functions to use `ftFallbackFace\_`.

Add `loadGlyph`, `loadGlyphIntoSlotWithoutCache` and

`loadGlyphWithoutUpdate`, and remove `loadOutline`.

Extract code about "get a face object from the cache and do sth."

into a new function `withFace`.

Add property `antiAliasingEnabled` and `renderMode` for the rendering engine.

Some minor changes are included.

\* src/ftinspect/engine/rendering.cpp, src/ftinspect/engine/rendering.hpp:

New files, as described.

\* src/ftinspect/panels/settingpanel.cpp,

src/ftinspect/glyphcomponents/glyphbitmap.cpp,

src/ftinspect/panels/singular.cpp: Uncomment functional code.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Add the `SingularTab` and related widgets.

This introduces

the new singular tab. However, because the new tab heavily depend on the new engine structure, it's current not functional. No bitmap or outline will be displayed. This would be fixed after the `Engine` was refactored in the next commit.

The new singular tab has the size and glyph index selector moved out as modular widgets to be reused.

The new scroll and shortcut behaviours are introduced in this commit, which depend on scroll events introduced in the custom `QGraphicsView`.

The infinity panning of grid is implemented mainly via

`SingularTab::updateGrid` and `Grid::updateRect`.

This commit is introducing new features since it would be unfavorable to "backport" old version of glyph components, and add those new features in future commits - this is way too complex.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:

Add `currentFontNumberOfGlyphs` and `dpi` functions.

\* src/ftinspect/widgets/fontsizeselector.cpp,

src/ftinspect/widgets/fontsizeselector.hpp:

This is the new font size selector to replace the old size/DPI/zoom boxes.  
This widget is capable of handling wheel and key events delegated from other widgets.

The support for fixed sizes and bitmap-only font is not yet added.

\* src/ftinspect/widgets/glyphindexselector.cpp,  
src/ftinspect/widgets/glyphindexselector.hpp:

This is the new glyph index selector to replace the old navi buttons.  
This selector is aware of index min/max, consists of a group of navi buttons, a text box (actually a spin box without buttons) to directly input glyph index.

\* src/ftinspect/glyphcomponents/graphicsdefault.cpp,  
src/ftinspect/glyphcomponents/graphicsdefault.hpp:

This struct contains all default graphical settings (mainly for singular view, e.g. the grid line color).

\* src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp:

Add the new tab into the main window.

\* src/ftinspect/glyphcomponents/glyphbitmap.cpp,  
src/ftinspect/glyphcomponents/glyphbitmap.hpp:

This will now delegate rendering to the engine instead of doing rendering itself. However, since the rendering part of the `Engine` is not implemented, code initializing `image\_` is left commented.

Also add another constructor for initializing directly from a `QImage`.

\* src/ftinspect/glyphcomponents/glyphoutline.cpp,  
src/ftinspect/glyphcomponents/glyphoutline.hpp,  
src/ftinspect/glyphcomponents/glyphpointnumbers.cpp,  
src/ftinspect/glyphcomponents/glyphpointnumbers.hpp,  
src/ftinspect/glyphcomponents/glyphpoints.cpp,  
src/ftinspect/glyphcomponents/glyphpoints.hpp:

Constructors of those items now accept a `FT\_Glyph` instead of `FT\_Outline`. The conversion is done inside the view, and the view won't be displayed if the glyph isn't outline glyph.

This simplifies the code of `SingularTab`.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Rewrite `MainGUIT`.

Note:

This commit compiles, but the main view is removed, so you will get a blank right panel. The singular view will be added back with major changes in the next commit.

This commit mainly introduces below changes:

1. The original `MainGUI` contains almost all GUI elements. Most of them are taken out to modular components. The current `MainGUI` serves only as a skeleton provides coordinate between components, greatly shortened. It also provides some auxiliary code such as calling to file chooser.
2. The left panel is moved to `SettingPanel` class. The current `settingpanel.[ch]pp` are directly modified from the latest code, so they contains some options not implemented in the `Engine`. Structural code that is only added accompanying later change is removed, such as the comparator mode. Such code will be added back with the related feature. However, code for unimplemented options are simply commented out.
3. The main part is transformed into a tabbed view. The original code is removed. Refactored, it will be added back in the next commit.
4. The navigation buttons (Next/Prev Font/Face/NI) are changed into the new triplet-selector, which is a major UI improvement.

\* src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp: As described.

\* src/ftinspect/panels/abstracttab.hpp: Add `AbstractTab` which is an interface for all tabs listening for font reloading and repainting.

\* src/ftinspect/panels/settingpanel.cpp,  
src/ftinspect/panels/settingpanel.hpp:  
As described, this is the left panel. This requires intensive reviewing since many bugs had rooted here.

\* src/ftinspect/widgets/tripletselector.cpp,  
src/ftinspect/widgets/tripletselector.hpp:  
As described, this is the triplet (Font/Subface/NI) selector.  
This component is also responsible for repopulating triplet information and keep up with the font file change (i.e. the `FontFileManager::currentFileChanged` event is captured here).

\*

src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:  
Add `fontValid` and `namedInstanceName` since `TripletSelector` requires them. However, they'll subject to change later.

\* src/ftinspect/ftinspect.cpp: Remove call to `MainGUI::setDefault`.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] WIP: Rewrite `MainGUI`.

Note: This commit doesn't compile. This change is splitted into 2 commits to avoid a complicated diff.

\* src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp: Old version removed.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Rename `rendering` dir to `glyphcomponents`.

All classes in `rendering` directory will be responsible for draw glyphs, either as independent widgets or as `QGraphicsItem`. However, the actual drawing part will be placed into `RenderingEngine`. Therefore, we rename it to `glyphcomponents`.

\* src/ftinspect/rendering/\*\*: Renamed.

\*

src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build,  
src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Re-organize custom widgets.

\* src/ftinspect/widgets/customwidgets.cpp,  
src/ftinspect/widgets/customwidgets.cpp: New files.  
Include `QGraphicsViewx`, `ZoomSpinBox` and `UnboundScrollArea` (for later use).

\* src/ftinspect/widgets/qspinboxx.hpp, src/ftinspect/widgets/qspinboxx.hpp:  
Changed into `ZoomSpinBox` in `customwidgets.cpp`.

\* src/ftinspect/widgets/qgraphicsviewx.cpp,  
src/ftinspect/widgets/qgraphicsviewx.hpp:  
Merged into `customwidgets.cpp`

\* src/ftinspect/widgets/qcomboboxx.hpp,  
src/ftinspect/widgets/qcomboboxx.cpp: Removed. No longer needed.  
We're using custom `QAbstractListModel`'s `flags` func to disable items.

\* src/ftinspect/widgets/qpushbuttonx.hpp,  
src/ftinspect/widgets/qpushbuttonx.cpp: Removed. No longer needed.  
We're using `setButtonNarrowest` in `uihelper.cpp`.

\*

src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp: Updated to use new custom widgets.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Use custom `QAbstractListModel` instead of manually mapping.

In `maingui.cpp`, mapping between `QComboBox` indices and actual FreeType values was done manually. The enabled statuses of individual ComboBox items were also maintained in `maingui.cpp`.

In this commit, those code was moved to separate custom classes implementing `QAbstractListModel`. All mapping was done there.

Enable/Disable states was maintained in the classes as well.

By doing this, the reason why some items were disabled was made more clear and explicit. Adding more items is easier.

The `QComboBox` custom widget is no longer needed since disable flag can be provided by the custom model by overriding the `flags` function.

`SimpleComboBoxModel` is a basic class for Key-Value-DisplayName mapping.

Other models could extend this class if no complicated mapping (e.g. `HintingModeComboBoxModel`) is needed.

\* src/ftinspect/models/customcomboboxmodels.cpp,  
src/ftinspect/models/customcomboboxmodels.cpp: New files.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:  
`Engine` now accepts "load target" value of certain anti-aliasing mode instead of the anti-aliasing enum value. The mapping was moved into `AntiAliasingComboBoxModel`.

\* src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp: Move all mappings and enabled/disabled statuses to separate models.  
Remove mapping `QHash`es. Use `QComboBox` instead of `QComboBox`.

\* src/ftinspect/meson.build, src/ftinspect/CMakeLists.txt: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Rename all private member variables with an underscore suffix.

(pure mechanical commit)

\* src/ftinspect/\*\*: Renaming. Also some variables with abbreviations were renamed.

This  
will enable nicer getter/setters, as discussed in #13.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Refactor `Engine`.

This commit decouples `Engine` so it no longer depends on `MainGUT`.

Because of that, a lot of getters and setters are added to `Engine`, and `MainGUT` call setters in its `applySettings` function, which makes applying of the settings lazy (only happen when the glyph repaints).

In the later commits, options will be divided into two types: mostly lazy ones, and a few eager ones which need to be immediately applied, because they need the cache to be purged.

Some code in `MainGUT` is moved into `Engine`, as well.

Functions in the `Engine` are re-ordered. Constructor is greatly reduced to `queryEngine`.

\* src/ftinspect/engine/engine.cpp, src/ftinspect/engine/engine.hpp:  
As described.

\* src/ftinspect/maingui.cpp, src/ftinspect/maingui.hpp:  
As described.

\* src/ftinspect/ftinspect.cpp: Remove dependency of `Engine` against `MainGUT`.

2022-09-25

Charlie Jiang <w@chariri.moe>

[ftinspect] Move out font file managing/watching out to a new class.

Introduce the feature that rejects invalid files.

\* src/ftinspect/maingui.hpp, src/ftinspect/maingui.cpp: Move `fontList`, `fontWatcher`, `timer` and other code related to font file managing to new class `FontFileManager`.

\* src/ftinspect/engine.hpp, src/ftinspect/engine.cpp:  
`Engine` class now holds `FontFileManager`.

Also, make `MainGUI` open and close fonts indirectly via `Engine`.

\* src/ftinspect/fontfilemanager.hpp, src/ftinspect/fontfilemanager.cpp:  
New files.

\* src/ftinspect/CMakeLists.txt, src/ftinspect/meson.build: Updated.

2022-09-25 Charlie Jiang <w@chariri.moe>

[ftinspect] Update build system settings.

\* src/ftinspect/CMakeLists.txt: Fix MSVC-only options. Require Qt 5.15 and enable higher warning level.

\* src/ftinspect/meson.build: Set C++ version. Require Qt 5.15.

2022-09-24 Alexei Podtelezhnikov <apodtele@gmail.com>

\*

graph/x11/grx11.c (gr\_x11\_blitter\_reset): Minor improvement.

2022-09-23 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/meson.build: No macOS driver yet.

Fixes #19.

2022-09-17 Alexei Podtelezhnikov <apodtele@gmail.com>

Revert "\* src/ftlint.c (Checksum): Accept negative pitch."

This reverts commit bac9a53080b24e76a2dfe8def2b15682135b8454.

The pitch is always positive in the converted bitmap.

2022-09-17 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftlint.c (Checksum): Accept negative pitch.

2022-09-16 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/gblblit.c (gblender\_blit\_init): Fix for negative pitch.

Reported by Anurag Thakur.

2022-09-15 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Clean up the cache clearance.

Use separate functions to clear the color and channel gradient caches and call them conditionally instead of passing the switch around.

\* graph/gblender.c (gblender\_clear): Separate out...

(gblender\_clear\_channels): ...

this function.

(gblender\_use\_channels): Removed.

\* graph/gblender.h: Update their declarations.

\* graph/gblgblit.c (gblender\_blit\_init, grSetTargetPenBrush):

Updated to call the above functions and formatted.

2022-09-13 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftdiff.c: Add const qualifier to the executable basename.

2022-09-12 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftcommon.c (FTDemo\_Display\_New): Handle window titles.

\* src/ftcommon.h: Update its prototype.

\* src/ftgamma.c, src/ftgrid.c, src/ftsdf.c, src/ftstring.c, src/ftview.c

(main): Updated accordingly.

2022-09-11 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftdiff.c (render\_state\_draw), src/common.d (ft\_strdup): Clean up.

2022-09-08 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/\*.\*: Add const qualifier to the executable basename.

2022-09-08 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/grobjs.\* (grAlloc): Return void pointer.

2022-09-06 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph]

Fortify channel cache.

Using signed short offsets in the channel cache will risk to overflow if the current cache size is to increase. Here we switch to unsigned index and express it in the cache units.

\* graph/gblender.h (GBlenderChanKeyRec): Update `index`.

\* graph/gblender.c (gblender\_clear, gblender\_lookup\_channel, gblender\_reset\_channel\_key): Updated accordingly.



2022-09-06 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/gblender.\* (GBlenderRec): Cosmetic changes to cache array.

2022-08-29 shugaley <<https://gitlab.freedesktop.org/shugaley>>

\* src/ftpngout.c (FTDemo\_Display\_Print): Declare `code` volatile.

Fixes #18.

2022-08-29 Alexei Podtelezhnikov <apodtele@gmail.com>

\* Makefile (FTCOMMON\_OBJ): Add `graph` dependency, include `rsvg-port`.

2022-08-29 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Rework #ifdef GBLENDER\_STORE\_BYTES.

This also settles on tripling the number of channel keys, which is a safe bet in all circumstances. Quadrupling might only work on 64-bit architectures or with added key structure padding, without GBLENDER\_STORE\_BYTES defined.

\* graph/gblender.h (GBlenderCell): Change definition.

\* graph/gblblit.c (GDST\_STOREB): Updated accordingly.

\* graph/gblender.c (gblender\_clear, gblender\_reset\_key, gblender\_lookup, gblender\_lookup\_channel): Ditto.

2022-08-28 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Better hash function and a fix.

\* graph/gblender.c (gblender\_clear): Initialize recently grown array.

(gblender\_lookup\_channel): Improve hash function.

2022-08-28 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/gblender.c (gblender\_lookup): Quest for perfect hash function.

2022-08-28 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Minor fixes.

(gblender\_clear): Initialize with black background, whereas foreground stays invalid.

(gblender\_lookup\_channel): Increase cache utilization.

2022-08-26 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph]

Slight optimization of cached gradients.

This saves about 1% of `ftgrid` execution time.

\* graph/gblender.c (gblender\_reset\_key, gblender\_reset\_channel\_key):  
Implement faster gradients, which are rounded anyway.

2022-08-25 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Rework cache management.

With more complex rendering in `ftgrid`, the old cache management resulted in excessive clashes and slow `gblender\_lookup`. It is better to replace the clashing entries than to preserve them and search for an available spot in the table. This saves about 10% of execution time in `ftgrid` without much effect on the others.

\* graph/gblender.c (gblender\_lookup): Replace old clashing entries and hash function.

(gblender\_lookup\_channel): Ditto.

\* graph/gblender.h (GBlenderRec): Remove `stat\_clears`.

2022-08-25 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/gblender.c (gblender\_lookup\*): Count clashes directly.

2022-08-23 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph]

Count the number of hash clashes.

The hash table lookups take very noticeable time when rendering is complex like in `ftgrid`. This can help optimize the hash function.

\* graph/gblender.h (GBLENDER\_STATS): New field for clashes.

\* graph/gblender.c (gblender\_init, gblender\_lookup{,\_channel},  
gblender\_dump\_stats): Initialize, collect, and report clashes.

2022-08-18 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Fix mishandling of LCDv formats.

\* graph/gblblit.c (gblender\_blit)init): Triple the LCDv pitch.

\* graph/gblany.h (\_gblender\_blit\_{vrgb,vbgr}\_\*): Updated accordingly.

2022-08-17 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/gblender.c: Minor.

2022-08-17 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/gblblit.c (grBlitGlyphToSurface): Remove redundant check.

The rare empty glyphs will be caught later in `gblender\_blit\_init`.

2022-08-17 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/gblender.c (gblender\_set\_gamma\_table):

Reintroduce linear loops.

2022-08-17 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/gblender.c (gblender\_set\_gamma\_table): Updated sRGB ramps.

When we use finite approximation it is more appropriate to use the actual values for the linear portion instead of the standard ones.

2022-08-16 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/common.c (utf8\_next): Use more efficient algorithm.

2022-08-15 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftcommon.c (FTDemo\_String\_Set): Refactor.

2022-08-15 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftcommon.c (FTDemo\_Make-Encoding\_Tag): Refactor.

2022-08-11 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/gblender.c (gblender\_set\_gamma\_table): Minor improvements.

2022-08-11 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftcommon.c (FTDemo\_Draw\_Header): Show non-trivial face index.

This is a useful hint if a file contains multiple faces.

2022-08-07 Alexei Podtelezhnikov <apodtele@gmail.com>

\*

src/win32/grwin32.c: Cosmetic updates.

2022-08-06 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftgrid,ftmulti,ftstring,ftview] Document optional size.

\* man/ftgrid.1, man/ftmulti.1, man/ftstring.1, man/ftview.1: Update.

\* src/ftgrid.c, src/ftmulti.c, src/ftstring.c, src/ftview.c: Ditto.

2022-08-05 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftgrid,ftmulti,ftstring,ftview] Make the size optional.

\* src/ftgrid.c (parse\_cmdline), src/ftview.c (parse\_cmdline),  
src/ftstring.c (parse\_cmdline), src/ftmulti.c (main): Fallback on  
a default size if it is missing on the command line.

2022-07-30 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftgrid.c: Sync with freetype.

2022-07-30 Werner Lemberg <wl@gnu.org>

\* src/ftlint.c (main): Check number of glyphs.

Problem reported by Marc Schönfeld <marc.schoenefeld@gmx.org>.

2022-07-30 Werner Lemberg <wl@gnu.org>

[ftgrid] Fix memory-related problems.

Reported by Marc Schönfeld <marc.schoenefeld@gmx.org>.

\*

src/ftgrid.c (bitmap\_scale): Limit bitmap size.  
(grid\_status\_draw\_outline): Handle errors in `FT\_Get\_Glyph`.

2022-07-11 Charlie Jiang <w@chariri.moe>

[meson] Add option to disable libsvg dependency.

As discussed in #14.

Currently, 'libsvg' is used to render OT-SVG glyphs. However, 'libsvg' is far from simple to build as it requires tons of transitive dependencies, especially on Windows.

Therefore we introduce a configuration option to switch 'libsvg' on or

off. This is trivial because the source code itself already honors a  
`HAVE\_LIBRSVG` macro.

\* meson\_options.txt: Add `libsvg` option (feature), defaulting to  
`enabled`.

\* meson.build: Honor the option above.

2022-06-28 Charlie Jiang <w@chariri.moe>

[ftinspect] Drop QMake, add CMake.

\* src/ftinspect/CMakeLists.txt: Add CMake build file for `ftinspect`.

\* src/ftinspect/ftinspect.pro: Remove QMake build file.

Fixes #11

2022-06-28 Charlie Jiang <w@chariri.moe>

\* /src/ftinspect/.gitignore: Ignore  
Visual Studio specific files.

This is for `ftinspect`.

2022-06-28 Charlie Jiang <w@chariri.moe>

[ftinspect] Eliminate compile warnings.

\* src/ftinspect/engine.hpp: Use `uintptr\_t` as type for `faceCounter`  
instead of `int`.

\* src/ftinspect/engine.cpp: Changing all casts to use `FTC\_IDType` type  
(=`uintptr\_t`) we defined.

Fixes #10.

2022-06-21 Hugh McMaster <hugh.mcmaster@outlook.com>

\* Makefile: Append CPPFLAGS to CFLAGS so that they work in `graph`.

2022-06-06 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftcommon.c (FTDemo\_Hinting\_Engine\_Change): Minor fix.

2022-06-05 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftbench.c (main): Minor.

2022-06-04 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftbench] Minor tweaks.

\* builds/windows/msvc/ftbench.vcxproj: Do not depend on "common.c".

\* src/ftbench.c: Do not include "common.h".

(main): Minor output optimization.

2022-06-03 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftdump.c (main):

Report filename.

2022-06-03 Alexei Podtelezhnikov <apodtele@gmail.com>

\* subprojects/zlib.wrap: Update to zlib version 1.2.12.

2022-06-02 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftbench.c (main): Indicate memory-mapped fonts.

2022-05-26 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftbench] Create more concise and informative header.

\* src/ftbench.c (header): Report face, driver, and target info.

Borrowed from `FTDemo\_Get\_Info`.

(main): Remove and rearrange output.

2022-05-25 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftbench.c (main): Output spaces before units.

2022-05-24 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftbench.c (main): Reformat output (cont'd).

2022-05-24 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftbench.c (main): Reformat output.

2022-05-24 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftbench.c (main): Check the number of glyphs.

Fixes #8.

2022-05-24 Alexei Podtelezhnikov <apodtele@gmail.com>

\*

graph/win32/grwin32.c: Do not include <string.h>, formatting.

2022-05-23 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph/win32] Simplify icon setting further.

\* graph/win32/grwin32.c (gr\_win32\_surface\_set\_icon): Use `CreateIcon`.

2022-05-23 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph/win32] Simplify icon setting.

\* graph/win32/grwin32.c (gr\_win32\_surface\_set\_icon): Use basic  
`CreateBitmap` for color, which seems to work.

2022-05-22 Alexei Podtelezhnikov <apodtele@gmail.com>

This reverts commit 454797135a90.

\* graph/win32/grwin32.c (gr\_win32\_surface\_refresh\_rectangle): Revert  
to fix the 24 bpp rectangle invalidation.

2022-05-19 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/win32/grwin32.c (gr\_win32\_surface\_refresh\_rectangle): Minor move.

2022-05-01 Werner Lemberg <wl@gnu.org>

\* Version 2.12.1 released.

=====

Tag sources with 'VER-2-12-1'.

\* README: Updated.

\* meson.build: Updated.

\* man/\*.1: Updated.

2022-04-09

Charlie Jiang <w@chariri.moe>

[windows] Fix IME freezing window, don't filter messages by HWND

\* graph/win32/grwin32.c (Window\_ThreadProc): Remove HWND filter of GetMessage call

2022-04-08 Charlie Jiang <w@chariri.moe>

[windows] Fix some GUI keys not working

\* graph/win32/grwin32.c (gr\_win32\_surface\_listen\_event, Message\_Process): Switch to custom Windows message ID.

2022-03-31 Werner Lemberg <wl@gnu.org>

\* Version 2.12.0 released.

=====

Tag sources with 'VER-2-12-0'.

\* README: Updated.

\* meson.build: Updated.

\* man/\*.1: Updated.

\* Makefile (dist): Generate `ChangeLog` entries for all commits since version 2.11.0 (when we stopped creating this file manually).

2022-03-31 Werner Lemberg <wl@gnu.org>

Fix clang++ warnings.

\* src/ftsdf.c (event\_font\_update, write\_header, draw), src/rsvg-port.c (rsvg\_port\_preset\_slot): Add or remove casts.

2022-03-24 Anuj Verma <anuj@womp.xyz>

[ftsdf] Fix segmentation fault.

\* src/ftsdf.c (draw):

Use integer to avoid overflow while reverse looping `j`.

2022-02-19 Werner Lemberg <wl@gnu.org>

\*/\*: Replace header macros with file names.

We already did the same some time ago in the FreeTye library.

Also remove redundant inclusion of some header macros.

2022-02-19 Ben Wagner <bungeman@chromium.org>

[ftview] Handle foreground COLR.

\* src/ftview.c (Render\_All): handle 0xFFFF `layer\_color\_idx` without



crashing.

2022-02-11 Werner Lemberg <wl@gnu.org>

[ftdump] Emit PS dictionary info for option `-n` if available.

\* src/ftdump.c: Include `FT_TYPE1_TABLES_H`.

(Print\_Array): New function.

(Print\_FontInfo\_Dictionary, Print\_FontPrivate\_Dictionary): New functions.

(main): Use them.

(usage): Updated.

2022-02-06 Alexei Podtelezhnikov <apodtele@gmail.com>

[builds/windows] Add `rsvg` port to project files.

\* builds/windows/msvc/ftgamma.vcxproj: Updated.

\* builds/windows/msvc/ftgrid.vcxproj: Updated.

\* builds/windows/msvc/ftstring.vcxproj: Updated.

\* builds/windows/msvc/ftview.vcxproj:

Updated.

2022-02-05 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftgrid] Minor tweaks.

\* src/ftgrid.c (scale\_bitmap): Take the buffer immediately.

(DO\_BITMAP): Minor.

\* src/ftcommon.c (FTDemo\_Glyph\_To\_Bitmap): Clarify ownership.

2022-02-05 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftgrid.c (bitmap\_scale): Implement BGRA scaling.

2022-02-05 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftgrid] Implement embedded bitmap toggle.

\* src/ftgrid.c (grid\_status\_draw\_outline): Undo the last change.

(Process\_Event): Implement the embedded bitmap toggle and shift some other toggle keys for consistency.

(event\_help, main): Updated.

2022-02-01 Werner Lemberg <wl@gnu.org>

src/ftgrid.c (grid\_status\_draw\_outline): Enable embedded bitmaps.

Previously, bitmap-only fonts were displayed but bitmap strikes were not.

2022-01-30 Werner Lemberg <wl@gnu.org>

src/ftinspect/ftinspect.pro (PKGCONFIG, LIBS): Add 'librsvg'.

2022-01-28 Werner  
Lemberg <wl@gnu.org>

\* meson.build: We need 'librsvg' version 2.46.0 or newer.

Older versions don't have function `rsvg\_handle\_get\_intrinsic\_dimensions`.

2022-01-26 Werner Lemberg <wl@gnu.org>

\* meson.build: Fix typo.

2022-01-25 Werner Lemberg <wl@gnu.org>

Use 'librsvg' conditionally.

\* src/ftcommon.c, src/rsvg-port.c: Guard SVG code with `HAVE\_LIBRSVG`.

2022-01-23 Werner Lemberg <wl@gnu.org>

\* src/ftcommon.c (FTDemo\_New): Update to recent FreeType change.

2022-01-23 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Reshuffle some headers.

\* graph/grobjs.c, graph/grobjs.h, graph/win32/grwin32.c: Updated.

2022-01-20 Moazin Khatti <moazinkhatri@gmail.com>

Prototype SVG support.

\* src/rsvg-port.c, src/rsvg-port.h: New files, providing SVG rendering hooks using the 'librsvg' library.

\* src/ftcommon.c: Include `FT\_OTSVG\_H` and `rsvg-port.h`.

(FTDemo\_New): Set SVG renderer hooks.

(FTDemo\_Glyph\_To\_Bitmap): Also accept SVG glyph format.

\* Makefile:

Update for recent FreeType changes; the library's `configure` script now tests for 'librsvg'.

(COMPILE): Updated to use `FT\_DEMO\_CFLAGS` for normal compilation, and manually adding flags for 'librsvg' otherwise.

Update all users.

(LINK\_LIBS): Updated to use `FT\_DEMO\_LDFLAGS` for normal compilation, and manually adding flags for 'librsvg' otherwise.

(COMMON\_OBJ): Updated

(rsvg-port): New rule.

\* meson.build (librsvg\_dep): New dependency.

(ftcommon\_lib): Add `rsvg-port.\*` files and update dependencies.

2022-01-16 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph/win32] Fix up the key event handling.

\* graph/win32/grwin32.c (key\_translators): Do not translate the keys that Windows translates. We used to by-pass the system.

(gr\_win32\_surface\_listen\_event): Move custom translations from here...

(Message\_Process): ... to here, which reduces the message posting.

2022-01-12 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftgrid] Use lighter gridlines to improve readability.

\*

src/ftgrid.c (grid\_status\_colors, grid\_status\_alt\_colors): Updated.

2022-01-11 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftgrid.c (write\_header): Show page with glyph number or code.

2022-01-11 Werner Lemberg <wl@gnu.org>

Update all copyright notices.

2022-01-11 Werner Lemberg <wl@gnu.org>

\* subprojects/libpng.wrap, subprojects/zlib.wrap: Update from upstream.

2022-01-09 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/gblblit.c (gblender\_blit\_init): Remove double dereferencing.

2022-01-08 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Fix negative pitch issues.

Some cropping issues were identified by forcing unusual negative pitch in glyphs. This fixes those issues and removes some unused fields.

- \* graph/glblit.c (GBlenderBlitRec): Remove unused fields.
- \* graph/glblit.c (graph/glblit.c): Revise negative pitch code.
- \* graph/gblender.h (gblender\_dump\_stats): Remove macro semicolon.

2022-01-07 Werner Lemberg <wl@gnu.org>

- \* src/ftcommon.c  
(icon\_span): Fix undefined left-shift behaviour.

2022-01-07 Werner Lemberg <wl@gnu.org>

- graph/grobjs.c (grFindColor): Fix undefined left-shift behaviour.

2022-01-01 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph/win32] Consolidate resizing calls.

Suggested by Dmitry Timoshkov.

- \* graph/win32/grwin32.c (gr\_win32\_surface\_listen\_event): Purge obsolete WM\_RESIZE.

2021-12-31 Alexei Podtelezhnikov <apodtele@gmail.com>

- \* graph/win32/grwin32.c: Logging and formatting clean-ups.

2021-12-31 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph/win32] Implement smooth resizing.

The window creation and the message loop has to be put in a separate thread in order to achieve smooth resizing. Othrewise, the modal loop cannot be interrupted to redraw the canvas. The main thread also has a loop to receive the reposted messages, to update the canvas and send WM\_PAINT back via UpdateWindow. After this update the win32 resizing feels similar to the X11 resizing.

\*

- graph/win32/grwin32.c (grWin32Surface): Store the host thread id.
- (gr\_win32\_surface\_init): Spin off `CreateWindow` from here...
- (Window\_ThreadProc): ... to here and run the window message loop.
- (Message\_Process): Updated to repost messages to the host thread.
- (gr\_win32\_surface\_listen\_event): Run the host thread message loop.

2021-12-31 Alexei Podtelezhnikov <apodtele@gmail.com>

- \* graph/win32/grwin32.c (gr\_win32\_surface\_init): Check allocations.

2021-12-31 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftcommon.c (FTDemo\_Done): Flush stdout for mintty.

2021-12-31 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph/win32] Improve surface initialization.

\* graph/win32/grwin32.c (gr\_win32\_surface\_init): Allocate bitmaps by calling `gr\_win32\_surface\_resize`.

2021-12-11 Ben Wagner <bungeman@chromium.org>

[ftbench] Free stroker when done.

LeakSanitizer reported that the stroker object was being leaked. Properly free it with FT\_Stroker\_Done. (!14)

\* src/ftbench.c  
(test\_stroke): Free stroker.

2021-12-02 Werner Lemberg <wl@gnu.org>

\* Version 2.11.1 released.

=====

Tag sources with 'VER-2-11-1'.

\* README: Updated.  
\* meson.build: Updated.  
\* man/\*.1: Updated.

\* ChangeLog: Renamed to ...  
\* ChangeLog.old: ... this.

\* Makefile (version\_tag, CHANGELOG\_SCRIPT): New variables.  
(dist): Generate `ChangeLog` file with all commits since last release.

2021-11-30 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Minor clean-ups.

\* graph/gblender.c (gblender\_reset\_key): Remove unnecessary masks.  
\* graph/gblany.h (\*vrgb\*, \*vbgr\*): Remove redundant casts.

2021-11-25 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/glblblit.c (gblender\_blit\_init): Remove dummy fallback.

2021-11-24 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/\*.\*: Remove legacy blitter ghosts.

2021-11-24 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Revise function arguments.

\* graph/glblblit.c (grSetTargetGamma, grSetTargetPenBrush):

Input

surface instead of bitmap as more appropriate.

\* graph/graph.h (grSetTargetGamma, grSetTargetPenBrush): Update  
decarations.

\* graph/grdevice.c, src/ftcommon.c, src/ftdiff.c: Update callers.

2021-11-22 Werner Lemberg <wl@gnu.org>

Whitespace, typos, other minor issues.

2021-11-22 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftview] Show empty charmaps if error, including UVS.

\* src/ftcommon.c (get\_last\_char): Call `FT\_Set\_Charmap` and handle  
its errors effectively setting `num\_indices` to 0.

\* src/ftview.c (event\_index\_change, event\_encoding\_change): Updated.

2021-11-22 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftdump.c (Print\_Charmaps): Do not iterate UVS charmaps.

2021-11-20 Werner Lemberg <wl@gnu.org>

\* graph/\*.\*: Fix clang compilation warnings.

Add casts for signed vs. unsigned issues.

2021-11-20 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftview] Report the last shown index or charcode.

Together with the index or charcode

limit, it gives a sense of the

portion of the font under review. This is reported at the bottom-  
left corner.

\* src/ftview.c (main): Pass the last shown index instead of error.  
(Render\_\*): Return the last shown index, charcode, or -1.  
(write\_header): Receive and display the last shown index or charcode.

2021-11-18 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftcommon.c (get\_last\_char): Speed up sparse convergence.

2021-11-17 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftview] Report the last available index or charcode.

\* src/ftcommon.c (get\_last\_char): Implement the binary search for the last charcode using `FT\_Get\_Next\_Char`.  
(FTDemo\_Set\_Current\_Font): Set the number of indices accordingly.  
\* src/ftview.c (write\_header): Display the last charcode or index.

2021-11-17 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Complete removal of legacy blitter.

This switches the remaining monochrome rendering of headers to the main blender and deletes the legacy blitter. The old blitter can handle exotic target surfaces like monochrome or 4-bit bitmaps. Anything beyond the alpha blender can do.

\* graph/grfont.c (grWriteCellChar, grWriteCellString): Switch from `grBlitGlyphToBitmap` to `grBlitGlyphToSurface`.  
\* graph/grblit.[ch]: Delete files.  
\* graph/graph.h, graph/grconfig.h: Remove references.  
\* graph/rules.mk, graph/meson.build, vms\_make.com, builds/windows/msvc/migs.vcxproj: Update build scripts.

2021-11-15 Werner Lemberg <wl@gnu.org>

\* src/\*: Fix clang warnings.

All of them are minor and belong to one of the following categories:

\* signedness casts  
\* corrected `printf` signatures  
\* missing `static` keyword for local functions

2021-11-15 Werner Lemberg <wl@gnu.org>

[ftbench] Fix clang warnings.

\* src/ftbench.c (first\_index, last\_index): Make these two global variables signed, to be of the same type as `incr\_index` (which can be positive or negative).

Update all related code.

2021-11-15 Alexei Podtelezhnikov

<apodtele@gmail.com>

\* graph/win32/grwin32.c (gr\_win32\_surface\_set\_icon): Add background.

2021-11-15 Alexei Podtelezhnikov <apodtele@gmail.com>

Minor.

2021-11-12 Alexei Podtelezhnikov <apodtele@gmail.com>

[builds/windows] Use `props` to share dependencies.

Merges !12 from @ubawurinna.

\* builds/windows/msvc/ft2demos.props: Consolidate FreeType dependencies.

\* builds/windows/msvc/\*.vcxproj: Updated.

2021-10-31 Alexei Podtelezhnikov <apodtele@gmail.com>

[builds/windows] New project and solution files.

These files can be used to build selected FreeType demo programs using Microsoft Visual C++. FreeType should be compiled in the parallel folder with freetype.lib available in freetype\objs\ for compilation. The executables will be delivered into freetype-demos\bin\ and expect freetype.dll there as well.

\* builds/windows/msvc/ft2demos.sln: Solution file.

\* builds/windows/msvc/\*.vcxproj: Project files.

2021-10-26 Alexei Podtelezhnikov <apodtele@gmail.com>

\*

Makefile: Remove obsolete rule.

2021-10-26 Alexei Podtelezhnikov <apodtele@gmail.com>

\* Makefile: Reduce FT2\_BUILD\_FREETYPE usage

Public macro FT\_FACE\_DRIVER\_NAME utilized in d01c79af9838 makes FT2\_BUILD\_LIBRARY unnecessary in most cases.



\* src/ftinspect/ftinspect.pro: Ditto.

2021-10-23 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/grblit.c (grBlitClean): Fix warnings.

2021-10-22 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/grblit.c (grGetSaturation, grBlitClean): Dead fixes.

2021-10-22 Alexei Podtelezhnikov <apodtele@gmail.com>

Minor.

2021-10-22 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/grblit.c (grGetSaturation): Fix return value.

2021-10-22 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Avoid unnecessary memory zeroing.

\* graph/x11/grx11.c (gr\_x11\_surface\_init): Call `malloc` explicitly.

\* graph/grblit.c (grGetSaturation, grGetConversion): Call `malloc` and `memset` explicitly even though this code is unused.

2021-10-18

Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/grdevice.c (grWriteSurface{Char,String}): Use GR\_FONT\_SIZE.

2021-10-18 Alexei Podtelezhnikov <apodtele@gmail.com>

[graph] Do not zero a new bitmap.

The `grNewBitmap` function is mostly used to allocate and resize canvas, which is shortly flooded with a background color. There is no need to zero it.

\* graph/grobjs.c (grNewBitmap): Always call `realloc` directly, which does not initialize the buffer.

\* graph/grobjs.c (grNewBitmap): Update description.

2021-10-13 Hugh McMaster <hugh.mcmaster@outlook.com>

graph/x11/rules.mk: Use standard pkg-config variable naming

2021-10-13 Hugh McMaster <hugh.mcmaster@outlook.com>

graph/x11/rules.mk: Use pkg-config to find the X11 headers and library

2021-10-07 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftinspect/engine/engine.cpp: Include FT\_MODULE\_H.

Fixes #2.

2021-10-05 Jouk Jansen <joukj@hrem.stm.tudelft.nl>

\* vms\_make.com: Updated to include more demos.

2021-10-03 Alexei Podtelezhnikov <apodtele@gmail.com>

Synchronize with FreeType.

\* src/ftcommon.c (FTDemo\_Hinting\_Engine\_Change, FTDemo\_Get\_Info):

Use new public `FT\_FACE\_DRIVER\_NAME` macro.

\* src/ftdump.c (Print\_Type): Ditto.

\* src/ftdiff.c (process\_event, render\_state\_draw): Ditto.

\* src/ftinspect/engine/engine.cpp (loadFont): Ditto.

2021-10-01 Jouk Jansen <joukj@hrem.stm.tudelft.nl>

\* graph/grtypes.h [VMS]: Accomodate non-compliant C99.

2021-10-01 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/win32/grwin32.c (gr\_win32\_device\_init): Use neutral background.

2021-09-30 Jouk Jansen <joukj@hrem.stm.tudelft.nl>

\* vms\_make.com, src/mlgetopt.h [VMS]: Updated.

2021-09-30 Alexei Podtelezhnikov <apodtele@gmail.com>

\* graph/grtypes.h: Don't give up on <stdint.h>.

2021-09-16 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftdump.c (Print\_Name): Reformat font revision.

2021-09-10 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftdump.c

(Print\_Name): Ignore negative pre-epoch time.

2021-09-09 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftdump.c (Print\_Name): Avoid negative pre-epoch time.

2021-09-09 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftdump.c (Print\_Programs, Print\_Glyphs): Handle no-data glyphs.

2021-09-09 Alexei Podtelezhnikov <apodtele@gmail.com>

\* src/ftdump.c (Print\_Programs, Print\_Glyphs): Generalize messages.

2021-08-26 Alexei Podtelezhnikov <apodtele@gmail.com>

[ftstring] Loop through a custom string if present.

\* src/ftstring.c (Sample): Use the initial pointer for a custom string.

(parse\_cmdline): Assing the pointer here if any.

(event\_text\_change): Loop through the pointer if set.

(main): Minor tweak.

2021-07-24 Werner Lemberg <wl@gnu.org>

\* meson.build: Build `ttdebug`.

Problem reported by Andreas Radke <andreas.radke@mailbox.org>.

2021-07-24 Werner Lemberg <wl@gnu.org>

\* meson.build: Sort executable rules.

Found in path(s):

\* /opt/cola/permits/2148594610\_1727706026.1938062/0/freetype-2-13-2-dfsg-orig-ft2demos-tar-xz/ft2demos-2.13.2/ChangeLog

No license file was found, but licenses were detected in source scan.

/\*\*\*\*\*

\*

\* grx11.h graphics driver for X11 (header)

\*

\* This is the driver for displaying inside a window under X11,

\* used by the graphics utility of the FreeType test suite.

\*

\* Copyright (C) 1999-2023 by

\* Antoine Leca, David Turner, Robert Wilhelm, and Werner Lemberg.

\*

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\*\*\*\*\*/

Found in path(s):

\* /opt/cola/permits/2148594610\_1727706026.1938062/0/freetype-2-13-2-dfsg-orig-ft2demos-tar-xz/ft2demos-2.13.2/graph/x11/grx11.h

No license file was found, but licenses were detected in source scan.

/\*

\* This is a cheap replacement for getopt() because that routine is not  
\* available on some platforms and behaves differently on other platforms.  
\* This code was written from scratch without looking at any other  
\* implementation.

\*

\* This code is hereby expressly placed in the public domain.

\* mleisher@crl.nmsu.edu (Mark Leisher)

\* 10 October 1997

\*

\* Last update 2019-06-10.

\*/

Found in path(s):

\* /opt/cola/permits/2148594610\_1727706026.1938062/0/freetype-2-13-2-dfsg-orig-ft2demos-tar-xz/ft2demos-2.13.2/src/mlgetopt.c

## 1.346 usb-ids 2024.03.18-1

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Sun, 03 Feb 2019 11:50:47 +0100

It was downloaded from <http://www.linux-usb.org/usb-ids.html>

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## 1.347 apport 2.28.1-0ubuntu3.1

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## 1.349 libarchive 3.7.2-2ubuntu0.1

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Upstream-Name: liblz4

Upstream-Contact: Yann Collet <Cyan4973@github.com>

Source: <https://github.com/lz4/lz4>

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=====

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Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a

"work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

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A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the

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You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest



your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public

License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it

contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified

executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

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@subheading Preamble

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In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in



non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

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The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a ``work based on the library" and a ``work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

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such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

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The modified work must itself be a software library.

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You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

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You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

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If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has

a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

@end enumerate

These requirements apply to the modified work as a whole. If identifiable sections

of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

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This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

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You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

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A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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As an exception to the Sections above, you may also combine or link a ``work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

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Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable ``work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

@item

Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

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Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

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If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

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Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

@end enumerate

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

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Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

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Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

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## 1.366 base-files 13ubuntu10.1

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```

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Source code for a work means the preferred form of the work for making modifications to it. For an executable file, complete source code means all the source code for all modules it contains; but, as a special exception, it need not include source code for modules which are standard libraries that accompany the operating system on which the executable file runs, or for standard header files or definitions files that accompany that operating system.

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### Appendix: How to Apply These Terms to Your New Programs

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To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

```
<one line to give the program's name and a brief idea of what it does.>  
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```

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If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

```
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Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'.  
This is free software, and you are welcome to redistribute it  
under certain conditions; type `show c' for details.
```

The hypothetical commands `show w` and `show c` should show the appropriate parts of the General Public License.

Of course, the commands you use may be called something other than `show w` and `show c`; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (a program to direct compilers to make passes at assemblers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989  
Ty Coon, President of Vice

That's all there is to it!

The "Artistic License"

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The End

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concluded that weaker conditions might promote sharing better.

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"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation



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any

application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

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# 1.368 e2fsprogs 1.47.0-2.4~exp1ubuntu4.1

## 1.368.1 Available under license :

Index: tdbsa/tdb.c

-----  
--- tdbsa.orig/tdb.c

+++ tdbsa/tdb.c

@@ -4,11 +4,11 @@ Rev: 23371

Last Changed Date: 2007-06-06 20:14:06 -0400 (Wed, 06 Jun 2007)

\*/



/\*

- Unix SMB/CIFS implementation.
- + trivial database library - standalone version

- trivial database library - private includes

-

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Format: <https://www.debian.org/doc/packaging-manuals/copyright-format/1.0/>

Upstream-Name: e2fsprogs

Upstream-Contact: Theodore Ts'o <tytso@mit.edu>

Source: <http://sourceforge.net/projects/e2fsprogs>

Comment:

This is the Debian GNU/Linux prepackaged version of the EXT2 file system utilities (e2fsck, mke2fs, etc.). The EXT2 utilities were written by Theodore Ts'o <tytso@mit.edu> and Remy Card <card@masi.ibp.fr>.

Files: \*

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Files: lib/ext2fs/\*

lib/e2p/\*

lib/support/print\_fs\_flags.c

misc/e2fuzz.c

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1995-1999, 2002, 2004-2006 Theodore Ts'o <tytso@mit.edu>

1992-1994 Remy Card <card@masi.ibp.fr>

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2006, 2007 by Andreas Dilger <adilger@clusterfs.com>  
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August 26, 2011 Darrick J. Wong <djwong at us.ibm.com>

Reuse Bob Pearson's slice-by-8 implementation for e2fsprogs.

.

July 20, 2011 Bob Pearson <rpearson at systemfabricworks.com>

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Oct 15, 2000 Matt Domsch <Matt\_Domsch@dell.com>

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Files: e2fsck/\*

debugfs/do\_journal.c

debugfs/journal.\*

debugfs/logdump.c

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lib/support/plausible.c

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```
<one line to give the program's name and a brief idea of what it does.>  
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of author>
```

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```
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```



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<signature of Ty Coon>, 1 April 1989  
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<signature of Ty Coon>, 1 April 1990

Ty Coon, President of Vice

That's all there is to it!

```
#
# This is a Makefile stub which handles the creation of BSD shared
# libraries.
#
# In order to use this stub, the following makefile variables must be defined.
#
# BSDLIB_VERSION = 1.0
# BSDLIB_IMAGE = libce
# BSDLIB_MYDIR = et
# BSDLIB_INSTALL_DIR = $(SHLIBDIR)
#
```

```
all:: image
```

```
real-subdirs:: Makefile
```

```
@echo " MKDIR pic"
```

```
@mkdir -p pic
```

```
BSD_LIB = $(BSDLIB_IMAGE).so.$(BSDLIB_VERSION)
```

```
BSDLIB_PIC_FLAG = -fpic
```

```
image: $(BSD_LIB)
```

```
$(BSD_LIB): $(OBJS)
```

```
(cd pic; ld -Bshareable -o $(BSD_LIB) $(LDFLAGS_SHLIB) $(OBJS))
```

```
$(MV) pic/$(BSD_LIB) .
```

```
$(RM) -f ../$(BSD_LIB)
```

```
(cd ..; $(LN) $(LINK_BUILD_FLAGS) \
```

```
`echo $(my_dir) | sed -e 's;lib/;;' /$(BSD_LIB) $(BSD_LIB))
```

```
install-shlibs install:: $(BSD_LIB)
```

```
@echo " INSTALL_PROGRAM $(BSDLIB_INSTALL_DIR)/$(BSD_LIB)"
```

```
@$(INSTALL_PROGRAM) $(BSD_LIB) \
```

```
$(DESTDIR)$$(BSDLIB_INSTALL_DIR)/$(BSD_LIB)
```

```
@-$(LDCONFIG)
```

```
install-strip: install
```

```
install-shlibs-strip:: install-shlibs
```

```
uninstall-shlibs uninstall::
```

```
$(RM) -f $(DESTDIR)$$(BSDLIB_INSTALL_DIR)/$(BSD_LIB)
```

```
clean::
```

\$(RM)

-rf pic

\$(RM) -f \$(BSD\_LIB)

\$(RM) -f ../\$(BSD\_LIB)

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```
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under certain conditions; type `show c' for details.
```

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```
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at assemblers) written by James Hacker.
```

```
<signature of Ty Coon>, 1 April 1989
Ty Coon, President of Vice
```

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# 1.371 cpp 14-20240412-0ubuntu1

## 1.371.1 Available under license :

This is the Debian GNU/Linux prepackaged version of the GNU compiler collection, containing Ada, C, C++, D, Fortran 95, Go, Objective-C, Objective-C++, and Modula-2 compilers, documentation, and support libraries. In addition, Debian provides the gm2 compiler, either in the same source package, or built from a separate same source package. Packaging is done by the Debian GCC Maintainers <debian-gcc@lists.debian.org>, with sources obtained from:

ftp://gcc.gnu.org/pub/gcc/releases/ (for full releases)  
svn://gcc.gnu.org/svn/gcc/ (for prereleases)  
ftp://sourceware.org/pub/newlib/ (for newlib)  
git://git.savannah.gnu.org/gm2.git (for Modula-2)

The current gcc-14 source package is taken from the git gcc-14-branch.

Changes: See changelog.Debian.gz

Debian splits the GNU Compiler Collection into packages for each language, library, and documentation as follows:

Language	Compiler package	Library package	Documentation
Ada	gnat-14	libgnat-14	gnat-14-doc
C	gcc-14		gcc-14-doc
C++	g++-14	libstdc++6	libstdc++6-14-doc
D	gdc-14		
Fortran 95	gfortran-14	libgfortran5	gfortran-14-doc
Go	gccgo-14	libgo0	
Objective C	gobjc-14	libobjc4	
Objective C++	gobjc++-14		
Modula-2	gm2-14	libgm2	
Rust	gccrs-14		

For some language run-time libraries, Debian provides source files, development files, debugging symbols and libraries containing position-independent code in separate packages:



Language Sources    Development    Debugging    Position-Independent

-----  
C++                    libstdc++6-14-dbg libstdc++6-14-pic  
D    libphobos-14-dev

Additional packages include:

All languages:

libgcc1, libgcc2, libgcc4

    GCC intrinsics (platform-dependent)

gcc-14-base            Base files common to all compilers

gcc-14-soft-float      Software floating point (ARM only)

gcc-14-source          The sources with patches

Ada:

libgnat-util14-dev, libgnat-util14 GNAT version library

C:

cpp-14, cpp-14-doc      GNU C Preprocessor

libssp0-dev, libssp0    GCC stack smashing protection library

libquadmath0            Math routines for the \_\_float128 type

fixincludes             Fix non-ANSI header files

C, C++ and Fortran 95:

libgomp1-dev, libgomp1 GCC OpenMP (GOMP) support library

libitm1-dev, libitm1 GNU Transactional Memory Library

Biarch support: On some 64-bit platforms which can also run 32-bit code, Debian provides additional packages containing 32-bit versions of some libraries. These packages have names beginning with 'lib32' instead of 'lib', for example lib32stdc++6. Similarly, on some 32-bit platforms which can also run 64-bit code,

Debian provides additional packages with names beginning with 'lib64' instead of 'lib'. These packages contain 64-bit versions of the libraries. (At this time, not all platforms and not all libraries support biarch.) The license terms for these lib32 or lib64 packages are identical to the ones for the lib packages.

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- libatomic
- libdecnumber
- libgm2
- libgomp
- libgrust
- libitm
- libssp
- libstdc++-v3
- libobjc
- libgfortran
- The libgnat-14 Ada support library and libgnat-util14 library.
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Version 3.1, 31 March 2009

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Written by Tobias Burnus <burnus@net-b.de>

Contributions by Ulrich Drepper <drepper@gnu.ai.mit.edu>

Conversion to long double by Jakub Jelinek <jj@ultra.linux.cz>

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libquadmath/math:

atanq.c, expm1q.c, j0q.c, j1q.c, log1pq.c, logq.c:

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coshq.c, erfq.c, jnq.c, lgammaq.c, powq.c, roundq.c:

Changes for 128-bit \_\_float128 are

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libquadmath/math/

cosq\_kernel.c, expq.c, sincos\_table.c, sincosq.c, sincosq\_kernel.c,  
sinq\_kernel.c, truncq.c:

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Change for long double by Jakub Jelinek <jj@ultra.linux.cz>

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llroundq.c, lroundq.c, tgammaq.c:

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libquadmath/math/log10q.c:



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acoshq.c, acosq.c, asinhq.c, asinq.c, atan2q.c, atanhq.c, ceilq.c,  
copysignq.c, coshq.c, cosq.c, erfq.c, fabsq.c, finiteq.c, floorq.c,  
fmodq.c, frexpq.c, hypotq.c, ilogbq.c, isnanq.c, jnq.c, ldexpq.c,  
logbq.c, modfq.c, nearbyintq.c, nextafterq.c, powq.c, remainderq.c,  
rem\_pio2q.c, rintq.c, scalblnq.c, scalbnq.c, sinhq.c, sinq.c,  
tanhq.c, tanq.c, tanq\_kernel.c:

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libquadmath/math/  
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gcc/go/gofrontend, libgo:

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D:

```
gdc-14          GNU D Compiler
libphobos-14-dev      D standard runtime library
```

The D source package is made up of the following components.

The D front-end for GCC:

- d/\*

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The DMD Compiler implementation of the D programming language:  
- `d/dmd/*`

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The Zlib data compression library:  
- `zlib/*`

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The Phobos standard runtime library:  
- `libphobos/*`

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gcc/m2/gm2-libiberty:

gcc/m2/mc-boot/:

gcc/m2/mc-boot-ch/:

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gcc/m2/\*\*/\*.texi:

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gcc/m2/gm2-coroutines:

gcc/m2/gm2-libs:

gcc/m2/gm2-libs-min:

gcc/m2/gm2-libs-pim:

gcc/m2/gm2-libs-ch:

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Library module defined by the International Standard  
Information technology - programming languages  
BS ISO/IEC 10514-1:1996E Part 1: Modula-2, Base Language.

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libgm2/libpim/:

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libgm2/libmin/:

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newlib-X.Y.Z/:

Upstream

Authors:

newlib@sources.redhat.com

Jeff Johnston <jjohnstn@redhat.com>

Tom Fitzsimmons <fitzsim@redhat.com>

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- \* @version 3.0 (December 2000)
- \*
- \* Optimised ANSI C code for the Rijndael cipher (now AES)
- \*
- \* @author Vincent Rijmen <vincent.rijmen@esat.kuleuven.ac.be>
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# 1.381 snapd 2.63.1+24.04

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```
// -*- Mode: Go; indent-tabs-mode: t -*-
```

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/*
```

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*
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* along with this program. If not, see <http://www.gnu.org/licenses/>.
```

```
*
```

```
*/
```

```
package spdx
```

```
// From https://spdx.org/licenses/
```

```
// data files: https://github.com/spdx/license-list-data
```

```
// Version: 3.11 2020-11-25
```

```
//
```

```
// jq < json/licenses.json '.licenses | .[] | select(.isOsiApproved == true) | .licenseId' | sort | sed -e 's/$/,/'
```

```
//
```

```
//nolint:unused
```



```
var osi = []string{
    "0BSD",
    "AAL",
    "AFL-1.1",
    "AFL-1.2",
    "AFL-2.0",
    "AFL-2.1",
    "AFL-3.0",
    "AGPL-3.0",
    "AGPL-3.0-only",
    "AGPL-3.0-or-later",
    "Apache-1.1",
    "Apache-2.0",
    "APL-1.0",
    "APSL-1.0",
    "APSL-1.1",
    "APSL-1.2",
    "APSL-2.0",
    "Artistic-1.0",
    "Artistic-1.0-cl8",
    "Artistic-1.0-Perl",
    "Artistic-2.0",
    "BSD-1-Clause",
    "BSD-2-Clause",
    "BSD-2-Clause-Patent",
    "BSD-3-Clause",
    "BSD-3-Clause-LBNL",
    "BSL-1.0",
    "CAL-1.0",
    "CAL-1.0-Combined-Work-Exception",
    "CATOSL-1.1",
    "CDDL-1.0",
    "CECILL-2.1",
    "CNRI-Python",
    "CPAL-1.0",
    "CPL-1.0",
    "CUA-OPL-1.0",
    "ECL-1.0",
    "ECL-2.0",
    "EFL-1.0",
    "EFL-2.0",
    "Entessa",
    "EPL-1.0",
    "EPL-2.0",
    "EUDatagrid",
    "EUPL-1.1",
    "EUPL-1.2",
    "Fair",
```

"Frameworkx-1.0",  
"GPL-2.0",  
"GPL-2.0+",  
"GPL-2.0-only",  
"GPL-2.0-or-later",  
"GPL-3.0",  
"GPL-3.0+",  
"GPL-3.0-only",  
"GPL-3.0-or-later",  
"GPL-3.0-with-GCC-exception",  
"HPND",  
"Intel",  
"IPA",  
"IPL-1.0",  
"ISC",  
"LGPL-2.0",  
"LGPL-2.0+",  
"LGPL-2.0-only",  
"LGPL-2.0-or-later",  
"LGPL-2.1",  
"LGPL-2.1+",  
"LGPL-2.1-only",  
"LGPL-2.1-or-later",  
"LGPL-3.0",  
"LGPL-3.0+",  
"LGPL-3.0-only",  
"LGPL-3.0-or-later",  
"LiLiQ-P-1.1",  
"LiLiQ-R-1.1",  
"LiLiQ-Rplus-1.1",  
"LPL-1.0",  
"LPL-1.02",  
"LPPL-1.3c",  
"MirOS",  
"MIT",  
"MIT-0",  
"Motosoto",  
"MPL-1.0",  
"MPL-1.1",  
"MPL-2.0",  
"MPL-2.0-no-copyleft-exception",  
"MS-PL",  
"MS-RL",  
"MulanPSL-2.0",  
"Multics",  
"NASA-1.3",  
"Naumen",  
"NCSA",

```

"NGPL",
"Nokia",
"NPOSL-3.0",
"NTP",
"OCLC-2.0",
"OFL-1.1",
"OFL-1.1-no-RFN",
"OFL-1.1-RFN",
"OGTSL",
"OLDAP-2.8",
"OSET-PL-2.1",
"OSL-1.0",
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"OSL-2.1",
"OSL-3.0",
"PHP-3.0",
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"PostgreSQL",
"Python-2.0",
"QPL-1.0",
"RPL-1.1",
"RPL-1.5",
"RPSL-1.0",
"RSCPL",
"SimPL-2.0",
"SISSL",
"Sleepycat",
"SPL-1.0",
"UCL-1.0",
"Unicode-DFS-2016",
"Unlicense",
"UPL-1.0",
"VSL-1.0",
"W3C",
"Watcom-1.0",
"Xnet",
"Zlib",
"ZPL-2.0",
}

//
using SPDX license data:
// jq < json/licenses.json '.licenses | .[] | .licenseId' | sort | sed -e 's/$/,/'
var allLicenses = []string{
"OBSD",
"AAL",
"Abstyles",
"Adobe-2006",

```

"Adobe-Glyph",  
"ADSL",  
"AFL-1.1",  
"AFL-1.2",  
"AFL-2.0",  
"AFL-2.1",  
"AFL-3.0",  
"Afmparse",  
"AGPL-1.0",  
"AGPL-1.0-only",  
"AGPL-1.0-or-later",  
"AGPL-3.0",  
"AGPL-3.0-only",  
"AGPL-3.0-or-later",  
"Aladdin",  
"AMDPLPA",  
"AML",  
"AMPAS",  
"ANTLR-PD",  
"ANTLR-PD-fallback",  
"Apache-1.0",  
"Apache-1.1",  
"Apache-2.0",  
"APAFML",  
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"APSL-1.1",  
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"APSL-2.0",  
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"Artistic-1.0-cl8",  
"Artistic-1.0-Perl",  
"Artistic-2.0",  
"Bahyph",  
"Barr",  
"Beerware",  
"BitTorrent-1.0",  
"BitTorrent-1.1",  
"blessing",  
"BlueOak-1.0.0",  
"Borceux",  
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"BSD-2-Clause-Patent",  
"BSD-2-Clause-Views",  
"BSD-3-Clause",

"BSD-3-Clause-Attribution",  
"BSD-3-Clause-Clear",  
"BSD-3-Clause-LBNL",  
"BSD-3-Clause-No-Nuclear-License",  
"BSD-3-Clause-No-Nuclear-License-2014",  
"BSD-3-Clause-No-Nuclear-Warranty",  
"BSD-3-Clause-Open-MPI",  
"BSD-4-Clause",  
"BSD-4-Clause-UC",  
"BSD-Protection",  
"BSD-Source-Code",  
"BSL-1.0",  
"BUSL-1.1",  
"bzip2-1.0.5",  
"bzip2-1.0.6",  
"CAL-1.0",  
"CAL-1.0-Combined-Work-Exception",  
"Caldera",  
"CATOSL-1.1",  
"CC0-1.0",  
"CC-BY-1.0",  
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"CC-BY-2.5",  
"CC-BY-3.0",  
"CC-BY-3.0-AT",  
"CC-BY-3.0-US",  
"CC-BY-4.0",  
"CC-BY-NC-1.0",  
"CC-BY-NC-2.0",  
"CC-BY-NC-2.5",  
"CC-BY-NC-3.0",  
"CC-BY-NC-4.0",  
"CC-BY-NC-ND-1.0",  
"CC-BY-NC-ND-2.0",  
"CC-BY-NC-ND-2.5",  
"CC-BY-NC-ND-3.0",  
"CC-BY-NC-ND-3.0-IGO",  
"CC-BY-NC-ND-4.0",  
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"CC-BY-NC-SA-2.0",  
"CC-BY-NC-SA-2.5",  
"CC-BY-NC-SA-3.0",  
"CC-BY-NC-SA-4.0",  
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"CC-BY-ND-2.5",  
"CC-BY-ND-3.0",  
"CC-BY-ND-4.0",

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"CC-BY-SA-2.0-UK",  
"CC-BY-SA-2.5",  
"CC-BY-SA-3.0",  
"CC-BY-SA-3.0-AT",  
"CC-BY-SA-4.0",  
"CC-PDDC",  
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"CDDL-1.1",  
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"CDLA-Sharing-1.0",  
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"CECILL-1.1",  
"CECILL-2.0",  
"CECILL-2.1",  
"CECILL-B",  
"CECILL-C",  
"CERN-OHL-1.1",  
"CERN-OHL-1.2",  
"CERN-OHL-P-2.0",  
"CERN-OHL-S-2.0",  
"CERN-OHL-W-2.0",  
"CIArtistic",  
"CNRI-Jython",  
"CNRI-Python",  
"CNRI-Python-GPL-Compatible",  
"Condor-1.1",  
"copyleft-next-0.3.0",  
"copyleft-next-0.3.1",  
"CPAL-1.0",  
"CPL-1.0",  
"CPOL-1.02",  
"Crossword",  
"CrystalStacker",  
"CUA-OPL-1.0",  
"Cube",  
"curl",  
"D-FSL-1.0",  
"diffmark",  
"DOC",  
"Dotseqn",  
"DSDP",  
"dvi2pdf",  
"ECL-1.0",  
"ECL-2.0",  
"eCos-2.0",  
"EFL-1.0",

"EFL-2.0",  
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"Entessa",  
"EPICS",  
"EPL-1.0",  
"EPL-2.0",  
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FIXME: non SPDX licenses that the snapstore uses
"Proprietary",
}

// from
https://www.google.com/url?q=https://docs.google.com/a/s.sfusd.edu/document/d/1wE_zvLU4c291ACi9wIJmQoE4ltKRW4rzM1TYiIvEVOs/edit?pli%3D1%23heading%3Dh.ruv3y18g6czd&sa=D&ust=1473291615601000&usg=AFQjCNFyLcPLdEarX1TOesGWxg9Afb57mA
var
licenseExceptions = []string{
"Autoconf-exception-2.0",
"Autoconf-exception-3.0",
"Bison-exception-2.2",
"Classpath-exception-2.0",
"eCos-exception-2.0",
"Font-exception-2.0",
"GCC-exception-2.0",
"GCC-exception-3.1",
"WxWindows-exception-3.1",
}

```

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package notify

```
import (  
    "fmt"  
    "strings"  
)
```

```
// FilePermission is a bit-mask of apparmor permissions in relation to files.
```

```
// It is applicable to messages with the class of AA_CLASS_FILE.
```

```
type FilePermission uint32
```

```
const (  
    // AA_MAY_EXEC implies that a process has a permission to execute another
```

```
    // program. The specific details of the program are not conveyed.
```

```
    AA_MAY_EXEC FilePermission = 1 << iota
```

```
    // AA_MAY_WRITE implies that a process may write to a file or socket, or  
    // may modify directory contents.
```

```
    AA_MAY_WRITE
```

```
    // AA_MAY_READ implies that a process may read from a file or socket, or  
    // may enumerate directory contents.
```

```
    AA_MAY_READ
```

```
    // AA_MAY_APPEND implies that a process may open a file in append mode.
```

```
    AA_MAY_APPEND
```

```
    // AA_MAY_CREATE implies that a process may create a new file.
```

```
    AA_MAY_CREATE
```

```
    // AA_MAY_DELETE implies that a process may delete a file, directory,  
    // symbolic link or socket.
```

```
    AA_MAY_DELETE
```

```
    // AA_MAY_OPEN implies that a process may open a file or directory.
```

```
    The
```

```
    // additional presence of AA_MAY_WRITE or AA_MAY_READ grants specific type  
    // of access.
```

```
    AA_MAY_OPEN
```

```
    // AA_MAY_RENAME implies that a process may rename a file.
```

```

AA_MAY_RENAME
// AA_MAY_SETATTR is not checked by the kernel.
AA_MAY_SETATTR
// AA_MAY_GETATTR is not checked by the kernel.
AA_MAY_GETATTR
// AA_MAY_SETCRED is not used in the kernel.
AA_MAY_SETCRED
// AA_MAY_GETCRED is not used in the kernel.
AA_MAY_GETCRED
// AA_MAY_CHMOD implies that a process may change UNIX file permissions.
AA_MAY_CHMOD
// AA_MAY_CHOWN implies that a process may change file ownership.
AA_MAY_CHOWN
// AA_MAY_CHGRP implies that a process may change the group ownership of a
// file. The C-level macro is not defined in any userspace header but is
// already supported and reported by the kernel.
AA_MAY_CHGRP
// AA_MAY_LOCK implies that a process may perform fcntl locking operations
// on a file.
AA_MAY_LOCK
// AA_EXEC_MMAP implies that a process may execute code from an page
//
memory-mapped from a file.
AA_EXEC_MMAP

// There are additional permissions defined in the kernel but it seems some
// of those are unused and their exact scope and meaning is unclear.

// AA_MAY_LINK implies that a process may create a hard link. Their
// associated file information describes the hard link name, not the
// original file.
AA_MAY_LINK FilePermission = 1 << 18
// AA_MAY_ONEXEC implies that a process may change the apparmor profile on
// the next exec call.
AA_MAY_ONEXEC FilePermission = 1 << 29
// AA_MAY_CHANGE_PROFILE implies that a process may change the apparmor
// profile on demand.
AA_MAY_CHANGE_PROFILE FilePermission = 1 << 30
)

const filePermissionMask = (AA_MAY_EXEC | AA_MAY_WRITE | AA_MAY_READ |
AA_MAY_APPEND | AA_MAY_CREATE | AA_MAY_DELETE | AA_MAY_OPEN |
AA_MAY_RENAME | AA_MAY_SETATTR | AA_MAY_GETATTR | AA_MAY_SETCRED |
AA_MAY_GETCRED | AA_MAY_CHMOD | AA_MAY_CHOWN | AA_MAY_CHGRP |
AA_MAY_LOCK | AA_EXEC_MMAP | AA_MAY_LINK | AA_MAY_ONEXEC |
AA_MAY_CHANGE_PROFILE)

//

```

String returns readable representation of the file permission value.

```
func (p FilePermission) String() string {
    frags := make([]string, 0, 21)
    if p&AA_MAY_EXEC != 0 {
        frags = append(frags, "execute")
    }
    if p&AA_MAY_WRITE != 0 {
        frags = append(frags, "write")
    }
    if p&AA_MAY_READ != 0 {
        frags = append(frags, "read")
    }
    if p&AA_MAY_APPEND != 0 {
        frags = append(frags, "append")
    }
    if p&AA_MAY_CREATE != 0 {
        frags = append(frags, "create")
    }
    if p&AA_MAY_DELETE != 0 {
        frags = append(frags, "delete")
    }
    if p&AA_MAY_OPEN != 0 {
        frags = append(frags, "open")
    }
    if p&AA_MAY_RENAME != 0 {
        frags = append(frags, "rename")
    }
    if p&AA_MAY_SETATTR != 0 {
        frags = append(frags, "set-attr")
    }
    if p&AA_MAY_GETATTR != 0 {
        frags = append(frags, "get-attr")
    }
    if p&AA_MAY_SETCRED != 0 {
        frags = append(frags, "set-cred")
    }
    if p&AA_MAY_GETCRED != 0 {
        frags = append(frags, "get-cred")
    }
    if p&AA_MAY_CHMOD != 0 {
        frags = append(frags, "change-mode")
    }
    if
    p&AA_MAY_CHOWN != 0 {
        frags = append(frags, "change-owner")
    }
    if p&AA_MAY_CHGRP != 0 {
        frags = append(frags, "change-group")
    }
}
```



```

}
if p&AA_MAY_LOCK != 0 {
    frags = append(frags, "lock")
}
if p&AA_EXEC_MMAP != 0 {
    frags = append(frags, "execute-map")
}
if p&AA_MAY_LINK != 0 {
    frags = append(frags, "link")
}
if p&AA_MAY_ONEXEC != 0 {
    frags = append(frags, "change-profile-on-exec")
}
if p&AA_MAY_CHANGE_PROFILE != 0 {
    frags = append(frags, "change-profile")
}
if residue := p & ^filePermissionMask; residue != 0 {
    frags = append(frags, fmt.Sprintf("%#x", uint(residue)))
}
if len(frags) == 0 {
    return "none"
}
return strings.Join(frags, "|")
}

// IsValid returns true if the given file permission contains only known bits set.
func (p FilePermission) IsValid() bool {
    return p & ^filePermissionMask == 0
}

```

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Gocheck - A rich testing framework for Go

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tomb - support for clean goroutine termination in Go.

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(For example, a function in a library to compute square roots has

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6.

Any executables

containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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# 1.390 netplan-io 1.0.1-1ubuntu2~24.04.1

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```
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## 1.391 hwdata 0.379-1

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```
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```

<signature of Ty Coon>, 1 April 1989

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## BSD-specific setup (FreeBSD, OpenBSD, NetBSD, *BSD)
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## Commands to generate dependency files
GEN_DEPS.c= $(CC) -E -MM $(DEFS) $(CPPFLAGS)
GEN_DEPS.cc= $(CXX) -E -MM $(DEFS) $(CPPFLAGS)

## Flags for position independent code
SHAREDLIBCFLAGS = -fPIC
SHAREDLIBCXXFLAGS = -fPIC
SHAREDLIBCPPFLAGS = -DPIC

## Additional flags when building libraries and with threads
THREADSCPPFLAGS = -D_REENTRANT
LIBCPPFLAGS =

## Compiler switch to embed a runtime search path
LD_RPATH=
LD_RPATH_PRE= -Wl,-rpath,

## Compiler switch to embed a library name
LD_SONAME = -Wl,-soname -Wl,$(notdir $(MIDDLE_SO_TARGET))

## Shared library options
LD_SOOPTIONS= -Wl,-Bsymbolic
```

```

## Shared object suffix
SO = so
## Non-shared intermediate object suffix
STATIC_O = ao

## Compilation
rules
%. $(STATIC_O): $(srcdir)/%.c
$(COMPILE.c) $(STATICCPPFLAGS) $(STATICCFLAGS) -o $@ $<
%.o: $(srcdir)/%.c
$(COMPILE.c) $(DYNAMICCPPFLAGS) $(DYNAMICCFLAGS) -o $@ $<

%. $(STATIC_O): $(srcdir)/%.cpp
$(COMPILE.cc) $(STATICCPPFLAGS) $(STATICCXXFLAGS) -o $@ $<
%.o: $(srcdir)/%.cpp
$(COMPILE.cc) $(DYNAMICCPPFLAGS) $(DYNAMICCXXFLAGS) -o $@ $<

## Dependency rules
%.d: $(srcdir)/%.c
@echo "generating dependency information for $<"
@$(SHELL) -ec '$(GEN_DEPS.c) $< \
| sed "s^\($*\)\.o[ :]*^1.o $@ : /g\" > $@; \
[ -s $@ ] || rm -f $@'

%.d: $(srcdir)/%.cpp
@echo "generating dependency information for $<"
@$(SHELL) -ec '$(GEN_DEPS.cc) $< \
| sed "s^\($*\)\.o[ :]*^1.o $@ : /g\" > $@; \
[ -s $@ ] || rm -f $@'

## Versioned libraries rules

%. $(SO).$(SO_TARGET_VERSION_MAJOR): %. $(SO).$(SO_TARGET_VERSION)
$(RM) $@ && ln -s ${<F} $@
%. $(SO): %. $(SO).$(SO_TARGET_VERSION_MAJOR)
$(RM) $@ && ln -s ${*F}. $(SO).$(SO_TARGET_VERSION) $@

## Bind internal references

# LDflags that pkgdata will use
BIR_LDFLAGS= -Wl,-Bsymbolic

# Dependencies [i.e. map files] for the final library
BIR_DEPS=

## Remove shared library 's'

```

STATIC\_PREFIX\_WHEN\_USED =

STATIC\_PREFIX =

## End BSD-specific setup

# 1.393 ieee-data 20220827.1

## 1.393.1 Available under license :

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# 1.394 python-setuptools 68.1.2-2ubuntu1.1

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=====

Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see <http://www.cwi.nl>) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <http://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations (now Zope Corporation, see <http://www.zope.com>). In 2001, the Python Software Foundation (PSF, see <http://www.python.org/psf/>) was formed, a

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1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
2.0.1	2.0+1.6.1	2001	PSF	yes
2.1.1	2.1+2.0.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3	2.1.2	2002	PSF	yes
2.2 and above				
2.1.1	2001-now	PSF		yes

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#### A. HISTORY OF THE SOFTWARE

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Python was created in the early 1990s by Guido van Rossum at Stichting Mathematisch Centrum (CWI, see <http://www.cwi.nl>) in the Netherlands as a successor of a language called ABC. Guido remains Python's principal author, although it includes many contributions from others.

In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <http://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations, which became Zope Corporation. In 2001, the Python Software Foundation (PSF, see <https://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation was a sponsoring member of the PSF.

All

Python releases are Open Source (see <http://www.opensource.org> for the Open Source Definition). Historically, most, but not all, Python releases have also been GPL-compatible; the table below summarizes the various releases.

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0.9.0 thru 1.2		1991-1995	CWI	yes
1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
2.0.1	2.0+1.6.1	2001	PSF	yes
2.1.1	2.1+2.0.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3	2.1.2	2002	PSF	yes

2.2 and above 2.1.1 2001-now  
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```
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```

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- <https://github.com/abravalheri/validate-pyproject/issues>

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`fastjsonschema`

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`validate-pyproject`

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In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <https://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations, which became Zope Corporation. In 2001, the Python Software Foundation (PSF, see <https://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation was a sponsoring member of the PSF.

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1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
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2.1.2	2.1.1	2002	PSF	yes
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Although the Lesser General Public License is Less protective of the

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- a) Accompany



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<one line to give the library's name and a brief idea of what it does.>  
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<signature of Ty Coon>, 1 April 1990  
Ty Coon, President of Vice

That's all there is to it!

---

title: Supermicro BMC License

---

## Introduction

While all newer (some X10, all X11 and H12 series) mainboard for Supermicro support Redfish some features are only available after buying them as additional feature. One of those are applying BIOS and BMC firmware updates.

## Details

If you want to update your Supermicro board via redfish using fwupd you will need either the [SFT-OOB-LIC](https://store.supermicro.com/out-of-band-sft-oob-lic.html) or the [SFT-DCMS-Single](https://store.supermicro.com/supermicro-server-manager-dcms-license-key-sft-dcms-single.html) license.

The license can be installed via redfish by POSTing it to `~/redfish/v1/Managers/1/LicenseManager/ActivateLicense``, using the web interface or using the `~/contrib/upload-smc-license.py`` If the license is not installed fwupd will add the `FWUPD_DEVICE_PROBLEM_MISSING_LICENSE` flag to the device.

# 1.398 initramfs-tools 0.142ubuntu25.2

## 1.398.1 Available under license :

This package was debianized by Jeff Bailey <jbailey@ubuntu.com> on Thu, 27 Jan 2005 15:23:52 -0500.

The current Debian maintainer are maximilian attems <maks@debian.org> and Michael Prokop <mika@debian.org>.

The current ubuntu release can be found at:  
<http://archive.ubuntu.com/ubuntu/pool/main/i/initramfs-tools/>

The Debian tree is maintained with "git" at:  
<https://anonscm.debian.org/git/kernel/initramfs-tools.git>  
<https://anonscm.debian.org/cgit/kernel/initramfs-tools.git>

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# 1.399 llvm-toolchain-18 18.1.3-1ubuntu1

## 1.399.1 Available under license :

; NOTE: Assertions have been autogenerated by utils/update\_llc\_test\_checks.py

; RUN: llc < %s -mtriple=aarch64-- | FileCheck %s

; A shuffle mask with all undef elements is always legal.

```
define <4 x i32> @PR41535(<2 x i32> %p1, <2 x i32> %p2) {
```

```
; CHECK-LABEL: PR41535:
```

```
; CHECK: // %bb.0:
```

```
; CHECK-NEXT: ext v0.8b, v0.8b, v1.8b, #4
```

```
; CHECK-NEXT: mov v0.d[1], v0.d[0]
```

```
; CHECK-NEXT: ret
```

```
%cat1 = shufflevector <2 x i32> %p1, <2 x i32> undef, <4 x i32> <i32 undef, i32 1, i32 undef, i32 undef>
```

```
%cat2 = shufflevector <2 x i32> %p2, <2 x i32> undef, <4 x i32> <i32 0, i32 undef, i32 undef, i32 undef>
```

```
%r = shufflevector <4 x i32> %cat1, <4 x i32> %cat2, <4 x i32> <i32 undef, i32 undef, i32 1, i32 4>
```

```
ret <4 x i32> %r
```

```
}
```

; NOTE: Assertions have been autogenerated by utils/update\_llc\_test\_checks.py

; RUN: llc -mtriple=amdgcncpu=fiji < %s | FileCheck -enable-var-scope --check-prefixes=GCN,GCN-SAFE,VI,VI-SAFE %s

; RUN: llc -enable-no-signed-zeros-fp-math -mtriple=amdgcncpu=fiji < %s | FileCheck -enable-var-scope --check-prefixes=GCN,GCN-NSZ,VI,VI-NSZ %s

```
;-----
```

```
; rcp tests
```

```
;-----
```

```
define half @v_fneg_rcp_f16(half %a) #0 {
```

```
; GCN-LABEL: v_fneg_rcp_f16:
```

```
; GCN: ; %bb.0:
```

```
; GCN-NEXT: s_waitcnt vmcnt(0) expcnt(0) lgkmcnt(0)
```

```
; GCN-NEXT: v_rcp_f16_e64 v0, -v0
```

```
; GCN-NEXT: s_setpc_b64 s[30:31]
```

```
%rcp = call half @llvm.amdgcncpu.fiji.rcp.f16(half %a)
```

```
%fneg = fneg half %rcp
```

```
ret half %fneg
```

```
}
```

```
define half @v_fneg_rcp_fneg_f16(half %a) #0 {
```

```
; GCN-LABEL: v_fneg_rcp_fneg_f16:
```

```
; GCN: ; %bb.0:
```

```
; GCN-NEXT: s_waitcnt vmcnt(0) expcnt(0) lgkmcnt(0)
```

```
; GCN-NEXT:
```

```

    v_rcp_f16_e32 v0, v0
; GCN-NEXT:  s_setpc_b64 s[30:31]
    %fneg.a = fneg half %a
    %rcp = call half @llvm.amdgcn.rcp.f16(half %fneg.a)
    %fneg = fneg half %rcp
    ret half %fneg
}

define { half, half } @v_fneg_rcp_store_use_fneg_f16(half %a) #0 {
; GCN-LABEL: v_fneg_rcp_store_use_fneg_f16:
; GCN:      ; %bb.0:
; GCN-NEXT:  s_waitcnt vmcnt(0) expcnt(0) lgkmcnt(0)
; GCN-NEXT:  v_rcp_f16_e32 v2, v0
; GCN-NEXT:  v_xor_b32_e32 v1, 0x8000, v0
; GCN-NEXT:  v_mov_b32_e32 v0, v2
; GCN-NEXT:  s_setpc_b64 s[30:31]
    %fneg.a = fneg half %a
    %rcp = call half @llvm.amdgcn.rcp.f16(half %fneg.a)
    %fneg = fneg half %rcp
    %insert.0 = insertvalue { half, half } poison, half %fneg, 0
    %insert.1 = insertvalue { half, half } %insert.0, half %fneg.a, 1
    ret { half, half } %insert.1
}

define { half, half } @v_fneg_rcp_multi_use_fneg_f16(half %a, half %c) #0 {
; GCN-LABEL: v_fneg_rcp_multi_use_fneg_f16:
; GCN:      ; %bb.0:
; GCN-NEXT:  s_waitcnt vmcnt(0) expcnt(0) lgkmcnt(0)
; GCN-NEXT:
    v_rcp_f16_e32 v2, v0
; GCN-NEXT:  v_mul_f16_e64 v1, -v0, v1
; GCN-NEXT:  v_mov_b32_e32 v0, v2
; GCN-NEXT:  s_setpc_b64 s[30:31]
    %fneg.a = fneg half %a
    %rcp = call half @llvm.amdgcn.rcp.f16(half %fneg.a)
    %fneg = fneg half %rcp
    %use1 = fmul half %fneg.a, %c
    %insert.0 = insertvalue { half, half } poison, half %fneg, 0
    %insert.1 = insertvalue { half, half } %insert.0, half %use1, 1
    ret { half, half } %insert.1
}

; -----
; sin tests
; -----

define half @v_fneg_amdgcn_sin_f16(half %a) #0 {
; GCN-LABEL: v_fneg_amdgcn_sin_f16:

```



```

; GCN:      ; %bb.0:
; GCN-NEXT: s_waitcnt vmcnt(0) expcnt(0) lgkmcnt(0)
; GCN-NEXT: v_sin_f16_e64 v0, -v0
; GCN-NEXT: s_setpc_b64 s[30:31]
%sin = call half @llvm.amdgcn.sin.f16(half %a)
%fneg = fneg half %sin
ret half %fneg
}

;-----
;
vintrp tests
;-----

define { float, float } @v_fneg_interp_p1_f16(float %a, float %b) #0 {
; GCN-LABEL: v_fneg_interp_p1_f16:
; GCN:      ; %bb.0:
; GCN-NEXT: s_waitcnt vmcnt(0) expcnt(0) lgkmcnt(0)
; GCN-NEXT: v_mul_f32_e64 v1, v0, -v1
; GCN-NEXT: s_mov_b32 m0, 0
; GCN-NEXT: s_setreg_imm32_b32 hwreg(HW_REG_MODE, 2, 2), 3
; GCN-NEXT: v_interp_p1ll_f16 v0, v1, attr0.x
; GCN-NEXT: v_interp_p1ll_f16 v1, v1, attr0.y
; GCN-NEXT: s_setpc_b64 s[30:31]
%mul = fmul float %a, %b
%fneg = fneg float %mul
%intrp0 = call float @llvm.amdgcn.interp.p1.f16(float %fneg, i32 0, i32 0, i1 false, i32 0)
%intrp1 = call float @llvm.amdgcn.interp.p1.f16(float %fneg, i32 1, i32 0, i1 false, i32 0)
%insert.0 = insertvalue { float, float } poison, float %intrp0, 0
%insert.1 = insertvalue { float, float } %insert.0, float %intrp1, 1
ret { float, float } %insert.1
}

define
{ half, half } @v_fneg_interp_p2_f16(float %a, float %b) #0 {
; GCN-LABEL: v_fneg_interp_p2_f16:
; GCN:      ; %bb.0:
; GCN-NEXT: s_waitcnt vmcnt(0) expcnt(0) lgkmcnt(0)
; GCN-NEXT: v_mul_f32_e64 v1, v0, -v1
; GCN-NEXT: v_mov_b32_e32 v2, 4.0
; GCN-NEXT: s_mov_b32 m0, 0
; GCN-NEXT: s_setreg_imm32_b32 hwreg(HW_REG_MODE, 2, 2), 3
; GCN-NEXT: v_interp_p2_f16 v0, v1, attr0.x, v2
; GCN-NEXT: v_interp_p2_f16 v1, v1, attr0.y, v2
; GCN-NEXT: s_setpc_b64 s[30:31]
%mul = fmul float %a, %b
%fneg = fneg float %mul
%intrp0 = call half @llvm.amdgcn.interp.p2.f16(float 4.0, float %fneg, i32 0, i32 0, i1 false, i32 0)

```

```

%intrap1 = call half @llvm.amdgcn.interp.p2.f16(float 4.0, float %fneg, i32 1, i32 0, i1 false, i32 0)
%insert.0 = insertvalue { half, half } poison, half %intrap0, 0
%insert.1 = insertvalue { half, half } %insert.0, half %intrap1, 1
ret { half, half } %insert.1
}

```

```

;-----
;
; arithmetic.fence tests
;-----

```

```

; FIXME: Legalization/promote is broken
define half @v_fneg_arithmetic_fence_f16(half %a) #0 {
; GCN-LABEL: v_fneg_arithmetic_fence_f16:
; GCN:      ; %bb.0:
; GCN-NEXT: ; ARITH_FENCE
; GCN-NEXT: s_waitcnt vmcnt(0) expcnt(0) lgkmcnt(0)
; GCN-NEXT: v_xor_b32_e32 v0, 0x8000, v0
; GCN-NEXT: s_setpc_b64 s[30:31]
% fence = call half @llvm.arithmetic.fence.f16(half %a)
%fneg = fneg half %fence
ret half %fneg
}

```

```

define half @v_fneg_arithmetic_fence_fmuls_f16(half %a, half %b) #0 {
; GCN-LABEL: v_fneg_arithmetic_fence_fmuls_f16:
; GCN:      ; %bb.0:
; GCN-NEXT: s_waitcnt vmcnt(0) expcnt(0) lgkmcnt(0)
; GCN-NEXT: v_mul_f16_e32 v0, v0, v1
; GCN-NEXT: ; ARITH_FENCE
; GCN-NEXT: v_xor_b32_e32 v0, 0x8000, v0
; GCN-NEXT: s_setpc_b64 s[30:31]
%mul = fmul half %a, %b
% fence = call half @llvm.arithmetic.fence.f16(half %mul)
%fneg = fneg half %fence
ret half
%fneg
}

```

```

declare half @llvm.amdgcn.rcp.f16(half) #1
declare half @llvm.amdgcn.sin.f16(half) #1
declare half @llvm.arithmetic.fence.f16(half) #1
declare float @llvm.amdgcn.interp.p1.f16(float, i32, i32, i1, i32) #0
declare half @llvm.amdgcn.interp.p2.f16(float, float, i32, i32, i1, i32) #0

```

```

attributes #0 = { nounwind "denormal-fp-math-f32"="preserve-sign,preserve-sign" }

```

```

attributes #1 = { nounwind readnone }

```

```

attributes #2 = { nounwind "unsafe-fp-math"="true" }

```

```

attributes #3 = { nounwind "no-signed-zeros-fp-math"="true" }
attributes #4 = { nounwind "amdgpu-ieee"="false" "denormal-fp-math-f32"="preserve-sign,preserve-sign" }
;; NOTE: These prefixes are unused and the list is autogenerated. Do not add tests below this line:
; GCN-NSZ: {{.*}}
; GCN-SAFE: {{.*}}
; VI: {{.*}}
; VI-NSZ: {{.*}}
; VI-SAFE: {{.*}}
; NOTE: Assertions have been autogenerated by utils/update_test_checks.py UTC_ARGS: --function-signature --
check-attributes --check-globals
; RUN: opt -aa-pipeline=basic-aa -passes=attributor -attributor-manifest-internal -attributor-annotate-decl-cs -S <
%s | FileCheck %s --check-prefixes=CHECK,TUNIT
; RUN: opt -aa-pipeline=basic-aa -passes=attributor-cgsc -attributor-manifest-internal -attributor-annotate-decl-cs -
S < %s | FileCheck %s --check-prefixes=CHECK,CGSCC
; Test that we only promote arguments when the caller/callee have compatible
; function attributes.

```

```
target triple = "x86_64-unknown-linux-gnu"
```

```

; This should promote
define internal fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer512(ptr %arg, ptr
readonly %arg1) #0 {
;
; CHECK: Function Attrs: inlinehint mustprogress norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; CHECK-LABEL: define {{{^@+}}}@callee_avx512_legal512_prefer512_call_avx512_legal512_prefer512
; CHECK-SAME:
(ptr noalias nocapture norecurse noundef nonnull writeonly align 64 dereferenceable(64) [[ARG:.*]], <8 x i64>
[[TMP0:.*]]) #[[ATTR0:[0-9]+]] {
; CHECK-NEXT: bb:
; CHECK-NEXT: [[ARG1_PRIV:.*]] = alloca <8 x i64>, align 64
; CHECK-NEXT: store <8 x i64> [[TMP0]], ptr [[ARG1_PRIV]], align 64
; CHECK-NEXT: [[TMP:.*]] = load <8 x i64>, ptr [[ARG1_PRIV]], align 64
; CHECK-NEXT: store <8 x i64> [[TMP]], ptr [[ARG]], align 64
; CHECK-NEXT: ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

```

```

define void @avx512_legal512_prefer512_call_avx512_legal512_prefer512(ptr %arg) #0 {
;
; TUNIT: Function Attrs: inlinehint mustprogress norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; TUNIT-LABEL: define {{{^@+}}}@avx512_legal512_prefer512_call_avx512_legal512_prefer512
; TUNIT-SAME: (ptr nocapture norecurse writeonly [[ARG:.*]]) #[[ATTR0]] {

```

```

; TUNIT-NEXT: bb:
; TUNIT-NEXT:  [[TMP:%.*]] = alloca <8 x i64>, align
32
; TUNIT-NEXT:  [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT:  call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 32
dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5:[0-9]+]]
; TUNIT-NEXT:  [[TMP0:%.*]] = load <8 x i64>, ptr [[TMP]], align 64
; TUNIT-NEXT:  call fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer512(ptr
noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], <8 x i64>
[[TMP0]]) #[[ATTR6:[0-9]+]]
; TUNIT-NEXT:  [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; TUNIT-NEXT:  store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; TUNIT-NEXT:  ret void
;
; CGSCC: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; CGSCC-LABEL: define {[^@+]}@avx512_legal512_prefer512_call_avx512_legal512_prefer512
; CGSCC-SAME: (ptr nocapture
nofree noundef nonnull writeonly align 2 dereferenceable(64) [[ARG:%.*]]) #[[ATTR0]] {
; CGSCC-NEXT: bb:
; CGSCC-NEXT:  [[TMP:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT:  [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT:  call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 64
dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5:[0-9]+]]
; CGSCC-NEXT:  [[TMP0:%.*]] = load <8 x i64>, ptr [[TMP]], align 64
; CGSCC-NEXT:  call fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer512(ptr
noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], <8 x i64>
[[TMP0]]) #[[ATTR6:[0-9]+]]
; CGSCC-NEXT:  [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; CGSCC-NEXT:  store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; CGSCC-NEXT:  ret void
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align 32
call void
@llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
call fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer512(ptr %tmp2, ptr %tmp)
%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2
ret void
}

; This should promote
define internal fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer256(ptr %arg, ptr
readonly %arg1) #1 {
;
; CHECK: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:

```

```

readwrite) uwtable
; CHECK-LABEL: define {{{^@+}}}@callee_avx512_legal512_prefer256_call_avx512_legal512_prefer256
; CHECK-SAME: (ptr noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64)
[[ARG:%.*]], <8 x i64> [[TMP0:%.*]]) #[[ATTR1:[0-9]+]] {
; CHECK-NEXT: bb:
; CHECK-NEXT: [[ARG1_PRIV:%.*]] = alloca <8 x i64>, align 64
; CHECK-NEXT: store <8 x i64> [[TMP0]], ptr [[ARG1_PRIV]], align 64
; CHECK-NEXT: [[TMP:%.*]] = load <8 x
i64>, ptr [[ARG1_PRIV]], align 64
; CHECK-NEXT: store <8 x i64> [[TMP]], ptr [[ARG]], align 64
; CHECK-NEXT: ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx512_legal512_prefer256_call_avx512_legal512_prefer256(ptr %arg) #1 {
;
; TUNIT: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; TUNIT-LABEL: define {{{^@+}}}@avx512_legal512_prefer256_call_avx512_legal512_prefer256
; TUNIT-SAME: (ptr nocapture nofree writeonly [[ARG:%.*]]) #[[ATTR1]] {
; TUNIT-NEXT: bb:
; TUNIT-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT: [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT: call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 32
dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]
; TUNIT-NEXT: [[TMP0:%.*]] = load <8 x i64>, ptr [[TMP]], align 64
; TUNIT-NEXT:
call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer256(ptr noalias nocapture
nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], <8 x i64> [[TMP0]]) #[[ATTR6]]
; TUNIT-NEXT: [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; TUNIT-NEXT: store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; TUNIT-NEXT: ret void
;
; CGSCC: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; CGSCC-LABEL: define {{{^@+}}}@avx512_legal512_prefer256_call_avx512_legal512_prefer256
; CGSCC-SAME: (ptr nocapture nofree noundef nonnull writeonly align 2 dereferenceable(64) [[ARG:%.*]])
#[[ATTR1]] {
; CGSCC-NEXT: bb:
; CGSCC-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT: [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT: call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 64
dereferenceable(64)

```

```

[[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]
; CGSCC-NEXT:  [[TMP0:%.*]] = load <8 x i64>, ptr [[TMP]], align 64
; CGSCC-NEXT:  call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer256(ptr
noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], <8 x i64>
[[TMP0]]) #[[ATTR6]]
; CGSCC-NEXT:  [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; CGSCC-NEXT:  store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; CGSCC-NEXT:  ret void
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align 32
call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer256(ptr %tmp2, ptr %tmp)
%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2
ret void
}

; This should promote
define internal fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer256(ptr
%arg, ptr readonly %arg1) #1 {
;
; CHECK: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; CHECK-LABEL: define {{{^@+}}}@callee_avx512_legal512_prefer512_call_avx512_legal512_prefer256
; CHECK-SAME: (ptr noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64)
[[ARG:%.*]], <8 x i64> [[TMP0:%.*]]) #[[ATTR1]] {
; CHECK-NEXT: bb:
; CHECK-NEXT:  [[ARG1_PRIV:%.*]] = alloca <8 x i64>, align 64
; CHECK-NEXT:  store <8 x i64> [[TMP0]], ptr [[ARG1_PRIV]], align 64
; CHECK-NEXT:  [[TMP:%.*]] = load <8 x i64>, ptr [[ARG1_PRIV]], align 64
; CHECK-NEXT:  store <8 x i64> [[TMP]], ptr [[ARG]], align 64
; CHECK-NEXT:  ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx512_legal512_prefer512_call_avx512_legal512_prefer256(ptr %arg) #0 {
;
; TUNIT: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind
willreturn memory(argmem: readwrite) uwtable
; TUNIT-LABEL: define {{{^@+}}}@avx512_legal512_prefer512_call_avx512_legal512_prefer256
; TUNIT-SAME: (ptr nocapture nofree writeonly [[ARG:%.*]]) #[[ATTR0]] {
; TUNIT-NEXT: bb:

```

```

; TUNIT-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT: [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT: call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 32
dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]
; TUNIT-NEXT: [[TMP0:%.*]] = load <8 x i64>, ptr [[TMP]], align 64
; TUNIT-NEXT: call fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer256(ptr
noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], <8 x i64>
[[TMP0]]) #[[ATTR6]]
; TUNIT-NEXT: [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; TUNIT-NEXT: store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; TUNIT-NEXT:
    ret void
;
; CGSCC: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; CGSCC-LABEL: define {{{^@+}}}@avx512_legal512_prefer512_call_avx512_legal512_prefer256
; CGSCC-SAME: (ptr nocapture nofree noundef nonnull writeonly align 2 dereferenceable(64) [[ARG:%.*]])
#[[ATTR0]] {
; CGSCC-NEXT: bb:
; CGSCC-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT: [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT: call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 64
dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]
; CGSCC-NEXT: [[TMP0:%.*]] = load <8 x i64>, ptr [[TMP]], align 64
; CGSCC-NEXT: call fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer256(ptr
noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], <8 x i64>
[[TMP0]]) #[[ATTR6]]
; CGSCC-NEXT:
    [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; CGSCC-NEXT: store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; CGSCC-NEXT: ret void
;
bb:
    %tmp = alloca <8 x i64>, align 32
    %tmp2 = alloca <8 x i64>, align 32
    call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
    call fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer256(ptr %tmp2, ptr %tmp)
    %tmp4 = load <8 x i64>, ptr %tmp2, align 32
    store <8 x i64> %tmp4, ptr %arg, align 2
    ret void
}

; This should promote
define internal fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer512(ptr %arg, ptr
readonly %arg1) #0 {
;
; CHECK: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable

```

```

; CHECK-LABEL: define {{{^@}+}}@callee_avx512_legal512_prefer256_call_avx512_legal512_prefer512
; CHECK-SAME: (ptr noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64)
[[ARG:%.*]],
<8 x i64> [[TMP0:%.*]]) #[[ATTR0]] {
; CHECK-NEXT: bb:
; CHECK-NEXT: [[ARG1_PRIV:%.*]] = alloca <8 x i64>, align 64
; CHECK-NEXT: store <8 x i64> [[TMP0]], ptr [[ARG1_PRIV]], align 64
; CHECK-NEXT: [[TMP:%.*]] = load <8 x i64>, ptr [[ARG1_PRIV]], align 64
; CHECK-NEXT: store <8 x i64> [[TMP]], ptr [[ARG]], align 64
; CHECK-NEXT: ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx512_legal512_prefer256_call_avx512_legal512_prefer512(ptr %arg) #1 {
;
; TUNIT: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; TUNIT-LABEL: define {{{^@}+}}@avx512_legal512_prefer256_call_avx512_legal512_prefer512
; TUNIT-SAME: (ptr nocapture nofree writeonly [[ARG:%.*]]) #[[ATTR1]] {
; TUNIT-NEXT: bb:
; TUNIT-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT: [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT: call void @llvm.memset.p0.i64(ptr
noalias nocapture nofree noundef nonnull writeonly align 32 dereferenceable(64) [[TMP]], i8 noundef 0, i64
noundef 32, i1 noundef false) #[[ATTR5]]
; TUNIT-NEXT: [[TMP0:%.*]] = load <8 x i64>, ptr [[TMP]], align 64
; TUNIT-NEXT: call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer512(ptr
noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], <8 x i64>
[[TMP0]]) #[[ATTR6]]
; TUNIT-NEXT: [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; TUNIT-NEXT: store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; TUNIT-NEXT: ret void
;
; CGSCC: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; CGSCC-LABEL: define {{{^@}+}}@avx512_legal512_prefer256_call_avx512_legal512_prefer512
; CGSCC-SAME: (ptr nocapture nofree noundef nonnull writeonly align 2 dereferenceable(64) [[ARG:%.*]])
#[[ATTR1]] {
; CGSCC-NEXT: bb:
; CGSCC-NEXT:
[[TMP:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT: [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT: call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 64
dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]

```



```

; CGSCC-NEXT:  [[TMP0:%.*]] = load <8 x i64>, ptr [[TMP]], align 64
; CGSCC-NEXT:  call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer512(ptr
noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], <8 x i64>
[[TMP0]]) #[[ATTR6]]
; CGSCC-NEXT:  [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; CGSCC-NEXT:  store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; CGSCC-NEXT:  ret void
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align 32
call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer512(ptr
%tmp2, ptr %tmp)
%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2
ret void
}

; This should not promote
define internal fastcc void @callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256(ptr %arg, ptr
readonly %arg1) #1 {
;
; CHECK: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; CHECK-LABEL: define {{{^@+}}}@callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256
; CHECK-SAME: (ptr noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64)
[[ARG:%.*]], ptr noalias nocapture nofree noundef nonnull readonly align 64 dereferenceable(64) [[ARG1:%.*]])
#[[ATTR1]] {
; CHECK-NEXT: bb:
; CHECK-NEXT:  [[TMP:%.*]] = load <8 x i64>, ptr [[ARG1]], align 64
; CHECK-NEXT:  store <8 x i64> [[TMP]], ptr [[ARG]], align 64
; CHECK-NEXT:  ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx512_legal256_prefer256_call_avx512_legal512_prefer256(ptr %arg) #2 {
;
; TUNIT: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; TUNIT-LABEL: define {{{^@+}}}@avx512_legal256_prefer256_call_avx512_legal512_prefer256
; TUNIT-SAME: (ptr nocapture nofree writeonly [[ARG:%.*]]) #[[ATTR2:[0-9]+]] {
; TUNIT-NEXT: bb:
; TUNIT-NEXT:  [[TMP:%.*]] = alloca <8 x i64>, align 32

```

```

; TUNIT-NEXT:  [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT:  call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 32
dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]
; TUNIT-NEXT:  call fastcc void @callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256(ptr
noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], ptr noalias
nocapture nofree noundef nonnull readonly align 64 dereferenceable(64)
[[TMP]]) #[[ATTR6]]
; TUNIT-NEXT:  [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; TUNIT-NEXT:  store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; TUNIT-NEXT:  ret void
;
; CGSCC: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; CGSCC-LABEL: define {{{^@+}}} @avx512_legal256_prefer256_call_avx512_legal512_prefer256
; CGSCC-SAME: (ptr nocapture nofree noundef nonnull writeonly align 2 dereferenceable(64) [[ARG:%.*]])
#[[ATTR2:[0-9]+]] {
; CGSCC-NEXT: bb:
; CGSCC-NEXT:  [[TMP:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT:  [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT:  call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 64
dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]
; CGSCC-NEXT:  call fastcc void @callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256(ptr
noalias
nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], ptr noalias nocapture
nofree noundef nonnull readonly align 64 dereferenceable(64) [[TMP]]) #[[ATTR6]]
; CGSCC-NEXT:  [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; CGSCC-NEXT:  store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; CGSCC-NEXT:  ret void
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align 32
call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
call fastcc void @callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256(ptr %tmp2, ptr %tmp)
%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2
ret void
}

; This should not promote
define internal fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256(ptr %arg, ptr
readonly %arg1) #2 {
;
; CHECK: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
;
CHECK-LABEL: define {{{^@+}}} @callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256
; CHECK-SAME: (ptr noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64)

```

```

[[ARG:%.*]], ptr noalias nocapture nofree noundef nonnull readonly align 64 dereferenceable(64) [[ARG1:%.*]])
#[[ATTR2:[0-9]+]] {
; CHECK-NEXT: bb:
; CHECK-NEXT: [[TMP:%.*]] = load <8 x i64>, ptr [[ARG1]], align 64
; CHECK-NEXT: store <8 x i64> [[TMP]], ptr [[ARG]], align 64
; CHECK-NEXT: ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx512_legal512_prefer256_call_avx512_legal256_prefer256(ptr %arg) #1 {
;
; TUNIT: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; TUNIT-LABEL: define {{{^@+}}} @avx512_legal512_prefer256_call_avx512_legal256_prefer256
; TUNIT-SAME: (ptr nocapture nofree writeonly [[ARG:%.*]]) #[[ATTR1]] {
; TUNIT-NEXT: bb:
; TUNIT-NEXT:
[[TMP:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT: [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT: call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 32
dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]
; TUNIT-NEXT: call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256(ptr
noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], ptr noalias
nocapture nofree noundef nonnull readonly align 64 dereferenceable(64) [[TMP]]) #[[ATTR6]]
; TUNIT-NEXT: [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; TUNIT-NEXT: store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; TUNIT-NEXT: ret void
;
; CGSCC: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; CGSCC-LABEL: define {{{^@+}}} @avx512_legal512_prefer256_call_avx512_legal256_prefer256
;
CGSCC-SAME: (ptr nocapture nofree noundef nonnull writeonly align 2 dereferenceable(64) [[ARG:%.*]])
#[[ATTR1]] {
; CGSCC-NEXT: bb:
; CGSCC-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT: [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT: call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 64
dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]
; CGSCC-NEXT: call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256(ptr
noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], ptr noalias
nocapture nofree noundef nonnull readonly align 64 dereferenceable(64) [[TMP]]) #[[ATTR6]]
; CGSCC-NEXT: [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; CGSCC-NEXT: store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2

```

```

; CGSCC-NEXT:  ret void
;
bb:
  %tmp = alloca <8 x i64>, align 32
  %tmp2 = alloca <8 x i64>,
  align 32
  call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
  call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256(ptr %tmp2, ptr %tmp)
  %tmp4 = load <8 x i64>, ptr %tmp2, align 32
  store <8 x i64> %tmp4, ptr %arg, align 2
  ret void
}

; This should promote
define internal fastcc void @callee_avx2_legal256_prefer256_call_avx2_legal512_prefer256(ptr %arg, ptr readonly
%arg1) #3 {
;
; CHECK: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; CHECK-LABEL: define {{{^@+}}} @callee_avx2_legal256_prefer256_call_avx2_legal512_prefer256
; CHECK-SAME: (ptr noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64)
[[ARG:%.*]], <8 x i64> [[TMP0:%.*]]) #[[ATTR3:[0-9]+]] {
; CHECK-NEXT: bb:
; CHECK-NEXT:  [[ARG1_PRIV:%.*]] = alloca <8 x i64>, align 64
; CHECK-NEXT:  store <8 x i64> [[TMP0]], ptr [[ARG1_PRIV]], align 64
; CHECK-NEXT:  [[TMP:%.*]]
= load <8 x i64>, ptr [[ARG1_PRIV]], align 64
; CHECK-NEXT:  store <8 x i64> [[TMP]], ptr [[ARG]], align 64
; CHECK-NEXT:  ret void
;
bb:
  %tmp = load <8 x i64>, ptr %arg1
  store <8 x i64> %tmp, ptr %arg
  ret void
}

define void @avx2_legal256_prefer256_call_avx2_legal512_prefer256(ptr %arg) #4 {
;
; TUNIT: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; TUNIT-LABEL: define {{{^@+}}} @avx2_legal256_prefer256_call_avx2_legal512_prefer256
; TUNIT-SAME: (ptr nocapture nofree writeonly [[ARG:%.*]]) #[[ATTR3]] {
; TUNIT-NEXT: bb:
; TUNIT-NEXT:  [[TMP:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT:  [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT:  call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 32
dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]
; TUNIT-NEXT:  [[TMP0:%.*]] = load <8 x i64>, ptr [[TMP]], align 64

```

```

;
TUNIT-NEXT: call fastcc void @callee_avx2_legal256_prefer256_call_avx2_legal512_prefer256(ptr noalias
nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], <8 x i64> [[TMP0]])
#[[ATTR6]]
; TUNIT-NEXT: [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; TUNIT-NEXT: store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; TUNIT-NEXT: ret void
;
; CGSCC: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; CGSCC-LABEL: define {{{^@+}}} @avx2_legal256_prefer256_call_avx2_legal512_prefer256
; CGSCC-SAME: (ptr nocapture nofree noundef nonnull writeonly align 2 dereferenceable(64) [[ARG:%.*]])
#[[ATTR3]] {
; CGSCC-NEXT: bb:
; CGSCC-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT: [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT: call void @llvm.memset.p0.i64(ptr noalias nocapture nofree noundef nonnull writeonly align 64
dereferenceable(64) [[TMP]],
i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]
; CGSCC-NEXT: [[TMP0:%.*]] = load <8 x i64>, ptr [[TMP]], align 64
; CGSCC-NEXT: call fastcc void @callee_avx2_legal256_prefer256_call_avx2_legal512_prefer256(ptr noalias
nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], <8 x i64> [[TMP0]])
#[[ATTR6]]
; CGSCC-NEXT: [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; CGSCC-NEXT: store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; CGSCC-NEXT: ret void
;
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align 32
call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
call fastcc void @callee_avx2_legal256_prefer256_call_avx2_legal512_prefer256(ptr %tmp2, ptr %tmp)
%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2
ret void
}

; This should promote
define internal fastcc void @callee_avx2_legal512_prefer256_call_avx2_legal256_prefer256(ptr
%arg, ptr readonly %arg1) #4 {
;
; CHECK: Function Attrs: inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem:
readwrite) uwtable
; CHECK-LABEL: define {{{^@+}}} @callee_avx2_legal512_prefer256_call_avx2_legal256_prefer256
; CHECK-SAME: (ptr noalias nocapture nofree noundef nonnull writeonly align 64 dereferenceable(64)
[[ARG:%.*]], <8 x i64> [[TMP0:%.*]]) #[[ATTR3]] {
; CHECK-NEXT: bb:
; CHECK-NEXT: [[ARG1_PRIV:%.*]] = alloca <8 x i64>, align 64

```

```

; CHECK-NEXT: store <8 x i64> [[TMP0]], ptr [[ARG1_PRIV]], align 64
; CHECK-NEXT: [[TMP:%.*]] = load <8 x i64>, ptr [[ARG1_PRIV]], align 64
; CHECK-NEXT: store <8 x i64> [[TMP]], ptr [[ARG]], align 64
; CHECK-NEXT: ret void
;
bb:
  %tmp = load <8 x i64>, ptr %arg1
  store <8 x i64> %tmp, ptr %arg
  ret void
}

define void @avx2_legal512_prefer256_call_avx2_legal256_prefer256(ptr %arg) #3 {
;
; TUNIT: Function Attrs: inlinehint mustprogress norecurse nosync nounwind willreturn memory(argmem:
  readwrite) uwtable
; TUNIT-LABEL: define {{{^@+}}} @avx2_legal512_prefer256_call_avx2_legal256_prefer256
; TUNIT-SAME: (ptr nocapture norecurse writeonly [[ARG:%.*]]) #[[ATTR3]] {
; TUNIT-NEXT: bb:
; TUNIT-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT: [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; TUNIT-NEXT: call void @llvm.memset.p0.i64(ptr noalias nocapture norecurse noundef nonnull writeonly align 32
  dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]
; TUNIT-NEXT: [[TMP0:%.*]] = load <8 x i64>, ptr [[TMP]], align 64
; TUNIT-NEXT: call fastcc void @callee_avx2_legal512_prefer256_call_avx2_legal256_prefer256(ptr noalias
  nocapture norecurse noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], <8 x i64> [[TMP0]])
  #[[ATTR6]]
; TUNIT-NEXT: [[TRUETMP4:%.*]] = load <8 x i64>, ptr [[TRUETMP2]], align 64
; TUNIT-NEXT: store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; TUNIT-NEXT: ret void
;
; CGSCC: Function
  Attrs: inlinehint mustprogress norecurse nosync nounwind willreturn memory(argmem: readwrite) uwtable
; CGSCC-LABEL: define {{{^@+}}} @avx2_legal512_prefer256_call_avx2_legal256_prefer256
; CGSCC-SAME: (ptr nocapture norecurse noundef nonnull writeonly align 2 dereferenceable(64) [[ARG:%.*]])
  #[[ATTR3]] {
; CGSCC-NEXT: bb:
; CGSCC-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT: [[TRUETMP2:%.*]] = alloca <8 x i64>, align 32
; CGSCC-NEXT: call void @llvm.memset.p0.i64(ptr noalias nocapture norecurse noundef nonnull writeonly align 64
  dereferenceable(64) [[TMP]], i8 noundef 0, i64 noundef 32, i1 noundef false) #[[ATTR5]]
; CGSCC-NEXT: [[TMP0:%.*]] = load <8 x i64>, ptr [[TMP]], align 64
; CGSCC-NEXT: call fastcc void @callee_avx2_legal512_prefer256_call_avx2_legal256_prefer256(ptr noalias
  nocapture norecurse noundef nonnull writeonly align 64 dereferenceable(64) [[TRUETMP2]], <8 x i64> [[TMP0]])
  #[[ATTR6]]
; CGSCC-NEXT: [[TRUETMP4:%.*]] = load <8 x i64>,
  ptr [[TRUETMP2]], align 64
; CGSCC-NEXT: store <8 x i64> [[TRUETMP4]], ptr [[ARG]], align 2
; CGSCC-NEXT: ret void

```

```

;
bb:
  %tmp = alloca <8 x i64>, align 32
  %tmp2 = alloca <8 x i64>, align 32
  call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
  call fastcc void @callee_avx2_legal512_prefer256_call_avx2_legal256_prefer256(ptr %tmp2, ptr %tmp)
  %tmp4 = load <8 x i64>, ptr %tmp2, align 32
  store <8 x i64> %tmp4, ptr %arg, align 2
  ret void
}

```

```

; Function Attrs: argmemonly nounwind
declare void @llvm.memset.p0.i64(ptr nocapture writeonly, i8, i64, i1) #5

```

```

attributes #0 = { inlinehint norecurse nounwind uwtable "target-features"="+avx512vl" "min-legal-vector-width"="512" "prefer-vector-width"="512" }
attributes #1 = { inlinehint norecurse nounwind uwtable "target-features"="+avx512vl" "min-legal-vector-width"="512" "prefer-vector-width"="256" }
attributes #2 = { inlinehint norecurse nounwind uwtable "target-features"="+avx512vl" "min-legal-vector-width"="256"
"prefer-vector-width"="256" }
attributes #3 = { inlinehint norecurse nounwind uwtable "target-features"="+avx2" "min-legal-vector-width"="512"
"prefer-vector-width"="256" }
attributes #4 = { inlinehint norecurse nounwind uwtable "target-features"="+avx2" "min-legal-vector-width"="256"
"prefer-vector-width"="256" }
attributes #5 = { argmemonly nounwind }

```

```

;
; TUNIT: attributes #[[ATTR0]] = { inlinehint mustprogress nofree norecurse nosync nounwind willreturn
memory(argmem: readwrite) uwtable "min-legal-vector-width"="512" "prefer-vector-width"="512" "target-features"="+avx512vl" }
; TUNIT: attributes #[[ATTR1]] = { inlinehint mustprogress nofree norecurse nosync nounwind willreturn
memory(argmem: readwrite) uwtable "min-legal-vector-width"="512" "prefer-vector-width"="256" "target-features"="+avx512vl" }
; TUNIT: attributes #[[ATTR2]] = { inlinehint mustprogress nofree norecurse nosync nounwind willreturn
memory(argmem: readwrite) uwtable "min-legal-vector-width"="256" "prefer-vector-width"="256"
"target-features"="+avx512vl" }
; TUNIT: attributes #[[ATTR3]] = { inlinehint mustprogress nofree norecurse nosync nounwind willreturn
memory(argmem: readwrite) uwtable "min-legal-vector-width"="512" "prefer-vector-width"="256" "target-features"="+avx2" }
; TUNIT: attributes #[[ATTR4:[0-9]+]] = { norecurse nofree nounwind willreturn memory(argmem: write) }
; TUNIT: attributes #[[ATTR5]] = { nofree willreturn memory(write) }
; TUNIT: attributes #[[ATTR6]] = { nofree nosync nounwind willreturn }

```

```

;
; CGSCC: attributes #[[ATTR0]] = { inlinehint mustprogress nofree norecurse nosync nounwind willreturn
memory(argmem: readwrite) uwtable "min-legal-vector-width"="512" "prefer-vector-width"="512" "target-features"="+avx512vl" }
; CGSCC: attributes #[[ATTR1]] = { inlinehint mustprogress nofree norecurse nosync nounwind willreturn
memory(argmem: readwrite) uwtable "min-legal-vector-width"="512" "prefer-vector-width"="256" "target-features"="+avx512vl" }

```

```

features="+avx512vl" }
; CGSCC: attributes #[[ATTR2]]
= { inlinehint mustprogress nofree norecurse nosync nounwind willreturn memory(argmem: readwrite) uwtable
"min-legal-vector-width"="256" "prefer-vector-width"="256" "target-features"="+avx512vl" }
; CGSCC: attributes #[[ATTR3]] = { inlinehint mustprogress nofree norecurse nosync nounwind willreturn
memory(argmem: readwrite) uwtable "min-legal-vector-width"="512" "prefer-vector-width"="256" "target-
features"="+avx2" }
; CGSCC: attributes #[[ATTR4:[0-9]+]] = { nocallback nofree nounwind willreturn memory(argmem: write) }
; CGSCC: attributes #[[ATTR5]] = { nofree willreturn memory(write) }
; CGSCC: attributes #[[ATTR6]] = { nofree nounwind willreturn }
;
; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc -mtriple=riscv64 -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefix=RV64I
; RUN: llc -mtriple=riscv64 -mattr=+zbb -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefix=RV64ZBB

```

```

declare i32 @llvm.ctlz.i32(i32, i1)

```

```

define signext i32 @ctlz_i32(i32 signext %a) nounwind {
; RV64I-LABEL: ctlz_i32:
; RV64I:      # %bb.0:
; RV64I-NEXT: beqz a0, .LBB0_2
; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: srlw a1, a0, 1
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 2
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 4
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 8
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 16
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT:
    not a0, a0
; RV64I-NEXT: srlw a1, a0, 1
; RV64I-NEXT: lui a2, 349525
; RV64I-NEXT: addi a2, a2, 1365
; RV64I-NEXT: and a1, a1, a2
; RV64I-NEXT: subw a0, a0, a1
; RV64I-NEXT: lui a1, 209715
; RV64I-NEXT: addi a1, a1, 819
; RV64I-NEXT: and a2, a0, a1
; RV64I-NEXT: srlw a0, a0, 2
; RV64I-NEXT: and a0, a0, a1

```



```

; RV64I-NEXT: add a0, a2, a0
; RV64I-NEXT: srlw a1, a0, 4
; RV64I-NEXT: addw a0, a0, a1
; RV64I-NEXT: lui a1, 61681
; RV64I-NEXT: addiw a1, a1, -241
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, 4112
; RV64I-NEXT: addiw a1, a1, 257
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srlw a0, a0, 24
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
; RV64I-NEXT: .LBB0_2:
; RV64I-NEXT: li a0, 32
; RV64I-NEXT: ret
;
; RV64ZBB-LABEL: ctlz_i32:
; RV64ZBB: # %bb.0:
; RV64ZBB-NEXT: clzw a0, a0
; RV64ZBB-NEXT: ret
%1 = call i32 @llvm.ctlz.i32(i32 %a, i1 false)
ret i32 %1
}

define signext i32 @log2_i32(i32 signext %a) nounwind {
; RV64I-LABEL: log2_i32:
; RV64I: # %bb.0:
; RV64I-NEXT: beqz a0, .LBB1_2
; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: srlw a1, a0, 1
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 2
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 4
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 8
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 16
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: not a0, a0
; RV64I-NEXT: srlw a1, a0, 1
; RV64I-NEXT: lui a2, 349525
; RV64I-NEXT: addi a2, a2, 1365
; RV64I-NEXT: and a1, a1, a2
; RV64I-NEXT: subw a0, a0, a1

```

```

; RV64I-NEXT: lui a1, 209715
; RV64I-NEXT: addi a1, a1, 819
; RV64I-NEXT: and a2, a0, a1
; RV64I-NEXT: srlw a0, a0, 2
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: add a0, a2, a0
; RV64I-NEXT:
    srlw a1, a0, 4
; RV64I-NEXT: addw a0, a0, a1
; RV64I-NEXT: lui a1, 61681
; RV64I-NEXT: addiw a1, a1, -241
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, 4112
; RV64I-NEXT: addiw a1, a1, 257
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srlw a0, a0, 24
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: j .LBB1_3
; RV64I-NEXT: .LBB1_2:
; RV64I-NEXT: li a0, 32
; RV64I-NEXT: .LBB1_3: # %cond.end
; RV64I-NEXT: li a1, 31
; RV64I-NEXT: subw a0, a1, a0
; RV64I-NEXT: ret
;
; RV64ZBB-LABEL: log2_i32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT: clzw a0, a0
; RV64ZBB-NEXT: li a1, 31
; RV64ZBB-NEXT: subw a0, a1, a0
; RV64ZBB-NEXT: ret
%1 = call i32 @llvmctlz.i32(i32 %a, i1 false)
%2 = sub i32 31, %1
ret i32 %2
}

define signext i32 @log2_ceil_i32(i32 signext %a) nounwind {
; RV64I-LABEL: log2_ceil_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra,
    8(sp) # 8-byte Folded Spill
; RV64I-NEXT: sd s0, 0(sp) # 8-byte Folded Spill
; RV64I-NEXT: addiw a0, a0, -1
; RV64I-NEXT: li s0, 32
; RV64I-NEXT: li a1, 32
; RV64I-NEXT: beqz a0, .LBB2_2

```

```

; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT: srlw a1, a0, 1
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 2
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 4
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 8
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 16
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: not a0, a0
; RV64I-NEXT: srlw a1, a0, 1
; RV64I-NEXT: lui a2, 349525
; RV64I-NEXT: addi a2, a2, 1365
; RV64I-NEXT: and a1, a1, a2
; RV64I-NEXT: subw a0, a0, a1
; RV64I-NEXT: lui a1, 209715
; RV64I-NEXT: addi a1, a1, 819
; RV64I-NEXT: and a2, a0, a1
; RV64I-NEXT: srlw a0, a0, 2
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: add a0, a2, a0
; RV64I-NEXT: srlw a1, a0, 4
; RV64I-NEXT:
    addw a0, a0, a1
; RV64I-NEXT: lui a1, 61681
; RV64I-NEXT: addiw a1, a1, -241
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, 4112
; RV64I-NEXT: addiw a1, a1, 257
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srlw a1, a0, 24
; RV64I-NEXT: .LBB2_2: # %cond.end
; RV64I-NEXT: subw a0, s0, a1
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: ld s0, 0(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64ZBB-LABEL: log2_ceil_i32:
; RV64ZBB: # %bb.0:
; RV64ZBB-NEXT: addi a0, a0, -1
; RV64ZBB-NEXT: clzw a0, a0
; RV64ZBB-NEXT: li a1, 32
; RV64ZBB-NEXT: subw a0, a1, a0
; RV64ZBB-NEXT: ret
%1 = sub i32 %a, 1

```

```

%2 = call i32 @llvmctlz.i32(i32 %1, i1 false)
%3 = sub i32 32, %2
ret i32 %3
}

```

```

define signext i32 @findLastSet_i32(i32 signext %a) nounwind {
; RV64I-LABEL: findLastSet_i32:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
;
; RV64I-NEXT:  sd s0, 0(sp) # 8-byte Folded Spill
; RV64I-NEXT:  mv s0, a0
; RV64I-NEXT:  srlw a0, a0, 1
; RV64I-NEXT:  or a0, s0, a0
; RV64I-NEXT:  srlw a1, a0, 2
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  srlw a1, a0, 4
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  srlw a1, a0, 8
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  srlw a1, a0, 16
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  not a0, a0
; RV64I-NEXT:  srlw a1, a0, 1
; RV64I-NEXT:  lui a2, 349525
; RV64I-NEXT:  addi a2, a2, 1365
; RV64I-NEXT:  and a1, a1, a2
; RV64I-NEXT:  subw a0, a0, a1
; RV64I-NEXT:  lui a1, 209715
; RV64I-NEXT:  addi a1, a1, 819
; RV64I-NEXT:  and a2, a0, a1
; RV64I-NEXT:  srlw a0, a0, 2
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  add a0, a2, a0
; RV64I-NEXT:  srlw a1, a0, 4
; RV64I-NEXT:  addw a0, a0, a1
; RV64I-NEXT:  lui a1, 61681
; RV64I-NEXT:  addiw a1, a1, -241
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  lui a1, 4112
; RV64I-NEXT:
; RV64I-NEXT:  addiw a1, a1, 257
; RV64I-NEXT:  call __muldi3
; RV64I-NEXT:  srlw a0, a0, 24
; RV64I-NEXT:  xori a0, a0, 31
; RV64I-NEXT:  snez a1, s0
; RV64I-NEXT:  addiw a1, a1, -1

```

```

; RV64I-NEXT: or a0, a1, a0
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: ld s0, 0(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64ZBB-LABEL: findLastSet_i32:
; RV64ZBB: # %bb.0:
; RV64ZBB-NEXT: clzw a1, a0
; RV64ZBB-NEXT: xori a1, a1, 31
; RV64ZBB-NEXT: snez a0, a0
; RV64ZBB-NEXT: addiw a0, a0, -1
; RV64ZBB-NEXT: or a0, a0, a1
; RV64ZBB-NEXT: ret
%1 = call i32 @llvm.ctlz.i32(i32 %a, i1 true)
%2 = xor i32 31, %1
%3 = icmp eq i32 %a, 0
%4 = select i1 %3, i32 -1, i32 %2
ret i32 %4
}

define i32 @ctlz_lshr_i32(i32 signext %a) {
; RV64I-LABEL: ctlz_lshr_i32:
; RV64I: # %bb.0:
; RV64I-NEXT: srlw a0, a0, 1
; RV64I-NEXT: beqz a0, .LBB4_2
; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT: addi sp, sp,
-16
; RV64I-NEXT: .cfi_def_cfa_offset 16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: .cfi_offset ra, -8
; RV64I-NEXT: srlw a1, a0, 1
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 2
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 4
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 8
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 16
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: not a0, a0
; RV64I-NEXT: srlw a1, a0, 1
; RV64I-NEXT: lui a2, 349525
; RV64I-NEXT: addi a2, a2, 1365
; RV64I-NEXT: and a1, a1, a2
; RV64I-NEXT: subw a0, a0, a1

```

```

; RV64I-NEXT: lui a1, 209715
; RV64I-NEXT: addi a1, a1, 819
; RV64I-NEXT: and a2, a0, a1
; RV64I-NEXT: srlw a0, a0, 2
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: add a0, a2, a0
; RV64I-NEXT: srlw a1, a0, 4
; RV64I-NEXT: addw a0, a0, a1
; RV64I-NEXT: lui a1, 61681
; RV64I-NEXT: addiw a1, a1, -241
; RV64I-NEXT: and a0,
a0, a1
; RV64I-NEXT: lui a1, 4112
; RV64I-NEXT: addiw a1, a1, 257
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srlw a0, a0, 24
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
; RV64I-NEXT: .LBB4_2:
; RV64I-NEXT: li a0, 32
; RV64I-NEXT: ret
;
; RV64ZBB-LABEL: ctlz_lshr_i32:
; RV64ZBB: # %bb.0:
; RV64ZBB-NEXT: srlw a0, a0, 1
; RV64ZBB-NEXT: clzw a0, a0
; RV64ZBB-NEXT: ret
%1 = lshr i32 %a, 1
%2 = call i32 @llvm.ctlz.i32(i32 %1, i1 false)
ret i32 %2
}

declare i64 @llvm.ctlz.i64(i64, i1)

define i64 @ctlz_i64(i64 %a) nounwind {
; RV64I-LABEL: ctlz_i64:
; RV64I: # %bb.0:
; RV64I-NEXT: beqz a0, .LBB5_2
; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: srli a1, a0, 1
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srli a1, a0, 2
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srli a1, a0, 4
; RV64I-NEXT:

```

```

    or a0, a0, a1
; RV64I-NEXT: srli a1, a0, 8
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srli a1, a0, 16
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srli a1, a0, 32
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: not a0, a0
; RV64I-NEXT: srli a1, a0, 1
; RV64I-NEXT: lui a2, 349525
; RV64I-NEXT: addiw a2, a2, 1365
; RV64I-NEXT: slli a3, a2, 32
; RV64I-NEXT: add a2, a2, a3
; RV64I-NEXT: and a1, a1, a2
; RV64I-NEXT: sub a0, a0, a1
; RV64I-NEXT: lui a1, 209715
; RV64I-NEXT: addiw a1, a1, 819
; RV64I-NEXT: slli a2, a1, 32
; RV64I-NEXT: add a1, a1, a2
; RV64I-NEXT: and a2, a0, a1
; RV64I-NEXT: srli a0, a0, 2
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: add a0, a2, a0
; RV64I-NEXT: srli a1, a0, 4
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: lui a1, 61681
; RV64I-NEXT: addiw a1, a1, -241
; RV64I-NEXT: slli a2, a1, 32
; RV64I-NEXT: add a1, a1, a2
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, 4112
; RV64I-NEXT:
    addiw a1, a1, 257
; RV64I-NEXT: slli a2, a1, 32
; RV64I-NEXT: add a1, a1, a2
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srli a0, a0, 56
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
; RV64I-NEXT: .LBB5_2:
; RV64I-NEXT: li a0, 64
; RV64I-NEXT: ret
;
; RV64ZBB-LABEL: ctlz_i64:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT: clz a0, a0
; RV64ZBB-NEXT: ret

```

```

%1 = call i64 @llvm.cttz.i64(i64 %a, i1 false)
ret i64 %1
}

declare i32 @llvm.cttz.i32(i32, i1)

define signext i32 @cttz_i32(i32 signext %a) nounwind {
; RV64I-LABEL: cttz_i32:
; RV64I:      # %bb.0:
; RV64I-NEXT:  beqz a0, .LBB6_2
; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  negw a1, a0
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  lui a1, 30667
; RV64I-NEXT:  addiw a1, a1, 1329
; RV64I-NEXT:  call __muldi3
; RV64I-NEXT:  srlw a0, a0, 27
;
; RV64I-NEXT:  lui a1, %hi(.LCPI6_0)
; RV64I-NEXT:  addi a1, a1, %lo(.LCPI6_0)
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  lbu a0, 0(a0)
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
; RV64I-NEXT: .LBB6_2:
; RV64I-NEXT:  li a0, 32
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: cttz_i32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  ctw a0, a0
; RV64ZBB-NEXT:  ret
%1 = call i32 @llvm.cttz.i32(i32 %a, i1 false)
ret i32 %1
}

define signext i32 @cttz_zero_undef_i32(i32 signext %a) nounwind {
; RV64I-LABEL: cttz_zero_undef_i32:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  negw a1, a0
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  lui a1, 30667
; RV64I-NEXT:  addiw a1, a1, 1329

```



```

; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srlw a0, a0, 27
; RV64I-NEXT: lui a1, %hi(.LCPI7_0)
; RV64I-NEXT: addi a1, a1, %lo(.LCPI7_0)
; RV64I-NEXT:
    add a0, a1, a0
; RV64I-NEXT: lbu a0, 0(a0)
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64ZBB-LABEL: cttz_zero_undef_i32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  ctw a0, a0
; RV64ZBB-NEXT:  ret
%1 = call i32 @llvm.cttz.i32(i32 %a, i1 true)
ret i32 %1
}

define signext i32 @findFirstSet_i32(i32 signext %a) nounwind {
; RV64I-LABEL: findFirstSet_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  sd s0, 0(sp) # 8-byte Folded Spill
; RV64I-NEXT:  mv s0, a0
; RV64I-NEXT:  negw a0, a0
; RV64I-NEXT:  and a0, s0, a0
; RV64I-NEXT:  lui a1, 30667
; RV64I-NEXT:  addiw a1, a1, 1329
; RV64I-NEXT:  call __muldi3
; RV64I-NEXT:  srlw a0, a0, 27
; RV64I-NEXT:  lui a1, %hi(.LCPI8_0)
; RV64I-NEXT:  addi a1, a1, %lo(.LCPI8_0)
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  lbu a0, 0(a0)
; RV64I-NEXT:  snez a1, s0
; RV64I-NEXT:
    addi a1, a1, -1
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  ld s0, 0(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: findFirstSet_i32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  ctw a1, a0

```

```

; RV64ZBB-NEXT: snez a0, a0
; RV64ZBB-NEXT: addiw a0, a0, -1
; RV64ZBB-NEXT: or a0, a0, a1
; RV64ZBB-NEXT: ret
%1 = call i32 @llvm.cttz.i32(i32 %a, i1 true)
%2 = icmp eq i32 %a, 0
%3 = select i1 %2, i32 -1, i32 %1
ret i32 %3
}

define signext i32 @ffs_i32(i32 signext %a) nounwind {
; RV64I-LABEL: ffs_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: sd s0, 0(sp) # 8-byte Folded Spill
; RV64I-NEXT: mv s0, a0
; RV64I-NEXT: negw a0, a0
; RV64I-NEXT: and a0, s0, a0
; RV64I-NEXT: lui a1, 30667
; RV64I-NEXT: addiw a1, a1, 1329
; RV64I-NEXT: call __muldi3
; RV64I-NEXT:
    srlw a0, a0, 27
; RV64I-NEXT: lui a1, %hi(.LCPI9_0)
; RV64I-NEXT: addi a1, a1, %lo(.LCPI9_0)
; RV64I-NEXT: add a0, a1, a0
; RV64I-NEXT: lbu a0, 0(a0)
; RV64I-NEXT: addi a0, a0, 1
; RV64I-NEXT: seqz a1, s0
; RV64I-NEXT: addi a1, a1, -1
; RV64I-NEXT: and a0, a1, a0
; RV64I-NEXT: slli a0, a0, 32
; RV64I-NEXT: srli a0, a0, 32
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: ld s0, 0(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64ZBB-LABEL: ffs_i32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT: ctw a1, a0
; RV64ZBB-NEXT: addi a1, a1, 1
; RV64ZBB-NEXT: seqz a0, a0
; RV64ZBB-NEXT: addi a0, a0, -1
; RV64ZBB-NEXT: and a0, a0, a1
; RV64ZBB-NEXT: zext.h a0, a0
; RV64ZBB-NEXT: ret

```

```

%1 = call i32 @llvm.cttz.i32(i32 %a, i1 true)
%2 = add i32 %1, 1
%3 = icmp eq i32 %a, 0
%4 = select i1 %3, i32 0, i32 %2
ret i32 %4
}

declare i64 @llvm.cttz.i64(i64, i1)

define i64 @cttz_i64(i64
%a) nounwind {
; RV64I-LABEL: cttz_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  beqz a0, .LBB10_2
; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  neg a1, a0
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  lui a1, %hi(.LCPI10_0)
; RV64I-NEXT:  ld a1, %lo(.LCPI10_0)(a1)
; RV64I-NEXT:  call __muldi3
; RV64I-NEXT:  srli a0, a0, 58
; RV64I-NEXT:  lui a1, %hi(.LCPI10_1)
; RV64I-NEXT:  addi a1, a1, %lo(.LCPI10_1)
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  lbu a0, 0(a0)
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
; RV64I-NEXT: .LBB10_2:
; RV64I-NEXT:  li a0, 64
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: cttz_i64:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  ctz a0, a0
; RV64ZBB-NEXT:  ret
%1 = call i64 @llvm.cttz.i64(i64 %a, i1 false)
ret i64 %1
}

```

```

declare i32 @llvm.ctpop.i32(i32)

```

```

define signext i32 @ctpop_i32(i32
signext %a) nounwind {
; RV64I-LABEL: ctpop_i32:
; RV64I:    # %bb.0:

```

```

; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  srlw a1, a0, 1
; RV64I-NEXT:  lui a2, 349525
; RV64I-NEXT:  addi a2, a2, 1365
; RV64I-NEXT:  and a1, a1, a2
; RV64I-NEXT:  subw a0, a0, a1
; RV64I-NEXT:  lui a1, 209715
; RV64I-NEXT:  addi a1, a1, 819
; RV64I-NEXT:  and a2, a0, a1
; RV64I-NEXT:  srlw a0, a0, 2
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  add a0, a2, a0
; RV64I-NEXT:  srlw a1, a0, 4
; RV64I-NEXT:  addw a0, a0, a1
; RV64I-NEXT:  lui a1, 61681
; RV64I-NEXT:  addiw a1, a1, -241
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  lui a1, 4112
; RV64I-NEXT:  addiw a1, a1, 257
; RV64I-NEXT:  call __muldi3
; RV64I-NEXT:  srlw a0, a0, 24
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: ctpop_i32:
; RV64ZBB:      # %bb.0:
; RV64ZBB-NEXT: cpop
a0, a0
; RV64ZBB-NEXT: ret
%1 = call i32 @llvm.ctpop.i32(i32 %a)
ret i32 %1
}

```

```

define signext i32 @ctpop_i32_load(ptr %p) nounwind {
; RV64I-LABEL: ctpop_i32_load:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  lw a0, 0(a0)
; RV64I-NEXT:  srlw a1, a0, 1
; RV64I-NEXT:  lui a2, 349525
; RV64I-NEXT:  addi a2, a2, 1365
; RV64I-NEXT:  and a1, a1, a2
; RV64I-NEXT:  subw a0, a0, a1
; RV64I-NEXT:  lui a1, 209715
; RV64I-NEXT:  addi a1, a1, 819

```

```

; RV64I-NEXT: and a2, a0, a1
; RV64I-NEXT: srliw a0, a0, 2
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: add a0, a2, a0
; RV64I-NEXT: srliw a1, a0, 4
; RV64I-NEXT: addw a0, a0, a1
; RV64I-NEXT: lui a1, 61681
; RV64I-NEXT: addiw a1, a1, -241
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, 4112
; RV64I-NEXT: addiw a1, a1, 257
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srliw a0, a0, 24
; RV64I-NEXT: ld ra, 8(sp)
# 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64ZBB-LABEL: ctpop_i32_load:
; RV64ZBB: # %bb.0:
; RV64ZBB-NEXT: lw a0, 0(a0)
; RV64ZBB-NEXT: cpopw a0, a0
; RV64ZBB-NEXT: ret
%a = load i32, ptr %p
%1 = call i32 @llvm.ctpop.i32(i32 %a)
ret i32 %1
}

```

```
declare i64 @llvm.ctpop.i64(i64)
```

```

define i64 @ctpop_i64(i64 %a) nounwind {
; RV64I-LABEL: ctpop_i64:
; RV64I: # %bb.0:
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: srli a1, a0, 1
; RV64I-NEXT: lui a2, 349525
; RV64I-NEXT: addiw a2, a2, 1365
; RV64I-NEXT: slli a3, a2, 32
; RV64I-NEXT: add a2, a2, a3
; RV64I-NEXT: and a1, a1, a2
; RV64I-NEXT: sub a0, a0, a1
; RV64I-NEXT: lui a1, 209715
; RV64I-NEXT: addiw a1, a1, 819
; RV64I-NEXT: slli a2, a1, 32
; RV64I-NEXT: add a1, a1, a2
; RV64I-NEXT: and a2, a0, a1
; RV64I-NEXT: srli a0, a0, 2

```

```

; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: add a0, a2,
a0
; RV64I-NEXT: srli a1, a0, 4
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: lui a1, 61681
; RV64I-NEXT: addiw a1, a1, -241
; RV64I-NEXT: slli a2, a1, 32
; RV64I-NEXT: add a1, a1, a2
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, 4112
; RV64I-NEXT: addiw a1, a1, 257
; RV64I-NEXT: slli a2, a1, 32
; RV64I-NEXT: add a1, a1, a2
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srli a0, a0, 56
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64ZBB-LABEL: ctpop_i64:
; RV64ZBB: # %bb.0:
; RV64ZBB-NEXT: cpop a0, a0
; RV64ZBB-NEXT: ret
%1 = call i64 @llvm.ctpop.i64(i64 %a)
ret i64 %1
}

define signext i32 @sextb_i32(i32 signext %a) nounwind {
; RV64I-LABEL: sextb_i32:
; RV64I: # %bb.0:
; RV64I-NEXT: slli a0, a0, 56
; RV64I-NEXT: srai a0, a0, 56
; RV64I-NEXT: ret
;
; RV64ZBB-LABEL: sextb_i32:
; RV64ZBB: # %bb.0:
; RV64ZBB-NEXT: sext.b a0, a0
; RV64ZBB-NEXT:
ret
%shl = shl i32 %a, 24
%shr = ashr exact i32 %shl, 24
ret i32 %shr
}

define i64 @sextb_i64(i64 %a) nounwind {
; RV64I-LABEL: sextb_i64:
; RV64I: # %bb.0:

```

```

; RV64I-NEXT:  slli a0, a0, 56
; RV64I-NEXT:  srli a0, a0, 56
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: sextb_i64:
; RV64ZBB:     # %bb.0:
; RV64ZBB-NEXT:  sext.b a0, a0
; RV64ZBB-NEXT:  ret
%shl = shl i64 %a, 56
%shr = ashr exact i64 %shl, 56
ret i64 %shr
}

define signext i32 @sexth_i32(i32 signext %a) nounwind {
; RV64I-LABEL: sexth_i32:
; RV64I:     # %bb.0:
; RV64I-NEXT:  slli a0, a0, 48
; RV64I-NEXT:  srli a0, a0, 48
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: sexth_i32:
; RV64ZBB:     # %bb.0:
; RV64ZBB-NEXT:  sext.h a0, a0
; RV64ZBB-NEXT:  ret
%shl = shl i32 %a, 16
%shr = ashr exact i32 %shl, 16
ret i32 %shr
}

define i64 @sexth_i64(i64 %a) nounwind {
; RV64I-LABEL: sexth_i64:
; RV64I:     # %bb.0:
; RV64I-NEXT:  slli a0, a0, 48
; RV64I-NEXT:  srli a0, a0, 48
; RV64I-NEXT:
ret
;
; RV64ZBB-LABEL: sexth_i64:
; RV64ZBB:     # %bb.0:
; RV64ZBB-NEXT:  sext.h a0, a0
; RV64ZBB-NEXT:  ret
%shl = shl i64 %a, 48
%shr = ashr exact i64 %shl, 48
ret i64 %shr
}

define signext i32 @min_i32(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: min_i32:

```

```

; RV64I:    # %bb.0:
; RV64I-NEXT:  blt a0, a1, .LBB18_2
; RV64I-NEXT: # %bb.1:
; RV64I-NEXT:  mv a0, a1
; RV64I-NEXT:  .LBB18_2:
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: min_i32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  min a0, a0, a1
; RV64ZBB-NEXT:  ret
%cmp = icmp slt i32 %a, %b
%cond = select i1 %cmp, i32 %a, i32 %b
ret i32 %cond
}

define i64 @min_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: min_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  blt a0, a1, .LBB19_2
; RV64I-NEXT: # %bb.1:
; RV64I-NEXT:  mv a0, a1
; RV64I-NEXT:  .LBB19_2:
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: min_i64:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  min a0, a0, a1
; RV64ZBB-NEXT:  ret
%cmp = icmp
slt i64 %a, %b
%cond = select i1 %cmp, i64 %a, i64 %b
ret i64 %cond
}

define signext i32 @max_i32(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: max_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  blt a1, a0, .LBB20_2
; RV64I-NEXT: # %bb.1:
; RV64I-NEXT:  mv a0, a1
; RV64I-NEXT:  .LBB20_2:
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: max_i32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  max a0, a0, a1
; RV64ZBB-NEXT:  ret

```



```

%cmp = icmp sgt i32 %a, %b
%cond = select i1 %cmp, i32 %a, i32 %b
ret i32 %cond
}

```

```

define i64 @max_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: max_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  blt a1, a0, .LBB21_2
; RV64I-NEXT:  # %bb.1:
; RV64I-NEXT:  mv a0, a1
; RV64I-NEXT:  .LBB21_2:
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: max_i64:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  max a0, a0, a1
; RV64ZBB-NEXT:  ret
%cmp = icmp sgt i64 %a, %b
%cond = select i1 %cmp, i64 %a, i64 %b
ret i64 %cond
}

```

```

define signext i32 @minu_i32(i32 signext
%a, i32 signext %b) nounwind {
; RV64I-LABEL: minu_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  bltu a0, a1, .LBB22_2
; RV64I-NEXT:  # %bb.1:
; RV64I-NEXT:  mv a0, a1
; RV64I-NEXT:  .LBB22_2:
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: minu_i32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  minu a0, a0, a1
; RV64ZBB-NEXT:  ret
%cmp = icmp ult i32 %a, %b
%cond = select i1 %cmp, i32 %a, i32 %b
ret i32 %cond
}

```

```

define i64 @minu_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: minu_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  bltu a0, a1, .LBB23_2
; RV64I-NEXT:  # %bb.1:
; RV64I-NEXT:  mv a0, a1

```

```

; RV64I-NEXT: .LBB23_2:
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: minu_i64:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  minu a0, a0, a1
; RV64ZBB-NEXT:  ret
%cmp = icmp ult i64 %a, %b
%cond = select i1 %cmp, i64 %a, i64 %b
ret i64 %cond
}

define signext i32 @maxu_i32(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: maxu_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  bltu a1,
a0, .LBB24_2
; RV64I-NEXT: # %bb.1:
; RV64I-NEXT:  mv a0, a1
; RV64I-NEXT: .LBB24_2:
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: maxu_i32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  maxu a0, a0, a1
; RV64ZBB-NEXT:  ret
%cmp = icmp ugt i32 %a, %b
%cond = select i1 %cmp, i32 %a, i32 %b
ret i32 %cond
}

define i64 @maxu_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: maxu_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  bltu a1, a0, .LBB25_2
; RV64I-NEXT: # %bb.1:
; RV64I-NEXT:  mv a0, a1
; RV64I-NEXT: .LBB25_2:
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: maxu_i64:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  maxu a0, a0, a1
; RV64ZBB-NEXT:  ret
%cmp = icmp ugt i64 %a, %b
%cond = select i1 %cmp, i64 %a, i64 %b
ret i64 %cond
}

```

```

declare i32 @llvm.abs.i32(i32, i1 immarg)

define i32 @abs_i32(i32 %x) {
; RV64I-LABEL: abs_i32:
; RV64I:      # %bb.0:
; RV64I-NEXT:  sraiw a1, a0, 31
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  subw a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL:
abs_i32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  sraiw a1, a0, 31
; RV64ZBB-NEXT:  xor a0, a0, a1
; RV64ZBB-NEXT:  subw a0, a0, a1
; RV64ZBB-NEXT:  ret
%abs = tail call i32 @llvm.abs.i32(i32 %x, i1 true)
ret i32 %abs
}

```

```

define signext i32 @abs_i32_sext(i32 signext %x) {
; RV64I-LABEL: abs_i32_sext:
; RV64I:      # %bb.0:
; RV64I-NEXT:  sraiw a1, a0, 31
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  subw a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: abs_i32_sext:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  sraiw a1, a0, 31
; RV64ZBB-NEXT:  xor a0, a0, a1
; RV64ZBB-NEXT:  subw a0, a0, a1
; RV64ZBB-NEXT:  ret
%abs = tail call i32 @llvm.abs.i32(i32 %x, i1 true)
ret i32 %abs
}

```

```

declare i64 @llvm.abs.i64(i64, i1 immarg)

```

```

define i64 @abs_i64(i64 %x) {
; RV64I-LABEL: abs_i64:
; RV64I:      # %bb.0:
; RV64I-NEXT:  srai a1, a0, 63
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  sub a0, a0, a1

```

```

; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: abs_i64:
; RV64ZBB:
    # %bb.0:
; RV64ZBB-NEXT:  neg a1, a0
; RV64ZBB-NEXT:  max a0, a0, a1
; RV64ZBB-NEXT:  ret
%abs = tail call i64 @llvm.abs.i64(i64 %x, i1 true)
ret i64 %abs
}

define i32 @zexth_i32(i32 %a) nounwind {
; RV64I-LABEL: zexth_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 48
; RV64I-NEXT:  srli a0, a0, 48
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: zexth_i32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  slli a0, a0, 48
; RV64ZBB-NEXT:  srli a0, a0, 48
; RV64ZBB-NEXT:  ret
%and = and i32 %a, 65535
ret i32 %and
}

define i64 @zexth_i64(i64 %a) nounwind {
; RV64I-LABEL: zexth_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 48
; RV64I-NEXT:  srli a0, a0, 48
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: zexth_i64:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  zext.h a0, a0
; RV64ZBB-NEXT:  ret
%and = and i64 %a, 65535
ret i64 %and
}

declare i32 @llvm.bswap.i32(i32)

define signext i32 @bswap_i32(i32 signext %a) nounwind {
; RV64I-LABEL: bswap_i32:
;

```

```

RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a1, a0, 8
; RV64I-NEXT:  lui a2, 16
; RV64I-NEXT:  addiw a2, a2, -256
; RV64I-NEXT:  and a1, a1, a2
; RV64I-NEXT:  srlw a3, a0, 24
; RV64I-NEXT:  or a1, a1, a3
; RV64I-NEXT:  and a2, a0, a2
; RV64I-NEXT:  sllw a2, a2, 8
; RV64I-NEXT:  sllw a0, a0, 24
; RV64I-NEXT:  or a0, a0, a2
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: bswap_i32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  rev8 a0, a0
; RV64ZBB-NEXT:  srli a0, a0, 32
; RV64ZBB-NEXT:  ret
%1 = tail call @llvm.bswap.i32(i32 %a)
ret i32 %1
}

```

; Similar to bswap\_i32 but the result is not sign extended.

```
define void @bswap_i32_nosext(i32 signext %a, ptr %x) nounwind {
```

```

; RV64I-LABEL: bswap_i32_nosext:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a2, a0, 8
; RV64I-NEXT:  lui a3, 16
; RV64I-NEXT:  addi a3, a3, -256
; RV64I-NEXT:  and a2, a2, a3
; RV64I-NEXT:  srlw a4, a0, 24
; RV64I-NEXT:  or a2, a2, a4
; RV64I-NEXT:
and a3, a0, a3
; RV64I-NEXT:  slli a3, a3, 8
; RV64I-NEXT:  slli a0, a0, 24
; RV64I-NEXT:  or a0, a0, a3
; RV64I-NEXT:  or a0, a0, a2
; RV64I-NEXT:  sw a0, 0(a1)
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: bswap_i32_nosext:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  rev8 a0, a0
; RV64ZBB-NEXT:  srli a0, a0, 32
; RV64ZBB-NEXT:  sw a0, 0(a1)
; RV64ZBB-NEXT:  ret

```

```
%1 = tail call i32 @llvm.bswap.i32(i32 %a)
store i32 %1, ptr %x
ret void
}
```

```
declare i64 @llvm.bswap.i64(i64)
```

```
define i64 @bswap_i64(i64 %a) {
; RV64I-LABEL: bswap_i64:
; RV64I:      # %bb.0:
; RV64I-NEXT: srli a1, a0, 40
; RV64I-NEXT: lui a2, 16
; RV64I-NEXT: addiw a2, a2, -256
; RV64I-NEXT: and a1, a1, a2
; RV64I-NEXT: srli a3, a0, 56
; RV64I-NEXT: or a1, a1, a3
; RV64I-NEXT: srli a3, a0, 24
; RV64I-NEXT: lui a4, 4080
; RV64I-NEXT: and a3, a3, a4
; RV64I-NEXT: srli a5, a0, 8
; RV64I-NEXT: srliw a5, a5, 24
; RV64I-NEXT: slli a5, a5, 24
; RV64I-NEXT: or a3, a5, a3
; RV64I-NEXT:
    or a1, a3, a1
; RV64I-NEXT: and a4, a0, a4
; RV64I-NEXT: slli a4, a4, 24
; RV64I-NEXT: srliw a3, a0, 24
; RV64I-NEXT: slli a3, a3, 32
; RV64I-NEXT: or a3, a4, a3
; RV64I-NEXT: and a2, a0, a2
; RV64I-NEXT: slli a2, a2, 40
; RV64I-NEXT: slli a0, a0, 56
; RV64I-NEXT: or a0, a0, a2
; RV64I-NEXT: or a0, a0, a3
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBB-LABEL: bswap_i64:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT: rev8 a0, a0
; RV64ZBB-NEXT: ret
%1 = call i64 @llvm.bswap.i64(i64 %a)
ret i64 %1
}
```

```
; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
```

```
; RUN: llc -mtriple=riscv64 -verify-machineinstrs < %s \
```

```
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefix=RV64I
```

```
; RUN: llc -mtriple=riscv64 -mattr=+zbbk -verify-machineinstrs < %s \  
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefix=RV64ZBKB
```

```
define signext i32 @pack_i32(i32 signext %a, i32 signext %b) nounwind {  
; RV64I-LABEL: pack_i32:  
; RV64I:    # %bb.0:  
; RV64I-NEXT:  slli a0, a0, 48  
; RV64I-NEXT:  srli a0, a0, 48  
; RV64I-NEXT:  slliw a1, a1, 16  
; RV64I-NEXT:  or a0, a1, a0  
; RV64I-NEXT:  ret  
;  
; RV64ZBKB-LABEL: pack_i32:  
; RV64ZBKB:    # %bb.0:  
; RV64ZBKB-NEXT:  packw a0, a0, a1  
; RV64ZBKB-NEXT:  ret  
%shl = and i32 %a, 65535  
%shl1 = shl i32 %b, 16  
%or = or i32 %shl1, %shl  
ret i32 %or  
}
```

```
define signext i32 @pack_i32_2(i16 zeroext %a, i16 zeroext %b) nounwind {  
; RV64I-LABEL: pack_i32_2:  
; RV64I:    # %bb.0:  
; RV64I-NEXT:  slliw  
a1, a1, 16  
; RV64I-NEXT:  or a0, a1, a0  
; RV64I-NEXT:  ret  
;  
; RV64ZBKB-LABEL: pack_i32_2:  
; RV64ZBKB:    # %bb.0:  
; RV64ZBKB-NEXT:  packw a0, a0, a1  
; RV64ZBKB-NEXT:  ret  
%zexta = zext i16 %a to i32  
%zextb = zext i16 %b to i32  
%shl1 = shl i32 %zextb, 16  
%or = or i32 %shl1, %zexta  
ret i32 %or  
}
```

```
; Test case where we don't have a sign_extend_inreg after the or.
```

```
define signext i32 @pack_i32_3(i16 zeroext %0, i16 zeroext %1, i32 signext %2) {  
; RV64I-LABEL: pack_i32_3:  
; RV64I:    # %bb.0:  
; RV64I-NEXT:  slli a0, a0, 16  
; RV64I-NEXT:  or a0, a0, a1  
; RV64I-NEXT:  addw a0, a0, a2
```

```

; RV64I-NEXT:  ret
;
; RV64ZBKB-LABEL: pack_i32_3:
; RV64ZBKB:    # %bb.0:
; RV64ZBKB-NEXT:  packw a0, a1, a0
; RV64ZBKB-NEXT:  addw a0, a0, a2
; RV64ZBKB-NEXT:  ret
%4 = zext i16 %0 to i32
%5 = shl nuw i32 %4, 16
%6 = zext i16 %1 to i32
%7 = or i32 %5, %6
%8 = add i32 %7, %2
ret i32 %8
}

define i64 @pack_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: pack_i64:
;
RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBKB-LABEL: pack_i64:
; RV64ZBKB:    # %bb.0:
; RV64ZBKB-NEXT:  pack a0, a0, a1
; RV64ZBKB-NEXT:  ret
%shl = and i64 %a, 4294967295
%shl1 = shl i64 %b, 32
%or = or i64 %shl1, %shl
ret i64 %or
}

define i64 @pack_i64_2(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: pack_i64_2:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBKB-LABEL: pack_i64_2:
; RV64ZBKB:    # %bb.0:
; RV64ZBKB-NEXT:  pack a0, a0, a1
; RV64ZBKB-NEXT:  ret

```



```

%zexta = zext i32 %a to i64
%zextb = zext i32 %b to i64
%shl1 = shl i64 %zextb, 32
%or = or i64 %shl1, %zexta
ret i64 %or
}

```

```

define i64 @pack_i64_3(ptr %0, ptr %1) {
; RV64I-LABEL: pack_i64_3:
; RV64I:      #
%bb.0:
; RV64I-NEXT: lw a0, 0(a0)
; RV64I-NEXT: lwu a1, 0(a1)
; RV64I-NEXT: slli a0, a0, 32
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBKB-LABEL: pack_i64_3:
; RV64ZBKB:   # %bb.0:
; RV64ZBKB-NEXT: lw a0, 0(a0)
; RV64ZBKB-NEXT: lwu a1, 0(a1)
; RV64ZBKB-NEXT: pack a0, a1, a0
; RV64ZBKB-NEXT: ret
%3 = load i32, ptr %0, align 4
%4 = zext i32 %3 to i64
%5 = shl i64 %4, 32
%6 = load i32, ptr %1, align 4
%7 = zext i32 %6 to i64
%8 = or i64 %5, %7
ret i64 %8
}

```

```

define signext i32 @packh_i32(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: packh_i32:
; RV64I:      # %bb.0:
; RV64I-NEXT: andi a0, a0, 255
; RV64I-NEXT: slli a1, a1, 56
; RV64I-NEXT: srli a1, a1, 48
; RV64I-NEXT: or a0, a1, a0
; RV64I-NEXT: ret
;
; RV64ZBKB-LABEL: packh_i32:
; RV64ZBKB:   # %bb.0:
; RV64ZBKB-NEXT: packh a0, a0, a1
; RV64ZBKB-NEXT: ret
%and = and i32 %a, 255
%and1 = shl i32 %b, 8
%shl = and i32 %and1, 65280

```

```

%or = or
i32 %shl, %and
ret i32 %or
}

define i32 @packh_i32_2(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: packh_i32_2:
; RV64I:    # %bb.0:
; RV64I-NEXT:  andi a0, a0, 255
; RV64I-NEXT:  andi a1, a1, 255
; RV64I-NEXT:  slliw a1, a1, 8
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBKB-LABEL: packh_i32_2:
; RV64ZBKB:    # %bb.0:
; RV64ZBKB-NEXT:  packh a0, a0, a1
; RV64ZBKB-NEXT:  ret
%and = and i32 %a, 255
%and1 = and i32 %b, 255
%shl = shl i32 %and1, 8
%or = or i32 %shl, %and
ret i32 %or
}

define i64 @packh_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: packh_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  andi a0, a0, 255
; RV64I-NEXT:  slli a1, a1, 56
; RV64I-NEXT:  srli a1, a1, 48
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBKB-LABEL: packh_i64:
; RV64ZBKB:    # %bb.0:
; RV64ZBKB-NEXT:  packh a0, a0, a1
; RV64ZBKB-NEXT:  ret
%and = and i64 %a, 255
%and1 = shl i64 %b, 8
%shl = and i64 %and1, 65280
%or = or i64 %shl,
%and
ret i64 %or
}

define i64 @packh_i64_2(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: packh_i64_2:

```

```

; RV64I:    # %bb.0:
; RV64I-NEXT:  andi a0, a0, 255
; RV64I-NEXT:  andi a1, a1, 255
; RV64I-NEXT:  slli a1, a1, 8
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBKB-LABEL: packh_i64_2:
; RV64ZBKB:    # %bb.0:
; RV64ZBKB-NEXT:  packh a0, a0, a1
; RV64ZBKB-NEXT:  ret
%and = and i64 %a, 255
%and1 = and i64 %b, 255
%shl = shl i64 %and1, 8
%or = or i64 %shl, %and
ret i64 %or
}

define zeroext i16 @packh_i16(i8 zeroext %a, i8 zeroext %b) nounwind {
; RV64I-LABEL: packh_i16:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slliw a1, a1, 8
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBKB-LABEL: packh_i16:
; RV64ZBKB:    # %bb.0:
; RV64ZBKB-NEXT:  packh a0, a0, a1
; RV64ZBKB-NEXT:  ret
%zext = zext i8 %a to i16
%zext1 = zext i8 %b to i16
%shl = shl i16 %zext1, 8
%or = or i16 %shl, %zext
ret i16 %or
}

define zeroext i16 @packh_i16_2(i8
zeroext %0, i8 zeroext %1, i8 zeroext %2) {
; RV64I-LABEL: packh_i16_2:
; RV64I:    # %bb.0:
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  slli a0, a0, 8
; RV64I-NEXT:  or a0, a0, a2
; RV64I-NEXT:  slli a0, a0, 48
; RV64I-NEXT:  srli a0, a0, 48
; RV64I-NEXT:  ret
;
; RV64ZBKB-LABEL: packh_i16_2:

```

```

; RV64ZBKB:    # %bb.0:
; RV64ZBKB-NEXT:  add a0, a1, a0
; RV64ZBKB-NEXT:  packh a0, a2, a0
; RV64ZBKB-NEXT:  ret
%4 = add i8 %1, %0
%5 = zext i8 %4 to i16
%6 = shl i16 %5, 8
%7 = zext i8 %2 to i16
%8 = or i16 %6, %7
ret i16 %8
}

define i64 @pack_i64_allWUsers(i32 signext %0, i32 signext %1, i32 signext %2) {
; RV64I-LABEL: pack_i64_allWUsers:
; RV64I:    # %bb.0:
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  slli a2, a2, 32
; RV64I-NEXT:  srli a2, a2, 32
; RV64I-NEXT:  or a0, a0, a2
; RV64I-NEXT:  ret
;
; RV64ZBKB-LABEL: pack_i64_allWUsers:
; RV64ZBKB:    # %bb.0:
; RV64ZBKB-NEXT:  add a0, a1, a0
; RV64ZBKB-NEXT:
    pack a0, a2, a0
; RV64ZBKB-NEXT:  ret
%4 = add i32 %1, %0
%5 = zext i32 %4 to i64
%6 = shl i64 %5, 32
%7 = zext i32 %2 to i64
%8 = or i64 %6, %7
ret i64 %8
}

define signext i32 @pack_i32_allWUsers(i16 zeroext %0, i16 zeroext %1, i16 zeroext %2) {
; RV64I-LABEL: pack_i32_allWUsers:
; RV64I:    # %bb.0:
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  slliw a0, a0, 16
; RV64I-NEXT:  or a0, a0, a2
; RV64I-NEXT:  ret
;
; RV64ZBKB-LABEL: pack_i32_allWUsers:
; RV64ZBKB:    # %bb.0:
; RV64ZBKB-NEXT:  add a0, a1, a0
; RV64ZBKB-NEXT:  packw a0, a2, a0

```

```

; RV64ZBKB-NEXT:  ret
%4 = add i16 %1, %0
%5 = zext i16 %4 to i32
%6 = shl i32 %5, 16
%7 = zext i16 %2 to i32
%8 = or i32 %6, %7
ret i32 %8
}

define i64 @pack_i64_imm() {
; RV64I-LABEL: pack_i64_imm:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 65793
; RV64I-NEXT:  addiw a0, a0, 16
; RV64I-NEXT:  slli a1, a0, 32
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBKB-LABEL:
pack_i64_imm:
; RV64ZBKB:    # %bb.0:
; RV64ZBKB-NEXT:  lui a0, 65793
; RV64ZBKB-NEXT:  addi a0, a0, 16
; RV64ZBKB-NEXT:  pack a0, a0, a0
; RV64ZBKB-NEXT:  ret
ret i64 1157442765409226768 ; 0x0101010101010101
}
; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc -mtriple=riscv64 -verify-machineinstrs < %s \
; RUN:  -riscv-experimental-rv64-legal-i32 | FileCheck -check-prefix=RV64I %s

; Check indexed and unindexed, sext, zext and anyext loads

define void @lb(ptr %a, ptr %b) nounwind {
; RV64I-LABEL: lb:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lb a2, 1(a0)
; RV64I-NEXT:  lbu zero, 0(a0)
; RV64I-NEXT:  sw a2, 0(a1)
; RV64I-NEXT:  ret
%1 = getelementptr i8, ptr %a, i32 1
%2 = load i8, ptr %1
%3 = sext i8 %2 to i32
; the unused load will produce an anyext for selection
%4 = load volatile i8, ptr %a
store i32 %3, ptr %b
ret void
}

```

```

define void @lbu(ptr %a, ptr %b) nounwind {
; RV64I-LABEL: lbu:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lbu a0, 1(a0)
; RV64I-NEXT:  sw a0, 0(a1)
; RV64I-NEXT:  ret
%1 = getelementptr i8, ptr %a, i32 1
%2 = load i8, ptr %1
%3 = zext i8 %2 to i32
store i32 %3, ptr %b
ret void
}

define void @lh(ptr
%a, ptr %b) nounwind {
; RV64I-LABEL: lh:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lh a2, 2(a0)
; RV64I-NEXT:  lh zero, 0(a0)
; RV64I-NEXT:  sw a2, 0(a1)
; RV64I-NEXT:  ret
%1 = getelementptr i16, ptr %a, i32 1
%2 = load i16, ptr %1
%3 = sext i16 %2 to i32
; the unused load will produce an anyext for selection
%4 = load volatile i16, ptr %a
store i32 %3, ptr %b
ret void
}

define void @lhu(ptr %a, ptr %b) nounwind {
; RV64I-LABEL: lhu:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lhu a0, 2(a0)
; RV64I-NEXT:  sw a0, 0(a1)
; RV64I-NEXT:  ret
%1 = getelementptr i16, ptr %a, i32 1
%2 = load i16, ptr %1
%3 = zext i16 %2 to i32
store i32 %3, ptr %b
ret void
}

define void @lw(ptr %a, ptr %b) nounwind {
; RV64I-LABEL: lw:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lw a2, 4(a0)

```

```

; RV64I-NEXT: lw zero, 0(a0)
; RV64I-NEXT: sd a2, 0(a1)
; RV64I-NEXT: ret
%1 = getelementptr i32, ptr %a, i64 1
%2 = load i32, ptr %1
%3 = sext i32 %2 to i64
; the unused load
will produce an anyext for selection
%4 = load volatile i32, ptr %a
store i64 %3, ptr %b
ret void
}

```

```

define void @lwu(ptr %a, ptr %b) nounwind {
; RV64I-LABEL: lwu:
; RV64I: # %bb.0:
; RV64I-NEXT: lwu a0, 4(a0)
; RV64I-NEXT: sd a0, 0(a1)
; RV64I-NEXT: ret
%1 = getelementptr i32, ptr %a, i64 1
%2 = load i32, ptr %1
%3 = zext i32 %2 to i64
store i64 %3, ptr %b
ret void
}

```

```

; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc -mtriple=riscv64 -riscv-disable-using-constant-pool-for-large-ints -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefixes=RV64I,RV64-NOPOOL
; RUN: llc -mtriple=riscv64 -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefixes=RV64I,RV64I-POOL
; RUN: llc -mtriple=riscv64 -riscv-disable-using-constant-pool-for-large-ints -mattr=+zba \
; RUN: -riscv-experimental-rv64-legal-i32 -verify-machineinstrs < %s | FileCheck %s -check-prefix=RV64IZBA
; RUN: llc -mtriple=riscv64 -riscv-disable-using-constant-pool-for-large-ints -mattr=+zbb \
; RUN: -riscv-experimental-rv64-legal-i32 -verify-machineinstrs < %s | FileCheck %s -check-prefix=RV64IZBB
; RUN: llc -mtriple=riscv64 -riscv-disable-using-constant-pool-for-large-ints -mattr=+zbs \
; RUN: -riscv-experimental-rv64-legal-i32 -verify-machineinstrs < %s | FileCheck
% s -check-prefix=RV64IZBS
; RUN: llc -mtriple=riscv64 -riscv-disable-using-constant-pool-for-large-ints -mattr=+xtheadbb \
; RUN: -riscv-experimental-rv64-legal-i32 -verify-machineinstrs < %s | FileCheck %s -check-
prefix=RV64IXTHEADBB

```

```

; Materializing constants

```

```

; TODO: It would be preferable if anyext constant returns were sign rather
; than zero extended. See PR39092. For now, mark returns as explicitly signext
; (this matches what Clang would generate for equivalent C/C++ anyway).

```

```

define signext i32 @zero() nounwind {

```

```

; RV64I-LABEL: zero:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a0, 0
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: zero:
; RV64IZBA:   # %bb.0:
; RV64IZBA-NEXT:  li a0, 0
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: zero:
; RV64IZBB:   # %bb.0:
; RV64IZBB-NEXT:  li a0, 0
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: zero:
; RV64IZBS:   # %bb.0:
; RV64IZBS-NEXT:  li a0, 0
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: zero:
; RV64IXTHEADBB:   # %bb.0:
;
RV64IXTHEADBB-NEXT:  li a0, 0
; RV64IXTHEADBB-NEXT:  ret
ret i32 0
}

```

```

define signext i32 @pos_small() nounwind {

```

```

; RV64I-LABEL: pos_small:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a0, 2047
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: pos_small:
; RV64IZBA:   # %bb.0:
; RV64IZBA-NEXT:  li a0, 2047
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: pos_small:
; RV64IZBB:   # %bb.0:
; RV64IZBB-NEXT:  li a0, 2047
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: pos_small:
; RV64IZBS:   # %bb.0:
; RV64IZBS-NEXT:  li a0, 2047
; RV64IZBS-NEXT:  ret

```



```

;
; RV64IXTHEADBB-LABEL: pos_small:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, 2047
; RV64IXTHEADBB-NEXT:  ret
ret i32 2047
}

```

```

define signext i32 @neg_small() nounwind {
; RV64I-LABEL: neg_small:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a0, -2048
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: neg_small:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  li a0, -2048
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL:
neg_small:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  li a0, -2048
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: neg_small:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  li a0, -2048
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: neg_small:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, -2048
; RV64IXTHEADBB-NEXT:  ret
ret i32 -2048
}

```

```

define signext i32 @pos_i32() nounwind {
; RV64I-LABEL: pos_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 423811
; RV64I-NEXT:  addiw a0, a0, -1297
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: pos_i32:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 423811
; RV64IZBA-NEXT:  addiw a0, a0, -1297

```

```

; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: pos_i32:
; RV64IZBB:      # %bb.0:
; RV64IZBB-NEXT:  lui a0, 423811
; RV64IZBB-NEXT:  addiw a0, a0, -1297
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: pos_i32:
; RV64IZBS:      # %bb.0:
; RV64IZBS-NEXT:  lui a0, 423811
; RV64IZBS-NEXT:  addiw a0, a0, -1297
; RV64IZBS-NEXT:
    ret
;
; RV64IXTHEADBB-LABEL: pos_i32:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 423811
; RV64IXTHEADBB-NEXT:  addiw a0, a0, -1297
; RV64IXTHEADBB-NEXT:  ret
ret i32 1735928559
}

```

```

define signext i32 @neg_i32() nounwind {

```

```

; RV64I-LABEL: neg_i32:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lui a0, 912092
; RV64I-NEXT:  addiw a0, a0, -273
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: neg_i32:
; RV64IZBA:      # %bb.0:
; RV64IZBA-NEXT:  lui a0, 912092
; RV64IZBA-NEXT:  addiw a0, a0, -273
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: neg_i32:
; RV64IZBB:      # %bb.0:
; RV64IZBB-NEXT:  lui a0, 912092
; RV64IZBB-NEXT:  addiw a0, a0, -273
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: neg_i32:
; RV64IZBS:      # %bb.0:
; RV64IZBS-NEXT:  lui a0, 912092
; RV64IZBS-NEXT:  addiw a0, a0, -273
; RV64IZBS-NEXT:  ret
;

```

```

; RV64IXTHEADBB-LABEL: neg_i32:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 912092
; RV64IXTHEADBB-NEXT:  addiw a0, a0, -273
;
RV64IXTHEADBB-NEXT:  ret
ret i32 -559038737
}

```

```

define signext i32 @pos_i32_hi20_only() nounwind {
; RV64I-LABEL: pos_i32_hi20_only:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 16
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: pos_i32_hi20_only:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 16
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: pos_i32_hi20_only:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 16
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: pos_i32_hi20_only:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 16
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: pos_i32_hi20_only:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 16
; RV64IXTHEADBB-NEXT:  ret
ret i32 65536 ; 0x10000
}

```

```

define signext i32 @neg_i32_hi20_only() nounwind {
; RV64I-LABEL: neg_i32_hi20_only:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 1048560
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: neg_i32_hi20_only:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0,
1048560
; RV64IZBA-NEXT:  ret

```

```

;
; RV64IZBB-LABEL: neg_i32_hi20_only:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 1048560
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: neg_i32_hi20_only:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 1048560
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: neg_i32_hi20_only:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 1048560
; RV64IXTHEADBB-NEXT:  ret
ret i32 -65536 ; -0x10000
}

```

; This can be materialized with ADDI+SLLI, improving compressibility.

```

define signext i32 @imm_left_shifted_addi() nounwind {
; RV64I-LABEL: imm_left_shifted_addi:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 32
; RV64I-NEXT:  addiw a0, a0, -64
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_left_shifted_addi:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 32
; RV64IZBA-NEXT:  addiw a0, a0, -64
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_left_shifted_addi:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 32
;
; RV64IZBB-NEXT:  addiw a0, a0, -64
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_left_shifted_addi:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 32
; RV64IZBS-NEXT:  addiw a0, a0, -64
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_left_shifted_addi:
; RV64IXTHEADBB:  # %bb.0:

```

```

; RV64IXTHEADBB-NEXT: lui a0, 32
; RV64IXTHEADBB-NEXT: addiw a0, a0, -64
; RV64IXTHEADBB-NEXT: ret
ret i32 131008 ; 0x1FFFC0
}

```

; This can be materialized with ADDI+SRLI, improving compressibility.

```

define signext i32 @imm_right_shifted_addi() nounwind {
; RV64I-LABEL: imm_right_shifted_addi:
; RV64I:    # %bb.0:
; RV64I-NEXT: lui a0, 524288
; RV64I-NEXT: addiw a0, a0, -1
; RV64I-NEXT: ret
;
; RV64IZBA-LABEL: imm_right_shifted_addi:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT: lui a0, 524288
; RV64IZBA-NEXT: addiw a0, a0, -1
; RV64IZBA-NEXT: ret
;
; RV64IZBB-LABEL: imm_right_shifted_addi:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT: lui a0, 524288
; RV64IZBB-NEXT:
;     addiw a0, a0, -1
; RV64IZBB-NEXT: ret
;
; RV64IZBS-LABEL: imm_right_shifted_addi:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT: lui a0, 524288
; RV64IZBS-NEXT: addiw a0, a0, -1
; RV64IZBS-NEXT: ret
;
; RV64IXTHEADBB-LABEL: imm_right_shifted_addi:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT: lui a0, 524288
; RV64IXTHEADBB-NEXT: addiw a0, a0, -1
; RV64IXTHEADBB-NEXT: ret
ret i32 2147483647 ; 0x7FFFFFFF
}

```

; This can be materialized with LUI+SRLI, improving compressibility.

```

define signext i32 @imm_right_shifted_lui() nounwind {
; RV64I-LABEL: imm_right_shifted_lui:
; RV64I:    # %bb.0:
; RV64I-NEXT: lui a0, 56

```

```

; RV64I-NEXT:  addiw a0, a0, 580
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_right_shifted_lui:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 56
; RV64IZBA-NEXT:  addiw a0, a0, 580
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_right_shifted_lui:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 56
; RV64IZBB-NEXT:
;               addiw a0, a0, 580
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_right_shifted_lui:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 56
; RV64IZBS-NEXT:  addiw a0, a0, 580
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_right_shifted_lui:
; RV64IXTHEADBB: # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 56
; RV64IXTHEADBB-NEXT:  addiw a0, a0, 580
; RV64IXTHEADBB-NEXT:  ret
ret i32 229956 ; 0x38244
}

```

```

define i64 @imm64_1() nounwind {
; RV64I-LABEL: imm64_1:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a0, 1
; RV64I-NEXT:  slli a0, a0, 31
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm64_1:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  li a0, 1
; RV64IZBA-NEXT:  slli a0, a0, 31
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm64_1:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  li a0, 1
; RV64IZBB-NEXT:  slli a0, a0, 31
; RV64IZBB-NEXT:  ret

```

```

;
; RV64IZBS-LABEL: imm64_1:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  bseti a0, zero, 31
; RV64IZBS-NEXT:  ret
;
;
RV64IXTHEADBB-LABEL: imm64_1:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, 1
; RV64IXTHEADBB-NEXT:  slli a0, a0, 31
; RV64IXTHEADBB-NEXT:  ret
ret i64 2147483648 ; 0x8000_0000
}

```

```

define i64 @imm64_2() nounwind {
; RV64I-LABEL: imm64_2:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a0, -1
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm64_2:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  li a0, -1
; RV64IZBA-NEXT:  srli a0, a0, 32
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm64_2:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  li a0, -1
; RV64IZBB-NEXT:  srli a0, a0, 32
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm64_2:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  li a0, -1
; RV64IZBS-NEXT:  srli a0, a0, 32
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm64_2:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, -1
; RV64IXTHEADBB-NEXT:  srli a0, a0, 32
; RV64IXTHEADBB-NEXT:  ret
ret i64 4294967295 ;
0xFFFF_FFFF
}

```

```

define i64 @imm64_3() nounwind {
; RV64I-LABEL: imm64_3:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a0, 1
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm64_3:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  li a0, 1
; RV64IZBA-NEXT:  slli a0, a0, 32
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm64_3:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  li a0, 1
; RV64IZBB-NEXT:  slli a0, a0, 32
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm64_3:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  bseti a0, zero, 32
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm64_3:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, 1
; RV64IXTHEADBB-NEXT:  slli a0, a0, 32
; RV64IXTHEADBB-NEXT:  ret
ret i64 4294967296 ; 0x1_0000_0000
}

```

```

define i64 @imm64_4() nounwind {
; RV64I-LABEL: imm64_4:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a0, -1
; RV64I-NEXT:  slli a0, a0, 63
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm64_4:
; RV64IZBA:
;   # %bb.0:
; RV64IZBA-NEXT:  li a0, -1
; RV64IZBA-NEXT:  slli a0, a0, 63
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm64_4:

```



```

; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  li a0, -1
; RV64IZBB-NEXT:  slli a0, a0, 63
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm64_4:
; RV64IZBS:     # %bb.0:
; RV64IZBS-NEXT:  bseti a0, zero, 63
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm64_4:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, -1
; RV64IXTHEADBB-NEXT:  slli a0, a0, 63
; RV64IXTHEADBB-NEXT:  ret
ret i64 9223372036854775808 ; 0x8000_0000_0000_0000
}

```

```

define i64 @imm64_5() nounwind {
; RV64I-LABEL: imm64_5:
; RV64I:     # %bb.0:
; RV64I-NEXT:  li a0, -1
; RV64I-NEXT:  slli a0, a0, 63
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm64_5:
; RV64IZBA:   # %bb.0:
; RV64IZBA-NEXT:  li a0, -1
; RV64IZBA-NEXT:  slli a0, a0, 63
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm64_5:
; RV64IZBB:   # %bb.0:
; RV64IZBB-NEXT:  li a0, -1
; RV64IZBB-NEXT:
;               slli a0, a0, 63
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm64_5:
; RV64IZBS:   # %bb.0:
; RV64IZBS-NEXT:  bseti a0, zero, 63
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm64_5:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, -1
; RV64IXTHEADBB-NEXT:  slli a0, a0, 63
; RV64IXTHEADBB-NEXT:  ret

```

```

ret i64 -9223372036854775808 ; 0x8000_0000_0000_0000
}

define i64 @imm64_6() nounwind {
; RV64I-LABEL: imm64_6:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 9321
; RV64I-NEXT:  addi a0, a0, -1329
; RV64I-NEXT:  slli a0, a0, 35
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm64_6:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 9321
; RV64IZBA-NEXT:  addi a0, a0, -1329
; RV64IZBA-NEXT:  slli a0, a0, 35
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm64_6:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 9321
; RV64IZBB-NEXT:  addi a0, a0, -1329
; RV64IZBB-NEXT:  slli a0, a0, 35
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm64_6:
;
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 9321
; RV64IZBS-NEXT:  addi a0, a0, -1329
; RV64IZBS-NEXT:  slli a0, a0, 35
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm64_6:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 9321
; RV64IXTHEADBB-NEXT:  addi a0, a0, -1329
; RV64IXTHEADBB-NEXT:  slli a0, a0, 35
; RV64IXTHEADBB-NEXT:  ret
ret i64 1311768464867721216 ; 0x1234_5678_0000_0000
}

```

```

define i64 @imm64_7() nounwind {
; RV64I-LABEL: imm64_7:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a0, 7
; RV64I-NEXT:  slli a0, a0, 36
; RV64I-NEXT:  addi a0, a0, 11

```

```

; RV64I-NEXT:  slli a0, a0, 24
; RV64I-NEXT:  addi a0, a0, 15
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm64_7:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  li a0, 7
; RV64IZBA-NEXT:  slli a0, a0, 36
; RV64IZBA-NEXT:  addi a0, a0, 11
; RV64IZBA-NEXT:  slli a0, a0, 24
; RV64IZBA-NEXT:  addi a0, a0, 15
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm64_7:
; RV64IZBB:    #
%bb.0:
; RV64IZBB-NEXT:  li a0, 7
; RV64IZBB-NEXT:  slli a0, a0, 36
; RV64IZBB-NEXT:  addi a0, a0, 11
; RV64IZBB-NEXT:  slli a0, a0, 24
; RV64IZBB-NEXT:  addi a0, a0, 15
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm64_7:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  li a0, 7
; RV64IZBS-NEXT:  slli a0, a0, 36
; RV64IZBS-NEXT:  addi a0, a0, 11
; RV64IZBS-NEXT:  slli a0, a0, 24
; RV64IZBS-NEXT:  addi a0, a0, 15
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm64_7:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, 7
; RV64IXTHEADBB-NEXT:  slli a0, a0, 36
; RV64IXTHEADBB-NEXT:  addi a0, a0, 11
; RV64IXTHEADBB-NEXT:  slli a0, a0, 24
; RV64IXTHEADBB-NEXT:  addi a0, a0, 15
; RV64IXTHEADBB-NEXT:  ret
ret i64 8070450532432478223 ; 0x7000_0000_0B00_000F
}

```

; TODO: it can be preferable to put constants that are expensive to materialise  
into the constant pool, especially for -Os.

```

define i64 @imm64_8() nounwind {
; RV64-NOPOOL-LABEL: imm64_8:
; RV64-NOPOOL:

```

```

# %bb.0:
; RV64-NOPOOL-NEXT: lui a0, 583
; RV64-NOPOOL-NEXT: addiw a0, a0, -1875
; RV64-NOPOOL-NEXT: slli a0, a0, 14
; RV64-NOPOOL-NEXT: addi a0, a0, -947
; RV64-NOPOOL-NEXT: slli a0, a0, 12
; RV64-NOPOOL-NEXT: addi a0, a0, 1511
; RV64-NOPOOL-NEXT: slli a0, a0, 13
; RV64-NOPOOL-NEXT: addi a0, a0, -272
; RV64-NOPOOL-NEXT: ret
;
; RV64I-POOL-LABEL: imm64_8:
; RV64I-POOL: # %bb.0:
; RV64I-POOL-NEXT: lui a0, %hi(.LCPI17_0)
; RV64I-POOL-NEXT: ld a0, %lo(.LCPI17_0)(a0)
; RV64I-POOL-NEXT: ret
;
; RV64IZBA-LABEL: imm64_8:
; RV64IZBA: # %bb.0:
; RV64IZBA-NEXT: lui a0, 596523
; RV64IZBA-NEXT: addi a0, a0, 965
; RV64IZBA-NEXT: slli.uw a0, a0, 13
; RV64IZBA-NEXT: addi a0, a0, -1347
; RV64IZBA-NEXT: slli a0, a0, 12
; RV64IZBA-NEXT: addi a0, a0, -529
; RV64IZBA-NEXT: slli a0, a0, 4
; RV64IZBA-NEXT: ret
;
; RV64IZBB-LABEL: imm64_8:
; RV64IZBB: # %bb.0:
; RV64IZBB-NEXT: lui a0, 583
; RV64IZBB-NEXT: addiw
a0, a0, -1875
; RV64IZBB-NEXT: slli a0, a0, 14
; RV64IZBB-NEXT: addi a0, a0, -947
; RV64IZBB-NEXT: slli a0, a0, 12
; RV64IZBB-NEXT: addi a0, a0, 1511
; RV64IZBB-NEXT: slli a0, a0, 13
; RV64IZBB-NEXT: addi a0, a0, -272
; RV64IZBB-NEXT: ret
;
; RV64IZBS-LABEL: imm64_8:
; RV64IZBS: # %bb.0:
; RV64IZBS-NEXT: lui a0, 583
; RV64IZBS-NEXT: addiw a0, a0, -1875
; RV64IZBS-NEXT: slli a0, a0, 14
; RV64IZBS-NEXT: addi a0, a0, -947
; RV64IZBS-NEXT: slli a0, a0, 12

```

```

; RV64IZBS-NEXT:  addi a0, a0, 1511
; RV64IZBS-NEXT:  slli a0, a0, 13
; RV64IZBS-NEXT:  addi a0, a0, -272
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm64_8:
; RV64IXTHEADBB:   # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 583
; RV64IXTHEADBB-NEXT:  addiw a0, a0, -1875
; RV64IXTHEADBB-NEXT:  slli a0, a0, 14
; RV64IXTHEADBB-NEXT:  addi a0, a0, -947
; RV64IXTHEADBB-NEXT:  slli a0, a0, 12
; RV64IXTHEADBB-NEXT:  addi a0, a0, 1511
; RV64IXTHEADBB-NEXT:  slli a0, a0, 13
; RV64IXTHEADBB-NEXT:
    addi a0, a0, -272
; RV64IXTHEADBB-NEXT:  ret
ret i64 1311768467463790320 ; 0x1234_5678_9ABC_DEF0
}

```

```

define i64 @imm64_9() nounwind {
; RV64I-LABEL: imm64_9:
; RV64I:   # %bb.0:
; RV64I-NEXT:  li a0, -1
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm64_9:
; RV64IZBA:   # %bb.0:
; RV64IZBA-NEXT:  li a0, -1
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm64_9:
; RV64IZBB:   # %bb.0:
; RV64IZBB-NEXT:  li a0, -1
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm64_9:
; RV64IZBS:   # %bb.0:
; RV64IZBS-NEXT:  li a0, -1
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm64_9:
; RV64IXTHEADBB:   # %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, -1
; RV64IXTHEADBB-NEXT:  ret
ret i64 -1
}

```

; Various cases where extraneous ADDIs can be inserted where a (left shifted)  
; LUI suffices.

```
define i64 @imm_left_shifted_lui_1() nounwind {  
; RV64I-LABEL: imm_left_shifted_lui_1:  
; RV64I:    # %bb.0:  
; RV64I-NEXT:  lui a0, 262145  
; RV64I-NEXT:  slli a0, a0, 1  
;  
RV64I-NEXT:  ret  
;  
; RV64IZBA-LABEL: imm_left_shifted_lui_1:  
; RV64IZBA:    # %bb.0:  
; RV64IZBA-NEXT:  lui a0, 262145  
; RV64IZBA-NEXT:  slli a0, a0, 1  
; RV64IZBA-NEXT:  ret  
;  
; RV64IZBB-LABEL: imm_left_shifted_lui_1:  
; RV64IZBB:    # %bb.0:  
; RV64IZBB-NEXT:  lui a0, 262145  
; RV64IZBB-NEXT:  slli a0, a0, 1  
; RV64IZBB-NEXT:  ret  
;  
; RV64IZBS-LABEL: imm_left_shifted_lui_1:  
; RV64IZBS:    # %bb.0:  
; RV64IZBS-NEXT:  lui a0, 262145  
; RV64IZBS-NEXT:  slli a0, a0, 1  
; RV64IZBS-NEXT:  ret  
;  
; RV64IXTHEADBB-LABEL: imm_left_shifted_lui_1:  
; RV64IXTHEADBB:  # %bb.0:  
; RV64IXTHEADBB-NEXT:  lui a0, 262145  
; RV64IXTHEADBB-NEXT:  slli a0, a0, 1  
; RV64IXTHEADBB-NEXT:  ret  
ret i64 2147491840 ; 0x8000_2000  
}
```

```
define i64 @imm_left_shifted_lui_2() nounwind {  
; RV64I-LABEL: imm_left_shifted_lui_2:  
; RV64I:    # %bb.0:  
; RV64I-NEXT:  lui a0, 262145  
; RV64I-NEXT:  slli a0, a0, 2  
; RV64I-NEXT:  ret  
;  
; RV64IZBA-LABEL: imm_left_shifted_lui_2:  
; RV64IZBA:  
# %bb.0:  
; RV64IZBA-NEXT:  lui a0, 262145
```

```

; RV64IZBA-NEXT:  slli a0, a0, 2
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_left_shifted_lui_2:
; RV64IZBB:      # %bb.0:
; RV64IZBB-NEXT:  lui a0, 262145
; RV64IZBB-NEXT:  slli a0, a0, 2
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_left_shifted_lui_2:
; RV64IZBS:      # %bb.0:
; RV64IZBS-NEXT:  lui a0, 262145
; RV64IZBS-NEXT:  slli a0, a0, 2
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_left_shifted_lui_2:
; RV64IXTHEADBB: # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 262145
; RV64IXTHEADBB-NEXT:  slli a0, a0, 2
; RV64IXTHEADBB-NEXT:  ret
ret i64 4294983680 ; 0x1_0000_4000
}

```

```

define i64 @imm_left_shifted_lui_3() nounwind {
; RV64I-LABEL: imm_left_shifted_lui_3:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lui a0, 4097
; RV64I-NEXT:  slli a0, a0, 20
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_left_shifted_lui_3:
; RV64IZBA:      # %bb.0:
; RV64IZBA-NEXT:  lui a0, 4097
; RV64IZBA-NEXT:  slli a0, a0, 20
;
RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_left_shifted_lui_3:
; RV64IZBB:      # %bb.0:
; RV64IZBB-NEXT:  lui a0, 4097
; RV64IZBB-NEXT:  slli a0, a0, 20
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_left_shifted_lui_3:
; RV64IZBS:      # %bb.0:
; RV64IZBS-NEXT:  lui a0, 4097
; RV64IZBS-NEXT:  slli a0, a0, 20
; RV64IZBS-NEXT:  ret
}

```

```

;
; RV64IXTHEADBB-LABEL: imm_left_shifted_lui_3:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 4097
; RV64IXTHEADBB-NEXT:  slli a0, a0, 20
; RV64IXTHEADBB-NEXT:  ret
ret i64 17596481011712 ; 0x1001_0000_0000
}

; Various cases where extraneous ADDIs can be inserted where a (right shifted)
; LUI suffices, or where multiple ADDIs can be used instead of a single LUI.

```

```

define i64 @imm_right_shifted_lui_1() nounwind {
; RV64I-LABEL: imm_right_shifted_lui_1:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 983056
; RV64I-NEXT:  srli a0, a0, 16
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_right_shifted_lui_1:
; RV64IZBA:
;   # %bb.0:
; RV64IZBA-NEXT:  lui a0, 983056
; RV64IZBA-NEXT:  srli a0, a0, 16
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_right_shifted_lui_1:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 983056
; RV64IZBB-NEXT:  srli a0, a0, 16
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_right_shifted_lui_1:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 983056
; RV64IZBS-NEXT:  srli a0, a0, 16
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_right_shifted_lui_1:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 983056
; RV64IXTHEADBB-NEXT:  srli a0, a0, 16
; RV64IXTHEADBB-NEXT:  ret
ret i64 281474976706561 ; 0xFFFF_FFFF_F001
}

```

```

define i64 @imm_right_shifted_lui_2() nounwind {
; RV64I-LABEL: imm_right_shifted_lui_2:

```



```

; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 1044481
; RV64I-NEXT:  slli a0, a0, 12
; RV64I-NEXT:  srli a0, a0, 24
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_right_shifted_lui_2:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:
    lui a0, 1044481
; RV64IZBA-NEXT:  slli a0, a0, 12
; RV64IZBA-NEXT:  srli a0, a0, 24
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_right_shifted_lui_2:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 1044481
; RV64IZBB-NEXT:  slli a0, a0, 12
; RV64IZBB-NEXT:  srli a0, a0, 24
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_right_shifted_lui_2:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 1044481
; RV64IZBS-NEXT:  slli a0, a0, 12
; RV64IZBS-NEXT:  srli a0, a0, 24
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_right_shifted_lui_2:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 1044481
; RV64IXTHEADBB-NEXT:  slli a0, a0, 12
; RV64IXTHEADBB-NEXT:  srli a0, a0, 24
; RV64IXTHEADBB-NEXT:  ret
ret i64 1099511623681 ; 0xFF_FFFF_F001
}

```

; We can materialize the upper bits with a single (shifted) LUI, but that option  
; can be missed due to the lower bits, which aren't just 1s or just 0s.

```

define i64 @imm_decoupled_lui_addi() nounwind
{
; RV64I-LABEL: imm_decoupled_lui_addi:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 4097
; RV64I-NEXT:  slli a0, a0, 20
; RV64I-NEXT:  addi a0, a0, -3
; RV64I-NEXT:  ret

```

```

;
; RV64IZBA-LABEL: imm_decoupled_lui_addi:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 4097
; RV64IZBA-NEXT:  slli a0, a0, 20
; RV64IZBA-NEXT:  addi a0, a0, -3
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_decoupled_lui_addi:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 4097
; RV64IZBB-NEXT:  slli a0, a0, 20
; RV64IZBB-NEXT:  addi a0, a0, -3
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_decoupled_lui_addi:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 4097
; RV64IZBS-NEXT:  slli a0, a0, 20
; RV64IZBS-NEXT:  addi a0, a0, -3
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_decoupled_lui_addi:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 4097
; RV64IXTHEADBB-NEXT:  slli a0, a0, 20
; RV64IXTHEADBB-NEXT:  addi a0, a0, -3
; RV64IXTHEADBB-NEXT:
    ret
ret i64 17596481011709 ; 0x1000_FFFF_FFFD
}

; This constant can be materialized for RV64 with LUI+SRLI+XORI.

```

```

define i64 @imm_end_xori_1() nounwind {
; RV64I-LABEL: imm_end_xori_1:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 983040
; RV64I-NEXT:  srli a0, a0, 3
; RV64I-NEXT:  not a0, a0
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_end_xori_1:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 983040
; RV64IZBA-NEXT:  srli a0, a0, 3
; RV64IZBA-NEXT:  not a0, a0
; RV64IZBA-NEXT:  ret
}

```

```

;
; RV64IZBB-LABEL: imm_end_xori_1:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 983040
; RV64IZBB-NEXT:  srli a0, a0, 3
; RV64IZBB-NEXT:  not a0, a0
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_end_xori_1:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 983040
; RV64IZBS-NEXT:  srli a0, a0, 3
; RV64IZBS-NEXT:  not a0, a0
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_end_xori_1:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:
    lui a0, 983040
; RV64IXTHEADBB-NEXT:  srli a0, a0, 3
; RV64IXTHEADBB-NEXT:  not a0, a0
; RV64IXTHEADBB-NEXT:  ret
ret i64 -2305843009180139521 ; 0xE000_0000_01FF_FFFF
}

```

; This constant can be materialized for RV64 with ADDI+SLLI+ADDI+ADDI.

```

define i64 @imm_end_2addi_1() nounwind {
; RV64I-LABEL: imm_end_2addi_1:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a0, -2047
; RV64I-NEXT:  slli a0, a0, 39
; RV64I-NEXT:  addi a0, a0, -2048
; RV64I-NEXT:  addi a0, a0, -1
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_end_2addi_1:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  li a0, -2047
; RV64IZBA-NEXT:  slli a0, a0, 39
; RV64IZBA-NEXT:  addi a0, a0, -2048
; RV64IZBA-NEXT:  addi a0, a0, -1
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_end_2addi_1:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  li a0, -2047
; RV64IZBB-NEXT:  slli a0, a0, 39

```

```

; RV64IZBB-NEXT:  addi a0, a0, -2048
; RV64IZBB-NEXT:  addi a0, a0, -1
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_end_2addi_1:
;
RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  li a0, -2047
; RV64IZBS-NEXT:  slli a0, a0, 39
; RV64IZBS-NEXT:  addi a0, a0, -2048
; RV64IZBS-NEXT:  addi a0, a0, -1
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_end_2addi_1:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, -2047
; RV64IXTHEADBB-NEXT:  slli a0, a0, 39
; RV64IXTHEADBB-NEXT:  addi a0, a0, -2048
; RV64IXTHEADBB-NEXT:  addi a0, a0, -1
; RV64IXTHEADBB-NEXT:  ret
ret i64 -1125350151030785 ; 0xFFFC_007F_FFFF_F7FF
}

```

; This constant can be more efficiently materialized for RV64 if we use two  
; registers instead of one.

```

define i64 @imm_2reg_1() nounwind {
; RV64I-LABEL: imm_2reg_1:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 74565
; RV64I-NEXT:  addiw a0, a0, 1656
; RV64I-NEXT:  slli a1, a0, 57
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_2reg_1:
; RV64IZBA:  # %bb.0:
; RV64IZBA-NEXT:  lui a0, 74565
; RV64IZBA-NEXT:  addiw a0, a0, 1656
; RV64IZBA-NEXT:
    slli a1, a0, 57
; RV64IZBA-NEXT:  add a0, a0, a1
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_2reg_1:
; RV64IZBB:  # %bb.0:
; RV64IZBB-NEXT:  lui a0, 74565
; RV64IZBB-NEXT:  addiw a0, a0, 1656

```

```

; RV64IZBB-NEXT: slli a1, a0, 57
; RV64IZBB-NEXT: add a0, a0, a1
; RV64IZBB-NEXT: ret
;
; RV64IZBS-LABEL: imm_2reg_1:
; RV64IZBS: # %bb.0:
; RV64IZBS-NEXT: lui a0, 74565
; RV64IZBS-NEXT: addiw a0, a0, 1656
; RV64IZBS-NEXT: slli a1, a0, 57
; RV64IZBS-NEXT: add a0, a0, a1
; RV64IZBS-NEXT: ret
;
; RV64IXTHEADBB-LABEL: imm_2reg_1:
; RV64IXTHEADBB: # %bb.0:
; RV64IXTHEADBB-NEXT: lui a0, 74565
; RV64IXTHEADBB-NEXT: addiw a0, a0, 1656
; RV64IXTHEADBB-NEXT: slli a1, a0, 57
; RV64IXTHEADBB-NEXT: add a0, a0, a1
; RV64IXTHEADBB-NEXT: ret
ret i64 -1152921504301427080 ; 0xF000_0000_1234_5678
}

```

; FIXME: This should use a single ADDI for the immediate.

```
define void @imm_store_i16_neg1(ptr %p) nounwind {
```

```

; RV64I-LABEL: imm_store_i16_neg1:
;
RV64I: # %bb.0:
; RV64I-NEXT: li a1, -1
; RV64I-NEXT: sh a1, 0(a0)
; RV64I-NEXT: ret
;
; RV64IZBA-LABEL: imm_store_i16_neg1:
; RV64IZBA: # %bb.0:
; RV64IZBA-NEXT: li a1, -1
; RV64IZBA-NEXT: sh a1, 0(a0)
; RV64IZBA-NEXT: ret
;
; RV64IZBB-LABEL: imm_store_i16_neg1:
; RV64IZBB: # %bb.0:
; RV64IZBB-NEXT: li a1, -1
; RV64IZBB-NEXT: sh a1, 0(a0)
; RV64IZBB-NEXT: ret
;
; RV64IZBS-LABEL: imm_store_i16_neg1:
; RV64IZBS: # %bb.0:
; RV64IZBS-NEXT: li a1, -1
; RV64IZBS-NEXT: sh a1, 0(a0)
; RV64IZBS-NEXT: ret

```

```

;
; RV64IXTHEADBB-LABEL: imm_store_i16_neg1:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  li a1, -1
; RV64IXTHEADBB-NEXT:  sh a1, 0(a0)
; RV64IXTHEADBB-NEXT:  ret
store i16 -1, ptr %p
ret void
}

; FIXME: This should use a single ADDI for the immediate.
define void @imm_store_i32_neg1(ptr %p) nounwind {
; RV64I-LABEL: imm_store_i32_neg1:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, -1
; RV64I-NEXT:
sw a1, 0(a0)
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_store_i32_neg1:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  li a1, -1
; RV64IZBA-NEXT:  sw a1, 0(a0)
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_store_i32_neg1:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  li a1, -1
; RV64IZBB-NEXT:  sw a1, 0(a0)
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_store_i32_neg1:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  li a1, -1
; RV64IZBS-NEXT:  sw a1, 0(a0)
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_store_i32_neg1:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  li a1, -1
; RV64IXTHEADBB-NEXT:  sw a1, 0(a0)
; RV64IXTHEADBB-NEXT:  ret
store i32 -1, ptr %p
ret void
}

define i64 @imm_5372288229() {
; RV64I-LABEL: imm_5372288229:

```

```

; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 160
; RV64I-NEXT:  addiw a0, a0, 437
; RV64I-NEXT:  slli a0, a0, 13
; RV64I-NEXT:  addi a0, a0, -795
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_5372288229:
; RV64IZBA:
    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 655797
; RV64IZBA-NEXT:  slli.uw a0, a0, 1
; RV64IZBA-NEXT:  addi a0, a0, -795
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_5372288229:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 160
; RV64IZBB-NEXT:  addiw a0, a0, 437
; RV64IZBB-NEXT:  slli a0, a0, 13
; RV64IZBB-NEXT:  addi a0, a0, -795
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_5372288229:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 263018
; RV64IZBS-NEXT:  addiw a0, a0, -795
; RV64IZBS-NEXT:  bseti a0, a0, 32
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_5372288229:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 160
; RV64IXTHEADBB-NEXT:  addiw a0, a0, 437
; RV64IXTHEADBB-NEXT:  slli a0, a0, 13
; RV64IXTHEADBB-NEXT:  addi a0, a0, -795
; RV64IXTHEADBB-NEXT:  ret
ret i64 5372288229
}

```

```

define i64 @imm_neg_5372288229() {
; RV64I-LABEL: imm_neg_5372288229:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 1048416
; RV64I-NEXT:
    addiw a0, a0, -437
; RV64I-NEXT:  slli a0, a0, 13
; RV64I-NEXT:  addi a0, a0, 795

```

```

; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_neg_5372288229:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 611378
; RV64IZBA-NEXT:  addiw a0, a0, 265
; RV64IZBA-NEXT:  sh1add a0, a0, a0
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_neg_5372288229:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 1048416
; RV64IZBB-NEXT:  addiw a0, a0, -437
; RV64IZBB-NEXT:  slli a0, a0, 13
; RV64IZBB-NEXT:  addi a0, a0, 795
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_neg_5372288229:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 785558
; RV64IZBS-NEXT:  addiw a0, a0, 795
; RV64IZBS-NEXT:  bclri a0, a0, 32
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_neg_5372288229:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 1048416
; RV64IXTHEADBB-NEXT:  addiw a0, a0, -437
; RV64IXTHEADBB-NEXT:  slli a0, a0, 13
; RV64IXTHEADBB-NEXT:  addi a0, a0,
795
; RV64IXTHEADBB-NEXT:  ret
ret i64 -5372288229
}

```

```

define i64 @imm_8953813715() {
; RV64I-LABEL: imm_8953813715:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 267
; RV64I-NEXT:  addiw a0, a0, -637
; RV64I-NEXT:  slli a0, a0, 13
; RV64I-NEXT:  addi a0, a0, -1325
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_8953813715:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 437198
; RV64IZBA-NEXT:  addiw a0, a0, -265

```



```

; RV64IZBA-NEXT: sh2add a0, a0, a0
; RV64IZBA-NEXT: ret
;
; RV64IZBB-LABEL: imm_8953813715:
; RV64IZBB: # %bb.0:
; RV64IZBB-NEXT: lui a0, 267
; RV64IZBB-NEXT: addiw a0, a0, -637
; RV64IZBB-NEXT: slli a0, a0, 13
; RV64IZBB-NEXT: addi a0, a0, -1325
; RV64IZBB-NEXT: ret
;
; RV64IZBS-LABEL: imm_8953813715:
; RV64IZBS: # %bb.0:
; RV64IZBS-NEXT: lui a0, 88838
; RV64IZBS-NEXT: addiw a0, a0, -1325
; RV64IZBS-NEXT: bseti a0, a0, 33
; RV64IZBS-NEXT: ret
;
; RV64IXTHEADBB-LABEL: imm_8953813715:
; RV64IXTHEADBB: # %bb.0:
;
; RV64IXTHEADBB-NEXT: lui a0, 267
; RV64IXTHEADBB-NEXT: addiw a0, a0, -637
; RV64IXTHEADBB-NEXT: slli a0, a0, 13
; RV64IXTHEADBB-NEXT: addi a0, a0, -1325
; RV64IXTHEADBB-NEXT: ret
ret i64 8953813715
}

```

```

define i64 @imm_neg_8953813715() {
; RV64I-LABEL: imm_neg_8953813715:
; RV64I: # %bb.0:
; RV64I-NEXT: lui a0, 1048309
; RV64I-NEXT: addiw a0, a0, 637
; RV64I-NEXT: slli a0, a0, 13
; RV64I-NEXT: addi a0, a0, 1325
; RV64I-NEXT: ret
;
; RV64IZBA-LABEL: imm_neg_8953813715:
; RV64IZBA: # %bb.0:
; RV64IZBA-NEXT: lui a0, 611378
; RV64IZBA-NEXT: addiw a0, a0, 265
; RV64IZBA-NEXT: sh2add a0, a0, a0
; RV64IZBA-NEXT: ret
;
; RV64IZBB-LABEL: imm_neg_8953813715:
; RV64IZBB: # %bb.0:
; RV64IZBB-NEXT: lui a0, 1048309

```

```

; RV64IZBB-NEXT:  addiw a0, a0, 637
; RV64IZBB-NEXT:  slli a0, a0, 13
; RV64IZBB-NEXT:  addi a0, a0, 1325
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_neg_8953813715:
; RV64IZBS:      # %bb.0:
; RV64IZBS-NEXT:
    lui a0, 959738
; RV64IZBS-NEXT:  addiw a0, a0, 1325
; RV64IZBS-NEXT:  bclri a0, a0, 33
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_neg_8953813715:
; RV64IXTHEADBB: # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 1048309
; RV64IXTHEADBB-NEXT:  addiw a0, a0, 637
; RV64IXTHEADBB-NEXT:  slli a0, a0, 13
; RV64IXTHEADBB-NEXT:  addi a0, a0, 1325
; RV64IXTHEADBB-NEXT:  ret
ret i64 -8953813715
}

```

```

define i64 @imm_16116864687() {
; RV64I-LABEL: imm_16116864687:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lui a0, 961
; RV64I-NEXT:  addiw a0, a0, -1475
; RV64I-NEXT:  slli a0, a0, 12
; RV64I-NEXT:  addi a0, a0, 1711
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_16116864687:
; RV64IZBA:   # %bb.0:
; RV64IZBA-NEXT:  lui a0, 437198
; RV64IZBA-NEXT:  addiw a0, a0, -265
; RV64IZBA-NEXT:  sh3add a0, a0, a0
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_16116864687:
; RV64IZBB:   # %bb.0:
; RV64IZBB-NEXT:  lui a0, 961
; RV64IZBB-NEXT:  addiw a0, a0, -1475
; RV64IZBB-NEXT:
    slli a0, a0, 12
; RV64IZBB-NEXT:  addi a0, a0, 1711
; RV64IZBB-NEXT:  ret
;

```

```

;RV64IZBS-LABEL: imm_16116864687:
;RV64IZBS:    # %bb.0:
;RV64IZBS-NEXT:  lui a0, 961
;RV64IZBS-NEXT:  addiw a0, a0, -1475
;RV64IZBS-NEXT:  slli a0, a0, 12
;RV64IZBS-NEXT:  addi a0, a0, 1711
;RV64IZBS-NEXT:  ret
;
;RV64IXTHEADBB-LABEL: imm_16116864687:
;RV64IXTHEADBB:    # %bb.0:
;RV64IXTHEADBB-NEXT:  lui a0, 961
;RV64IXTHEADBB-NEXT:  addiw a0, a0, -1475
;RV64IXTHEADBB-NEXT:  slli a0, a0, 12
;RV64IXTHEADBB-NEXT:  addi a0, a0, 1711
;RV64IXTHEADBB-NEXT:  ret
ret i64 16116864687
}

```

```

define i64 @imm_neg_16116864687() {
;RV64I-LABEL: imm_neg_16116864687:
;RV64I:    # %bb.0:
;RV64I-NEXT:  lui a0, 1047615
;RV64I-NEXT:  addiw a0, a0, 1475
;RV64I-NEXT:  slli a0, a0, 12
;RV64I-NEXT:  addi a0, a0, -1711
;RV64I-NEXT:  ret
;
;RV64IZBA-LABEL: imm_neg_16116864687:
;RV64IZBA:    # %bb.0:
;RV64IZBA-NEXT:  lui a0, 611378
;RV64IZBA-NEXT:
addiw a0, a0, 265
;RV64IZBA-NEXT:  sh3add a0, a0, a0
;RV64IZBA-NEXT:  ret
;
;RV64IZBB-LABEL: imm_neg_16116864687:
;RV64IZBB:    # %bb.0:
;RV64IZBB-NEXT:  lui a0, 1047615
;RV64IZBB-NEXT:  addiw a0, a0, 1475
;RV64IZBB-NEXT:  slli a0, a0, 12
;RV64IZBB-NEXT:  addi a0, a0, -1711
;RV64IZBB-NEXT:  ret
;
;RV64IZBS-LABEL: imm_neg_16116864687:
;RV64IZBS:    # %bb.0:
;RV64IZBS-NEXT:  lui a0, 1047615
;RV64IZBS-NEXT:  addiw a0, a0, 1475
;RV64IZBS-NEXT:  slli a0, a0, 12

```

```

; RV64IZBS-NEXT:  addi a0, a0, -1711
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_neg_16116864687:
; RV64IXTHEADBB:   # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 1047615
; RV64IXTHEADBB-NEXT:  addiw a0, a0, 1475
; RV64IXTHEADBB-NEXT:  slli a0, a0, 12
; RV64IXTHEADBB-NEXT:  addi a0, a0, -1711
; RV64IXTHEADBB-NEXT:  ret
ret i64 -16116864687
}

```

```

define i64 @imm_2344336315() {
; RV64I-LABEL: imm_2344336315:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lui a0, 143087
; RV64I-NEXT:
    slli a0, a0, 2
; RV64I-NEXT:  addi a0, a0, -1093
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_2344336315:
; RV64IZBA:   # %bb.0:
; RV64IZBA-NEXT:  lui a0, 143087
; RV64IZBA-NEXT:  slli a0, a0, 2
; RV64IZBA-NEXT:  addi a0, a0, -1093
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_2344336315:
; RV64IZBB:   # %bb.0:
; RV64IZBB-NEXT:  lui a0, 143087
; RV64IZBB-NEXT:  slli a0, a0, 2
; RV64IZBB-NEXT:  addi a0, a0, -1093
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_2344336315:
; RV64IZBS:   # %bb.0:
; RV64IZBS-NEXT:  lui a0, 143087
; RV64IZBS-NEXT:  slli a0, a0, 2
; RV64IZBS-NEXT:  addi a0, a0, -1093
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_2344336315:
; RV64IXTHEADBB:   # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 143087
; RV64IXTHEADBB-NEXT:  slli a0, a0, 2
; RV64IXTHEADBB-NEXT:  addi a0, a0, -1093

```

```

; RV64IXTHEADBB-NEXT:  ret
ret i64 2344336315 ; 0x8bbbbbbb
}

define i64 @imm_70370820078523() {
; RV64-NOPOOL-LABEL: imm_70370820078523:
;
RV64-NOPOOL:    # %bb.0:
; RV64-NOPOOL-NEXT:  lui a0, 256
; RV64-NOPOOL-NEXT:  addiw a0, a0, 31
; RV64-NOPOOL-NEXT:  slli a0, a0, 12
; RV64-NOPOOL-NEXT:  addi a0, a0, -273
; RV64-NOPOOL-NEXT:  slli a0, a0, 14
; RV64-NOPOOL-NEXT:  addi a0, a0, -1093
; RV64-NOPOOL-NEXT:  ret
;
; RV64I-POOL-LABEL: imm_70370820078523:
; RV64I-POOL:    # %bb.0:
; RV64I-POOL-NEXT:  lui a0, %hi(.LCPI37_0)
; RV64I-POOL-NEXT:  ld a0, %lo(.LCPI37_0)(a0)
; RV64I-POOL-NEXT:  ret
;
; RV64IZBA-LABEL: imm_70370820078523:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 256
; RV64IZBA-NEXT:  addiw a0, a0, 31
; RV64IZBA-NEXT:  slli a0, a0, 12
; RV64IZBA-NEXT:  addi a0, a0, -273
; RV64IZBA-NEXT:  slli a0, a0, 14
; RV64IZBA-NEXT:  addi a0, a0, -1093
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_70370820078523:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 256
; RV64IZBB-NEXT:  addiw a0, a0, 31
; RV64IZBB-NEXT:  slli a0, a0, 12
; RV64IZBB-NEXT:  addi a0, a0, -273
;
RV64IZBB-NEXT:  slli a0, a0, 14
; RV64IZBB-NEXT:  addi a0, a0, -1093
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_70370820078523:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 506812
; RV64IZBS-NEXT:  addiw a0, a0, -1093
; RV64IZBS-NEXT:  bseti a0, a0, 46

```

```

;RV64IZBS-NEXT:  ret
;
;RV64IXTHEADBB-LABEL: imm_70370820078523:
;RV64IXTHEADBB:   # %bb.0:
;RV64IXTHEADBB-NEXT:  lui a0, 256
;RV64IXTHEADBB-NEXT:  addiw a0, a0, 31
;RV64IXTHEADBB-NEXT:  slli a0, a0, 12
;RV64IXTHEADBB-NEXT:  addi a0, a0, -273
;RV64IXTHEADBB-NEXT:  slli a0, a0, 14
;RV64IXTHEADBB-NEXT:  addi a0, a0, -1093
;RV64IXTHEADBB-NEXT:  ret
ret i64 70370820078523 ; 0x40007bbbbbbb
}

define i64 @imm_neg_9223372034778874949() {
;RV64I-LABEL: imm_neg_9223372034778874949:
;RV64I:   # %bb.0:
;RV64I-NEXT:  lui a0, 506812
;RV64I-NEXT:  addiw a0, a0, -1093
;RV64I-NEXT:  slli a1, a0, 63
;RV64I-NEXT:  add a0, a0, a1
;RV64I-NEXT:  ret
;
;RV64IZBA-LABEL: imm_neg_9223372034778874949:
;
RV64IZBA:   # %bb.0:
;RV64IZBA-NEXT:  lui a0, 506812
;RV64IZBA-NEXT:  addiw a0, a0, -1093
;RV64IZBA-NEXT:  slli a1, a0, 63
;RV64IZBA-NEXT:  add a0, a0, a1
;RV64IZBA-NEXT:  ret
;
;RV64IZBB-LABEL: imm_neg_9223372034778874949:
;RV64IZBB:   # %bb.0:
;RV64IZBB-NEXT:  lui a0, 506812
;RV64IZBB-NEXT:  addiw a0, a0, -1093
;RV64IZBB-NEXT:  slli a1, a0, 63
;RV64IZBB-NEXT:  add a0, a0, a1
;RV64IZBB-NEXT:  ret
;
;RV64IZBS-LABEL: imm_neg_9223372034778874949:
;RV64IZBS:   # %bb.0:
;RV64IZBS-NEXT:  lui a0, 506812
;RV64IZBS-NEXT:  addiw a0, a0, -1093
;RV64IZBS-NEXT:  bseti a0, a0, 63
;RV64IZBS-NEXT:  ret
;
;RV64IXTHEADBB-LABEL: imm_neg_9223372034778874949:

```

```

; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 506812
; RV64IXTHEADBB-NEXT:  addiw a0, a0, -1093
; RV64IXTHEADBB-NEXT:  slli a1, a0, 63
; RV64IXTHEADBB-NEXT:  add a0, a0, a1
; RV64IXTHEADBB-NEXT:  ret
ret i64 -9223372034778874949 ; 0x800000007bbbbbbb
}

define
i64 @imm_neg_9223301666034697285() {
; RV64-NOPOOL-LABEL: imm_neg_9223301666034697285:
; RV64-NOPOOL:    # %bb.0:
; RV64-NOPOOL-NEXT:  lui a0, 917505
; RV64-NOPOOL-NEXT:  slli a0, a0, 8
; RV64-NOPOOL-NEXT:  addi a0, a0, 31
; RV64-NOPOOL-NEXT:  slli a0, a0, 12
; RV64-NOPOOL-NEXT:  addi a0, a0, -273
; RV64-NOPOOL-NEXT:  slli a0, a0, 14
; RV64-NOPOOL-NEXT:  addi a0, a0, -1093
; RV64-NOPOOL-NEXT:  ret
;
; RV64I-POOL-LABEL: imm_neg_9223301666034697285:
; RV64I-POOL:    # %bb.0:
; RV64I-POOL-NEXT:  lui a0, %hi(.LCPI39_0)
; RV64I-POOL-NEXT:  ld a0, %lo(.LCPI39_0)(a0)
; RV64I-POOL-NEXT:  ret
;
; RV64IZBA-LABEL: imm_neg_9223301666034697285:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 917505
; RV64IZBA-NEXT:  slli a0, a0, 8
; RV64IZBA-NEXT:  addi a0, a0, 31
; RV64IZBA-NEXT:  slli a0, a0, 12
; RV64IZBA-NEXT:  addi a0, a0, -273
; RV64IZBA-NEXT:  slli a0, a0, 14
; RV64IZBA-NEXT:  addi a0, a0, -1093
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL:
imm_neg_9223301666034697285:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 917505
; RV64IZBB-NEXT:  slli a0, a0, 8
; RV64IZBB-NEXT:  addi a0, a0, 31
; RV64IZBB-NEXT:  slli a0, a0, 12
; RV64IZBB-NEXT:  addi a0, a0, -273
; RV64IZBB-NEXT:  slli a0, a0, 14

```

```

;RV64IZBB-NEXT:  addi a0, a0, -1093
;RV64IZBB-NEXT:  ret
;
;RV64IZBS-LABEL: imm_neg_9223301666034697285:
;RV64IZBS:      # %bb.0:
;RV64IZBS-NEXT:  lui a0, 506812
;RV64IZBS-NEXT:  addiw a0, a0, -1093
;RV64IZBS-NEXT:  bseti a0, a0, 46
;RV64IZBS-NEXT:  bseti a0, a0, 63
;RV64IZBS-NEXT:  ret
;
;RV64IXTHEADBB-LABEL: imm_neg_9223301666034697285:
;RV64IXTHEADBB: # %bb.0:
;RV64IXTHEADBB-NEXT:  lui a0, 917505
;RV64IXTHEADBB-NEXT:  slli a0, a0, 8
;RV64IXTHEADBB-NEXT:  addi a0, a0, 31
;RV64IXTHEADBB-NEXT:  slli a0, a0, 12
;RV64IXTHEADBB-NEXT:  addi a0, a0, -273
;RV64IXTHEADBB-NEXT:  slli a0, a0, 14
;RV64IXTHEADBB-NEXT:  addi a0, a0, -1093
;RV64IXTHEADBB-NEXT:  ret
ret i64 -9223301666034697285 ; 0x800040007bbbbbbb
}

```

```

define i64 @imm_neg_2219066437() {
;RV64I-LABEL: imm_neg_2219066437:
;RV64I:      # %bb.0:
;RV64I-NEXT:  lui a0, 913135
;RV64I-NEXT:  slli a0, a0, 2
;RV64I-NEXT:  addi a0, a0, -1093
;RV64I-NEXT:  ret
;
;RV64IZBA-LABEL: imm_neg_2219066437:
;RV64IZBA:   # %bb.0:
;RV64IZBA-NEXT:  lui a0, 913135
;RV64IZBA-NEXT:  slli a0, a0, 2
;RV64IZBA-NEXT:  addi a0, a0, -1093
;RV64IZBA-NEXT:  ret
;
;RV64IZBB-LABEL: imm_neg_2219066437:
;RV64IZBB:   # %bb.0:
;RV64IZBB-NEXT:  lui a0, 913135
;RV64IZBB-NEXT:  slli a0, a0, 2
;RV64IZBB-NEXT:  addi a0, a0, -1093
;RV64IZBB-NEXT:  ret
;
;RV64IZBS-LABEL: imm_neg_2219066437:
;RV64IZBS:   # %bb.0:

```



```

; RV64IZBS-NEXT: lui a0, 913135
; RV64IZBS-NEXT: slli a0, a0, 2
; RV64IZBS-NEXT: addi a0, a0, -1093
; RV64IZBS-NEXT: ret
;
; RV64IXTHEADBB-LABEL: imm_neg_2219066437:
; RV64IXTHEADBB: # %bb.0:
; RV64IXTHEADBB-NEXT: lui a0, 913135
; RV64IXTHEADBB-NEXT:
slli a0, a0, 2
; RV64IXTHEADBB-NEXT: addi a0, a0, -1093
; RV64IXTHEADBB-NEXT: ret
ret i64 -2219066437 ; 0xffffffff7bbbbbbb
}

```

```

define i64 @imm_neg_8798043653189() {
; RV64I-LABEL: imm_neg_8798043653189:
; RV64I: # %bb.0:
; RV64I-NEXT: lui a0, 917475
; RV64I-NEXT: addiw a0, a0, -273
; RV64I-NEXT: slli a0, a0, 14
; RV64I-NEXT: addi a0, a0, -1093
; RV64I-NEXT: ret
;
; RV64IZBA-LABEL: imm_neg_8798043653189:
; RV64IZBA: # %bb.0:
; RV64IZBA-NEXT: lui a0, 917475
; RV64IZBA-NEXT: addiw a0, a0, -273
; RV64IZBA-NEXT: slli a0, a0, 14
; RV64IZBA-NEXT: addi a0, a0, -1093
; RV64IZBA-NEXT: ret
;
; RV64IZBB-LABEL: imm_neg_8798043653189:
; RV64IZBB: # %bb.0:
; RV64IZBB-NEXT: lui a0, 917475
; RV64IZBB-NEXT: addiw a0, a0, -273
; RV64IZBB-NEXT: slli a0, a0, 14
; RV64IZBB-NEXT: addi a0, a0, -1093
; RV64IZBB-NEXT: ret
;
; RV64IZBS-LABEL: imm_neg_8798043653189:
; RV64IZBS: # %bb.0:
; RV64IZBS-NEXT: lui a0, 572348
; RV64IZBS-NEXT:
addiw a0, a0, -1093
; RV64IZBS-NEXT: bclri a0, a0, 43
; RV64IZBS-NEXT: ret
;

```

```

;RV64IXTHEADBB-LABEL: imm_neg_8798043653189:
;RV64IXTHEADBB:    # %bb.0:
;RV64IXTHEADBB-NEXT:  lui a0, 917475
;RV64IXTHEADBB-NEXT:  addiw a0, a0, -273
;RV64IXTHEADBB-NEXT:  slli a0, a0, 14
;RV64IXTHEADBB-NEXT:  addi a0, a0, -1093
;RV64IXTHEADBB-NEXT:  ret
ret i64 -8798043653189 ; 0xffff7ff8bbbbbbb
}

define i64 @imm_9223372034904144827() {
;RV64I-LABEL: imm_9223372034904144827:
;RV64I:    # %bb.0:
;RV64I-NEXT:  lui a0, 572348
;RV64I-NEXT:  addiw a0, a0, -1093
;RV64I-NEXT:  slli a1, a0, 63
;RV64I-NEXT:  add a0, a0, a1
;RV64I-NEXT:  ret
;
;RV64IZBA-LABEL: imm_9223372034904144827:
;RV64IZBA:    # %bb.0:
;RV64IZBA-NEXT:  lui a0, 572348
;RV64IZBA-NEXT:  addiw a0, a0, -1093
;RV64IZBA-NEXT:  slli a1, a0, 63
;RV64IZBA-NEXT:  add a0, a0, a1
;RV64IZBA-NEXT:  ret
;
;RV64IZBB-LABEL: imm_9223372034904144827:
;RV64IZBB:    # %bb.0:
;RV64IZBB-NEXT:
    lui a0, 572348
;RV64IZBB-NEXT:  addiw a0, a0, -1093
;RV64IZBB-NEXT:  slli a1, a0, 63
;RV64IZBB-NEXT:  add a0, a0, a1
;RV64IZBB-NEXT:  ret
;
;RV64IZBS-LABEL: imm_9223372034904144827:
;RV64IZBS:    # %bb.0:
;RV64IZBS-NEXT:  lui a0, 572348
;RV64IZBS-NEXT:  addiw a0, a0, -1093
;RV64IZBS-NEXT:  bclri a0, a0, 63
;RV64IZBS-NEXT:  ret
;
;RV64IXTHEADBB-LABEL: imm_9223372034904144827:
;RV64IXTHEADBB:    # %bb.0:
;RV64IXTHEADBB-NEXT:  lui a0, 572348
;RV64IXTHEADBB-NEXT:  addiw a0, a0, -1093
;RV64IXTHEADBB-NEXT:  slli a1, a0, 63

```

```

; RV64IXTHEADBB-NEXT:  add a0, a0, a1
; RV64IXTHEADBB-NEXT:  ret
ret i64 9223372034904144827 ; 0x7fffffff8bbbbbbb
}

define i64 @imm_neg_9223354442718100411() {
; RV64-NOPOOL-LABEL: imm_neg_9223354442718100411:
; RV64-NOPOOL:      # %bb.0:
; RV64-NOPOOL-NEXT:  lui a0, 524287
; RV64-NOPOOL-NEXT:  slli a0, a0, 6
; RV64-NOPOOL-NEXT:  addi a0, a0, -29
; RV64-NOPOOL-NEXT:  slli a0, a0, 12
; RV64-NOPOOL-NEXT:
    addi a0, a0, -273
; RV64-NOPOOL-NEXT:  slli a0, a0, 14
; RV64-NOPOOL-NEXT:  addi a0, a0, -1093
; RV64-NOPOOL-NEXT:  ret
;
; RV64I-POOL-LABEL: imm_neg_9223354442718100411:
; RV64I-POOL:      # %bb.0:
; RV64I-POOL-NEXT:  lui a0, %hi(.LCPI43_0)
; RV64I-POOL-NEXT:  ld a0, %lo(.LCPI43_0)(a0)
; RV64I-POOL-NEXT:  ret
;
; RV64IZBA-LABEL: imm_neg_9223354442718100411:
; RV64IZBA:      # %bb.0:
; RV64IZBA-NEXT:  lui a0, 524287
; RV64IZBA-NEXT:  slli a0, a0, 6
; RV64IZBA-NEXT:  addi a0, a0, -29
; RV64IZBA-NEXT:  slli a0, a0, 12
; RV64IZBA-NEXT:  addi a0, a0, -273
; RV64IZBA-NEXT:  slli a0, a0, 14
; RV64IZBA-NEXT:  addi a0, a0, -1093
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_neg_9223354442718100411:
; RV64IZBB:      # %bb.0:
; RV64IZBB-NEXT:  lui a0, 524287
; RV64IZBB-NEXT:  slli a0, a0, 6
; RV64IZBB-NEXT:  addi a0, a0, -29
; RV64IZBB-NEXT:  slli a0, a0, 12
; RV64IZBB-NEXT:  addi a0, a0, -273
; RV64IZBB-NEXT:  slli a0, a0, 14
; RV64IZBB-NEXT:
    addi a0, a0, -1093
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_neg_9223354442718100411:

```

```

; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 572348
; RV64IZBS-NEXT:  addiw a0, a0, -1093
; RV64IZBS-NEXT:  bclri a0, a0, 44
; RV64IZBS-NEXT:  bclri a0, a0, 63
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_neg_9223354442718100411:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 524287
; RV64IXTHEADBB-NEXT:  slli a0, a0, 6
; RV64IXTHEADBB-NEXT:  addi a0, a0, -29
; RV64IXTHEADBB-NEXT:  slli a0, a0, 12
; RV64IXTHEADBB-NEXT:  addi a0, a0, -273
; RV64IXTHEADBB-NEXT:  slli a0, a0, 14
; RV64IXTHEADBB-NEXT:  addi a0, a0, -1093
; RV64IXTHEADBB-NEXT:  ret
ret i64 9223354442718100411 ; 0x7ffefff8bbbbbbb
}

```

```

define i64 @imm_2863311530() {
; RV64I-LABEL: imm_2863311530:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 349525
; RV64I-NEXT:  addiw a0, a0, 1365
; RV64I-NEXT:  slli a0, a0, 1
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_2863311530:
; RV64IZBA:
    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 349525
; RV64IZBA-NEXT:  addiw a0, a0, 1365
; RV64IZBA-NEXT:  slli a0, a0, 1
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_2863311530:
; RV64IZBB:  # %bb.0:
; RV64IZBB-NEXT:  lui a0, 349525
; RV64IZBB-NEXT:  addiw a0, a0, 1365
; RV64IZBB-NEXT:  slli a0, a0, 1
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_2863311530:
; RV64IZBS:  # %bb.0:
; RV64IZBS-NEXT:  lui a0, 349525
; RV64IZBS-NEXT:  addiw a0, a0, 1365
; RV64IZBS-NEXT:  slli a0, a0, 1

```

```

; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_2863311530:
; RV64IXTHEADBB:   # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 349525
; RV64IXTHEADBB-NEXT:  addiw a0, a0, 1365
; RV64IXTHEADBB-NEXT:  slli a0, a0, 1
; RV64IXTHEADBB-NEXT:  ret
ret i64 2863311530 ; #0xaaaaaaaa
}

define i64 @imm_neg_2863311530() {
; RV64I-LABEL: imm_neg_2863311530:
; RV64I:   # %bb.0:
; RV64I-NEXT:  lui a0, 699051
; RV64I-NEXT:  addiw a0, a0, -1365
; RV64I-NEXT:  slli a0,
a0, 1
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_neg_2863311530:
; RV64IZBA:   # %bb.0:
; RV64IZBA-NEXT:  lui a0, 699051
; RV64IZBA-NEXT:  addiw a0, a0, -1365
; RV64IZBA-NEXT:  slli a0, a0, 1
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_neg_2863311530:
; RV64IZBB:   # %bb.0:
; RV64IZBB-NEXT:  lui a0, 699051
; RV64IZBB-NEXT:  addiw a0, a0, -1365
; RV64IZBB-NEXT:  slli a0, a0, 1
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_neg_2863311530:
; RV64IZBS:   # %bb.0:
; RV64IZBS-NEXT:  lui a0, 699051
; RV64IZBS-NEXT:  addiw a0, a0, -1365
; RV64IZBS-NEXT:  slli a0, a0, 1
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_neg_2863311530:
; RV64IXTHEADBB:   # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 699051
; RV64IXTHEADBB-NEXT:  addiw a0, a0, -1365
; RV64IXTHEADBB-NEXT:  slli a0, a0, 1
; RV64IXTHEADBB-NEXT:  ret
ret i64 -2863311530 ; #0xffffffff55555556

```

```

}

define i64 @imm_2147486378() {
; RV64I-LABEL: imm_2147486378:
; RV64I:    # %bb.0:
; RV64I-NEXT:
    li a0, 1
; RV64I-NEXT:  slli a0, a0, 31
; RV64I-NEXT:  addi a0, a0, 1365
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_2147486378:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  li a0, 1
; RV64IZBA-NEXT:  slli a0, a0, 31
; RV64IZBA-NEXT:  addi a0, a0, 1365
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_2147486378:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  li a0, 1
; RV64IZBB-NEXT:  slli a0, a0, 31
; RV64IZBB-NEXT:  addi a0, a0, 1365
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_2147486378:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  li a0, 1365
; RV64IZBS-NEXT:  bseti a0, a0, 31
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_2147486378:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, 1
; RV64IXTHEADBB-NEXT:  slli a0, a0, 31
; RV64IXTHEADBB-NEXT:  addi a0, a0, 1365
; RV64IXTHEADBB-NEXT:  ret
ret i64 2147485013
}

```

```

define i64 @imm_neg_2147485013() {
; RV64I-LABEL: imm_neg_2147485013:
; RV64I:    # %bb.0:
; RV64I-NEXT:
    lui a0, 524288
; RV64I-NEXT:  addi a0, a0, -1365
; RV64I-NEXT:  ret
;

```

```

; RV64IZBA-LABEL: imm_neg_2147485013:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 524288
; RV64IZBA-NEXT:  addi a0, a0, -1365
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_neg_2147485013:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 524288
; RV64IZBB-NEXT:  addi a0, a0, -1365
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_neg_2147485013:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 524288
; RV64IZBS-NEXT:  addi a0, a0, -1365
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_neg_2147485013:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 524288
; RV64IXTHEADBB-NEXT:  addi a0, a0, -1365
; RV64IXTHEADBB-NEXT:  ret
ret i64 -2147485013
}

```

```

define i64 @imm_12900924131259() {
; RV64I-LABEL: imm_12900924131259:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 188
; RV64I-NEXT:  addiw a0, a0, -1093
; RV64I-NEXT:  slli a0, a0, 24
; RV64I-NEXT:  addi a0,
a0, 1979
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_12900924131259:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 768955
; RV64IZBA-NEXT:  slli.uw a0, a0, 12
; RV64IZBA-NEXT:  addi a0, a0, 1979
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_12900924131259:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 188
; RV64IZBB-NEXT:  addiw a0, a0, -1093
; RV64IZBB-NEXT:  slli a0, a0, 24

```

```

; RV64IZBB-NEXT:  addi a0, a0, 1979
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_12900924131259:
; RV64IZBS:      # %bb.0:
; RV64IZBS-NEXT:  lui a0, 188
; RV64IZBS-NEXT:  addiw a0, a0, -1093
; RV64IZBS-NEXT:  slli a0, a0, 24
; RV64IZBS-NEXT:  addi a0, a0, 1979
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_12900924131259:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 188
; RV64IXTHEADBB-NEXT:  addiw a0, a0, -1093
; RV64IXTHEADBB-NEXT:  slli a0, a0, 24
; RV64IXTHEADBB-NEXT:  addi a0, a0, 1979
; RV64IXTHEADBB-NEXT:  ret
ret i64 12900924131259
}

```

define

```

i64 @imm_50394234880() {
; RV64I-LABEL: imm_50394234880:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lui a0, 188
; RV64I-NEXT:  addiw a0, a0, -1093
; RV64I-NEXT:  slli a0, a0, 16
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_50394234880:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 768955
; RV64IZBA-NEXT:  slli.uw a0, a0, 4
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_50394234880:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 188
; RV64IZBB-NEXT:  addiw a0, a0, -1093
; RV64IZBB-NEXT:  slli a0, a0, 16
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_50394234880:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 188
; RV64IZBS-NEXT:  addiw a0, a0, -1093
; RV64IZBS-NEXT:  slli a0, a0, 16

```



```

; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_50394234880:
; RV64IXTHEADBB:   # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 188
; RV64IXTHEADBB-NEXT:  addiw a0, a0, -1093
; RV64IXTHEADBB-NEXT:  slli a0, a0, 16
; RV64IXTHEADBB-NEXT:  ret
ret
i64 50394234880
}

```

```

define i64 @imm_12900936431479() {
; RV64I-LABEL: imm_12900936431479:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lui a0, 192239
; RV64I-NEXT:  slli a0, a0, 2
; RV64I-NEXT:  addi a0, a0, -1093
; RV64I-NEXT:  slli a0, a0, 12
; RV64I-NEXT:  addi a0, a0, 1911
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_12900936431479:
; RV64IZBA:   # %bb.0:
; RV64IZBA-NEXT:  lui a0, 768956
; RV64IZBA-NEXT:  addi a0, a0, -1093
; RV64IZBA-NEXT:  slli.uw a0, a0, 12
; RV64IZBA-NEXT:  addi a0, a0, 1911
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_12900936431479:
; RV64IZBB:   # %bb.0:
; RV64IZBB-NEXT:  lui a0, 192239
; RV64IZBB-NEXT:  slli a0, a0, 2
; RV64IZBB-NEXT:  addi a0, a0, -1093
; RV64IZBB-NEXT:  slli a0, a0, 12
; RV64IZBB-NEXT:  addi a0, a0, 1911
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_12900936431479:
; RV64IZBS:   # %bb.0:
; RV64IZBS-NEXT:  lui a0, 192239
; RV64IZBS-NEXT:  slli a0, a0, 2
; RV64IZBS-NEXT:  addi a0, a0, -1093
; RV64IZBS-NEXT:
;   slli a0, a0, 12
; RV64IZBS-NEXT:  addi a0, a0, 1911
; RV64IZBS-NEXT:  ret

```

```

;
; RV64IXTHEADBB-LABEL: imm_12900936431479:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 192239
; RV64IXTHEADBB-NEXT:  slli a0, a0, 2
; RV64IXTHEADBB-NEXT:  addi a0, a0, -1093
; RV64IXTHEADBB-NEXT:  slli a0, a0, 12
; RV64IXTHEADBB-NEXT:  addi a0, a0, 1911
; RV64IXTHEADBB-NEXT:  ret
ret i64 12900936431479
}

```

```

define i64 @imm_12900918536874() {
; RV64I-LABEL: imm_12900918536874:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 384477
; RV64I-NEXT:  addiw a0, a0, 1365
; RV64I-NEXT:  slli a0, a0, 12
; RV64I-NEXT:  addi a0, a0, 1365
; RV64I-NEXT:  slli a0, a0, 1
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_12900918536874:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 768955
; RV64IZBA-NEXT:  addi a0, a0, -1365
; RV64IZBA-NEXT:  slli.uw a0, a0, 12
; RV64IZBA-NEXT:  addi a0, a0, -1366
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_12900918536874:
;
RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 384477
; RV64IZBB-NEXT:  addiw a0, a0, 1365
; RV64IZBB-NEXT:  slli a0, a0, 12
; RV64IZBB-NEXT:  addi a0, a0, 1365
; RV64IZBB-NEXT:  slli a0, a0, 1
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_12900918536874:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 384477
; RV64IZBS-NEXT:  addiw a0, a0, 1365
; RV64IZBS-NEXT:  slli a0, a0, 12
; RV64IZBS-NEXT:  addi a0, a0, 1365
; RV64IZBS-NEXT:  slli a0, a0, 1
; RV64IZBS-NEXT:  ret

```

```

;
; RV64IXTHEADBB-LABEL: imm_12900918536874:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 384477
; RV64IXTHEADBB-NEXT:  addiw a0, a0, 1365
; RV64IXTHEADBB-NEXT:  slli a0, a0, 12
; RV64IXTHEADBB-NEXT:  addi a0, a0, 1365
; RV64IXTHEADBB-NEXT:  slli a0, a0, 1
; RV64IXTHEADBB-NEXT:  ret
ret i64 12900918536874
}

```

```

define i64 @imm_12900925247761() {
; RV64I-LABEL: imm_12900925247761:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 384478
; RV64I-NEXT:  addiw
a0, a0, -1911
; RV64I-NEXT:  slli a0, a0, 13
; RV64I-NEXT:  addi a0, a0, -2048
; RV64I-NEXT:  addi a0, a0, -1775
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_12900925247761:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 768955
; RV64IZBA-NEXT:  addi a0, a0, 273
; RV64IZBA-NEXT:  slli.uw a0, a0, 12
; RV64IZBA-NEXT:  addi a0, a0, 273
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_12900925247761:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 384478
; RV64IZBB-NEXT:  addiw a0, a0, -1911
; RV64IZBB-NEXT:  slli a0, a0, 13
; RV64IZBB-NEXT:  addi a0, a0, -2048
; RV64IZBB-NEXT:  addi a0, a0, -1775
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_12900925247761:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 384478
; RV64IZBS-NEXT:  addiw a0, a0, -1911
; RV64IZBS-NEXT:  slli a0, a0, 13
; RV64IZBS-NEXT:  addi a0, a0, -2048
; RV64IZBS-NEXT:  addi a0, a0, -1775
; RV64IZBS-NEXT:  ret
}

```

```

;
; RV64IXTHEADBB-LABEL: imm_12900925247761:
; RV64IXTHEADBB:
    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 384478
; RV64IXTHEADBB-NEXT:  addiw a0, a0, -1911
; RV64IXTHEADBB-NEXT:  slli a0, a0, 13
; RV64IXTHEADBB-NEXT:  addi a0, a0, -2048
; RV64IXTHEADBB-NEXT:  addi a0, a0, -1775
; RV64IXTHEADBB-NEXT:  ret
ret i64 12900925247761
}

```

```

define i64 @imm_7158272001() {
; RV64I-LABEL: imm_7158272001:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 427
; RV64I-NEXT:  addiw a0, a0, -1367
; RV64I-NEXT:  slli a0, a0, 12
; RV64I-NEXT:  addi a0, a0, 1
; RV64I-NEXT:  ret
;

```

```

; RV64IZBA-LABEL: imm_7158272001:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 349525
; RV64IZBA-NEXT:  sh2add a0, a0, a0
; RV64IZBA-NEXT:  addi a0, a0, 1
; RV64IZBA-NEXT:  ret
;

```

```

; RV64IZBB-LABEL: imm_7158272001:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 427
; RV64IZBB-NEXT:  addiw a0, a0, -1367
; RV64IZBB-NEXT:  slli a0, a0, 12
; RV64IZBB-NEXT:  addi a0, a0, 1
; RV64IZBB-NEXT:  ret
;

```

```

; RV64IZBS-LABEL: imm_7158272001:
; RV64IZBS:
    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 427
; RV64IZBS-NEXT:  addiw a0, a0, -1367
; RV64IZBS-NEXT:  slli a0, a0, 12
; RV64IZBS-NEXT:  addi a0, a0, 1
; RV64IZBS-NEXT:  ret
;

```

```

; RV64IXTHEADBB-LABEL: imm_7158272001:
; RV64IXTHEADBB:    # %bb.0:

```

```

; RV64IXTHEADBB-NEXT: lui a0, 427
; RV64IXTHEADBB-NEXT: addiw a0, a0, -1367
; RV64IXTHEADBB-NEXT: slli a0, a0, 12
; RV64IXTHEADBB-NEXT: addi a0, a0, 1
; RV64IXTHEADBB-NEXT: ret
ret i64 7158272001 ; 0x0000_0001_aaaa_9001
}

```

```

define i64 @imm_12884889601() {
; RV64I-LABEL: imm_12884889601:
; RV64I:    # %bb.0:
; RV64I-NEXT: lui a0, 768
; RV64I-NEXT: addiw a0, a0, -3
; RV64I-NEXT: slli a0, a0, 12
; RV64I-NEXT: addi a0, a0, 1
; RV64I-NEXT: ret
;
; RV64IZBA-LABEL: imm_12884889601:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT: lui a0, 349525
; RV64IZBA-NEXT: sh3add a0, a0, a0
; RV64IZBA-NEXT: addi a0, a0, 1
; RV64IZBA-NEXT: ret
;
; RV64IZBB-LABEL: imm_12884889601:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:
    lui a0, 768
; RV64IZBB-NEXT: addiw a0, a0, -3
; RV64IZBB-NEXT: slli a0, a0, 12
; RV64IZBB-NEXT: addi a0, a0, 1
; RV64IZBB-NEXT: ret
;
; RV64IZBS-LABEL: imm_12884889601:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT: lui a0, 768
; RV64IZBS-NEXT: addiw a0, a0, -3
; RV64IZBS-NEXT: slli a0, a0, 12
; RV64IZBS-NEXT: addi a0, a0, 1
; RV64IZBS-NEXT: ret
;
; RV64IXTHEADBB-LABEL: imm_12884889601:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT: lui a0, 768
; RV64IXTHEADBB-NEXT: addiw a0, a0, -3
; RV64IXTHEADBB-NEXT: slli a0, a0, 12
; RV64IXTHEADBB-NEXT: addi a0, a0, 1
; RV64IXTHEADBB-NEXT: ret

```

```

ret i64 12884889601 ; 0x0000_0002_ffff_d001
}

define i64 @imm_neg_3435982847() {
; RV64I-LABEL: imm_neg_3435982847:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 1048371
; RV64I-NEXT:  addiw a0, a0, 817
; RV64I-NEXT:  slli a0, a0, 12
; RV64I-NEXT:  addi a0, a0, 1
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_neg_3435982847:
; RV64IZBA:
; # %bb.0:
; RV64IZBA-NEXT:  lui a0, 768955
; RV64IZBA-NEXT:  sh1add a0, a0, a0
; RV64IZBA-NEXT:  addi a0, a0, 1
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_neg_3435982847:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 1048371
; RV64IZBB-NEXT:  addiw a0, a0, 817
; RV64IZBB-NEXT:  slli a0, a0, 12
; RV64IZBB-NEXT:  addi a0, a0, 1
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_neg_3435982847:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 734001
; RV64IZBS-NEXT:  addiw a0, a0, 1
; RV64IZBS-NEXT:  bclri a0, a0, 31
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_neg_3435982847:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 1048371
; RV64IXTHEADBB-NEXT:  addiw a0, a0, 817
; RV64IXTHEADBB-NEXT:  slli a0, a0, 12
; RV64IXTHEADBB-NEXT:  addi a0, a0, 1
; RV64IXTHEADBB-NEXT:  ret
ret i64 -3435982847 ; 0xffff_fff_3333_1001
}

define i64 @imm_neg_5726842879() {
; RV64I-LABEL: imm_neg_5726842879:
; RV64I:    # %bb.0:

```

```

; RV64I-NEXT:
    lui a0, 1048235
; RV64I-NEXT:  addiw a0, a0, -1419
; RV64I-NEXT:  slli a0, a0, 12
; RV64I-NEXT:  addi a0, a0, 1
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: imm_neg_5726842879:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 768945
; RV64IZBA-NEXT:  sh2add a0, a0, a0
; RV64IZBA-NEXT:  addi a0, a0, 1
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_neg_5726842879:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 1048235
; RV64IZBB-NEXT:  addiw a0, a0, -1419
; RV64IZBB-NEXT:  slli a0, a0, 12
; RV64IZBB-NEXT:  addi a0, a0, 1
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_neg_5726842879:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 698997
; RV64IZBS-NEXT:  addiw a0, a0, 1
; RV64IZBS-NEXT:  bclri a0, a0, 32
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm_neg_5726842879:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 1048235
; RV64IXTHEADBB-NEXT:  addiw a0, a0, -1419
; RV64IXTHEADBB-NEXT:  slli a0, a0, 12
; RV64IXTHEADBB-NEXT:
    addi a0, a0, 1
; RV64IXTHEADBB-NEXT:  ret
ret i64 -5726842879 ; 0xffff_fffe_aaa7_5001
}

```

```

define i64 @imm_neg_10307948543() {
; RV64I-LABEL: imm_neg_10307948543:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 1047962
; RV64I-NEXT:  addiw a0, a0, -1645
; RV64I-NEXT:  slli a0, a0, 12
; RV64I-NEXT:  addi a0, a0, 1
; RV64I-NEXT:  ret
}

```

```

;
; RV64IZBA-LABEL: imm_neg_10307948543:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 768955
; RV64IZBA-NEXT:  sh3add a0, a0, a0
; RV64IZBA-NEXT:  addi a0, a0, 1
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm_neg_10307948543:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 1047962
; RV64IZBB-NEXT:  addiw a0, a0, -1645
; RV64IZBB-NEXT:  slli a0, a0, 12
; RV64IZBB-NEXT:  addi a0, a0, 1
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: imm_neg_10307948543:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 629139
; RV64IZBS-NEXT:  addiw a0, a0, 1
; RV64IZBS-NEXT:  bclri a0, a0, 33
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL:
imm_neg_10307948543:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 1047962
; RV64IXTHEADBB-NEXT:  addiw a0, a0, -1645
; RV64IXTHEADBB-NEXT:  slli a0, a0, 12
; RV64IXTHEADBB-NEXT:  addi a0, a0, 1
; RV64IXTHEADBB-NEXT:  ret
ret i64 -10307948543 ; 0xffff_ffff_9999_3001
}

```

```

define i64 @li_ropi_1() {
; RV64I-LABEL: li_ropi_1:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a0, -17
; RV64I-NEXT:  slli a0, a0, 43
; RV64I-NEXT:  addi a0, a0, -1
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: li_ropi_1:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  li a0, -17
; RV64IZBA-NEXT:  slli a0, a0, 43
; RV64IZBA-NEXT:  addi a0, a0, -1
; RV64IZBA-NEXT:  ret

```



```

;
; RV64IZBB-LABEL: li_ropi_1:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT: li a0, -18
; RV64IZBB-NEXT: ropi a0, a0, 21
; RV64IZBB-NEXT: ret
;
; RV64IZBS-LABEL: li_ropi_1:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT: li a0, -17
; RV64IZBS-NEXT: slli a0, a0, 43
; RV64IZBS-NEXT: addi a0, a0,
-1
; RV64IZBS-NEXT: ret
;
; RV64IXTHEADBB-LABEL: li_ropi_1:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT: li a0, -18
; RV64IXTHEADBB-NEXT: th.srri a0, a0, 21
; RV64IXTHEADBB-NEXT: ret
ret i64 -149533581377537
}

```

```

define i64 @li_ropi_2() {
; RV64I-LABEL: li_ropi_2:
; RV64I:    # %bb.0:
; RV64I-NEXT: li a0, -5
; RV64I-NEXT: slli a0, a0, 60
; RV64I-NEXT: addi a0, a0, -6
; RV64I-NEXT: ret
;
; RV64IZBA-LABEL: li_ropi_2:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT: li a0, -5
; RV64IZBA-NEXT: slli a0, a0, 60
; RV64IZBA-NEXT: addi a0, a0, -6
; RV64IZBA-NEXT: ret
;
; RV64IZBB-LABEL: li_ropi_2:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT: li a0, -86
; RV64IZBB-NEXT: ropi a0, a0, 4
; RV64IZBB-NEXT: ret
;
; RV64IZBS-LABEL: li_ropi_2:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT: li a0, -5
; RV64IZBS-NEXT: slli a0, a0, 60

```

```

; RV64IZBS-NEXT:  addi a0, a0, -6
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: li_ropi_2:
; RV64IXTHEADBB:
# %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, -86
; RV64IXTHEADBB-NEXT:  th.srri a0, a0, 4
; RV64IXTHEADBB-NEXT:  ret
ret i64 -5764607523034234886
}

```

```

define i64 @li_ropi_3() {
; RV64I-LABEL: li_ropi_3:
; RV64I:  # %bb.0:
; RV64I-NEXT:  li a0, -17
; RV64I-NEXT:  slli a0, a0, 27
; RV64I-NEXT:  addi a0, a0, -1
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: li_ropi_3:
; RV64IZBA:  # %bb.0:
; RV64IZBA-NEXT:  li a0, -17
; RV64IZBA-NEXT:  slli a0, a0, 27
; RV64IZBA-NEXT:  addi a0, a0, -1
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: li_ropi_3:
; RV64IZBB:  # %bb.0:
; RV64IZBB-NEXT:  li a0, -18
; RV64IZBB-NEXT:  ropi a0, a0, 37
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: li_ropi_3:
; RV64IZBS:  # %bb.0:
; RV64IZBS-NEXT:  li a0, -17
; RV64IZBS-NEXT:  slli a0, a0, 27
; RV64IZBS-NEXT:  addi a0, a0, -1
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: li_ropi_3:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  li a0, -18
; RV64IXTHEADBB-NEXT:  th.srri a0,
a0, 37
; RV64IXTHEADBB-NEXT:  ret
ret i64 -2281701377
}

```

```

; This used to assert when compiled with Zba.
define i64 @PR54812() {
; RV64I-LABEL: PR54812:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a0, 1048447
; RV64I-NEXT:  addiw a0, a0, 1407
; RV64I-NEXT:  slli a0, a0, 12
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: PR54812:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 872917
; RV64IZBA-NEXT:  sh1add a0, a0, a0
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: PR54812:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui a0, 1048447
; RV64IZBB-NEXT:  addiw a0, a0, 1407
; RV64IZBB-NEXT:  slli a0, a0, 12
; RV64IZBB-NEXT:  ret
;
; RV64IZBS-LABEL: PR54812:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 1045887
; RV64IZBS-NEXT:  bclri a0, a0, 31
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: PR54812:
; RV64IXTHEADBB:    # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 1048447
; RV64IXTHEADBB-NEXT:  addiw a0, a0, 1407
; RV64IXTHEADBB-NEXT:  slli a0, a0, 12
; RV64IXTHEADBB-NEXT:
    ret
ret i64 -2158497792;
}

```

```

define signext i32 @pos_2048() nounwind {
; RV64I-LABEL: pos_2048:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a0, 1
; RV64I-NEXT:  slli a0, a0, 11
; RV64I-NEXT:  ret
;
; RV64IZBA-LABEL: pos_2048:
; RV64IZBA:    # %bb.0:

```

```

; RV64IZBA-NEXT: li a0, 1
; RV64IZBA-NEXT: slli a0, a0, 11
; RV64IZBA-NEXT: ret
;
; RV64IZBB-LABEL: pos_2048:
; RV64IZBB: # %bb.0:
; RV64IZBB-NEXT: li a0, 1
; RV64IZBB-NEXT: slli a0, a0, 11
; RV64IZBB-NEXT: ret
;
; RV64IZBS-LABEL: pos_2048:
; RV64IZBS: # %bb.0:
; RV64IZBS-NEXT: bseti a0, zero, 11
; RV64IZBS-NEXT: ret
;
; RV64IXTHEADBB-LABEL: pos_2048:
; RV64IXTHEADBB: # %bb.0:
; RV64IXTHEADBB-NEXT: li a0, 1
; RV64IXTHEADBB-NEXT: slli a0, a0, 11
; RV64IXTHEADBB-NEXT: ret
ret i32 2048
}

```

```

define i64 @imm64_same_lo_hi() nounwind {
; RV64I-LABEL: imm64_same_lo_hi:
; RV64I: # %bb.0:
; RV64I-NEXT: lui a0, 65793
; RV64I-NEXT: addiw a0, a0, 16
; RV64I-NEXT:
slli a1, a0, 32
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: ret
;
; RV64IZBA-LABEL: imm64_same_lo_hi:
; RV64IZBA: # %bb.0:
; RV64IZBA-NEXT: lui a0, 65793
; RV64IZBA-NEXT: addiw a0, a0, 16
; RV64IZBA-NEXT: slli a1, a0, 32
; RV64IZBA-NEXT: add a0, a0, a1
; RV64IZBA-NEXT: ret
;
; RV64IZBB-LABEL: imm64_same_lo_hi:
; RV64IZBB: # %bb.0:
; RV64IZBB-NEXT: lui a0, 65793
; RV64IZBB-NEXT: addiw a0, a0, 16
; RV64IZBB-NEXT: slli a1, a0, 32
; RV64IZBB-NEXT: add a0, a0, a1
; RV64IZBB-NEXT: ret
}

```

```

;
; RV64IZBS-LABEL: imm64_same_lo_hi:
; RV64IZBS:    # %bb.0:
; RV64IZBS-NEXT:  lui a0, 65793
; RV64IZBS-NEXT:  addiw a0, a0, 16
; RV64IZBS-NEXT:  slli a1, a0, 32
; RV64IZBS-NEXT:  add a0, a0, a1
; RV64IZBS-NEXT:  ret
;
; RV64IXTHEADBB-LABEL: imm64_same_lo_hi:
; RV64IXTHEADBB:  # %bb.0:
; RV64IXTHEADBB-NEXT:  lui a0, 65793
; RV64IXTHEADBB-NEXT:  addiw a0, a0, 16
; RV64IXTHEADBB-NEXT:  slli a1, a0, 32
; RV64IXTHEADBB-NEXT:  add a0, a0, a1
;
RV64IXTHEADBB-NEXT:  ret
ret i64 1157442765409226768 ; 0x0101010101010101
}

; Same as above with optsize. Make sure we use constant pool on RV64
define i64 @imm64_same_lo_hi_optsize() nounwind optsize {
; RV64-NOPOOL-LABEL: imm64_same_lo_hi_optsize:
; RV64-NOPOOL:    # %bb.0:
; RV64-NOPOOL-NEXT:  lui a0, 65793
; RV64-NOPOOL-NEXT:  addiw a0, a0, 16
; RV64-NOPOOL-NEXT:  slli a1, a0, 32
; RV64-NOPOOL-NEXT:  add a0, a0, a1
; RV64-NOPOOL-NEXT:  ret
;
; RV64I-POOL-LABEL: imm64_same_lo_hi_optsize:
; RV64I-POOL:    # %bb.0:
; RV64I-POOL-NEXT:  lui a0, %hi(.LCPI64_0)
; RV64I-POOL-NEXT:  ld a0, %lo(.LCPI64_0)(a0)
; RV64I-POOL-NEXT:  ret
;
; RV64IZBA-LABEL: imm64_same_lo_hi_optsize:
; RV64IZBA:    # %bb.0:
; RV64IZBA-NEXT:  lui a0, 65793
; RV64IZBA-NEXT:  addiw a0, a0, 16
; RV64IZBA-NEXT:  slli a1, a0, 32
; RV64IZBA-NEXT:  add a0, a0, a1
; RV64IZBA-NEXT:  ret
;
; RV64IZBB-LABEL: imm64_same_lo_hi_optsize:
; RV64IZBB:    # %bb.0:
; RV64IZBB-NEXT:  lui

```

```

a0, 65793
; RV64IZBB-NEXT: addiw a0, a0, 16
; RV64IZBB-NEXT: slli a1, a0, 32
; RV64IZBB-NEXT: add a0, a0, a1
; RV64IZBB-NEXT: ret
;
; RV64IZBS-LABEL: imm64_same_lo_hi_optsize:
; RV64IZBS: # %bb.0:
; RV64IZBS-NEXT: lui a0, 65793
; RV64IZBS-NEXT: addiw a0, a0, 16
; RV64IZBS-NEXT: slli a1, a0, 32
; RV64IZBS-NEXT: add a0, a0, a1
; RV64IZBS-NEXT: ret
;
; RV64IXTHEADBB-LABEL: imm64_same_lo_hi_optsize:
; RV64IXTHEADBB: # %bb.0:
; RV64IXTHEADBB-NEXT: lui a0, 65793
; RV64IXTHEADBB-NEXT: addiw a0, a0, 16
; RV64IXTHEADBB-NEXT: slli a1, a0, 32
; RV64IXTHEADBB-NEXT: add a0, a0, a1
; RV64IXTHEADBB-NEXT: ret
ret i64 1157442765409226768 ; 0x0101010101010101
}

```

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```

*
* @(#)COPYRIGHT 8.1 (Berkeley) 3/16/94
*/
; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc < %s -mtriple=x86_64-unknown-unknown -mcpu=skylake-avx512 -mattr=prefer-256-bit | FileCheck %s
--check-prefixes=CHECK,CHECK-SKX
; RUN: llc < %s -mtriple=x86_64-unknown-unknown -mcpu=skylake-avx512 -mattr=prefer-256-bit,avx512vbmi |
FileCheck %s --check-prefixes=CHECK,CHECK-SKX,CHECK-SKX-VBMI
; Make sure CPUs default to prefer-256-bit. avx512vnni isn't interesting as it just adds an isel peephole for
vpmaddwd+vpadd
; RUN: llc < %s -mtriple=x86_64-unknown-unknown -mcpu=skylake-avx512 | FileCheck %s --check-
prefixes=CHECK,CHECK-AVX512
; RUN: llc < %s -mtriple=x86_64-unknown-unknown -mattr=-avx512vnni -mcpu=cascadelake | FileCheck %s --
check-prefixes=CHECK,CHECK-AVX512
; RUN: llc < %s -mtriple=x86_64-unknown-unknown -mattr=-avx512vnni -mcpu=cooperlake | FileCheck %s --
check-prefixes=CHECK,CHECK-AVX512
; RUN: llc < %s -mtriple=x86_64-unknown-unknown -mcpu=cannonlake | FileCheck %s --check-
prefixes=CHECK,CHECK-VBMI
;
; RUN: llc < %s -mtriple=x86_64-unknown-unknown -mattr=-avx512vnni -mcpu=icelake-client | FileCheck %s --
check-prefixes=CHECK,CHECK-VBMI
; RUN: llc < %s -mtriple=x86_64-unknown-unknown -mattr=-avx512vnni -mcpu=icelake-server | FileCheck %s --
check-prefixes=CHECK,CHECK-VBMI
; RUN: llc < %s -mtriple=x86_64-unknown-unknown -mattr=-avx512vnni -mcpu=tigerlake | FileCheck %s --check-
prefixes=CHECK,CHECK-VBMI

```

; This file primarily contains tests for specific places in X86ISelLowering.cpp that needed be made aware of the legalizer not allowing 512-bit vectors due to prefer-256-bit even though AVX512 is enabled.

```

define dso_local void @add256(<16 x i32>* %a, <16 x i32>* %b, <16 x i32>* %c) "min-legal-vector-
width"="256" {
; CHECK-LABEL: add256:
; CHECK:      # %bb.0:
; CHECK-NEXT: vmovdqa (%rdi), %ymm0
; CHECK-NEXT: vmovdqa 32(%rdi), %ymm1
; CHECK-NEXT: vpadd 32(%rsi), %ymm1, %ymm1
; CHECK-NEXT: vpadd (%rsi), %ymm0, %ymm0
; CHECK-NEXT: vmovdqa %ymm0, (%rdx)
; CHECK-NEXT:
;               vmovdqa %ymm1, 32(%rdx)
; CHECK-NEXT:  vzeroupper
; CHECK-NEXT:  retq
; %d = load <16 x i32>, <16 x i32>* %a
; %e = load <16 x i32>, <16 x i32>* %b
; %f = add <16 x i32> %d, %e
; store <16 x i32> %f, <16 x i32>* %c
; ret void
}

```







```

%even = shufflevector <32 x i32> %m, <32 x i32> undef, <16 x i32> <i32 1, i32 3, i32 5, i32
7, i32 9, i32 11, i32 13, i32 15, i32 17, i32 19, i32 21, i32 23, i32 25, i32 27, i32 29, i32 31>
%ret = add <16 x i32> %odd, %even
store <16 x i32> %ret, <16 x i32>* %CPtr
ret void
}

define dso_local void @pmaddwd_32_512(<32 x i16>* %APtr, <32 x i16>* %BPtr, <16 x i32>* %CPtr) "min-
legal-vector-width"="512" {
; CHECK-LABEL: pmaddwd_32_512:
; CHECK:      # %bb.0:
; CHECK-NEXT:  vmovdqa64 (%rdi), %zmm0
; CHECK-NEXT:  vpmaddwd (%rsi), %zmm0, %zmm0
; CHECK-NEXT:  vmovdqa64 %zmm0, (%rdx)
; CHECK-NEXT:  vzeroupper
; CHECK-NEXT:  retq
%A = load <32 x i16>, <32 x i16>* %APtr
%B = load <32 x i16>, <32 x i16>* %BPtr
%a = sext <32 x i16> %A to <32 x i32>
%b = sext <32 x i16> %B to <32 x i32>
%m = mul nsw <32 x i32> %a, %b
%odd = shufflevector <32 x i32> %m, <32 x i32> undef, <16 x i32> <i32 0, i32 2, i32 4, i32 6, i32 8, i32 10, i32
12, i32 14, i32 16, i32 18, i32 20, i32 22, i32 24, i32 26, i32 28, i32 30>
%even = shufflevector <32 x i32> %m, <32 x i32>
undef, <16 x i32> <i32 1, i32 3, i32 5, i32 7, i32 9, i32 11, i32 13, i32 15, i32 17, i32 19, i32 21, i32 23, i32 25, i32
27, i32 29, i32 31>
%ret = add <16 x i32> %odd, %even
store <16 x i32> %ret, <16 x i32>* %CPtr
ret void
}

define dso_local void @psubus_64i8_max_256(<64 x i8>* %xptr, <64 x i8>* %yptr, <64 x i8>* %zptr) "min-legal-
vector-width"="256" {
; CHECK-LABEL: psubus_64i8_max_256:
; CHECK:      # %bb.0:
; CHECK-NEXT:  vmovdqa (%rdi), %ymm0
; CHECK-NEXT:  vmovdqa 32(%rdi), %ymm1
; CHECK-NEXT:  vpsubusb 32(%rsi), %ymm1, %ymm1
; CHECK-NEXT:  vpsubusb (%rsi), %ymm0, %ymm0
; CHECK-NEXT:  vmovdqa %ymm0, (%rdx)
; CHECK-NEXT:  vmovdqa %ymm1, 32(%rdx)
; CHECK-NEXT:  vzeroupper
; CHECK-NEXT:  retq
%x = load <64 x i8>, <64 x i8>* %xptr
%y = load <64 x i8>, <64 x i8>* %yptr
%cmp = icmp ult <64 x i8> %x, %y
%max = select <64 x i1> %cmp, <64 x i8> %y, <64 x i8> %x
%res = sub <64 x i8> %max, %y

```

```

store <64 x i8> %res, <64 x i8>* %zptr
ret void
}

define
dso_local void @psubus_64i8_max_512(<64 x i8>* %xptr, <64 x i8>* %yptr, <64 x i8>* %zptr) "min-legal-
vector-width"="512" {
; CHECK-LABEL: psubus_64i8_max_512:
; CHECK:      # %bb.0:
; CHECK-NEXT: vmovdqa64 (%rdi), %zmm0
; CHECK-NEXT: vpsubusb (%rsi), %zmm0, %zmm0
; CHECK-NEXT: vmovdqa64 %zmm0, (%rdx)
; CHECK-NEXT: vzeroupper
; CHECK-NEXT: retq
%x = load <64 x i8>, <64 x i8>* %xptr
%y = load <64 x i8>, <64 x i8>* %yptr
%cmp = icmp ult <64 x i8> %x, %y
%max = select <64 x i1> %cmp, <64 x i8> %y, <64 x i8> %x
%res = sub <64 x i8> %max, %y
store <64 x i8> %res, <64 x i8>* %zptr
ret void
}

define dso_local i32 @_Z9test_charPcS_i_256(i8* nocapture readonly, i8* nocapture readonly, i32) "min-legal-
vector-width"="256" {
; CHECK-SKX-LABEL: _Z9test_charPcS_i_256:
; CHECK-SKX:      # %bb.0: # %entry
; CHECK-SKX-NEXT: movl %edx, %eax
; CHECK-SKX-NEXT: vpxor %xmm0, %xmm0, %xmm0
; CHECK-SKX-NEXT: xorl %ecx, %ecx
; CHECK-SKX-NEXT: vpxor %xmm1, %xmm1, %xmm1
;
; CHECK-SKX-NEXT: vpxor %xmm2, %xmm2, %xmm2
; CHECK-SKX-NEXT: .p2align 4, 0x90
; CHECK-SKX-NEXT: .LBB8_1: # %vector.body
; CHECK-SKX-NEXT: # =>This Inner Loop Header: Depth=1
; CHECK-SKX-NEXT: vpmovsxbw 16(%rdi,%rcx), %ymm3
; CHECK-SKX-NEXT: vpmovsxbw (%rdi,%rcx), %ymm4
; CHECK-SKX-NEXT: vpmovsxbw 16(%rsi,%rcx), %ymm5
; CHECK-SKX-NEXT: vpmaddwd %ymm3, %ymm5, %ymm3
; CHECK-SKX-NEXT: vpadd %ymm2, %ymm3, %ymm2
; CHECK-SKX-NEXT: vpmovsxbw (%rsi,%rcx), %ymm3
; CHECK-SKX-NEXT: vpmaddwd %ymm4, %ymm3, %ymm3
; CHECK-SKX-NEXT: vpadd %ymm1, %ymm3, %ymm1
; CHECK-SKX-NEXT: addq $32, %rcx
; CHECK-SKX-NEXT: cmpq %rcx, %rax
; CHECK-SKX-NEXT: jne .LBB8_1
; CHECK-SKX-NEXT: # %bb.2: # %middle.block

```

```

; CHECK-SKX-NEXT: vpaddd %ymm0, %ymm1, %ymm1
; CHECK-SKX-NEXT: vpaddd %ymm0, %ymm2, %ymm0
; CHECK-SKX-NEXT: vpaddd %ymm0, %ymm1, %ymm0
; CHECK-SKX-NEXT: vextracti128 $1, %ymm0, %xmm1
; CHECK-SKX-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-SKX-NEXT:
    vpshufd {{.*#+}} xmm1 = xmm0[2,3,2,3]
; CHECK-SKX-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-SKX-NEXT: vpsrlq $32, %xmm0, %xmm1
; CHECK-SKX-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-SKX-NEXT: vmovd %xmm0, %eax
; CHECK-SKX-NEXT: vzeroupper
; CHECK-SKX-NEXT: retq
;
; CHECK-AVX512-LABEL: _Z9test_charPcS_i_256:
; CHECK-AVX512:    # %bb.0: # %entry
; CHECK-AVX512-NEXT: movl %edx, %eax
; CHECK-AVX512-NEXT: vpxor %xmm0, %xmm0, %xmm0
; CHECK-AVX512-NEXT: xorl %ecx, %ecx
; CHECK-AVX512-NEXT: vpxor %xmm1, %xmm1, %xmm1
; CHECK-AVX512-NEXT: vpxor %xmm2, %xmm2, %xmm2
; CHECK-AVX512-NEXT: .p2align 4, 0x90
; CHECK-AVX512-NEXT: .LBB8_1: # %vector.body
; CHECK-AVX512-NEXT: # =>This Inner Loop Header: Depth=1
; CHECK-AVX512-NEXT: vpmovsxbw 16(%rdi,%rcx), %ymm3
; CHECK-AVX512-NEXT: vpmovsxbw (%rdi,%rcx), %ymm4
; CHECK-AVX512-NEXT: vpmovsxbw 16(%rsi,%rcx), %ymm5
; CHECK-AVX512-NEXT: vpmaddwd %ymm3, %ymm5, %ymm3
; CHECK-AVX512-NEXT: vpaddd %ymm2, %ymm3,
    %ymm2
; CHECK-AVX512-NEXT: vpmovsxbw (%rsi,%rcx), %ymm3
; CHECK-AVX512-NEXT: vpmaddwd %ymm4, %ymm3, %ymm3
; CHECK-AVX512-NEXT: vpaddd %ymm1, %ymm3, %ymm1
; CHECK-AVX512-NEXT: addq $32, %rcx
; CHECK-AVX512-NEXT: cmpq %rcx, %rax
; CHECK-AVX512-NEXT: jne .LBB8_1
; CHECK-AVX512-NEXT: # %bb.2: # %middle.block
; CHECK-AVX512-NEXT: vpaddd %ymm0, %ymm1, %ymm1
; CHECK-AVX512-NEXT: vpaddd %ymm0, %ymm2, %ymm0
; CHECK-AVX512-NEXT: vpaddd %ymm0, %ymm1, %ymm0
; CHECK-AVX512-NEXT: vextracti128 $1, %ymm0, %xmm1
; CHECK-AVX512-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-AVX512-NEXT: vpshufd {{.*#+}} xmm1 = xmm0[2,3,2,3]
; CHECK-AVX512-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-AVX512-NEXT: vpsrlq $32, %xmm0, %xmm1
; CHECK-AVX512-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-AVX512-NEXT: vmovd %xmm0, %eax
; CHECK-AVX512-NEXT: vzeroupper

```

```

; CHECK-AVX512-NEXT:  retq
;
; CHECK-VBMI-LABEL:  _Z9test_charPcS_i_256:
; CHECK-VBMI:      # %bb.0: # %entry
; CHECK-VBMI-NEXT:
    movl %edx, %eax
; CHECK-VBMI-NEXT:  vpxor %xmm0, %xmm0, %xmm0
; CHECK-VBMI-NEXT:  xorl %ecx, %ecx
; CHECK-VBMI-NEXT:  vpxor %xmm1, %xmm1, %xmm1
; CHECK-VBMI-NEXT:  vpxor %xmm2, %xmm2, %xmm2
; CHECK-VBMI-NEXT:  .p2align 4, 0x90
; CHECK-VBMI-NEXT:  .LBB8_1: # %vector.body
; CHECK-VBMI-NEXT:  # =>This Inner Loop Header: Depth=1
; CHECK-VBMI-NEXT:  vpmovsxbw 16(%rdi,%rcx), %ymm3
; CHECK-VBMI-NEXT:  vpmovsxbw (%rdi,%rcx), %ymm4
; CHECK-VBMI-NEXT:  vpmovsxbw 16(%rsi,%rcx), %ymm5
; CHECK-VBMI-NEXT:  vpmaddwd %ymm3, %ymm5, %ymm3
; CHECK-VBMI-NEXT:  vpadd %ymm2, %ymm3, %ymm2
; CHECK-VBMI-NEXT:  vpmovsxbw (%rsi,%rcx), %ymm3
; CHECK-VBMI-NEXT:  vpmaddwd %ymm4, %ymm3, %ymm3
; CHECK-VBMI-NEXT:  vpadd %ymm1, %ymm3, %ymm1
; CHECK-VBMI-NEXT:  addq $32, %rcx
; CHECK-VBMI-NEXT:  cmpq %rcx, %rax
; CHECK-VBMI-NEXT:  jne .LBB8_1
; CHECK-VBMI-NEXT:  # %bb.2: # %middle.block
; CHECK-VBMI-NEXT:  vpadd %ymm0, %ymm1, %ymm1
; CHECK-VBMI-NEXT:  vpadd %ymm0, %ymm2,
    %ymm0
; CHECK-VBMI-NEXT:  vpadd %ymm0, %ymm1, %ymm0
; CHECK-VBMI-NEXT:  vextracti128 $1, %ymm0, %xmm1
; CHECK-VBMI-NEXT:  vpadd %xmm1, %xmm0, %xmm0
; CHECK-VBMI-NEXT:  vpslufd {{.*#+}} xmm1 = xmm0[2,3,2,3]
; CHECK-VBMI-NEXT:  vpadd %xmm1, %xmm0, %xmm0
; CHECK-VBMI-NEXT:  vpslufd {{.*#+}} xmm1 = xmm0[1,1,1,1]
; CHECK-VBMI-NEXT:  vpadd %xmm1, %xmm0, %xmm0
; CHECK-VBMI-NEXT:  vmovd %xmm0, %eax
; CHECK-VBMI-NEXT:  vzeroupper
; CHECK-VBMI-NEXT:  retq
entry:
    %3 = zext i32 %2 to i64
    br label %vector.body

vector.body:
    %index = phi i64 [ %index.next, %vector.body ], [ 0, %entry ]
    %vec.phi = phi <32 x i32> [ %11, %vector.body ], [ zeroinitializer, %entry ]
    %4 = getelementptr inbounds i8, i8* %0, i64 %index
    %5 = bitcast i8* %4 to <32 x i8>*
    %wide.load = load <32 x i8>, <32 x i8>* %5, align 1

```

```

%6 = sext <32 x i8> %wide.load to <32 x i32>
%7 = getelementptr inbounds i8, i8* %1, i64 %index
%8 = bitcast i8* %7 to <32 x i8>*
%wide.load14 = load <32 x
i8>, <32 x i8>* %8, align 1
%9 = sext <32 x i8> %wide.load14 to <32 x i32>
%10 = mul nsw <32 x i32> %9, %6
%11 = add nsw <32 x i32> %10, %vec.phi
%index.next = add i64 %index, 32
%12 = icmp eq i64 %index.next, %3
br i1 %12, label %middle.block, label %vector.body

```

middle.block:

```

%rdx.shuf1 = shufflevector <32 x i32> %11, <32 x i32> undef, <32 x i32> <i32 16, i32 17, i32 18, i32 19, i32 20,
i32 21, i32 22, i32 23, i32 24, i32 25, i32 26, i32 27, i32 28, i32 29, i32 30, i32 31, i32 undef, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32
undef, i32 undef, i32 undef>
%bin.rdx1 = add <32 x i32> %11, %rdx.shuf1
%rdx.shuf = shufflevector <32 x i32> %bin.rdx1, <32 x i32> undef, <32 x i32> <i32 8, i32 9, i32 10, i32 11, i32
12, i32 13, i32 14, i32 15, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32
undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32
undef>
%bin.rdx = add <32 x i32> %bin.rdx1, %rdx.shuf
%rdx.shuf15 = shufflevector <32 x i32> %bin.rdx, <32 x i32> undef, <32 x i32> <i32 4, i32 5, i32 6, i32 7, i32
undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32
undef>
%bin.rdx32 = add <32 x i32> %bin.rdx, %rdx.shuf15
%rdx.shuf17 = shufflevector <32 x i32> %bin.rdx32, <32 x i32> undef, <32 x i32> <i32 2, i32 3, i32 undef, i32
undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32
undef, i32 undef>
%bin.rdx18 = add <32 x i32> %bin.rdx32, %rdx.shuf17
%rdx.shuf19 = shufflevector <32 x i32> %bin.rdx18, <32 x i32> undef, <32 x i32> <i32 1, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32
undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef,
i32 undef>
%bin.rdx20 = add <32 x i32> %bin.rdx18, %rdx.shuf19
%13 = extractelement <32 x i32> %bin.rdx20, i32 0
ret i32 %13
}

```

```

define dso_local i32 @_Z9test_charPcS_i_512(i8* nocapture readonly, i8* nocapture readonly, i32) "min-legal-
vector-width"="512" {

```

```

; CHECK-SKX-LABEL: _Z9test_charPcS_i_512:

```

```

; CHECK-SKX:      # %bb.0: # %entry

```

```

; CHECK-SKX-NEXT:  movl %edx, %eax
; CHECK-SKX-NEXT:  vpxor %xmm0, %xmm0, %xmm0
; CHECK-SKX-NEXT:  xorl %ecx,
%ecx
; CHECK-SKX-NEXT:  vpxor %xmm1, %xmm1, %xmm1
; CHECK-SKX-NEXT:  .p2align 4, 0x90
; CHECK-SKX-NEXT:  .LBB9_1: # %vector.body
; CHECK-SKX-NEXT:  # =>This Inner Loop Header: Depth=1
; CHECK-SKX-NEXT:  vpmovsxbw (%rdi,%rcx), %zmm2
; CHECK-SKX-NEXT:  vpmovsxbw (%rsi,%rcx), %zmm3
; CHECK-SKX-NEXT:  vpmaddwd %zmm2, %zmm3, %zmm2
; CHECK-SKX-NEXT:  vpaddd %zmm1, %zmm2, %zmm1
; CHECK-SKX-NEXT:  addq $32, %rcx
; CHECK-SKX-NEXT:  cmpq %rcx, %rax
; CHECK-SKX-NEXT:  jne .LBB9_1
; CHECK-SKX-NEXT:  # %bb.2: # %middle.block
; CHECK-SKX-NEXT:  vpaddd %zmm0, %zmm1, %zmm0
; CHECK-SKX-NEXT:  vextracti64x4 $1, %zmm0, %ymm1
; CHECK-SKX-NEXT:  vpaddd %zmm1, %zmm0, %zmm0
; CHECK-SKX-NEXT:  vextracti128 $1, %ymm0, %xmm1
; CHECK-SKX-NEXT:  vpaddd %xmm1, %xmm0, %xmm0
; CHECK-SKX-NEXT:  vpshufd {{.*#+}} xmm1 = xmm0[2,3,2,3]
; CHECK-SKX-NEXT:  vpaddd %xmm1, %xmm0, %xmm0
; CHECK-SKX-NEXT:  vpsrlq $32, %xmm0, %xmm1
; CHECK-SKX-NEXT:  vpaddd %xmm1, %xmm0, %xmm0
; CHECK-SKX-NEXT:
    vmovd %xmm0, %eax
; CHECK-SKX-NEXT:  vzeroupper
; CHECK-SKX-NEXT:  retq
;
; CHECK-AVX512-LABEL: _Z9test_charPcS_i_512:
; CHECK-AVX512:    # %bb.0: # %entry
; CHECK-AVX512-NEXT:  movl %edx, %eax
; CHECK-AVX512-NEXT:  vpxor %xmm0, %xmm0, %xmm0
; CHECK-AVX512-NEXT:  xorl %ecx, %ecx
; CHECK-AVX512-NEXT:  vpxor %xmm1, %xmm1, %xmm1
; CHECK-AVX512-NEXT:  .p2align 4, 0x90
; CHECK-AVX512-NEXT:  .LBB9_1: # %vector.body
; CHECK-AVX512-NEXT:  # =>This Inner Loop Header: Depth=1
; CHECK-AVX512-NEXT:  vpmovsxbw (%rdi,%rcx), %zmm2
; CHECK-AVX512-NEXT:  vpmovsxbw (%rsi,%rcx), %zmm3
; CHECK-AVX512-NEXT:  vpmaddwd %zmm2, %zmm3, %zmm2
; CHECK-AVX512-NEXT:  vpaddd %zmm1, %zmm2, %zmm1
; CHECK-AVX512-NEXT:  addq $32, %rcx
; CHECK-AVX512-NEXT:  cmpq %rcx, %rax
; CHECK-AVX512-NEXT:  jne .LBB9_1
; CHECK-AVX512-NEXT:  # %bb.2: # %middle.block
; CHECK-AVX512-NEXT:  vpaddd %zmm0, %zmm1, %zmm0

```



```

; CHECK-AVX512-NEXT: vextracti64x4 $1, %zmm0, %ymm1
; CHECK-AVX512-NEXT: vpaddd
%zmm1, %zmm0, %zmm0
; CHECK-AVX512-NEXT: vextracti128 $1, %ymm0, %xmm1
; CHECK-AVX512-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-AVX512-NEXT: vpslufd {{.*#+}} xmm1 = xmm0[2,3,2,3]
; CHECK-AVX512-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-AVX512-NEXT: vpsrlq $32, %xmm0, %xmm1
; CHECK-AVX512-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-AVX512-NEXT: vmovd %xmm0, %eax
; CHECK-AVX512-NEXT: vzeroupper
; CHECK-AVX512-NEXT: retq
;
; CHECK-VBMI-LABEL: _Z9test_charPcS_i_512:
; CHECK-VBMI: # %bb.0: # %entry
; CHECK-VBMI-NEXT: movl %edx, %eax
; CHECK-VBMI-NEXT: vpxor %xmm0, %xmm0, %xmm0
; CHECK-VBMI-NEXT: xorl %ecx, %ecx
; CHECK-VBMI-NEXT: vpxor %xmm1, %xmm1, %xmm1
; CHECK-VBMI-NEXT: .p2align 4, 0x90
; CHECK-VBMI-NEXT: .LBB9_1: # %vector.body
; CHECK-VBMI-NEXT: # =>This Inner Loop Header: Depth=1
; CHECK-VBMI-NEXT: vpmovsxbw (%rdi,%rcx), %zmm2
; CHECK-VBMI-NEXT: vpmovsxbw (%rsi,%rcx), %zmm3
; CHECK-VBMI-NEXT: vpmaddwd %zmm2, %zmm3, %zmm2
;
CHECK-VBMI-NEXT: vpaddd %zmm1, %zmm2, %zmm1
; CHECK-VBMI-NEXT: addq $32, %rcx
; CHECK-VBMI-NEXT: cmpq %rcx, %rax
; CHECK-VBMI-NEXT: jne .LBB9_1
; CHECK-VBMI-NEXT: # %bb.2: # %middle.block
; CHECK-VBMI-NEXT: vpaddd %zmm0, %zmm1, %zmm0
; CHECK-VBMI-NEXT: vextracti64x4 $1, %zmm0, %ymm1
; CHECK-VBMI-NEXT: vpaddd %zmm1, %zmm0, %zmm0
; CHECK-VBMI-NEXT: vextracti128 $1, %ymm0, %xmm1
; CHECK-VBMI-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-VBMI-NEXT: vpslufd {{.*#+}} xmm1 = xmm0[2,3,2,3]
; CHECK-VBMI-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-VBMI-NEXT: vpslufd {{.*#+}} xmm1 = xmm0[1,1,1,1]
; CHECK-VBMI-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-VBMI-NEXT: vmovd %xmm0, %eax
; CHECK-VBMI-NEXT: vzeroupper
; CHECK-VBMI-NEXT: retq
entry:
%3 = zext i32 %2 to i64
br label %vector.body

vector.body:

```

```

%index = phi i64 [ %index.next, %vector.body ], [ 0, %entry ]
%vec.phi = phi <32 x i32> [ %11, %vector.body ], [ zeroinitializer, %entry ]
%4 = getelementptr
inbounds i8, i8* %0, i64 %index
%5 = bitcast i8* %4 to <32 x i8>*
%wide.load = load <32 x i8>, <32 x i8>* %5, align 1
%6 = sext <32 x i8> %wide.load to <32 x i32>
%7 = getelementptr inbounds i8, i8* %1, i64 %index
%8 = bitcast i8* %7 to <32 x i8>*
%wide.load14 = load <32 x i8>, <32 x i8>* %8, align 1
%9 = sext <32 x i8> %wide.load14 to <32 x i32>
%10 = mul nsw <32 x i32> %9, %6
%11 = add nsw <32 x i32> %10, %vec.phi
%index.next = add i64 %index, 32
%12 = icmp eq i64 %index.next, %3
br i1 %12, label %middle.block, label %vector.body

```

middle.block:

```

%rdx.shuf1 = shufflevector <32 x i32> %11, <32 x i32> undef, <32 x i32> <i32 16, i32 17, i32 18, i32 19, i32 20,
i32 21, i32 22, i32 23, i32 24, i32 25, i32 26, i32 27, i32 28, i32 29, i32 30, i32 31, i32 undef, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32
undef, i32 undef, i32 undef>
%bin.rdx1 = add <32 x i32> %11, %rdx.shuf1
%rdx.shuf = shufflevector <32 x i32> %bin.rdx1, <32 x i32> undef, <32 x i32> <i32 8, i32 9, i32 10, i32 11, i32
12, i32 13, i32 14, i32 15, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef>
%bin.rdx = add <32 x i32> %bin.rdx1, %rdx.shuf
%rdx.shuf15 = shufflevector <32 x i32> %bin.rdx, <32 x i32> undef, <32 x i32> <i32 4, i32 5, i32 6, i32 7, i32
undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef>
%bin.rdx32 = add <32 x i32> %bin.rdx, %rdx.shuf15
%rdx.shuf17 = shufflevector <32 x i32> %bin.rdx32, <32 x i32> undef,
<32 x i32> <i32 2, i32 3, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32
undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32
undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32
undef>
%bin.rdx18 = add <32 x i32> %bin.rdx32, %rdx.shuf17
%rdx.shuf19 = shufflevector <32 x i32> %bin.rdx18, <32 x i32> undef, <32 x i32> <i32 1, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef>
%bin.rdx20 = add <32 x i32> %bin.rdx18, %rdx.shuf19
%13 = extractelement <32 x i32> %bin.rdx20, i32 0
ret i32 %13
}

```

```

@a = dso_local global [1024 x i8]
zeroinitializer, align 16
@b = dso_local global [1024 x i8] zeroinitializer, align 16

define dso_local i32 @sad_16i8_256() "min-legal-vector-width"="256" {
; CHECK-SKX-LABEL: sad_16i8_256:
; CHECK-SKX:      # %bb.0: # %entry
; CHECK-SKX-NEXT: vpxor %xmm0, %xmm0, %xmm0
; CHECK-SKX-NEXT: movq $-1024, %rax # imm = 0xFC00
; CHECK-SKX-NEXT: vpxor %xmm1, %xmm1, %xmm1
; CHECK-SKX-NEXT: .p2align 4, 0x90
; CHECK-SKX-NEXT: .LBB10_1: # %vector.body
; CHECK-SKX-NEXT: # =>This Inner Loop Header: Depth=1
; CHECK-SKX-NEXT: vmovdqu a+1024(%rax), %xmm2
; CHECK-SKX-NEXT: vpsadbw b+1024(%rax), %xmm2, %xmm2
; CHECK-SKX-NEXT: vpadd %ymm1, %ymm2, %ymm1
; CHECK-SKX-NEXT: addq $4, %rax
; CHECK-SKX-NEXT: jne .LBB10_1
; CHECK-SKX-NEXT: # %bb.2: # %middle.block
; CHECK-SKX-NEXT: vpadd %ymm0, %ymm1, %ymm0
; CHECK-SKX-NEXT: vextracti128 $1, %ymm0, %xmm1
; CHECK-SKX-NEXT: vpadd %xmm1, %xmm0, %xmm0
; CHECK-SKX-NEXT: vpsshufd {{.*#+}} xmm1 = xmm0[2,3,2,3]
; CHECK-SKX-NEXT:
    vpadd %xmm1, %xmm0, %xmm0
; CHECK-SKX-NEXT: vpsrlq $32, %xmm0, %xmm1
; CHECK-SKX-NEXT: vpadd %xmm1, %xmm0, %xmm0
; CHECK-SKX-NEXT: vmovd %xmm0, %eax
; CHECK-SKX-NEXT: vzeroupper
; CHECK-SKX-NEXT: retq
;
; CHECK-AVX512-LABEL: sad_16i8_256:
; CHECK-AVX512:      # %bb.0: # %entry
; CHECK-AVX512-NEXT: vpxor %xmm0, %xmm0, %xmm0
; CHECK-AVX512-NEXT: movq $-1024, %rax # imm = 0xFC00
; CHECK-AVX512-NEXT: vpxor %xmm1, %xmm1, %xmm1
; CHECK-AVX512-NEXT: .p2align 4, 0x90
; CHECK-AVX512-NEXT: .LBB10_1: # %vector.body
; CHECK-AVX512-NEXT: # =>This Inner Loop Header: Depth=1
; CHECK-AVX512-NEXT: vmovdqu a+1024(%rax), %xmm2
; CHECK-AVX512-NEXT: vpsadbw b+1024(%rax), %xmm2, %xmm2
; CHECK-AVX512-NEXT: vpadd %ymm1, %ymm2, %ymm1
; CHECK-AVX512-NEXT: addq $4, %rax
; CHECK-AVX512-NEXT: jne .LBB10_1
; CHECK-AVX512-NEXT: # %bb.2: # %middle.block
; CHECK-AVX512-NEXT: vpadd %ymm0, %ymm1, %ymm0
; CHECK-AVX512-NEXT: vextracti128 $1, %ymm0, %xmm1
;

```

```

CHECK-AVX512-NEXT:  vpaddd %xmm1, %xmm0, %xmm0
; CHECK-AVX512-NEXT:  vpsshufd {{.*#+}} xmm1 = xmm0[2,3,2,3]
; CHECK-AVX512-NEXT:  vpaddd %xmm1, %xmm0, %xmm0
; CHECK-AVX512-NEXT:  vpsrlq $32, %xmm0, %xmm1
; CHECK-AVX512-NEXT:  vpaddd %xmm1, %xmm0, %xmm0
; CHECK-AVX512-NEXT:  vmovd %xmm0, %eax
; CHECK-AVX512-NEXT:  vzeroupper
; CHECK-AVX512-NEXT:  retq
;
; CHECK-VBMI-LABEL: sad_16i8_256:
; CHECK-VBMI:        # %bb.0: # %entry
; CHECK-VBMI-NEXT:   vpxor %xmm0, %xmm0, %xmm0
; CHECK-VBMI-NEXT:   movq $-1024, %rax # imm = 0xFC00
; CHECK-VBMI-NEXT:   vpxor %xmm1, %xmm1, %xmm1
; CHECK-VBMI-NEXT:   .p2align 4, 0x90
; CHECK-VBMI-NEXT:   .LBB10_1: # %vector.body
; CHECK-VBMI-NEXT:   # =>This Inner Loop Header: Depth=1
; CHECK-VBMI-NEXT:   vmovdqu a+1024(%rax), %xmm2
; CHECK-VBMI-NEXT:   vpsadbw b+1024(%rax), %xmm2, %xmm2
; CHECK-VBMI-NEXT:   vpaddd %ymm1, %ymm2, %ymm1
; CHECK-VBMI-NEXT:   addq $4, %rax
; CHECK-VBMI-NEXT:   jne .LBB10_1
; CHECK-VBMI-NEXT:   # %bb.2: # %middle.block
;
CHECK-VBMI-NEXT:   vpaddd %ymm0, %ymm1, %ymm0
; CHECK-VBMI-NEXT:   vextracti128 $1, %ymm0, %xmm1
; CHECK-VBMI-NEXT:   vpaddd %xmm1, %xmm0, %xmm0
; CHECK-VBMI-NEXT:   vpsshufd {{.*#+}} xmm1 = xmm0[2,3,2,3]
; CHECK-VBMI-NEXT:   vpaddd %xmm1, %xmm0, %xmm0
; CHECK-VBMI-NEXT:   vpsshufd {{.*#+}} xmm1 = xmm0[1,1,1,1]
; CHECK-VBMI-NEXT:   vpaddd %xmm1, %xmm0, %xmm0
; CHECK-VBMI-NEXT:   vmovd %xmm0, %eax
; CHECK-VBMI-NEXT:   vzeroupper
; CHECK-VBMI-NEXT:   retq
entry:
br label %vector.body

vector.body:
%index = phi i64 [ 0, %entry ], [ %index.next, %vector.body ]
%vec.phi = phi <16 x i32> [ zeroinitializer, %entry ], [ %10, %vector.body ]
%0 = getelementptr inbounds [1024 x i8], [1024 x i8]* @a, i64 0, i64 %index
%1 = bitcast i8* %0 to <16 x i8>*
%wide.load = load <16 x i8>, <16 x i8>* %1, align 4
%2 = zext <16 x i8> %wide.load to <16 x i32>
%3 = getelementptr inbounds [1024 x i8], [1024 x i8]* @b, i64 0, i64 %index
%4 = bitcast i8* %3 to <16 x i8>*
%wide.load1

```

```

= load <16 x i8>, <16 x i8>* %4, align 4
%5 = zext <16 x i8> %wide.load1 to <16 x i32>
%6 = sub nsw <16 x i32> %2, %5
%7 = icmp sgt <16 x i32> %6, <i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1>
%8 = sub nsw <16 x i32> zeroinitializer, %6
%9 = select <16 x i1> %7, <16 x i32> %6, <16 x i32> %8
%10 = add nsw <16 x i32> %9, %vec.phi
%index.next = add i64 %index, 4
%11 = icmp eq i64 %index.next, 1024
br i1 %11, label %middle.block, label %vector.body

```

middle.block:

```

%rdx.shuf = shufflevector <16 x i32> %10, <16 x i32> undef, <16 x i32> <i32 8, i32 9, i32 10, i32 11, i32 12, i32 13, i32 14, i32 15, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef>
%bin.rdx = add <16 x i32> %10, %rdx.shuf
%rdx.shuf2 = shufflevector <16 x i32> %bin.rdx, <16 x i32> undef, <16 x i32> <i32 4, i32 5, i32 6, i32 7, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef>
%bin.rdx2 = add <16 x i32> %bin.rdx, %rdx.shuf2
%rdx.shuf3 = shufflevector <16 x i32> %bin.rdx2, <16 x i32> undef, <16 x i32> <i32 2, i32 3, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef>
%bin.rdx3 = add <16 x i32> %bin.rdx2, %rdx.shuf3
%rdx.shuf4 = shufflevector <16 x i32> %bin.rdx3, <16 x i32> undef, <16 x i32> <i32 1, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef>
%bin.rdx4 = add <16 x i32> %bin.rdx3, %rdx.shuf4
%12 = extractelement <16 x i32> %bin.rdx4, i32 0
ret i32 %12
}

```

```

define dso_local i32 @sad_16i8_512() "min-legal-vector-width"="512" {

```

```

; CHECK-SKX-LABEL: sad_16i8_512:
; CHECK-SKX:      # %bb.0: # %entry
; CHECK-SKX-NEXT:  vpxor %xmm0, %xmm0, %xmm0
; CHECK-SKX-NEXT:
    movq $-1024, %rax # imm = 0xFC00
; CHECK-SKX-NEXT:  .p2align 4, 0x90
; CHECK-SKX-NEXT:  .LBB11_1: # %vector.body
; CHECK-SKX-NEXT:  # =>This Inner Loop Header: Depth=1
; CHECK-SKX-NEXT:  vmovdqu a+1024(%rax), %xmm1
; CHECK-SKX-NEXT:  vpsadbw b+1024(%rax), %xmm1, %xmm1
; CHECK-SKX-NEXT:  vpaddq %zmm0, %zmm1, %zmm0
; CHECK-SKX-NEXT:  addq $4, %rax
; CHECK-SKX-NEXT:  jne .LBB11_1
; CHECK-SKX-NEXT:  # %bb.2: # %middle.block
; CHECK-SKX-NEXT:  vextracti64x4 $1, %zmm0, %ymm1

```

```

; CHECK-SKX-NEXT: vpaddd %zmm1, %zmm0, %zmm0
; CHECK-SKX-NEXT: vextracti128 $1, %ymm0, %xmm1
; CHECK-SKX-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-SKX-NEXT: vpsshufd {{.*#+}} xmm1 = xmm0[2,3,2,3]
; CHECK-SKX-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-SKX-NEXT: vpsrlq $32, %xmm0, %xmm1
; CHECK-SKX-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-SKX-NEXT: vmovd %xmm0, %eax
; CHECK-SKX-NEXT: vzeroupper
; CHECK-SKX-NEXT: retq
;
; CHECK-AVX512-LABEL: sad_16i8_512:
; CHECK-AVX512:
    # %bb.0: # %entry
; CHECK-AVX512-NEXT: vpxor %xmm0, %xmm0, %xmm0
; CHECK-AVX512-NEXT: movq $-1024, %rax # imm = 0xFC00
; CHECK-AVX512-NEXT: .p2align 4, 0x90
; CHECK-AVX512-NEXT: .LBB11_1: # %vector.body
; CHECK-AVX512-NEXT: # =>This Inner Loop Header: Depth=1
; CHECK-AVX512-NEXT: vmovdqu a+1024(%rax), %xmm1
; CHECK-AVX512-NEXT: vpsadbw b+1024(%rax), %xmm1, %xmm1
; CHECK-AVX512-NEXT: vpaddd %zmm0, %zmm1, %zmm0
; CHECK-AVX512-NEXT: addq $4, %rax
; CHECK-AVX512-NEXT: jne .LBB11_1
; CHECK-AVX512-NEXT: # %bb.2: # %middle.block
; CHECK-AVX512-NEXT: vextracti64x4 $1, %zmm0, %ymm1
; CHECK-AVX512-NEXT: vpaddd %zmm1, %zmm0, %zmm0
; CHECK-AVX512-NEXT: vextracti128 $1, %ymm0, %xmm1
; CHECK-AVX512-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-AVX512-NEXT: vpsshufd {{.*#+}} xmm1 = xmm0[2,3,2,3]
; CHECK-AVX512-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-AVX512-NEXT: vpsrlq $32, %xmm0, %xmm1
; CHECK-AVX512-NEXT: vpaddd %xmm1, %xmm0, %xmm0
; CHECK-AVX512-NEXT:
    vmovd %xmm0, %eax
; CHECK-AVX512-NEXT: vzeroupper
; CHECK-AVX512-NEXT: retq
;
; CHECK-VBMI-LABEL: sad_16i8_512:
; CHECK-VBMI:    # %bb.0: # %entry
; CHECK-VBMI-NEXT: vpxor %xmm0, %xmm0, %xmm0
; CHECK-VBMI-NEXT: movq $-1024, %rax # imm = 0xFC00
; CHECK-VBMI-NEXT: .p2align 4, 0x90
; CHECK-VBMI-NEXT: .LBB11_1: # %vector.body
; CHECK-VBMI-NEXT: # =>This Inner Loop Header: Depth=1
; CHECK-VBMI-NEXT: vmovdqu a+1024(%rax), %xmm1
; CHECK-VBMI-NEXT: vpsadbw b+1024(%rax), %xmm1, %xmm1
; CHECK-VBMI-NEXT: vpaddd %zmm0, %zmm1, %zmm0

```

```

; CHECK-VBMI-NEXT: addq $4, %rax
; CHECK-VBMI-NEXT: jne .LBB11_1
; CHECK-VBMI-NEXT: # %bb.2: # %middle.block
; CHECK-VBMI-NEXT: vextracti64x4 $1, %zmm0, %ymm1
; CHECK-VBMI-NEXT: vpadd %zmm1, %zmm0, %zmm0
; CHECK-VBMI-NEXT: vextracti128 $1, %ymm0, %xmm1
; CHECK-VBMI-NEXT: vpadd %xmm1, %xmm0, %xmm0
; CHECK-VBMI-NEXT: vpshufd {{.*#+}} xmm1 = xmm0[2,3,2,3]
; CHECK-VBMI-NEXT: vpadd %xmm1, %xmm0, %xmm0
; CHECK-VBMI-NEXT:
    vpshufd {{.*#+}} xmm1 = xmm0[1,1,1,1]
; CHECK-VBMI-NEXT: vpadd %xmm1, %xmm0, %xmm0
; CHECK-VBMI-NEXT: vmovd %xmm0, %eax
; CHECK-VBMI-NEXT: vzeroupper
; CHECK-VBMI-NEXT: retq

```

entry:

```
br label %vector.body
```

vector.body:

```

%index = phi i64 [ 0, %entry ], [ %index.next, %vector.body ]
%vec.phi = phi <16 x i32> [ zeroinitializer, %entry ], [ %10, %vector.body ]
%0 = getelementptr inbounds [1024 x i8], [1024 x i8]* @a, i64 0, i64 %index
%1 = bitcast i8* %0 to <16 x i8>*
%wide.load = load <16 x i8>, <16 x i8>* %1, align 4
%2 = zext <16 x i8> %wide.load to <16 x i32>
%3 = getelementptr inbounds [1024 x i8], [1024 x i8]* @b, i64 0, i64 %index
%4 = bitcast i8* %3 to <16 x i8>*
%wide.load1 = load <16 x i8>, <16 x i8>* %4, align 4
%5 = zext <16 x i8> %wide.load1 to <16 x i32>
%6 = sub nsw <16 x i32> %2, %5
%7 = icmp sgt <16 x i32> %6, <i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1, i32 -1>
%8 = sub nsw <16 x i32> zeroinitializer, %6
%9 = select <16 x i1> %7, <16 x i32> %6, <16 x i32> %8
%10 = add nsw <16 x i32> %9, %vec.phi
%index.next = add i64 %index, 4
%11 = icmp eq i64 %index.next, 1024
br i1 %11, label %middle.block, label %vector.body

```

middle.block:

```

%rdx.shuf = shufflevector <16 x i32> %10, <16 x i32> undef, <16 x i32> <i32 8, i32 9, i32 10, i32 11, i32 12, i32 13, i32 14, i32 15, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef>
%bin.rdx = add <16 x i32> %10, %rdx.shuf
%rdx.shuf2 = shufflevector <16 x i32> %bin.rdx, <16 x i32> undef, <16 x i32> <i32 4, i32 5, i32 6, i32 7, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef>
%bin.rdx2 = add <16 x i32> %bin.rdx, %rdx.shuf2

```

```

%rdx.shuf3 = shufflevector <16 x i32> %bin.rdx2, <16 x i32> undef, <16 x i32> <i32 2, i32 3, i32 undef, i32
undef, i32 undef, i32 undef, i32 undef,
i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef>
%bin.rdx3 = add <16 x i32> %bin.rdx2, %rdx.shuf3
%rdx.shuf4 = shufflevector <16 x i32> %bin.rdx3, <16 x i32> undef, <16 x i32> <i32 1, i32 undef, i32 undef, i32
undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef, i32 undef,
i32 undef, i32 undef>
%bin.rdx4 = add <16 x i32> %bin.rdx3, %rdx.shuf4
%12 = extractelement <16 x i32> %bin.rdx4, i32 0
ret i32 %12
}

```

```

define dso_local void @sbto16f32_256(<16 x i16> %a, <16 x float>* %res) "min-legal-vector-width"="256" {
; CHECK-LABEL: sbto16f32_256:
; CHECK:      # %bb.0:
; CHECK-NEXT:  vpmovw2m %ymm0, %k0
; CHECK-NEXT:  kshiftrw $8, %k0, %k1
; CHECK-NEXT:  vpmovm2d %k1, %ymm0
; CHECK-NEXT:  vcvt dq2ps %ymm0, %ymm0
; CHECK-NEXT:  vpmovm2d %k0, %ymm1
; CHECK-NEXT:  vcvt dq2ps %ymm1, %ymm1
; CHECK-NEXT:  vmovaps %ymm1, (%rdi)
; CHECK-NEXT:  vmovaps %ymm0, 32(%rdi)
; CHECK-NEXT:
    vzeroupper
; CHECK-NEXT:  retq
%mask = icmp slt <16 x i16> %a, zeroinitializer
%1 = sitofp <16 x i1> %mask to <16 x float>
store <16 x float> %1, <16 x float>* %res
ret void
}

```

```

define dso_local void @sbto16f32_512(<16 x i16> %a, <16 x float>* %res) "min-legal-vector-width"="512" {
; CHECK-LABEL: sbto16f32_512:
; CHECK:      # %bb.0:
; CHECK-NEXT:  vpmovw2m %ymm0, %k0
; CHECK-NEXT:  vpmovm2d %k0, %zmm0
; CHECK-NEXT:  vcvt dq2ps %zmm0, %zmm0
; CHECK-NEXT:  vmovaps %zmm0, (%rdi)
; CHECK-NEXT:  vzeroupper
; CHECK-NEXT:  retq
%mask = icmp slt <16 x i16> %a, zeroinitializer
%1 = sitofp <16 x i1> %mask to <16 x float>
store <16 x float> %1, <16 x float>* %res
ret void
}

```

```

define dso_local void @sbto16f64_256(<16 x i16> %a, <16 x double>* %res) "min-legal-vector-width"="256" {

```



```

; CHECK-LABEL: sbto16f64_256:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vpmovw2m %ymm0, %k0
; CHECK-NEXT:  kshiftrw $8, %k0, %k1
; CHECK-NEXT:  vpmovm2d %k1, %ymm0
; CHECK-NEXT:
    vcvtdq2pd %xmm0, %ymm1
; CHECK-NEXT:  vextracti128 $1, %ymm0, %xmm0
; CHECK-NEXT:  vcvtdq2pd %xmm0, %ymm0
; CHECK-NEXT:  vpmovm2d %k0, %ymm2
; CHECK-NEXT:  vcvtdq2pd %xmm2, %ymm3
; CHECK-NEXT:  vextracti128 $1, %ymm2, %xmm2
; CHECK-NEXT:  vcvtdq2pd %xmm2, %ymm2
; CHECK-NEXT:  vmovaps %ymm2, 32(%rdi)
; CHECK-NEXT:  vmovaps %ymm3, (%rdi)
; CHECK-NEXT:  vmovaps %ymm0, 96(%rdi)
; CHECK-NEXT:  vmovaps %ymm1, 64(%rdi)
; CHECK-NEXT:  vzeroupper
; CHECK-NEXT:  retq
%mask = icmp slt <16 x i16> %a, zeroinitializer
%1 = sitofp <16 x i1> %mask to <16 x double>
store <16 x double> %1, <16 x double>* %res
ret void
}

define dso_local void @sbto16f64_512(<16 x i16> %a, <16 x double>* %res) "min-legal-vector-width"="512" {
; CHECK-LABEL: sbto16f64_512:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vpmovw2m %ymm0, %k0
; CHECK-NEXT:  vpmovm2d %k0, %zmm0
; CHECK-NEXT:  vcvtdq2pd %ymm0, %zmm1
; CHECK-NEXT:  vextracti64x4 $1, %zmm0, %ymm0
; CHECK-NEXT:  vcvtdq2pd
    %ymm0, %zmm0
; CHECK-NEXT:  vmovaps %zmm0, 64(%rdi)
; CHECK-NEXT:  vmovaps %zmm1, (%rdi)
; CHECK-NEXT:  vzeroupper
; CHECK-NEXT:  retq
%mask = icmp slt <16 x i16> %a, zeroinitializer
%1 = sitofp <16 x i1> %mask to <16 x double>
store <16 x double> %1, <16 x double>* %res
ret void
}

define dso_local void @ubto16f32_256(<16 x i16> %a, <16 x float>* %res) "min-legal-vector-width"="256" {
; CHECK-LABEL: ubto16f32_256:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vpmovw2m %ymm0, %k0

```

```

; CHECK-NEXT: kshiftrw $8, %k0, %k1
; CHECK-NEXT: vpmovm2d %k1, %ymm0
; CHECK-NEXT: vpsrld $31, %ymm0, %ymm0
; CHECK-NEXT: vcvtdq2ps %ymm0, %ymm0
; CHECK-NEXT: vpmovm2d %k0, %ymm1
; CHECK-NEXT: vpsrld $31, %ymm1, %ymm1
; CHECK-NEXT: vcvtdq2ps %ymm1, %ymm1
; CHECK-NEXT: vmovaps %ymm1, (%rdi)
; CHECK-NEXT: vmovaps %ymm0, 32(%rdi)
; CHECK-NEXT: vzeroupper
; CHECK-NEXT: retq
%mask = icmp slt <16 x i16> %a, zeroinitializer
%1 = uitofp <16 x i1> %mask to <16 x float>
store <16 x float> %1, <16 x float>* %res
ret void
}

```

```

define dso_local void @ubto16f32_512(<16 x i16> %a, <16 x float>* %res) "min-legal-vector-width"="512" {
; CHECK-LABEL: ubto16f32_512:
; CHECK:    # %bb.0:
; CHECK-NEXT: vpmovw2m %ymm0, %k0
; CHECK-NEXT: vpmovm2d %k0, %zmm0
; CHECK-NEXT: vpsrld $31, %zmm0, %zmm0
; CHECK-NEXT: vcvtdq2ps %zmm0, %zmm0
; CHECK-NEXT: vmovaps %zmm0, (%rdi)
; CHECK-NEXT: vzeroupper
; CHECK-NEXT: retq
%mask = icmp slt <16 x i16> %a, zeroinitializer
%1 = uitofp <16 x i1> %mask to <16 x float>
store <16 x float> %1, <16 x float>* %res
ret void
}

```

```

define dso_local void @ubto16f64_256(<16 x i16> %a, <16 x double>* %res) "min-legal-vector-width"="256" {
; CHECK-LABEL: ubto16f64_256:
; CHECK:    # %bb.0:
; CHECK-NEXT: vpmovw2m %ymm0, %k0
; CHECK-NEXT: kshiftrw $8, %k0, %k1
; CHECK-NEXT: vpmovm2d %k1, %ymm0
; CHECK-NEXT: vpsrld $31, %ymm0, %ymm0
; CHECK-NEXT: vcvtdq2pd %xmm0, %ymm1
; CHECK-NEXT: vextracti128
$1, %ymm0, %xmm0
; CHECK-NEXT: vcvtdq2pd %xmm0, %ymm0
; CHECK-NEXT: vpmovm2d %k0, %ymm2
; CHECK-NEXT: vpsrld $31, %ymm2, %ymm2
; CHECK-NEXT: vcvtdq2pd %xmm2, %ymm3
; CHECK-NEXT: vextracti128 $1, %ymm2, %xmm2

```

```

; CHECK-NEXT:   vcvtdq2pd %xmm2, %ymm2
; CHECK-NEXT:   vmovaps %ymm2, 32(%rdi)
; CHECK-NEXT:   vmovaps %ymm3, (%rdi)
; CHECK-NEXT:   vmovaps %ymm0, 96(%rdi)
; CHECK-NEXT:   vmovaps %ymm1, 64(%rdi)
; CHECK-NEXT:   vzeroupper
; CHECK-NEXT:   retq
%mask = icmp slt <16 x i16> %a, zeroinitializer
%1 = uitofp <16 x i1> %mask to <16 x double>
store <16 x double> %1, <16 x double>* %res
ret void
}

```

```

define dso_local void @ubto16f64_512(<16 x i16> %a, <16 x double>* %res) "min-legal-vector-width"="512" {
; CHECK-LABEL: ubto16f64_512:
; CHECK:      # %bb.0:
; CHECK-NEXT:   vpmovw2m %ymm0, %k0
; CHECK-NEXT:   vpmovm2d %k0, %zmm0
; CHECK-NEXT:   vpsrld $31, %zmm0, %zmm0
; CHECK-NEXT:   vcvtdq2pd %ymm0, %zmm1
; CHECK-NEXT:   vextracti64x4 $1, %zmm0, %ymm0
; CHECK-NEXT:
    vcvtdq2pd %ymm0, %zmm0
; CHECK-NEXT:   vmovaps %zmm0, 64(%rdi)
; CHECK-NEXT:   vmovaps %zmm1, (%rdi)
; CHECK-NEXT:   vzeroupper
; CHECK-NEXT:   retq
%mask = icmp slt <16 x i16> %a, zeroinitializer
%1 = uitofp <16 x i1> %mask to <16 x double>
store <16 x double> %1, <16 x double>* %res
ret void
}

```

```

define <16 x i16> @test_16f32toub_256(<16 x float>* %ptr, <16 x i16> %passthru) "min-legal-vector-
width"="256" {
; CHECK-LABEL: test_16f32toub_256:
; CHECK:      # %bb.0:
; CHECK-NEXT:   vcvttps2dq (%rdi), %ymm1
; CHECK-NEXT:   vpslld $31, %ymm1, %ymm1
; CHECK-NEXT:   vpmovd2m %ymm1, %k0
; CHECK-NEXT:   vcvttps2dq 32(%rdi), %ymm1
; CHECK-NEXT:   vpslld $31, %ymm1, %ymm1
; CHECK-NEXT:   vpmovd2m %ymm1, %k1
; CHECK-NEXT:   kunpckbw %k0, %k1, %k1
; CHECK-NEXT:   vmovdqu16 %ymm0, %ymm0 {%k1} {z}
; CHECK-NEXT:   retq
%a = load <16 x float>, <16 x float>* %ptr
%mask = fptoui <16 x float> %a to <16 x i1>

```

```

%select = select <16 x i1> %mask, <16 x i16> %passthru,
<16 x i16> zeroinitializer
ret <16 x i16> %select
}

```

```

define <16 x i16> @test_16f32toub_512(<16 x float>* %ptr, <16 x i16> %passthru) "min-legal-vector-
width"="512" {
; CHECK-LABEL: test_16f32toub_512:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vcvttps2dq (%rdi), %zmm1
; CHECK-NEXT:  vpslld $31, %zmm1, %zmm1
; CHECK-NEXT:  vpmovd2m %zmm1, %k1
; CHECK-NEXT:  vmovdqu16 %ymm0, %ymm0 {%k1} {z}
; CHECK-NEXT:  retq
%a = load <16 x float>, <16 x float>* %ptr
%mask = fptoui <16 x float> %a to <16 x i1>
%select = select <16 x i1> %mask, <16 x i16> %passthru, <16 x i16> zeroinitializer
ret <16 x i16> %select
}

```

```

define <16 x i16> @test_16f32tosb_256(<16 x float>* %ptr, <16 x i16> %passthru) "min-legal-vector-
width"="256" {
; CHECK-LABEL: test_16f32tosb_256:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vcvttps2dq (%rdi), %ymm1
; CHECK-NEXT:  vpmovd2m %ymm1, %k0
; CHECK-NEXT:  vcvttps2dq 32(%rdi), %ymm1
; CHECK-NEXT:  vpmovd2m %ymm1, %k1
; CHECK-NEXT:  kunpckbw %k0, %k1, %k1
; CHECK-NEXT:
    vmovdqu16 %ymm0, %ymm0 {%k1} {z}
; CHECK-NEXT:  retq
%a = load <16 x float>, <16 x float>* %ptr
%mask = fptosi <16 x float> %a to <16 x i1>
%select = select <16 x i1> %mask, <16 x i16> %passthru, <16 x i16> zeroinitializer
ret <16 x i16> %select
}

```

```

define <16 x i16> @test_16f32tosb_512(<16 x float>* %ptr, <16 x i16> %passthru) "min-legal-vector-
width"="512" {
; CHECK-LABEL: test_16f32tosb_512:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vcvttps2dq (%rdi), %zmm1
; CHECK-NEXT:  vpmovd2m %zmm1, %k1
; CHECK-NEXT:  vmovdqu16 %ymm0, %ymm0 {%k1} {z}
; CHECK-NEXT:  retq
%a = load <16 x float>, <16 x float>* %ptr
%mask = fptosi <16 x float> %a to <16 x i1>

```

```

%select = select <16 x i1> %mask, <16 x i16> %passthru, <16 x i16> zeroinitializer
ret <16 x i16> %select
}

```

```

define dso_local void @mul256(<64 x i8>* %a, <64 x i8>* %b, <64 x i8>* %c) "min-legal-vector-width"="256" {
; CHECK-SKX-VBMI-LABEL: mul256:
; CHECK-SKX-VBMI:      # %bb.0:
; CHECK-SKX-VBMI-NEXT:  vmovdqa
(%rdi), %ymm0
; CHECK-SKX-VBMI-NEXT:  vmovdqa 32(%rdi), %ymm1
; CHECK-SKX-VBMI-NEXT:  vmovdqa (%rsi), %ymm2
; CHECK-SKX-VBMI-NEXT:  vmovdqa 32(%rsi), %ymm3
; CHECK-SKX-VBMI-NEXT:  vpunpckhbw {{.*#+}} %ymm4 =
ymm3[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-SKX-VBMI-NEXT:  vpunpckhbw {{.*#+}} %ymm5 =
ymm1[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-SKX-VBMI-NEXT:  vpmullw %ymm4, %ymm5, %ymm4
; CHECK-SKX-VBMI-NEXT:  vpunpcklbw {{.*#+}} %ymm3 =
ymm3[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
; CHECK-SKX-VBMI-NEXT:  vpunpcklbw {{.*#+}} %ymm1 =
ymm1[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
; CHECK-SKX-VBMI-NEXT:  vpmullw %ymm3, %ymm1, %ymm1
; CHECK-SKX-VBMI-NEXT:  vmovdqa {{.*#+}} %ymm3 =
[0,2,4,6,8,10,12,14,32,34,36,38,40,42,44,46,16,18,20,22,24,26,28,30,48,50,52,54,56,58,60,62]
;
CHECK-SKX-VBMI-NEXT:  vpermt2b %ymm4, %ymm3, %ymm1
; CHECK-SKX-VBMI-NEXT:  vpunpckhbw {{.*#+}} %ymm4 =
ymm2[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-SKX-VBMI-NEXT:  vpunpckhbw {{.*#+}} %ymm5 =
ymm0[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-SKX-VBMI-NEXT:  vpmullw %ymm4, %ymm5, %ymm4
; CHECK-SKX-VBMI-NEXT:  vpunpcklbw {{.*#+}} %ymm2 =
ymm2[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
; CHECK-SKX-VBMI-NEXT:  vpunpcklbw {{.*#+}} %ymm0 =
ymm0[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
; CHECK-SKX-VBMI-NEXT:  vpmullw %ymm2, %ymm0, %ymm0
; CHECK-SKX-VBMI-NEXT:  vpermt2b %ymm4, %ymm3, %ymm0
; CHECK-SKX-VBMI-NEXT:  vmovdqa %ymm0, (%rdx)
; CHECK-SKX-VBMI-NEXT:  vmovdqa %ymm1, 32(%rdx)
; CHECK-SKX-VBMI-NEXT:  vzeroupper
; CHECK-SKX-VBMI-NEXT:  retq
;
; CHECK-AVX512-LABEL: mul256:
; CHECK-AVX512:
# %bb.0:
; CHECK-AVX512-NEXT:  vmovdqa (%rdi), %ymm0
; CHECK-AVX512-NEXT:  vmovdqa 32(%rdi), %ymm1
; CHECK-AVX512-NEXT:  vmovdqa (%rsi), %ymm2

```

```

; CHECK-AVX512-NEXT: vmovdqa 32(%rsi), %ymm3
; CHECK-AVX512-NEXT: vpunpckhbw {{.*#+}} %ymm4 =
ymm3[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-AVX512-NEXT: vpunpckhbw {{.*#+}} %ymm5 =
ymm1[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-AVX512-NEXT: vpmullw %ymm4, %ymm5, %ymm4
; CHECK-AVX512-NEXT: vpbroadcastw {{.*#+}} %ymm5 =
[255,255,255,255,255,255,255,255,255,255,255,255,255,255,255,255]
; CHECK-AVX512-NEXT: vpand %ymm5, %ymm4, %ymm4
; CHECK-AVX512-NEXT: vpunpcklbw {{.*#+}} %ymm3 =
ymm3[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
; CHECK-AVX512-NEXT: vpunpcklbw {{.*#+}} %ymm1 =
ymm1[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
;
CHECK-AVX512-NEXT: vpmullw %ymm3, %ymm1, %ymm1
; CHECK-AVX512-NEXT: vpand %ymm5, %ymm1, %ymm1
; CHECK-AVX512-NEXT: vpackuswb %ymm4, %ymm1, %ymm1
; CHECK-AVX512-NEXT: vpunpckhbw {{.*#+}} %ymm3 =
ymm2[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-AVX512-NEXT: vpunpckhbw {{.*#+}} %ymm4 =
ymm0[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-AVX512-NEXT: vpmullw %ymm3, %ymm4, %ymm3
; CHECK-AVX512-NEXT: vpand %ymm5, %ymm3, %ymm3
; CHECK-AVX512-NEXT: vpunpcklbw {{.*#+}} %ymm2 =
ymm2[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
; CHECK-AVX512-NEXT: vpunpcklbw {{.*#+}} %ymm0 =
ymm0[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
; CHECK-AVX512-NEXT: vpmullw %ymm2, %ymm0, %ymm0
; CHECK-AVX512-NEXT: vpand %ymm5, %ymm0, %ymm0
; CHECK-AVX512-NEXT: vpackuswb %ymm3, %ymm0, %ymm0
; CHECK-AVX512-NEXT:
vmovdqa %ymm0, (%rdx)
; CHECK-AVX512-NEXT: vmovdqa %ymm1, 32(%rdx)
; CHECK-AVX512-NEXT: vzeroupper
; CHECK-AVX512-NEXT: retq
;
; CHECK-VBMI-LABEL: mul256:
; CHECK-VBMI: # %bb.0:
; CHECK-VBMI-NEXT: vmovdqa (%rdi), %ymm0
; CHECK-VBMI-NEXT: vmovdqa 32(%rdi), %ymm1
; CHECK-VBMI-NEXT: vmovdqa (%rsi), %ymm2
; CHECK-VBMI-NEXT: vmovdqa 32(%rsi), %ymm3
; CHECK-VBMI-NEXT: vpunpckhbw {{.*#+}} %ymm4 =
ymm3[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-VBMI-NEXT: vpunpckhbw {{.*#+}} %ymm5 =
ymm1[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-VBMI-NEXT: vpmullw %ymm4, %ymm5, %ymm4
; CHECK-VBMI-NEXT: vpunpcklbw {{.*#+}} %ymm3 =

```

```

ymm3[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
; CHECK-VBMI-NEXT:  vpunpcklbw {{.*#+}} ymm1 =
ymm1[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
;
CHECK-VBMI-NEXT:  vpmullw %ymm3, %ymm1, %ymm1
; CHECK-VBMI-NEXT:  vmovdqa {{.*#+}} ymm3 =
[0,2,4,6,8,10,12,14,32,34,36,38,40,42,44,46,16,18,20,22,24,26,28,30,48,50,52,54,56,58,60,62]
; CHECK-VBMI-NEXT:  vpermt2b %ymm4, %ymm3, %ymm1
; CHECK-VBMI-NEXT:  vpunpckhbw {{.*#+}} ymm4 =
ymm2[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-VBMI-NEXT:  vpunpckhbw {{.*#+}} ymm5 =
ymm0[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-VBMI-NEXT:  vpmullw %ymm4, %ymm5, %ymm4
; CHECK-VBMI-NEXT:  vpunpcklbw {{.*#+}} ymm2 =
ymm2[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
; CHECK-VBMI-NEXT:  vpunpcklbw {{.*#+}} ymm0 =
ymm0[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
; CHECK-VBMI-NEXT:  vpmullw %ymm2, %ymm0, %ymm0
; CHECK-VBMI-NEXT:  vpermt2b %ymm4, %ymm3, %ymm0
; CHECK-VBMI-NEXT:  vmovdqa %ymm0, (%rdx)
;
CHECK-VBMI-NEXT:  vmovdqa %ymm1, 32(%rdx)
; CHECK-VBMI-NEXT:  vzeroupper
; CHECK-VBMI-NEXT:  retq
%d = load <64 x i8>, <64 x i8>* %a
%e = load <64 x i8>, <64 x i8>* %b
%f = mul <64 x i8> %d, %e
store <64 x i8> %f, <64 x i8>* %c
ret void
}

define dso_local void @mul512(<64 x i8>* %a, <64 x i8>* %b, <64 x i8>* %c) "min-legal-vector-width"="512" {
; CHECK-SKX-VBMI-LABEL: mul512:
; CHECK-SKX-VBMI:    # %bb.0:
; CHECK-SKX-VBMI-NEXT:  vmovdqa64 (%rdi), %zmm0
; CHECK-SKX-VBMI-NEXT:  vmovdqa64 (%rsi), %zmm1
; CHECK-SKX-VBMI-NEXT:  vpunpckhbw {{.*#+}} zmm2 =
zmm1[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31,40,40,41,41,4
2,42,43,43,44,44,45,45,46,46,47,47,56,56,57,57,58,58,59,59,60,60,61,61,62,62,63,63]
; CHECK-SKX-VBMI-NEXT:  vpunpckhbw {{.*#+}} zmm3 =
zmm0[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31,40,40,41,41,4
2,42,43,43,44,44,45,45,46,46,47,47,56,56,57,57,58,58,59,59,60,60,61,61,62,62,63,63]
;
CHECK-SKX-VBMI-NEXT:  vpmullw %zmm2, %zmm3, %zmm2
; CHECK-SKX-VBMI-NEXT:  vpunpcklbw {{.*#+}} zmm1 =
zmm1[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23,32,32,33,33,34,34,35,35,36,3
6,37,37,38,38,39,39,48,48,49,49,50,50,51,51,52,52,53,53,54,54,55,55]
; CHECK-SKX-VBMI-NEXT:  vpunpcklbw {{.*#+}} zmm0 =

```





```

;
CHECK-VBMI-NEXT: vpunpckhbw {{.*#+}} zmm3 =
zmm0[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31,40,40,41,41,4
2,42,43,43,44,44,45,45,46,46,47,47,56,56,57,57,58,58,59,59,60,60,61,61,62,62,63,63]
; CHECK-VBMI-NEXT: vpmullw %zmm2, %zmm3, %zmm2
; CHECK-VBMI-NEXT: vpunpcklbw {{.*#+}} zmm1 =
zmm1[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23,32,32,33,33,34,34,35,35,36,3
6,37,37,38,38,39,39,48,48,49,49,50,50,51,51,52,52,53,53,54,54,55,55]
; CHECK-VBMI-NEXT: vpunpcklbw {{.*#+}} zmm0 =
zmm0[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23,32,32,33,33,34,34,35,35,36,3
6,37,37,38,38,39,39,48,48,49,49,50,50,51,51,52,52,53,53,54,54,55,55]
; CHECK-VBMI-NEXT: vpmullw %zmm1, %zmm0, %zmm0
; CHECK-VBMI-NEXT: vmovdqa64 {{.*#+}} zmm1 =
[0,2,4,6,8,10,12,14,64,66,68,70,72,74,76,78,16,18,20,22,24,26,28,30,80,82,84,86,88,90,92,94,32,34,36,38,40,42,44,
46,96,98,100,102,104,106,108,110,48,50,52,54,56,58,60,62,112,114,116,118,120,122,124,126]
;
CHECK-VBMI-NEXT: vpermi2b %zmm2, %zmm0, %zmm1
; CHECK-VBMI-NEXT: vmovdqa64 %zmm1, (%rdx)
; CHECK-VBMI-NEXT: vzeroupper
; CHECK-VBMI-NEXT: retq
%d = load <64 x i8>, <64 x i8>* %a
%e = load <64 x i8>, <64 x i8>* %b
%f = mul <64 x i8> %d, %e
store <64 x i8> %f, <64 x i8>* %c
ret void
}

```

; This threw an assertion at one point.

```

define <4 x i32> @mload_v4i32(<4 x i32> %trigger, <4 x i32>* %addr, <4 x i32> %dst) "min-legal-vector-
width"="256" {
; CHECK-LABEL: mload_v4i32:
; CHECK:    # %bb.0:
; CHECK-NEXT: vptestnmd %xmm0, %xmm0, %k1
; CHECK-NEXT: vpblendmd (%rdi), %xmm1, %xmm0 {%k1}
; CHECK-NEXT: retq
%mask = icmp eq <4 x i32> %trigger, zeroinitializer
%res = call <4 x i32> @llvm.masked.load.v4i32.p0v4i32(<4 x i32>* %addr, i32 4, <4 x i1> %mask, <4 x i32>
%dst)
ret <4 x i32> %res
}
declare <4 x i32>
@llvm.masked.load.v4i32.p0v4i32(<4 x i32>*, i32, <4 x i1>, <4 x i32>)

define <16 x i32> @trunc_v16i64_v16i32(<16 x i64>* %x) nounwind "min-legal-vector-width"="256" {
; CHECK-LABEL: trunc_v16i64_v16i32:
; CHECK:    # %bb.0:
; CHECK-NEXT: vmovdqa (%rdi), %ymm0
; CHECK-NEXT: vmovdqa 32(%rdi), %ymm1

```

```

; CHECK-NEXT: vmovdqa 64(%rdi), %ymm2
; CHECK-NEXT: vmovdqa 96(%rdi), %ymm3
; CHECK-NEXT: vpmovqd %ymm0, %xmm0
; CHECK-NEXT: vpmovqd %ymm1, %xmm1
; CHECK-NEXT: vinserti128 $1, %xmm1, %ymm0, %ymm0
; CHECK-NEXT: vpmovqd %ymm2, %xmm1
; CHECK-NEXT: vpmovqd %ymm3, %xmm2
; CHECK-NEXT: vinserti128 $1, %xmm2, %ymm1, %ymm1
; CHECK-NEXT: retq
%a = load <16 x i64>, <16 x i64>* %x
%b = trunc <16 x i64> %a to <16 x i32>
ret <16 x i32> %b
}

define <16 x i8> @trunc_v16i64_v16i8(<16 x i64>* %x) nounwind "min-legal-vector-width"="256" {
; CHECK-LABEL: trunc_v16i64_v16i8:
; CHECK: # %bb.0:
; CHECK-NEXT: vmovdqa (%rdi), %ymm0
; CHECK-NEXT: vmovdqa 32(%rdi),
%ymm1
; CHECK-NEXT: vmovdqa 64(%rdi), %ymm2
; CHECK-NEXT: vmovdqa 96(%rdi), %ymm3
; CHECK-NEXT: vpmovqb %ymm3, %xmm3
; CHECK-NEXT: vpmovqb %ymm2, %xmm2
; CHECK-NEXT: vpunpckldq {{.*#+}} xmm2 = xmm2[0],xmm3[0],xmm2[1],xmm3[1]
; CHECK-NEXT: vpmovqb %ymm1, %xmm1
; CHECK-NEXT: vpmovqb %ymm0, %xmm0
; CHECK-NEXT: vpunpckldq {{.*#+}} xmm0 = xmm0[0],xmm1[0],xmm0[1],xmm1[1]
; CHECK-NEXT: vpunpckldq {{.*#+}} xmm0 = xmm0[0],xmm2[0]
; CHECK-NEXT: vzeroupper
; CHECK-NEXT: retq
%a = load <16 x i64>, <16 x i64>* %x
%b = trunc <16 x i64> %a to <16 x i8>
ret <16 x i8> %b
}

define <16 x i8> @trunc_v16i32_v16i8(<16 x i32>* %x) nounwind "min-legal-vector-width"="256" {
; CHECK-LABEL: trunc_v16i32_v16i8:
; CHECK: # %bb.0:
; CHECK-NEXT: vmovdqa (%rdi), %ymm0
; CHECK-NEXT: vmovdqa 32(%rdi), %ymm1
; CHECK-NEXT: vpmovdb %ymm1, %xmm1
; CHECK-NEXT: vpmovdb %ymm0, %xmm0
; CHECK-NEXT: vpunpckldq {{.*#+}} xmm0 = xmm0[0],xmm1[0]
; CHECK-NEXT: vzeroupper
;
CHECK-NEXT: retq
%a = load <16 x i32>, <16 x i32>* %x

```

```

%b = trunc <16 x i32> %a to <16 x i8>
ret <16 x i8> %b
}

define <8 x i8> @trunc_v8i64_v8i8(<8 x i64>* %x) nounwind "min-legal-vector-width"="256" {
; CHECK-LABEL: trunc_v8i64_v8i8:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vmovdqa (%rdi), %ymm0
; CHECK-NEXT:  vmovdqa 32(%rdi), %ymm1
; CHECK-NEXT:  vpmovqb %ymm1, %xmm1
; CHECK-NEXT:  vpmovqb %ymm0, %xmm0
; CHECK-NEXT:  vpunpckldq {{.*#+}} xmm0 = xmm0[0],xmm1[0],xmm0[1],xmm1[1]
; CHECK-NEXT:  vzeroupper
; CHECK-NEXT:  retq
%a = load <8 x i64>, <8 x i64>* %x
%b = trunc <8 x i64> %a to <8 x i8>
ret <8 x i8> %b
}

define <8 x i16> @trunc_v8i64_v8i16(<8 x i64>* %x) nounwind "min-legal-vector-width"="256" {
; CHECK-LABEL: trunc_v8i64_v8i16:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vmovdqa (%rdi), %ymm0
; CHECK-NEXT:  vmovdqa 32(%rdi), %ymm1
; CHECK-NEXT:  vpmovqw %ymm1, %xmm1
; CHECK-NEXT:  vpmovqw %ymm0, %xmm0
; CHECK-NEXT:  vpunpcklqdq {{.*#+}} xmm0
= xmm0[0],xmm1[0]
; CHECK-NEXT:  vzeroupper
; CHECK-NEXT:  retq
%a = load <8 x i64>, <8 x i64>* %x
%b = trunc <8 x i64> %a to <8 x i16>
ret <8 x i16> %b
}

define <8 x i32> @trunc_v8i64_v8i32_zeroes(<8 x i64>* %x) nounwind "min-legal-vector-width"="256" {
; CHECK-LABEL: trunc_v8i64_v8i32_zeroes:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vpsrlq $48, 32(%rdi), %ymm0
; CHECK-NEXT:  vpsrlq $48, (%rdi), %ymm1
; CHECK-NEXT:  vpackusdw %ymm0, %ymm1, %ymm0
; CHECK-NEXT:  vpermq {{.*#+}} ymm0 = ymm0[0,2,1,3]
; CHECK-NEXT:  retq
%a = load <8 x i64>, <8 x i64>* %x
%b = lshr <8 x i64> %a, <i64 48, i64 48, i64 48, i64 48, i64 48, i64 48, i64 48, i64 48>
%c = trunc <8 x i64> %b to <8 x i32>
ret <8 x i32> %c
}

```



```

define <8 x i32> @trunc_v8i64_v8i32_sign(<8 x i64>* %x) nounwind "min-legal-vector-width"="256" {
; CHECK-LABEL: trunc_v8i64_v8i32_sign:
; CHECK:
# %bb.0:
; CHECK-NEXT:  vpsraq $48, 32(%rdi), %ymm0
; CHECK-NEXT:  vpsraq $48, (%rdi), %ymm1
; CHECK-NEXT:  vpackssdw %ymm0, %ymm1, %ymm0
; CHECK-NEXT:  vpermq {{.*#+}} ymm0 = ymm0[0,2,1,3]
; CHECK-NEXT:  retq
%a = load <8 x i64>, <8 x i64>* %x
%b = ashr <8 x i64> %a, <i64 48, i64 48, i64 48, i64 48, i64 48, i64 48, i64 48, i64 48>
%c = trunc <8 x i64> %b to <8 x i32>
ret <8 x i32> %c
}

define <16 x i16> @trunc_v16i32_v16i16_sign(<16 x i32>* %x) nounwind "min-legal-vector-width"="256" {
; CHECK-LABEL: trunc_v16i32_v16i16_sign:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vmovdqa (%rdi), %ymm1
; CHECK-NEXT:  vmovdqa {{.*#+}} ymm0 = [1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31]
; CHECK-NEXT:  vpermi2w 32(%rdi), %ymm1, %ymm0
; CHECK-NEXT:  retq
%a = load <16 x i32>, <16 x i32>* %x
%b = ashr <16 x i32> %a, <i32 16, i32 16, i32 16, i32 16, i32 16, i32 16, i32 16, i32 16, i32 16, i32 16, i32 16, i32 16, i32 16, i32 16, i32 16>
%c = trunc <16 x i32> %b to <16
x i16>
ret <16 x i16> %c
}

define <32 x i8> @trunc_v32i16_v32i8_sign(<32 x i16>* %x) nounwind "min-legal-vector-width"="256" {
; CHECK-SKX-VBMI-LABEL: trunc_v32i16_v32i8_sign:
; CHECK-SKX-VBMI:    # %bb.0:
; CHECK-SKX-VBMI-NEXT:  vmovdqa (%rdi), %ymm1
; CHECK-SKX-VBMI-NEXT:  vmovdqa {{.*#+}} ymm0 =
[1,3,5,7,9,11,13,15,17,19,21,23,25,27,29,31,33,35,37,39,41,43,45,47,49,51,53,55,57,59,61,63]
; CHECK-SKX-VBMI-NEXT:  vpermi2b 32(%rdi), %ymm1, %ymm0
; CHECK-SKX-VBMI-NEXT:  retq
;
; CHECK-AVX512-LABEL: trunc_v32i16_v32i8_sign:
; CHECK-AVX512:    # %bb.0:
; CHECK-AVX512-NEXT:  vpsrlw $8, 32(%rdi), %ymm0
; CHECK-AVX512-NEXT:  vpsrlw $8, (%rdi), %ymm1
; CHECK-AVX512-NEXT:  vpackuswb %ymm0, %ymm1, %ymm0
; CHECK-AVX512-NEXT:  vpermq {{.*#+}} ymm0 = ymm0[0,2,1,3]
; CHECK-AVX512-NEXT:  retq
;
; CHECK-VBMI-LABEL: trunc_v32i16_v32i8_sign:

```



```

width="256" {
; CHECK-LABEL: sext_v16i8_v16i64:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vpmovsxbw %xmm0, %ymm1
; CHECK-NEXT:  vpshufd {{.*#+}} xmm2 = xmm1[2,3,2,3]
; CHECK-NEXT:  vpmovsxwq %xmm2, %ymm2
; CHECK-NEXT:  vextracti128 $1, %ymm1, %xmm1
; CHECK-NEXT:  vpshufd {{.*#+}} xmm3 = xmm1[2,3,2,3]
; CHECK-NEXT:  vpmovsxwq %xmm3, %ymm3
; CHECK-NEXT:  vpmovsxwq %xmm1, %ymm1
; CHECK-NEXT:  vpmovsxbq %xmm0, %ymm0
; CHECK-NEXT:  vmovdqa %ymm0, (%rdi)
; CHECK-NEXT:  vmovdqa %ymm1, 64(%rdi)
; CHECK-NEXT:  vmovdqa %ymm3, 96(%rdi)
; CHECK-NEXT:  vmovdqa %ymm2, 32(%rdi)
; CHECK-NEXT:  vzeroupper
; CHECK-NEXT:  retq
%a = sext <16 x i8> %x to <16 x i64>
store <16 x i64> %a, <16 x i64>* %y
ret void
}

```

```

define dso_local void @vselect_split_v8i16_setcc(<8 x i16> %s, <8 x i16> %t, <8 x i64>* %p, <8 x i64>* %q, <8
x i64>* %r) "min-legal-vector-width"="256"
{
; CHECK-LABEL: vselect_split_v8i16_setcc:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vmovdqa (%rsi), %ymm2
; CHECK-NEXT:  vmovdqa 32(%rsi), %ymm3
; CHECK-NEXT:  vpcmpeqw %xmm1, %xmm0, %k1
; CHECK-NEXT:  kshiftrb $4, %k1, %k2
; CHECK-NEXT:  vmovdqa64 32(%rdi), %ymm3 {%k2}
; CHECK-NEXT:  vmovdqa64 (%rdi), %ymm2 {%k1}
; CHECK-NEXT:  vmovdqa %ymm2, (%rdx)
; CHECK-NEXT:  vmovdqa %ymm3, 32(%rdx)
; CHECK-NEXT:  vzeroupper
; CHECK-NEXT:  retq
%x = load <8 x i64>, <8 x i64>* %p
%y = load <8 x i64>, <8 x i64>* %q
%a = icmp eq <8 x i16> %s, %t
%b = select <8 x i16> %a, <8 x i64> %x, <8 x i64> %y
store <8 x i64> %b, <8 x i64>* %r
ret void
}

```

```

define dso_local void @vselect_split_v8i32_setcc(<8 x i32> %s, <8 x i32> %t, <8 x i64>* %p, <8 x i64>* %q, <8
x i64>* %r) "min-legal-vector-width"="256" {
; CHECK-LABEL: vselect_split_v8i32_setcc:

```

```

; CHECK:    # %bb.0:
; CHECK-NEXT:  vmovdqa (%rsi), %ymm2
; CHECK-NEXT:  vmovdqa 32(%rsi), %ymm3
; CHECK-NEXT:  vpcmpeqd %ymm1,
%ymm0, %k1
; CHECK-NEXT:  kshiftrb $4, %k1, %k2
; CHECK-NEXT:  vmovdqa64 32(%rdi), %ymm3 {%k2}
; CHECK-NEXT:  vmovdqa64 (%rdi), %ymm2 {%k1}
; CHECK-NEXT:  vmovdqa %ymm2, (%rdx)
; CHECK-NEXT:  vmovdqa %ymm3, 32(%rdx)
; CHECK-NEXT:  vzeroupper
; CHECK-NEXT:  retq
%x = load <8 x i64>, <8 x i64>* %p
%y = load <8 x i64>, <8 x i64>* %q
%a = icmp eq <8 x i32> %s, %t
%b = select <8 x i1> %a, <8 x i64> %x, <8 x i64> %y
store <8 x i64> %b, <8 x i64>* %r
ret void
}

define dso_local void @vselect_split_v16i8_setcc(<16 x i8> %s, <16 x i8> %t, <16 x i32>* %p, <16 x i32>* %q,
<16 x i32>* %r) "min-legal-vector-width"="256" {
; CHECK-LABEL: vselect_split_v16i8_setcc:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vmovdqa (%rsi), %ymm2
; CHECK-NEXT:  vmovdqa 32(%rsi), %ymm3
; CHECK-NEXT:  vpcmpeqb %xmm1, %xmm0, %k1
; CHECK-NEXT:  kshiftrw $8, %k1, %k2
; CHECK-NEXT:  vmovdqa32 32(%rdi), %ymm3 {%k2}
; CHECK-NEXT:  vmovdqa32 (%rdi), %ymm2 {%k1}
; CHECK-NEXT:  vmovdqa %ymm2,
(%rdx)
; CHECK-NEXT:  vmovdqa %ymm3, 32(%rdx)
; CHECK-NEXT:  vzeroupper
; CHECK-NEXT:  retq
%x = load <16 x i32>, <16 x i32>* %p
%y = load <16 x i32>, <16 x i32>* %q
%a = icmp eq <16 x i8> %s, %t
%b = select <16 x i1> %a, <16 x i32> %x, <16 x i32> %y
store <16 x i32> %b, <16 x i32>* %r
ret void
}

define dso_local void @vselect_split_v16i16_setcc(<16 x i16> %s, <16 x i16> %t, <16 x i32>* %p, <16 x i32>*
%q, <16 x i32>* %r) "min-legal-vector-width"="256" {
; CHECK-LABEL: vselect_split_v16i16_setcc:
; CHECK:    # %bb.0:
; CHECK-NEXT:  vmovdqa (%rsi), %ymm2

```



```

; CHECK-NEXT: vmovdqa 32(%rsi), %ymm3
; CHECK-NEXT: vpcmpeqw %ymm1, %ymm0, %k1
; CHECK-NEXT: kshiftrw $8, %k1, %k2
; CHECK-NEXT: vmovdqa32 32(%rdi), %ymm3 {%k2}
; CHECK-NEXT: vmovdqa32 (%rdi), %ymm2 {%k1}
; CHECK-NEXT: vmovdqa %ymm2, (%rdx)
; CHECK-NEXT: vmovdqa %ymm3, 32(%rdx)
; CHECK-NEXT: vzeroupper
; CHECK-NEXT: retq
%x = load <16 x i32>, <16 x i32>* %p
%y = load <16 x i32>,
<16 x i32>* %q
%a = icmp eq <16 x i16> %s, %t
%b = select <16 x i1> %a, <16 x i32> %x, <16 x i32> %y
store <16 x i32> %b, <16 x i32>* %r
ret void
}

define <16 x i8> @trunc_packus_v16i32_v16i8(<16 x i32>* %p) "min-legal-vector-width"="256" {
; CHECK-LABEL: trunc_packus_v16i32_v16i8:
; CHECK: # %bb.0:
; CHECK-NEXT: vmovdqa (%rdi), %ymm0
; CHECK-NEXT: vpackusdw 32(%rdi), %ymm0, %ymm0
; CHECK-NEXT: vpermq {{.*#+}} ymm0 = ymm0[0,2,1,3]
; CHECK-NEXT: vpmovuswb %ymm0, %xmm0
; CHECK-NEXT: vzeroupper
; CHECK-NEXT: retq
%a = load <16 x i32>, <16 x i32>* %p
%b = icmp slt <16 x i32> %a, <i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255>
%c = select <16 x i1> %b, <16 x i32> %a, <16 x i32> <i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255, i32 255>
%d = icmp sgt <16 x i32> %c, zeroinitializer
%e = select <16 x i1> %d, <16 x i32> %c, <16 x i32> zeroinitializer
%f = trunc <16 x i32> %e to <16 x i8>
ret <16 x i8> %f
}

define dso_local void @trunc_packus_v16i32_v16i8_store(<16 x i32>* %p, <16 x i8>* %q) "min-legal-vector-width"="256" {
; CHECK-LABEL: trunc_packus_v16i32_v16i8_store:
; CHECK: # %bb.0:
; CHECK-NEXT: vmovdqa (%rdi), %ymm0
; CHECK-NEXT: vpackusdw 32(%rdi), %ymm0, %ymm0
; CHECK-NEXT: vpermq {{.*#+}} ymm0 = ymm0[0,2,1,3]
; CHECK-NEXT: vpmovuswb %ymm0, (%rsi)
; CHECK-NEXT: vzeroupper
; CHECK-NEXT: retq

```



```

; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $5, %k0, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $59, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-33, %rax
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $4, %k0, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $58, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-65, %rax
; CHECK-NEXT: kmovq %rax, %k2
;
CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $7, %k0, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $57, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-129, %rax
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $6, %k0, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $56, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-257, %rax # imm = 0xFEFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $9, %k0, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $55, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-513, %rax # imm = 0xFDFE
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $8, %k0, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $54, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
;
CHECK-NEXT: movq $-1025, %rax # imm = 0xFBFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $11, %k0, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2

```

```

; CHECK-NEXT: kshiftrq $53, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-2049, %rax # imm = 0xF7FF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $10, %k0, %k2
; CHECK-NEXT: kshiftlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $52, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-4097, %rax # imm = 0xEFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $13, %k0, %k2
; CHECK-NEXT: kshiftlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $51, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-8193, %rax # imm = 0xDFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $12, %k0, %k2
; CHECK-NEXT:
    kshiftlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $50, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-16385, %rax # imm = 0xBFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $15, %k0, %k2
; CHECK-NEXT: kshiftlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $49, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-32769, %rax # imm = 0xFFFF7FFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $14, %k0, %k2
; CHECK-NEXT: kshiftlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $48, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-65537, %rax # imm = 0xFFFEFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $17, %k0, %k2
; CHECK-NEXT: kshiftlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $47, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-131073, %rax # imm = 0xFFDFDFFF
;

```

```

CHECK-NEXT:  kmovq %rax, %k2
; CHECK-NEXT:  kandq %k2, %k1, %k1
; CHECK-NEXT:  kshiftrd $16, %k0, %k2
; CHECK-NEXT:  kshiftrlq $63, %k2, %k2
; CHECK-NEXT:  kshiftrq $46, %k2, %k2
; CHECK-NEXT:  korq %k2, %k1, %k1
; CHECK-NEXT:  movq $-262145, %rax # imm = 0xFFFFBFFFF
; CHECK-NEXT:  kmovq %rax, %k2
; CHECK-NEXT:  kandq %k2, %k1, %k1
; CHECK-NEXT:  kshiftrd $19, %k0, %k2
; CHECK-NEXT:  kshiftrlq $63, %k2, %k2
; CHECK-NEXT:  kshiftrq $45, %k2, %k2
; CHECK-NEXT:  korq %k2, %k1, %k1
; CHECK-NEXT:  movq $-524289, %rax # imm = 0xFFF7FFFF
; CHECK-NEXT:  kmovq %rax, %k2
; CHECK-NEXT:  kandq %k2, %k1, %k1
; CHECK-NEXT:  kshiftrd $18, %k0, %k2
; CHECK-NEXT:  kshiftrlq $63, %k2, %k2
; CHECK-NEXT:  kshiftrq $44, %k2, %k2
; CHECK-NEXT:  korq %k2, %k1, %k1
; CHECK-NEXT:  movq $-1048577, %rax # imm = 0xFFEFFFFFFF
; CHECK-NEXT:  kmovq %rax, %k2
; CHECK-NEXT:  kandq %k2, %k1, %k1
; CHECK-NEXT:  kshiftrd $21, %k0, %k2
; CHECK-NEXT:  kshiftrlq $63, %k2, %k2
; CHECK-NEXT:
    kshiftrq $43, %k2, %k2
; CHECK-NEXT:  korq %k2, %k1, %k1
; CHECK-NEXT:  movq $-2097153, %rax # imm = 0xFFDFFFFFFF
; CHECK-NEXT:  kmovq %rax, %k2
; CHECK-NEXT:  kandq %k2, %k1, %k1
; CHECK-NEXT:  kshiftrd $20, %k0, %k2
; CHECK-NEXT:  kshiftrlq $63, %k2, %k2
; CHECK-NEXT:  kshiftrq $42, %k2, %k2
; CHECK-NEXT:  korq %k2, %k1, %k1
; CHECK-NEXT:  movq $-4194305, %rax # imm = 0xFFBFFFFFFF
; CHECK-NEXT:  kmovq %rax, %k2
; CHECK-NEXT:  kandq %k2, %k1, %k1
; CHECK-NEXT:  kshiftrd $23, %k0, %k2
; CHECK-NEXT:  kshiftrlq $63, %k2, %k2
; CHECK-NEXT:  kshiftrq $41, %k2, %k2
; CHECK-NEXT:  korq %k2, %k1, %k1
; CHECK-NEXT:  movq $-8388609, %rax # imm = 0xFF7FFFFFFF
; CHECK-NEXT:  kmovq %rax, %k2
; CHECK-NEXT:  kandq %k2, %k1, %k1
; CHECK-NEXT:  kshiftrd $22, %k0, %k2
; CHECK-NEXT:  kshiftrlq $63, %k2, %k2
; CHECK-NEXT:  kshiftrq $40, %k2, %k2

```

```

; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-16777217, %rax # imm = 0xFEFFFFFF
; CHECK-NEXT: kmovq
%rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $25, %k0, %k2
; CHECK-NEXT: kshiftlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $39, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-33554433, %rax # imm = 0xFDFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $24, %k0, %k2
; CHECK-NEXT: kshiftlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $38, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-67108865, %rax # imm = 0xFBFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $27, %k0, %k2
; CHECK-NEXT: kshiftlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $37, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-134217729, %rax # imm = 0xF7FFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $26, %k0, %k2
; CHECK-NEXT: kshiftlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq
$36, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-268435457, %rax # imm = 0xEFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $29, %k0, %k2
; CHECK-NEXT: kshiftlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $35, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-536870913, %rax # imm = 0xDFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1
; CHECK-NEXT: kshiftrd $28, %k0, %k2
; CHECK-NEXT: kshiftlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $34, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movq $-1073741825, %rax # imm = 0xBFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k1

```

```

; CHECK-NEXT: kshiftrd $31, %k0, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $33, %k2, %k2
; CHECK-NEXT: korq %k2, %k1, %k1
; CHECK-NEXT: movabsq $-2147483649, %rax # imm = 0xFFFFFFFF7FFFFFFF
; CHECK-NEXT:
    kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k1, %k2
; CHECK-NEXT: vptestnmb %ymm0, %ymm0, %k1
; CHECK-NEXT: kshiftrd $30, %k0, %k0
; CHECK-NEXT: kshiftrlq $63, %k0, %k0
; CHECK-NEXT: kshiftrq $32, %k0, %k0
; CHECK-NEXT: korq %k0, %k2, %k0
; CHECK-NEXT: movabsq $-4294967297, %rax # imm = 0xFFFFFFFFEFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $1, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $31, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-8589934593, %rax # imm = 0xFFFFFFFFDFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrlq $63, %k1, %k2
; CHECK-NEXT: kshiftrq $30, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-17179869185, %rax # imm = 0xFFFFFFFFBFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $3, %k1, %k2
; CHECK-NEXT:
    kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $29, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-34359738369, %rax # imm = 0xFFFFFFFF7FFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $2, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $28, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-68719476737, %rax # imm = 0xFFFFFFFFEFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $5, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $27, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0

```

```

; CHECK-NEXT: movabsq $-137438953473, %rax # imm = 0xFFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $4, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $26, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
;
CHECK-NEXT: movabsq $-274877906945, %rax # imm = 0xFFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $7, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $25, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-549755813889, %rax # imm = 0xFFFFFFFF7FFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $6, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $24, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-1099511627777, %rax # imm = 0xFFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $9, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $23, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-2199023255553, %rax # imm = 0xFFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
;
CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $8, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $22, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-4398046511105, %rax # imm = 0xFFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $11, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $21, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-8796093022209, %rax # imm = 0xFFFFFFFF7FFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $10, %k1, %k2

```



```

; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $20, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-17592186044417, %rax # imm = 0xFFFFEFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $13, %k1, %k2
; CHECK-NEXT: kshiftrlq
$63, %k2, %k2
; CHECK-NEXT: kshiftrq $19, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-35184372088833, %rax # imm = 0xFFFFDFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $12, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $18, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-70368744177665, %rax # imm = 0xFFFFBFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $15, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $17, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-140737488355329, %rax # imm = 0xFFFF7FFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $14, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $16, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT:
movabsq $-281474976710657, %rax # imm = 0xFFFEFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $17, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $15, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-562949953421313, %rax # imm = 0xFFFFDFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $16, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $14, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-1125899906842625, %rax # imm = 0xFFFBFFFFFFFFFFFFFFF

```

```

; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $19, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $13, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-2251799813685249, %rax # imm = 0xFFF7FFFFFFFFFFFFFF
; CHECK-NEXT: kmovq
%rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $18, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $12, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-4503599627370497, %rax # imm = 0xFFEFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $21, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $11, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-9007199254740993, %rax # imm = 0xFFDFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $20, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $10, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-18014398509481985, %rax # imm = 0xFFBFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $23, %k1, %k2
;
CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $9, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-36028797018963969, %rax # imm = 0xFF7FFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $22, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $8, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-72057594037927937, %rax # imm = 0xFEFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $25, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2

```

```

; CHECK-NEXT: kshiftrq $7, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-144115188075855873, %rax # imm = 0xFDFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $24, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $6, %k2, %k2
; CHECK-NEXT:
    korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-288230376151711745, %rax # imm = 0xFBFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $27, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $5, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-576460752303423489, %rax # imm = 0xF7FFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $26, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $4, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-1152921504606846977, %rax # imm = 0xEFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $29, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $3, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-2305843009213693953, %rax # imm =
0xDFFFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $28, %k1, %k2
; CHECK-NEXT: kshiftrlq $63, %k2, %k2
; CHECK-NEXT: kshiftrq $2, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: movabsq $-4611686018427387905, %rax # imm = 0xBF7FFFFFFFFFFFFFFF
; CHECK-NEXT: kmovq %rax, %k2
; CHECK-NEXT: kandq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $31, %k1, %k2
; CHECK-NEXT: kshiftrlq $62, %k2, %k2
; CHECK-NEXT: korq %k2, %k0, %k0
; CHECK-NEXT: kshiftrd $30, %k1, %k1
; CHECK-NEXT: kshiftrlq $1, %k0, %k0
; CHECK-NEXT: kshiftrq $1, %k0, %k0

```

```

; CHECK-NEXT: kshiflq $63, %k1, %k1
; CHECK-NEXT: korq %k1, %k0, %k1
; CHECK-NEXT: vmovdqu8 %ymm1, (%rsi) {%k1}
; CHECK-NEXT: kshiftrq $32, %k1, %k1
; CHECK-NEXT: vmovdqu8 %ymm0, 32(%rsi) {%k1}
; CHECK-NEXT: vzeroupper
; CHECK-NEXT: retq
entry:
%a = load <64 x i8>, <64 x i8>* %x
%b = icmp eq <64 x i8> %a, zeroinitializer
%shuf = shufflevector
<64 x i1> %b, <64 x i1> undef, <64 x i32> <i32 1, i32 0, i32 3, i32 2, i32 5, i32 4, i32 7, i32 6, i32 9, i32 8, i32 11,
i32 10, i32 13, i32 12, i32 15, i32 14, i32 17, i32 16, i32 19, i32 18, i32 21, i32 20, i32 23, i32 22, i32 25, i32 24, i32
27, i32 26, i32 29, i32 28, i32 31, i32 30, i32 33, i32 32, i32 35, i32 34, i32 37, i32 36, i32 39, i32 38, i32 41, i32 40,
i32 43, i32 42, i32 45, i32 44, i32 47, i32 46, i32 49, i32 48, i32 51, i32 50, i32 53, i32 52, i32 55, i32 54, i32 57, i32
56, i32 59, i32 58, i32 61, i32 60, i32 63, i32 62>
call void @llvm.masked.store.v64i8.p0v64i8(<64 x i8> %a, <64 x i8>* %y, i32 1, <64 x i1> %shuf)
ret void
}
declare void @llvm.masked.store.v64i8.p0v64i8(<64 x i8>, <64 x i8>*, i32, <64 x i1>)

@mem64_dst = dso_local global i64 0, align 8
@mem64_src = dso_local global i64 0, align 8
define dso_local i32 @v64i1_inline_asm() "min-legal-vector-width"="256" {
; CHECK-LABEL: v64i1_inline_asm:
; CHECK: # %bb.0:
; CHECK-NEXT: kmovq mem64_src(%rip),
%k0
; CHECK-NEXT: #APP
; CHECK-NEXT: #NO_APP
; CHECK-NEXT: kmovq %k0, mem64_dst(%rip)
; CHECK-NEXT: movl -{[0-9]+}(%rsp), %eax
; CHECK-NEXT: retq
%1 = alloca i32, align 4
%2 = load i64, i64* @mem64_src, align 8
%3 = call i64 @asm "", "=k,k,~{dirflag},~{fcsr},~{flags}"(i64 %2)
store i64 %3, i64* @mem64_dst, align 8
%4 = load i32, i32* %1, align 4
ret i32 %4
}

define dso_local void @cmp_v8i64_sext(<8 x i64>* %xptra, <8 x i64>* %yptra, <8 x i64>* %zptr) "min-legal-
vector-width"="256" {
; CHECK-LABEL: cmp_v8i64_sext:
; CHECK: # %bb.0:
; CHECK-NEXT: vmovdqa (%rsi), %ymm0
; CHECK-NEXT: vmovdqa 32(%rsi), %ymm1
; CHECK-NEXT: vpcmpgtq 32(%rdi), %ymm1, %ymm1

```

```

; CHECK-NEXT: vpcmpgtq (%rdi), %ymm0, %ymm0
; CHECK-NEXT: vmovdqa %ymm0, (%rdx)
; CHECK-NEXT: vmovdqa %ymm1, 32(%rdx)
; CHECK-NEXT: vzeroupper
; CHECK-NEXT: retq
%x = load <8 x i64>, <8 x i64>* %xptr
%y = load <8 x i64>, <8 x i64>* %yptr
%cmp = icmp slt <8 x i64> %x, %y
%ext
= sext <8 x i1> %cmp to <8 x i64>
store <8 x i64> %ext, <8 x i64>* %zptr
ret void
}

```

```

define dso_local void @cmp_v8i64_zext(<8 x i64>* %xptr, <8 x i64>* %yptr, <8 x i64>* %zptr) "min-legal-vector-width"="256" {

```

```

; CHECK-LABEL: cmp_v8i64_zext:
; CHECK:      # %bb.0:
; CHECK-NEXT: vmovdqa (%rsi), %ymm0
; CHECK-NEXT: vmovdqa 32(%rsi), %ymm1
; CHECK-NEXT: vpcmpgtq 32(%rdi), %ymm1, %ymm1
; CHECK-NEXT: vpcmpgtq (%rdi), %ymm0, %ymm0
; CHECK-NEXT: vpsrlq $63, %ymm1, %ymm1
; CHECK-NEXT: vpsrlq $63, %ymm0, %ymm0
; CHECK-NEXT: vmovdqa %ymm0, (%rdx)
; CHECK-NEXT: vmovdqa %ymm1, 32(%rdx)
; CHECK-NEXT: vzeroupper
; CHECK-NEXT: retq
%x = load <8 x i64>, <8 x i64>* %xptr
%y = load <8 x i64>, <8 x i64>* %yptr
%cmp = icmp slt <8 x i64> %x, %y
%ext = zext <8 x i1> %cmp to <8 x i64>
store <8 x i64> %ext, <8 x i64>* %zptr
ret void
}

```

```

define <16 x i8> @var_rotate_v16i8(<16 x i8> %a, <16 x i8> %b) nounwind "min-legal-vector-width"="256" {

```

```

; CHECK-LABEL: var_rotate_v16i8:
;
; CHECK:      # %bb.0:
; CHECK-NEXT: vpandd {{\?.?LCPI[0-9]+_[0-9]+}}(%rip){1to4}, %xmm1, %xmm1
; CHECK-NEXT: vpxor %xmm2, %xmm2, %xmm2
; CHECK-NEXT: vpunpckhbw {{.*#+}} %xmm2 =
xmm1[8],xmm2[8],xmm1[9],xmm2[9],xmm1[10],xmm2[10],xmm1[11],xmm2[11],xmm1[12],xmm2[12],xmm1[13],
xmm2[13],xmm1[14],xmm2[14],xmm1[15],xmm2[15]
; CHECK-NEXT: vpunpckhbw {{.*#+}} %xmm3 = xmm0[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15]
; CHECK-NEXT: vpsllvw %xmm2, %xmm3, %xmm2
; CHECK-NEXT: vpsrlw $8, %xmm2, %xmm2

```



```

define <32 x i8> @splatvar_rotate_v32i8(<32 x i8> %a, <32 x i8> %b) nounwind "min-legal-vector-width"="256"
{
; CHECK-LABEL: splatvar_rotate_v32i8:
; CHECK:      # %bb.0:
; CHECK-NEXT:  vpunpckhbw {{.*#+}} ymm2 =
ymm0[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-NEXT:  vpand {{\.?LCPI[0-9]+_[0-9]+}}(%rip), %xmm1, %xmm1
; CHECK-NEXT:  vpsllw %xmm1, %ymm2, %ymm2
; CHECK-NEXT:  vpsrlw $8, %ymm2, %ymm2
; CHECK-NEXT:  vpunpcklbw {{.*#+}} ymm0 =
ymm0[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
; CHECK-NEXT:  vpsllw %xmm1, %ymm0, %ymm0
; CHECK-NEXT:  vpsrlw $8, %ymm0, %ymm0
; CHECK-NEXT:  vpackuswb %ymm2, %ymm0, %ymm0
; CHECK-NEXT:  retq
%$splat = shufflevector <32 x i8> %b, <32 x i8> undef, <32 x i32> zeroinitializer
%$splat8 = sub <32 x i8> <i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8, i8 8>, %$splat
%$shl = shl <32 x i8>
%a, %$splat
%$lshr = lshr <32 x i8> %a, %$splat8
%or = or <32 x i8> %$shl, %$lshr
ret <32 x i8> %or
}

```

```

define <32 x i8> @constant_rotate_v32i8(<32 x i8> %a) nounwind "min-legal-vector-width"="256" {
; CHECK-LABEL: constant_rotate_v32i8:
; CHECK:      # %bb.0:
; CHECK-NEXT:  vpunpckhbw {{.*#+}} ymm1 =
ymm0[8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,24,24,25,25,26,26,27,27,28,28,29,29,30,30,31,31]
; CHECK-NEXT:  vpsllvw {{\.?LCPI[0-9]+_[0-9]+}}(%rip), %ymm1, %ymm1
; CHECK-NEXT:  vpsrlw $8, %ymm1, %ymm1
; CHECK-NEXT:  vpunpcklbw {{.*#+}} ymm0 =
ymm0[0,0,1,1,2,2,3,3,4,4,5,5,6,6,7,7,16,16,17,17,18,18,19,19,20,20,21,21,22,22,23,23]
; CHECK-NEXT:  vpsllvw {{\.?LCPI[0-9]+_[0-9]+}}(%rip), %ymm0, %ymm0
; CHECK-NEXT:  vpsrlw $8, %ymm0, %ymm0
; CHECK-NEXT:  vpackuswb %ymm1, %ymm0, %ymm0
; CHECK-NEXT:  retq
%$shl = shl <32 x i8> %a, <i8 0, i8 1, i8 2, i8 3, i8 4, i8 5, i8 6, i8 7, i8 8, i8 7, i8 6, i8 5, i8 4, i8 3, i8 2, i8 1, i8 0, i8 1, i8 2, i8 3, i8 4, i8 5, i8 6, i8 7, i8 8, i8 7, i8 6, i8 5, i8 4, i8 3, i8 2, i8 1>
%$lshr = lshr <32 x i8> %a, <i8 8, i8 7, i8 6, i8 5, i8 4, i8 3, i8 2, i8 1, i8 0, i8 1, i8 2, i8 3, i8 4, i8 5, i8 6, i8 7, i8 8, i8 7, i8 6, i8 5, i8 4, i8 3, i8 2, i8 1, i8 0, i8 1, i8 2, i8 3, i8 4, i8 5, i8 6, i8 7>
%or = or <32 x i8> %$shl, %$lshr
ret <32 x i8> %or
}

```





in the documentation and/or other materials provided with the distribution.

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; NOTE: Assertions have been autogenerated by utils/update\_llc\_test\_checks.py

; RUN: llc -mtriple=riscv64 -verify-machineinstrs < %s \

; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefixes=CHECK,RV64I

; RUN: llc -mtriple=riscv64 -mattr=+zbs -verify-machineinstrs < %s \

; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefixes=CHECK,RV64ZBS

```
define signext i32 @bclr_i32(i32 signext %a, i32 signext %b) nounwind {
```

```
; RV64I-LABEL: bclr_i32:
```

```
; RV64I:    # %bb.0:
```

```
; RV64I-NEXT:  li a2, 1
```

```
; RV64I-NEXT:  sllw a1, a2, a1
```

```
; RV64I-NEXT:  not a1, a1
```

```
; RV64I-NEXT:  and a0, a1, a0
```

```
; RV64I-NEXT:  ret
```

```
;
```

```
; RV64ZBS-LABEL: bclr_i32:
```

```
; RV64ZBS:    # %bb.0:
```

```
; RV64ZBS-NEXT:  andi a1, a1, 31
```

```
; RV64ZBS-NEXT:  bclr a0, a0, a1
```

```
; RV64ZBS-NEXT:  sext.w a0, a0
```

```
; RV64ZBS-NEXT:  ret
```

```
%and = and i32 %b, 31
```

```
%shl = shl nuw i32 1, %and
```

```
%neg = xor i32 %shl, -1
```

```
%and1 = and i32 %neg, %a
```

```
ret i32 %and1
```

```
}
```

```
define signext i32 @bclr_i32_no_mask(i32 signext %a,
```

```

i32 signext %b) nounwind {
; RV64I-LABEL: bclr_i32_no_mask:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  sllw a1, a2, a1
; RV64I-NEXT:  not a1, a1
; RV64I-NEXT:  and a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclr_i32_no_mask:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bclr a0, a0, a1
; RV64ZBS-NEXT:  sext.w a0, a0
; RV64ZBS-NEXT:  ret
%shl = shl i32 1, %b
%neg = xor i32 %shl, -1
%and1 = and i32 %neg, %a
ret i32 %and1
}

define signext i32 @bclr_i32_load(ptr %p, i32 signext %b) nounwind {
; RV64I-LABEL: bclr_i32_load:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lw a0, 0(a0)
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  sllw a1, a2, a1
; RV64I-NEXT:  not a1, a1
; RV64I-NEXT:  and a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclr_i32_load:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  lw a0, 0(a0)
; RV64ZBS-NEXT:  bclr a0, a0, a1
; RV64ZBS-NEXT:  sext.w a0, a0
; RV64ZBS-NEXT:  ret
%a = load i32, ptr %p
%shl = shl i32 1, %b
%neg
= xor i32 %shl, -1
%and1 = and i32 %neg, %a
ret i32 %and1
}

define i64 @bclr_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: bclr_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 1

```

```

; RV64I-NEXT:  sll a1, a2, a1
; RV64I-NEXT:  not a1, a1
; RV64I-NEXT:  and a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclr_i64:
; RV64ZBS:     # %bb.0:
; RV64ZBS-NEXT:  bclr a0, a0, a1
; RV64ZBS-NEXT:  ret
%and = and i64 %b, 63
%shl = shl nuw i64 1, %and
%neg = xor i64 %shl, -1
%and1 = and i64 %neg, %a
ret i64 %and1
}

define i64 @bclr_i64_no_mask(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: bclr_i64_no_mask:
; RV64I:     # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  sll a1, a2, a1
; RV64I-NEXT:  not a1, a1
; RV64I-NEXT:  and a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclr_i64_no_mask:
; RV64ZBS:     # %bb.0:
; RV64ZBS-NEXT:  bclr a0, a0, a1
; RV64ZBS-NEXT:  ret
%shl = shl i64 1, %b
%neg = xor i64 %shl, -1
%and1 = and i64 %neg, %a
ret i64
%and1
}

define signext i32 @bset_i32(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: bset_i32:
; RV64I:     # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  sllw a1, a2, a1
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bset_i32:
; RV64ZBS:     # %bb.0:
; RV64ZBS-NEXT:  andi a1, a1, 31
; RV64ZBS-NEXT:  bset a0, a0, a1

```

```

; RV64ZBS-NEXT:  sext.w a0, a0
; RV64ZBS-NEXT:  ret
%and = and i32 %b, 31
%shl = shl nuw i32 1, %and
%or = or i32 %shl, %a
ret i32 %or
}

define signext i32 @bset_i32_no_mask(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: bset_i32_no_mask:
; RV64I:      # %bb.0:
; RV64I-NEXT: li a2, 1
; RV64I-NEXT: sllw a1, a2, a1
; RV64I-NEXT: or a0, a1, a0
; RV64I-NEXT: ret
;
; RV64ZBS-LABEL: bset_i32_no_mask:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT: bset a0, a0, a1
; RV64ZBS-NEXT: sext.w a0, a0
; RV64ZBS-NEXT: ret
%shl = shl i32 1, %b
%or = or i32 %shl, %a
ret i32 %or
}

define signext i32
@bset_i32_load(ptr %p, i32 signext %b) nounwind {
; RV64I-LABEL: bset_i32_load:
; RV64I:      # %bb.0:
; RV64I-NEXT: lw a0, 0(a0)
; RV64I-NEXT: li a2, 1
; RV64I-NEXT: sllw a1, a2, a1
; RV64I-NEXT: or a0, a1, a0
; RV64I-NEXT: ret
;
; RV64ZBS-LABEL: bset_i32_load:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT: lw a0, 0(a0)
; RV64ZBS-NEXT: bset a0, a0, a1
; RV64ZBS-NEXT: sext.w a0, a0
; RV64ZBS-NEXT: ret
%a = load i32, ptr %p
%shl = shl i32 1, %b
%or = or i32 %shl, %a
ret i32 %or
}

```

; We can use bsetw for  $1 \ll x$  by setting the first source to zero.

```
define signext i32 @bset_i32_zero(i32 signext %a) nounwind {
; RV64I-LABEL: bset_i32_zero:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, 1
; RV64I-NEXT:  sllw a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bset_i32_zero:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bset a0, zero, a0
; RV64ZBS-NEXT:  sext.w a0, a0
; RV64ZBS-NEXT:  ret
%shl = shl i32 1, %a
ret i32 %shl
}
```

```
define i64 @bset_i64(i64 %a,
i64 %b) nounwind {
; RV64I-LABEL: bset_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  sll a1, a2, a1
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bset_i64:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bset a0, a0, a1
; RV64ZBS-NEXT:  ret
%conv = and i64 %b, 63
%shl = shl nuw i64 1, %conv
%or = or i64 %shl, %a
ret i64 %or
}
```

```
define i64 @bset_i64_no_mask(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: bset_i64_no_mask:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  sll a1, a2, a1
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bset_i64_no_mask:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bset a0, a0, a1
; RV64ZBS-NEXT:  ret
}
```

```

%shl = shl i64 1, %b
%or = or i64 %shl, %a
ret i64 %or
}

```

; We can use bsetw for  $1 \ll x$  by setting the first source to zero.

```

define signext i64 @bset_i64_zero(i64 signext %a) nounwind {
; RV64I-LABEL: bset_i64_zero:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li
a1, 1
; RV64I-NEXT:  sll a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bset_i64_zero:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bset a0, zero, a0
; RV64ZBS-NEXT:  ret
%shl = shl i64 1, %a
ret i64 %shl
}

```

```

define signext i32 @binv_i32(i32 signext %a, i32 signext %b) nounwind {

```

```

; RV64I-LABEL: binv_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  sllw a1, a2, a1
; RV64I-NEXT:  xor a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binv_i32:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  andi a1, a1, 31
; RV64ZBS-NEXT:  binv a0, a0, a1
; RV64ZBS-NEXT:  sext.w a0, a0
; RV64ZBS-NEXT:  ret
%and = and i32 %b, 31
%shl = shl nuw i32 1, %and
%xor = xor i32 %shl, %a
ret i32 %xor
}

```

```

define signext i32 @binv_i32_no_mask(i32 signext %a, i32 signext %b) nounwind {

```

```

; RV64I-LABEL: binv_i32_no_mask:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  sllw a1, a2, a1
; RV64I-NEXT:  xor a0, a1, a0

```

```

; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binv_i32_no_mask:
;
RV64ZBS:  # %bb.0:
; RV64ZBS-NEXT:  binv a0, a0, a1
; RV64ZBS-NEXT:  sext.w a0, a0
; RV64ZBS-NEXT:  ret
%shl = shl i32 1, %b
%xor = xor i32 %shl, %a
ret i32 %xor
}

define signext i32 @binv_i32_load(ptr %p, i32 signext %b) nounwind {
; RV64I-LABEL: binv_i32_load:
; RV64I:  # %bb.0:
; RV64I-NEXT:  lw a0, 0(a0)
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  sllw a1, a2, a1
; RV64I-NEXT:  xor a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binv_i32_load:
; RV64ZBS:  # %bb.0:
; RV64ZBS-NEXT:  lw a0, 0(a0)
; RV64ZBS-NEXT:  binv a0, a0, a1
; RV64ZBS-NEXT:  sext.w a0, a0
; RV64ZBS-NEXT:  ret
%a = load i32, ptr %p
%shl = shl i32 1, %b
%xor = xor i32 %shl, %a
ret i32 %xor
}

define i64 @binv_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: binv_i64:
; RV64I:  # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  sll a1, a2, a1
; RV64I-NEXT:  xor a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binv_i64:
; RV64ZBS:  # %bb.0:
;
RV64ZBS-NEXT:  binv a0, a0, a1
; RV64ZBS-NEXT:  ret
%conv = and i64 %b, 63

```

```

%shl = shl nuw i64 1, %conv
%xor = xor i64 %shl, %a
ret i64 %xor
}

```

```

define i64 @binv_i64_no_mask(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: binv_i64_no_mask:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  sll a1, a2, a1
; RV64I-NEXT:  xor a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binv_i64_no_mask:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  binv a0, a0, a1
; RV64ZBS-NEXT:  ret
%shl = shl nuw i64 1, %b
%xor = xor i64 %shl, %a
ret i64 %xor
}

```

```

define signext i32 @bext_i32(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: bext_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a0, a0, a1
; RV64I-NEXT:  andi a0, a0, 1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bext_i32:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  andi a1, a1, 31
; RV64ZBS-NEXT:  bext a0, a0, a1
; RV64ZBS-NEXT:  ret
%and = and i32 %b, 31
%shr = lshr i32 %a, %and
%and1 = and i32
%shr, 1
ret i32 %and1
}

```

```

define signext i32 @bext_i32_no_mask(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: bext_i32_no_mask:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a0, a0, a1
; RV64I-NEXT:  andi a0, a0, 1
; RV64I-NEXT:  ret
;

```



```

; RV64ZBS-LABEL: bext_i32_no_mask:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bext a0, a0, a1
; RV64ZBS-NEXT:  ret
%shr = lshr i32 %a, %b
%and1 = and i32 %shr, 1
ret i32 %and1
}

; This gets previous converted to (i1 (truncate (srl X, Y))). Make sure we are
; able to use bext.
define void @bext_i32_trunc(i32 signext %0, i32 signext %1) {
; RV64I-LABEL: bext_i32_trunc:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a0, a0, a1
; RV64I-NEXT:  andi a0, a0, 1
; RV64I-NEXT:  beqz a0, .LBB19_2
; RV64I-NEXT:  # %bb.1:
; RV64I-NEXT:  ret
; RV64I-NEXT:  .LBB19_2:
; RV64I-NEXT:  tail bar
;
; RV64ZBS-LABEL: bext_i32_trunc:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bext a0, a0, a1
; RV64ZBS-NEXT:  beqz a0, .LBB19_2
; RV64ZBS-NEXT:
# %bb.1:
; RV64ZBS-NEXT:  ret
; RV64ZBS-NEXT:  .LBB19_2:
; RV64ZBS-NEXT:  tail bar
%3 = shl i32 1, %1
%4 = and i32 %3, %0
%5 = icmp eq i32 %4, 0
br i1 %5, label %6, label %7

6:                                ; preds = %2
tail call void @bar()
br label %7

7:                                ; preds = %6, %2
ret void
}

declare void @bar()

define i64 @bext_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: bext_i64:

```

```

; RV64I:    # %bb.0:
; RV64I-NEXT:  srl a0, a0, a1
; RV64I-NEXT:  andi a0, a0, 1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bext_i64:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bext a0, a0, a1
; RV64ZBS-NEXT:  ret
%conv = and i64 %b, 63
%shr = lshr i64 %a, %conv
%and1 = and i64 %shr, 1
ret i64 %and1
}

define i64 @bext_i64_no_mask(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: bext_i64_no_mask:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srl a0, a0, a1
; RV64I-NEXT:  andi a0, a0, 1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL:
bext_i64_no_mask:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bext a0, a0, a1
; RV64ZBS-NEXT:  ret
%shr = lshr i64 %a, %b
%and1 = and i64 %shr, 1
ret i64 %and1
}

define signext i32 @bexti_i32(i32 signext %a) nounwind {
; RV64I-LABEL: bexti_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 58
; RV64I-NEXT:  srli a0, a0, 63
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bexti_i32:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bexti a0, a0, 5
; RV64ZBS-NEXT:  ret
%shr = lshr i32 %a, 5
%and = and i32 %shr, 1
ret i32 %and
}

```

```

define i64 @bexti_i64(i64 %a) nounwind {
; RV64I-LABEL: bexti_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 58
; RV64I-NEXT:  srli a0, a0, 63
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bexti_i64:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bexti a0, a0, 5
; RV64ZBS-NEXT:  ret
%shr = lshr i64 %a, 5
%and = and i64 %shr, 1
ret i64 %and
}

define signext i32 @bexti_i32_cmp(i32 signext %a) nounwind {
; CHECK-LABEL: bexti_i32_cmp:
;
CHECK:    # %bb.0:
; CHECK-NEXT:  andi a0, a0, 32
; CHECK-NEXT:  snez a0, a0
; CHECK-NEXT:  ret
%and = and i32 %a, 32
%cmp = icmp ne i32 %and, 0
%zext = zext i1 %cmp to i32
ret i32 %zext
}

define i64 @bexti_i64_cmp(i64 %a) nounwind {
; RV64I-LABEL: bexti_i64_cmp:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 58
; RV64I-NEXT:  srli a0, a0, 63
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bexti_i64_cmp:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bexti a0, a0, 5
; RV64ZBS-NEXT:  ret
%and = and i64 %a, 32
%cmp = icmp ne i64 %and, 0
%zext = zext i1 %cmp to i64
ret i64 %zext
}

define signext i32 @bclri_i32_10(i32 signext %a) nounwind {
; CHECK-LABEL: bclri_i32_10:

```

```

; CHECK:    # %bb.0:
; CHECK-NEXT:  andi a0, a0, -1025
; CHECK-NEXT:  ret
%and = and i32 %a, -1025
ret i32 %and
}

define signext i32 @bclri_i32_11(i32 signext %a) nounwind {
; RV64I-LABEL: bclri_i32_11:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a1, 1048575
; RV64I-NEXT:  addiw a1,
a1, 2047
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclri_i32_11:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bclri a0, a0, 11
; RV64ZBS-NEXT:  ret
%and = and i32 %a, -2049
ret i32 %and
}

define signext i32 @bclri_i32_30(i32 signext %a) nounwind {
; RV64I-LABEL: bclri_i32_30:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a1, 786432
; RV64I-NEXT:  addiw a1, a1, -1
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclri_i32_30:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bclri a0, a0, 30
; RV64ZBS-NEXT:  ret
%and = and i32 %a, -1073741825
ret i32 %and
}

define signext i32 @bclri_i32_31(i32 signext %a) nounwind {
; RV64I-LABEL: bclri_i32_31:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 33
; RV64I-NEXT:  srli a0, a0, 33
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclri_i32_31:

```

```

; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bclri a0, a0, 31
; RV64ZBS-NEXT:  sext.w a0, a0
; RV64ZBS-NEXT:  ret
%and = and i32 %a,
-2147483649
ret i32 %and
}

define i64 @bclri_i64_10(i64 %a) nounwind {
; CHECK-LABEL: bclri_i64_10:
; CHECK:    # %bb.0:
; CHECK-NEXT:  andi a0, a0, -1025
; CHECK-NEXT:  ret
%and = and i64 %a, -1025
ret i64 %and
}

define i64 @bclri_i64_11(i64 %a) nounwind {
; RV64I-LABEL: bclri_i64_11:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a1, 1048575
; RV64I-NEXT:  addiw a1, a1, 2047
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclri_i64_11:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bclri a0, a0, 11
; RV64ZBS-NEXT:  ret
%and = and i64 %a, -2049
ret i64 %and
}

define i64 @bclri_i64_30(i64 %a) nounwind {
; RV64I-LABEL: bclri_i64_30:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a1, 786432
; RV64I-NEXT:  addiw a1, a1, -1
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclri_i64_30:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bclri a0, a0, 30
; RV64ZBS-NEXT:  ret
%and = and i64 %a, -1073741825
ret i64 %and
}

```

```

}

define
i64 @bclri_i64_31(i64 %a) nounwind {
; RV64I-LABEL: bclri_i64_31:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a1, 524288
; RV64I-NEXT:  addi a1, a1, -1
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclri_i64_31:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bclri a0, a0, 31
; RV64ZBS-NEXT:  ret
%and = and i64 %a, -2147483649
ret i64 %and
}

define i64 @bclri_i64_62(i64 %a) nounwind {
; RV64I-LABEL: bclri_i64_62:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, -1
; RV64I-NEXT:  slli a1, a1, 62
; RV64I-NEXT:  addi a1, a1, -1
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclri_i64_62:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bclri a0, a0, 62
; RV64ZBS-NEXT:  ret
%and = and i64 %a, -4611686018427387905
ret i64 %and
}

define i64 @bclri_i64_63(i64 %a) nounwind {
; RV64I-LABEL: bclri_i64_63:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 1
; RV64I-NEXT:  srli a0, a0, 1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL:
bclri_i64_63:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bclri a0, a0, 63
; RV64ZBS-NEXT:  ret

```

```
%and = and i64 %a, -9223372036854775809
ret i64 %and
}
```

```
define i64 @bclri_i64_large0(i64 %a) nounwind {
; RV64I-LABEL: bclri_i64_large0:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a1, 1044480
; RV64I-NEXT:  addiw a1, a1, -256
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclri_i64_large0:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  andi a0, a0, -256
; RV64ZBS-NEXT:  bclri a0, a0, 24
; RV64ZBS-NEXT:  ret
%and = and i64 %a, -16777472
ret i64 %and
}
```

```
define i64 @bclri_i64_large1(i64 %a) nounwind {
; RV64I-LABEL: bclri_i64_large1:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a1, 1044464
; RV64I-NEXT:  addiw a1, a1, -1
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bclri_i64_large1:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bclri a0, a0, 16
; RV64ZBS-NEXT:  bclri a0, a0, 24
; RV64ZBS-NEXT:  ret
%and = and i64 %a,
-16842753
ret i64 %and
}
```

```
define signext i32 @bseti_i32_10(i32 signext %a) nounwind {
; CHECK-LABEL: bseti_i32_10:
; CHECK:    # %bb.0:
; CHECK-NEXT:  ori a0, a0, 1024
; CHECK-NEXT:  ret
%or = or i32 %a, 1024
ret i32 %or
}
```

```

define signext i32 @bseti_i32_11(i32 signext %a) nounwind {
; RV64I-LABEL: bseti_i32_11:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, 1
; RV64I-NEXT:  slliw a1, a1, 11
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bseti_i32_11:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bseti a0, a0, 11
; RV64ZBS-NEXT:  ret
%or = or i32 %a, 2048
ret i32 %or
}

```

```

define signext i32 @bseti_i32_30(i32 signext %a) nounwind {
; RV64I-LABEL: bseti_i32_30:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a1, 262144
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bseti_i32_30:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bseti a0, a0, 30
; RV64ZBS-NEXT:  ret
%or = or i32 %a, 1073741824
ret i32 %or
}

```

```

define signext i32
@bseti_i32_31(i32 signext %a) nounwind {
; RV64I-LABEL: bseti_i32_31:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a1, 524288
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bseti_i32_31:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bseti a0, a0, 31
; RV64ZBS-NEXT:  sext.w a0, a0
; RV64ZBS-NEXT:  ret
%or = or i32 %a, 2147483648
ret i32 %or
}

```



```

define i64 @bseti_i64_10(i64 %a) nounwind {
; CHECK-LABEL: bseti_i64_10:
; CHECK:      # %bb.0:
; CHECK-NEXT: ori a0, a0, 1024
; CHECK-NEXT: ret
%or = or i64 %a, 1024
ret i64 %or
}

```

```

define i64 @bseti_i64_11(i64 %a) nounwind {
; RV64I-LABEL: bseti_i64_11:
; RV64I:      # %bb.0:
; RV64I-NEXT: li a1, 1
; RV64I-NEXT: slli a1, a1, 11
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBS-LABEL: bseti_i64_11:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT: bseti a0, a0, 11
; RV64ZBS-NEXT: ret
%or = or i64 %a, 2048
ret i64 %or
}

```

```

define i64 @bseti_i64_30(i64 %a) nounwind {
; RV64I-LABEL: bseti_i64_30:
;
; RV64I:      # %bb.0:
; RV64I-NEXT: lui a1, 262144
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBS-LABEL: bseti_i64_30:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT: bseti a0, a0, 30
; RV64ZBS-NEXT: ret
%or = or i64 %a, 1073741824
ret i64 %or
}

```

```

define i64 @bseti_i64_31(i64 %a) nounwind {
; RV64I-LABEL: bseti_i64_31:
; RV64I:      # %bb.0:
; RV64I-NEXT: li a1, 1
; RV64I-NEXT: slli a1, a1, 31
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: ret

```

```

;
; RV64ZBS-LABEL: bseti_i64_31:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bseti a0, a0, 31
; RV64ZBS-NEXT:  ret
%or = or i64 %a, 2147483648
ret i64 %or
}

```

```

define i64 @bseti_i64_62(i64 %a) nounwind {
; RV64I-LABEL: bseti_i64_62:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, 1
; RV64I-NEXT:  slli a1, a1, 62
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bseti_i64_62:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bseti a0, a0, 62
; RV64ZBS-NEXT:  ret
%or = or i64 %a,
4611686018427387904
ret i64 %or
}

```

```

define i64 @bseti_i64_63(i64 %a) nounwind {
; RV64I-LABEL: bseti_i64_63:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, -1
; RV64I-NEXT:  slli a1, a1, 63
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bseti_i64_63:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bseti a0, a0, 63
; RV64ZBS-NEXT:  ret
%or = or i64 %a, 9223372036854775808
ret i64 %or
}

```

```

define signext i32 @binvi_i32_10(i32 signext %a) nounwind {
; CHECK-LABEL: binvi_i32_10:
; CHECK:    # %bb.0:
; CHECK-NEXT:  xori a0, a0, 1024
; CHECK-NEXT:  ret
%xor = xor i32 %a, 1024

```

```

ret i32 %xor
}

define signext i32 @binvi_i32_11(i32 signext %a) nounwind {
; RV64I-LABEL: binvi_i32_11:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, 1
; RV64I-NEXT:  slliw a1, a1, 11
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binvi_i32_11:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  binvi a0, a0, 11
; RV64ZBS-NEXT:  ret
%xor = xor i32 %a,
2048
ret i32 %xor
}

```

```

define signext i32 @binvi_i32_30(i32 signext %a) nounwind {
; RV64I-LABEL: binvi_i32_30:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a1, 262144
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binvi_i32_30:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  binvi a0, a0, 30
; RV64ZBS-NEXT:  ret
%xor = xor i32 %a, 1073741824
ret i32 %xor
}

```

```

define signext i32 @binvi_i32_31(i32 signext %a) nounwind {
; RV64I-LABEL: binvi_i32_31:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a1, 524288
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binvi_i32_31:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  binvi a0, a0, 31
; RV64ZBS-NEXT:  sext.w a0, a0
; RV64ZBS-NEXT:  ret
%xor = xor i32 %a, 2147483648
}

```

```

ret i32 %xor
}

define i64 @binvi_i64_10(i64 %a) nounwind {
; CHECK-LABEL: binvi_i64_10:
; CHECK:      # %bb.0:
; CHECK-NEXT:  xori a0, a0, 1024
; CHECK-NEXT:  ret
%xor = xor i64 %a, 1024
ret i64 %xor
}

define i64 @binvi_i64_11(i64
%a) nounwind {
; RV64I-LABEL: binvi_i64_11:
; RV64I:      # %bb.0:
; RV64I-NEXT:  li a1, 1
; RV64I-NEXT:  slli a1, a1, 11
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binvi_i64_11:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  binvi a0, a0, 11
; RV64ZBS-NEXT:  ret
%xor = xor i64 %a, 2048
ret i64 %xor
}

define i64 @binvi_i64_30(i64 %a) nounwind {
; RV64I-LABEL: binvi_i64_30:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lui a1, 262144
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binvi_i64_30:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  binvi a0, a0, 30
; RV64ZBS-NEXT:  ret
%xor = xor i64 %a, 1073741824
ret i64 %xor
}

define i64 @binvi_i64_31(i64 %a) nounwind {
; RV64I-LABEL: binvi_i64_31:
; RV64I:      # %bb.0:
; RV64I-NEXT:  li a1, 1

```

```

; RV64I-NEXT:  slli a1, a1, 31
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binvi_i64_31:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  binvi
a0, a0, 31
; RV64ZBS-NEXT:  ret
%xor = xor i64 %a, 2147483648
ret i64 %xor
}

define i64 @binvi_i64_62(i64 %a) nounwind {
; RV64I-LABEL: binvi_i64_62:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, 1
; RV64I-NEXT:  slli a1, a1, 62
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binvi_i64_62:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  binvi a0, a0, 62
; RV64ZBS-NEXT:  ret
%xor = xor i64 %a, 4611686018427387904
ret i64 %xor
}

define i64 @binvi_i64_63(i64 %a) nounwind {
; RV64I-LABEL: binvi_i64_63:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, -1
; RV64I-NEXT:  slli a1, a1, 63
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: binvi_i64_63:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  binvi a0, a0, 63
; RV64ZBS-NEXT:  ret
%xor = xor i64 %a, 9223372036854775808
ret i64 %xor
}

define i64 @xor_i64_large(i64 %a) nounwind {
; RV64I-LABEL: xor_i64_large:
; RV64I:    # %bb.0:

```

```

; RV64I-NEXT: li a1, 1
; RV64I-NEXT: slli
a1, a1, 32
; RV64I-NEXT: addi a1, a1, 1
; RV64I-NEXT: xor a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBS-LABEL: xor_i64_large:
; RV64ZBS: # %bb.0:
; RV64ZBS-NEXT: binvi a0, a0, 0
; RV64ZBS-NEXT: binvi a0, a0, 32
; RV64ZBS-NEXT: ret
%xor = xor i64 %a, 4294967297
ret i64 %xor
}

define i64 @xor_i64_4099(i64 %a) nounwind {
; RV64I-LABEL: xor_i64_4099:
; RV64I: # %bb.0:
; RV64I-NEXT: lui a1, 1
; RV64I-NEXT: addiw a1, a1, 3
; RV64I-NEXT: xor a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBS-LABEL: xor_i64_4099:
; RV64ZBS: # %bb.0:
; RV64ZBS-NEXT: xori a0, a0, 3
; RV64ZBS-NEXT: binvi a0, a0, 12
; RV64ZBS-NEXT: ret
%xor = xor i64 %a, 4099
ret i64 %xor
}

define i64 @xor_i64_96(i64 %a) nounwind {
; CHECK-LABEL: xor_i64_96:
; CHECK: # %bb.0:
; CHECK-NEXT: xori a0, a0, 96
; CHECK-NEXT: ret
%xor = xor i64 %a, 96
ret i64 %xor
}

define i64 @or_i64_large(i64 %a) nounwind {
; RV64I-LABEL: or_i64_large:
; RV64I: # %bb.0:
; RV64I-NEXT:
li a1, 1
; RV64I-NEXT: slli a1, a1, 32

```

```

; RV64I-NEXT:  addi a1, a1, 1
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: or_i64_large:
; RV64ZBS:     # %bb.0:
; RV64ZBS-NEXT:  bseti a0, a0, 0
; RV64ZBS-NEXT:  bseti a0, a0, 32
; RV64ZBS-NEXT:  ret
%or = or i64 %a, 4294967297
ret i64 %or
}

define i64 @xor_i64_66901(i64 %a) nounwind {
; RV64I-LABEL: xor_i64_66901:
; RV64I:       # %bb.0:
; RV64I-NEXT:  lui a1, 16
; RV64I-NEXT:  addiw a1, a1, 1365
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: xor_i64_66901:
; RV64ZBS:     # %bb.0:
; RV64ZBS-NEXT:  xori a0, a0, 1365
; RV64ZBS-NEXT:  binvi a0, a0, 16
; RV64ZBS-NEXT:  ret
%xor = xor i64 %a, 66901
ret i64 %xor
}

define i64 @or_i64_4099(i64 %a) nounwind {
; RV64I-LABEL: or_i64_4099:
; RV64I:       # %bb.0:
; RV64I-NEXT:  lui a1, 1
; RV64I-NEXT:  addiw a1, a1, 3
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: or_i64_4099:
; RV64ZBS:
; RV64ZBS:     # %bb.0:
; RV64ZBS-NEXT:  ori a0, a0, 3
; RV64ZBS-NEXT:  bseti a0, a0, 12
; RV64ZBS-NEXT:  ret
%or = or i64 %a, 4099
ret i64 %or
}

```

```

define i64 @or_i64_96(i64 %a) nounwind {
; CHECK-LABEL: or_i64_96:
; CHECK:      # %bb.0:
; CHECK-NEXT: ori a0, a0, 96
; CHECK-NEXT: ret
%or = or i64 %a, 96
ret i64 %or
}

```

```

define i64 @or_i64_66901(i64 %a) nounwind {
; RV64I-LABEL: or_i64_66901:
; RV64I:      # %bb.0:
; RV64I-NEXT: lui a1, 16
; RV64I-NEXT: addiw a1, a1, 1365
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBS-LABEL: or_i64_66901:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT: ori a0, a0, 1365
; RV64ZBS-NEXT: bseti a0, a0, 16
; RV64ZBS-NEXT: ret
%or = or i64 %a, 66901
ret i64 %or
}

```

```

define signext i32 @bset_trailing_ones_i32_mask(i32 signext %a) nounwind {
; RV64I-LABEL: bset_trailing_ones_i32_mask:
; RV64I:      # %bb.0:
; RV64I-NEXT: li a1, -1
; RV64I-NEXT: sllw a0, a1, a0
; RV64I-NEXT: not a0, a0
; RV64I-NEXT: ret
;
;
RV64ZBS-LABEL: bset_trailing_ones_i32_mask:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT: andi a0, a0, 31
; RV64ZBS-NEXT: bset a0, zero, a0
; RV64ZBS-NEXT: addiw a0, a0, -1
; RV64ZBS-NEXT: ret
%and = and i32 %a, 31
%shift = shl nsw i32 -1, %and
%not = xor i32 %shift, -1
ret i32 %not
}

```

```

define signext i32 @bset_trailing_ones_i32_no_mask(i32 signext %a) nounwind {

```



```

; RV64I-LABEL: bset_trailing_ones_i32_no_mask:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, -1
; RV64I-NEXT:  sllw a0, a1, a0
; RV64I-NEXT:  not a0, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bset_trailing_ones_i32_no_mask:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bset a0, zero, a0
; RV64ZBS-NEXT:  addiw a0, a0, -1
; RV64ZBS-NEXT:  ret
%shift = shl nsw i32 -1, %a
%not = xor i32 %shift, -1
ret i32 %not
}

define signext i64 @bset_trailing_ones_i64_mask(i64 signext %a) nounwind {
; RV64I-LABEL: bset_trailing_ones_i64_mask:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, -1
; RV64I-NEXT:  sll
a0, a1, a0
; RV64I-NEXT:  not a0, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bset_trailing_ones_i64_mask:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bset a0, zero, a0
; RV64ZBS-NEXT:  addi a0, a0, -1
; RV64ZBS-NEXT:  ret
%and = and i64 %a, 63
%shift = shl nsw i64 -1, %and
%not = xor i64 %shift, -1
ret i64 %not
}

define signext i64 @bset_trailing_ones_i64_no_mask(i64 signext %a) nounwind {
; RV64I-LABEL: bset_trailing_ones_i64_no_mask:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, -1
; RV64I-NEXT:  sll a0, a1, a0
; RV64I-NEXT:  not a0, a0
; RV64I-NEXT:  ret
;
; RV64ZBS-LABEL: bset_trailing_ones_i64_no_mask:
; RV64ZBS:    # %bb.0:
; RV64ZBS-NEXT:  bset a0, zero, a0

```

```
; RV64ZBS-NEXT:  addi a0, a0, -1
; RV64ZBS-NEXT:  ret
%shift = shl nsw i64 -1, %a
%not = xor i64 %shift, -1
ret i64 %not
}
```

---

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```
; RUN: opt -passes=consthoist -S -o - %s | FileCheck %s
target datalayout = "e-m:e-p:32:32-i64:64-v128:64:128-a:0:32-n32-S64"
target triple = "thumbv6m-none--musleabi"
```

```
; Check that for i8 type, the maximum legal offset is 31.
```

```
; Also check that an constant used as value to be stored rather than
```

```
; pointer in a store instruction is hoisted.
```

```

; CHECK: foo_i8
; CHECK-DAG: %[[C1:const[0-9]?]] = bitcast i32 805874720 to i32
; CHECK-DAG: %[[C2:const[0-9]?]] = bitcast i32 805874688 to i32
; CHECK-DAG: %[[C3:const[0-9]?]] = bitcast i32 805873720 to i32
; CHECK-DAG: %[[C4:const[0-9]?]] = bitcast i32 805873688 to i32
; CHECK: %0 = inttoptr i32 %[[C2]] to ptr
; CHECK-NEXT: %1 = load volatile i8, ptr %0
; CHECK-NEXT: %[[M1:const_mat[0-9]?]] = add i32 %[[C2]], 4
; CHECK-NEXT: %2 = inttoptr i32 %[[M1]] to ptr
; CHECK-NEXT: %3 = load volatile i8, ptr %2
; CHECK-NEXT: %[[M2:const_mat[0-9]?]] = add i32 %[[C2]], 31
; CHECK-NEXT: %4 = inttoptr i32 %[[M2]] to ptr
; CHECK-NEXT: %5 = load volatile
i8, ptr %4
; CHECK-NEXT: %6 = inttoptr i32 %[[C1]] to ptr
; CHECK-NEXT: %7 = load volatile i8, ptr %6
; CHECK-NEXT: %[[M3:const_mat[0-9]?]] = add i32 %[[C1]], 7
; CHECK-NEXT: %8 = inttoptr i32 %[[M3]] to ptr
; CHECK-NEXT: %9 = load volatile i8, ptr %8
; CHECK-NEXT: %10 = inttoptr i32 %[[C4]] to ptr
; CHECK-NEXT: store i8 %9, ptr %10
; CHECK-NEXT: %[[M4:const_mat[0-9]?]] = add i32 %[[C4]], 31
; CHECK-NEXT: %11 = inttoptr i32 %[[M4]] to ptr
; CHECK-NEXT: store i8 %7, ptr %11
; CHECK-NEXT: %12 = inttoptr i32 %[[C3]] to ptr
; CHECK-NEXT: store i8 %5, ptr %12
; CHECK-NEXT: %[[M5:const_mat[0-9]?]] = add i32 %[[C3]], 7
; CHECK-NEXT: %13 = inttoptr i32 %[[M5]] to ptr
; CHECK-NEXT: store i8 %3, ptr %13
; CHECK-NEXT: %[[M6:const_mat[0-9]?]] = add i32 %[[C1]], 80
; CHECK-NEXT: %14 = inttoptr i32 %[[M6]] to ptr
; CHECK-NEXT: store ptr %14, ptr @goo

```

```
@goo = global ptr undef
```

```

define void @foo_i8() {
entry:
%0 = load volatile i8, ptr inttoptr (i32 805874688 to ptr)
%1 = load volatile
i8, ptr inttoptr (i32 805874692 to ptr)
%2 = load volatile i8, ptr inttoptr (i32 805874719 to ptr)
%3 = load volatile i8, ptr inttoptr (i32 805874720 to ptr)
%4 = load volatile i8, ptr inttoptr (i32 805874727 to ptr)
store i8 %4, ptr inttoptr(i32 805873688 to ptr)
store i8 %3, ptr inttoptr(i32 805873719 to ptr)
store i8 %2, ptr inttoptr(i32 805873720 to ptr)
store i8 %1, ptr inttoptr(i32 805873727 to ptr)
store ptr inttoptr(i32 805874800 to ptr), ptr @goo

```

```
ret void
}
```

```
; Check that for i16 type, the maximum legal offset is 62.
; CHECK: foo_i16
; CHECK-DAG: %[[C1:const[0-9]?]] = bitcast i32 805874752 to i32
; CHECK-DAG: %[[C2:const[0-9]?]] = bitcast i32 805874688 to i32
; CHECK: %0 = inttoptr i32 %[[C2]] to ptr
; CHECK-NEXT: %1 = load volatile i16, ptr %0, align 2
; CHECK-NEXT: %[[M1:const_mat[0-9]?]] = add i32 %[[C2]], 4
; CHECK-NEXT: %2 = inttoptr i32 %[[M1]] to ptr
; CHECK-NEXT: %3 = load volatile i16, ptr %2, align 2
; CHECK-NEXT: %[[M2:const_mat[0-9]?]] = add
i32 %[[C2]], 32
; CHECK-NEXT: %4 = inttoptr i32 %[[M2]] to ptr
; CHECK-NEXT: %5 = load volatile i16, ptr %4, align 2
; CHECK-NEXT: %[[M3:const_mat[0-9]?]] = add i32 %[[C2]], 62
; CHECK-NEXT: %6 = inttoptr i32 %[[M3]] to ptr
; CHECK-NEXT: %7 = load volatile i16, ptr %6, align 2
; CHECK-NEXT: %8 = inttoptr i32 %[[C1]] to ptr
; CHECK-NEXT: %9 = load volatile i16, ptr %8, align 2
; CHECK-NEXT: %[[M4:const_mat[0-9]?]] = add i32 %[[C1]], 22
; CHECK-NEXT: %10 = inttoptr i32 %[[M4]] to ptr
; CHECK-NEXT: %11 = load volatile i16, ptr %10, align 2
```

```
define void @foo_i16() {
entry:
%0 = load volatile i16, ptr inttoptr (i32 805874688 to ptr), align 2
%1 = load volatile i16, ptr inttoptr (i32 805874692 to ptr), align 2
%2 = load volatile i16, ptr inttoptr (i32 805874720 to ptr), align 2
%3 = load volatile i16, ptr inttoptr (i32 805874750 to ptr), align 2
%4 = load volatile i16, ptr inttoptr (i32 805874752 to ptr), align 2
%5 = load volatile i16, ptr inttoptr (i32 805874774 to ptr), align
2
ret void
}
```

```
; Check that for i32 type, the maximum legal offset is 124.
; CHECK: foo_i32
; CHECK-DAG: %[[C1:const[0-9]?]] = bitcast i32 805874816 to i32
; CHECK-DAG: %[[C2:const[0-9]?]] = bitcast i32 805874688 to i32
; CHECK: %0 = inttoptr i32 %[[C2]] to ptr
; CHECK-NEXT: %1 = load volatile i32, ptr %0, align 4
; CHECK-NEXT: %[[M1:const_mat[0-9]?]] = add i32 %[[C2]], 4
; CHECK-NEXT: %2 = inttoptr i32 %[[M1]] to ptr
; CHECK-NEXT: %3 = load volatile i32, ptr %2, align 4
; CHECK-NEXT: %[[M2:const_mat[0-9]?]] = add i32 %[[C2]], 124
; CHECK-NEXT: %4 = inttoptr i32 %[[M2]] to ptr
```



```

; CHECK-NEXT: %5 = load volatile i32, ptr %4, align 4
; CHECK-NEXT: %6 = inttoptr i32 %[[C1]] to ptr
; CHECK-NEXT: %7 = load volatile i32, ptr %6, align 4
; CHECK-NEXT: %[[M3:const_mat[0-9]?]] = add i32 %[[C1]], 8
; CHECK-NEXT: %8 = inttoptr i32 %[[M3]] to ptr
; CHECK-NEXT: %9 = load volatile i32, ptr %8, align 4
; CHECK-NEXT: %[[M4:const_mat[0-9]?]] = add i32 %[[C1]], 12
; CHECK-NEXT: %10 = inttoptr
i32 %[[M4]] to ptr
; CHECK-NEXT: %11 = load volatile i32, ptr %10, align 4

```

```
define void @foo_i32() {
```

```
entry:
```

```

%0 = load volatile i32, ptr inttoptr (i32 805874688 to ptr), align 4
%1 = load volatile i32, ptr inttoptr (i32 805874692 to ptr), align 4
%2 = load volatile i32, ptr inttoptr (i32 805874812 to ptr), align 4
%3 = load volatile i32, ptr inttoptr (i32 805874816 to ptr), align 4
%4 = load volatile i32, ptr inttoptr (i32 805874824 to ptr), align 4
%5 = load volatile i32, ptr inttoptr (i32 805874828 to ptr), align 4
ret void

```

```
}
```

```
; RUN: llc -march=hexagon < %s
```

```
; REQUIRES: asserts
```

; The two loads based on %struct.0, loading two different data types  
; cause LSR to assume type "void" for the memory type. This would then  
; cause an assert in isLegalAddressingMode. Make sure we no longer crash.

```
target triple = "hexagon"
```

```
%struct.0 = type { ptr, i8, %union.anon.0 }
```

```
%union.anon.0 = type { ptr }
```

```
define hidden fastcc void @fred() unnamed_addr #0 {
```

```
entry:
```

```
br i1 undef, label %while.end, label %while.body.lr.ph
```

```
while.body.lr.ph: ; preds = %entry
```

```
br label %while.body
```

```
while.body: ; preds = %exit.2, %while.body.lr.ph
```

```
%lsr.iv = phi ptr [ %cgep22, %exit.2 ], [ undef, %while.body.lr.ph ]
```

```
switch i32 undef, label %exit [
```

```
  i32 1, label %sw.bb.i
```

```
  i32 2, label %sw.bb3.i
```

```
]
```

```
sw.bb.i: ; preds = %while.body
```

```

unreachable

sw.bb3.i:                                ; preds = %while.body
unreachable

exit:
                                ; preds = %while.body
switch i32 undef, label %exit.2 [
  i32 1, label %sw.bb.i17
  i32 2, label %sw.bb3.i20
]

sw.bb.i17:                             ; preds = %.exit
%0 = load i32, ptr %lsr.iv, align 4
unreachable

sw.bb3.i20:                             ; preds = %exit
%1 = load ptr, ptr %lsr.iv, align 4
unreachable

exit.2:                                 ; preds = %exit
%cgep22 = getelementptr %struct.0, ptr %lsr.iv, i32 1
br label %while.body

while.end:                              ; preds = %entry
ret void
}

attributes #0 = { nounwind optsize "target-cpu"="hexagonv55" }
; NOTE: Assertions have been autogenerated by utils/update_test_checks.py UTC_ARGS: --include-generated-funcs
; RUN: opt -S -passes=verify,iroutliner -ir-outlining-no-cost < %s | FileCheck %s
; FIXME: Disabled run-line after running into some turbulence with debuginfo-iterators
; run: opt -S -passes=verify,iroutliner -ir-outlining-no-cost < %s --try-experimental-debuginfo-iterators | FileCheck %s

; This test checks that debug info is recognized as able to be extracted along
; with the other instructions, but is not included in the consolidated function.

define void @function1() !dbg !6 {
entry:
  %a = alloca i32, align 4, !dbg !17
  call void @llvm.dbg.value(metadata ptr %a, metadata !9, metadata !DIExpression()), !dbg !17
  %b = alloca i32, align 4, !dbg !18
  call void @llvm.dbg.value(metadata ptr %b, metadata !11, metadata !DIExpression()), !dbg !18
  %c = alloca i32, align 4, !dbg !19
  call void @llvm.dbg.value(metadata ptr %c, metadata !12, metadata !DIExpression()), !dbg !19

```

```

store i32 2, ptr %a, align 4, !dbg !20
store i32 3, ptr %b, align 4, !dbg !21
store i32 4, ptr %c, align 4, !dbg !22
%al = load i32, ptr %a, align 4, !dbg !23
call void @llvm.dbg.value(metadata i32 %al, metadata !13, metadata !DIExpression()), !dbg !23
%bl = load i32, ptr %b, align 4, !dbg !24
call void @llvm.dbg.value(metadata i32 %bl, metadata !15, metadata !DIExpression()), !dbg !24
%cl = load i32, ptr %c, align 4, !dbg !25
call void @llvm.dbg.value(metadata i32 %cl, metadata !16, metadata !DIExpression()), !dbg !25
ret void, !dbg !26
}

```

```

define void @function2() !dbg !27 {
entry:
%a = alloca i32, align 4, !dbg !35
call void @llvm.dbg.value(metadata ptr %a, metadata !29, metadata !DIExpression()), !dbg !35
%b = alloca i32, align 4, !dbg !36
call void @llvm.dbg.value(metadata ptr %b, metadata !30, metadata !DIExpression()), !dbg !36
%c = alloca i32, align 4, !dbg !37
call void @llvm.dbg.value(metadata ptr %c, metadata !31, metadata !DIExpression()), !dbg
!37
store i32 2, ptr %a, align 4, !dbg !38
store i32 3, ptr %b, align 4, !dbg !39
store i32 4, ptr %c, align 4, !dbg !40
%al = load i32, ptr %a, align 4, !dbg !41
call void @llvm.dbg.value(metadata i32 %al, metadata !32, metadata !DIExpression()), !dbg !41
%bl = load i32, ptr %b, align 4, !dbg !42
call void @llvm.dbg.value(metadata i32 %bl, metadata !33, metadata !DIExpression()), !dbg !42
%cl = load i32, ptr %c, align 4, !dbg !43
call void @llvm.dbg.value(metadata i32 %cl, metadata !34, metadata !DIExpression()), !dbg !43
ret void, !dbg !44
}

```

```

; Function Attrs: nounwind readnone speculatable willreturn
declare void @llvm.dbg.value(metadata, metadata, metadata) #0

```

```

attributes #0 = { nounwind readnone speculatable willreturn }

```

```

!llvm.dbg.cu = !{!0}
!llvm.debugify = !{!3, !4}
!llvm.module.flags = !{!5}

```

```

!0 = distinct !DICompileUnit(language: DW_LANG_C, file: !1, producer: "debugify", isOptimized: true,
runtimeVersion: 0, emissionKind: FullDebug, enums: !2)

```

```

!1 = !DIFile(filename:
"legal-debug.ll", directory: "/")

```

```

!2 = !{}

```

```

!3 = !{i32 20}
!4 = !{i32 12}
!5 = !{i32 2, !"Debug Info Version", i32 3}
!6 = distinct !DISubprogram(name: "function1", linkageName: "function1", scope: null, file: !1, line: 1, type: !7,
scopeLine: 1, spFlags: DISPFlagDefinition | DISPFlagOptimized, unit: !0, retainedNodes: !8)
!7 = !DISubroutineType(types: !2)
!8 = !{!9, !11, !12, !13, !15, !16}
!9 = !DILocalVariable(name: "1", scope: !6, file: !1, line: 1, type: !10)
!10 = !DIBasicType(name: "ty64", size: 64, encoding: DW_ATE_unsigned)
!11 = !DILocalVariable(name: "2", scope: !6, file: !1, line: 2, type: !10)
!12 = !DILocalVariable(name: "3", scope: !6, file: !1, line: 3, type: !10)
!13 = !DILocalVariable(name: "4", scope: !6, file: !1, line: 7, type: !14)
!14 = !DIBasicType(name: "ty32", size: 32, encoding: DW_ATE_unsigned)
!15 = !DILocalVariable(name: "5", scope: !6, file: !1, line: 8, type: !14)
!16 = !DILocalVariable(name: "6", scope: !6, file: !1, line: 9, type: !14)
!17
= !DILocation(line: 1, column: 1, scope: !6)
!18 = !DILocation(line: 2, column: 1, scope: !6)
!19 = !DILocation(line: 3, column: 1, scope: !6)
!20 = !DILocation(line: 4, column: 1, scope: !6)
!21 = !DILocation(line: 5, column: 1, scope: !6)
!22 = !DILocation(line: 6, column: 1, scope: !6)
!23 = !DILocation(line: 7, column: 1, scope: !6)
!24 = !DILocation(line: 8, column: 1, scope: !6)
!25 = !DILocation(line: 9, column: 1, scope: !6)
!26 = !DILocation(line: 10, column: 1, scope: !6)
!27 = distinct !DISubprogram(name: "function2", linkageName: "function2", scope: null, file: !1, line: 11, type: !7,
scopeLine: 11, spFlags: DISPFlagDefinition | DISPFlagOptimized, unit: !0, retainedNodes: !28)
!28 = !{!29, !30, !31, !32, !33, !34}
!29 = !DILocalVariable(name: "7", scope: !27, file: !1, line: 11, type: !10)
!30 = !DILocalVariable(name: "8", scope: !27, file: !1, line: 12, type: !10)
!31 = !DILocalVariable(name: "9", scope: !27, file: !1, line: 13, type: !10)
!32 = !DILocalVariable(name: "10",
scope: !27, file: !1, line: 17, type: !14)
!33 = !DILocalVariable(name: "11", scope: !27, file: !1, line: 18, type: !14)
!34 = !DILocalVariable(name: "12", scope: !27, file: !1, line: 19, type: !14)
!35 = !DILocation(line: 11, column: 1, scope: !27)
!36 = !DILocation(line: 12, column: 1, scope: !27)
!37 = !DILocation(line: 13, column: 1, scope: !27)
!38 = !DILocation(line: 14, column: 1, scope: !27)
!39 = !DILocation(line: 15, column: 1, scope: !27)
!40 = !DILocation(line: 16, column: 1, scope: !27)
!41 = !DILocation(line: 17, column: 1, scope: !27)
!42 = !DILocation(line: 18, column: 1, scope: !27)
!43 = !DILocation(line: 19, column: 1, scope: !27)
!44 = !DILocation(line: 20, column: 1, scope: !27)
; CHECK-LABEL: @function1(
; CHECK-NEXT: entry:

```

```

; CHECK-NEXT: [[A:%.*]] = alloca i32, align 4, !dbg [[DBG17:[0-9]+]]
; CHECK-NEXT: call void @llvm.dbg.value(metadata ptr [[A]], metadata [[META9:[0-9]+]], metadata
!DIExpression(), !dbg [[DBG17]]
; CHECK-NEXT: [[B:%.*]] = alloca
i32, align 4, !dbg [[DBG18:[0-9]+]]
; CHECK-NEXT: call void @llvm.dbg.value(metadata ptr [[B]], metadata [[META11:[0-9]+]], metadata
!DIExpression(), !dbg [[DBG18]]
; CHECK-NEXT: [[C:%.*]] = alloca i32, align 4, !dbg [[DBG19:[0-9]+]]
; CHECK-NEXT: call void @llvm.dbg.value(metadata ptr [[C]], metadata [[META12:[0-9]+]], metadata
!DIExpression(), !dbg [[DBG19]]
; CHECK-NEXT: call void @outlined_ir_func_0(ptr [[A]], ptr [[B]], ptr [[C]]), !dbg [[DBG20:[0-9]+]]
; CHECK-NEXT: ret void, !dbg [[DBG21:[0-9]+]]
;
;
; CHECK-LABEL: @function2(
; CHECK-NEXT: entry:
; CHECK-NEXT: [[A:%.*]] = alloca i32, align 4, !dbg [[DBG30:[0-9]+]]
; CHECK-NEXT: call void @llvm.dbg.value(metadata ptr [[A]], metadata [[META24:[0-9]+]], metadata
!DIExpression(), !dbg [[DBG30]]
; CHECK-NEXT: [[B:%.*]] = alloca i32, align 4, !dbg [[DBG31:[0-9]+]]
; CHECK-NEXT: call void @llvm.dbg.value(metadata ptr [[B]], metadata [[META25:[0-9]+]], metadata
!DIExpression(), !dbg [[DBG31]]
;
CHECK-NEXT: [[C:%.*]] = alloca i32, align 4, !dbg [[DBG32:[0-9]+]]
; CHECK-NEXT: call void @llvm.dbg.value(metadata ptr [[C]], metadata [[META26:[0-9]+]], metadata
!DIExpression(), !dbg [[DBG32]]
; CHECK-NEXT: call void @outlined_ir_func_0(ptr [[A]], ptr [[B]], ptr [[C]]), !dbg [[DBG33:[0-9]+]]
; CHECK-NEXT: ret void, !dbg [[DBG34:[0-9]+]]
;
;
; CHECK: @outlined_ir_func_0(ptr [[TMP0:%.*]], ptr [[TMP1:%.*]], ptr [[TMP2:%.*]])
; CHECK: entry_to_outline:
; CHECK-NEXT: store i32 2, ptr [[TMP0]], align 4
; CHECK-NEXT: store i32 3, ptr [[TMP1]], align 4
; CHECK-NEXT: store i32 4, ptr [[TMP2]], align 4
; CHECK-NEXT: [[AL:%.*]] = load i32, ptr [[TMP0]], align 4
; CHECK-NEXT: [[BL:%.*]] = load i32, ptr [[TMP1]], align 4
; CHECK-NEXT: [[CL:%.*]] = load i32, ptr [[TMP2]], align 4
; CHECK-NEXT: br label [[ENTRY_AFTER_OUTLINE_EXITSTUB:%.*]]
;
; RUN: opt < %s -passes=argpromotion -S | FileCheck %s

; CHECK-LABEL: define i32 @foo() #0 {
; CHECK-NEXT:   %.val = load <32 x half>, ptr undef, align 4
; CHECK-NEXT:   call void @bar(<32 x half> %.val)
; CHECK-NEXT:   ret i32 0
; CHECK-NEXT: }

```

```

; CHECK-LABEL: define internal void @bar(<32 x half> %.0.val) #0 {
; CHECK-NEXT:   ret void
; CHECK-NEXT: }

; CHECK:   attributes #0 = { uwtable "min-legal-vector-width"="512" }

define i32 @foo() #0 {
  call void @bar(ptr undef)
  ret i32 0
}

define internal void @bar(ptr) #0 {
  %2 = load <32 x half>, ptr %0, align 4
  ret void
}

attributes #0 = { uwtable "min-legal-vector-width"="0" }
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```

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```
; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc -mtriple=riscv64 -mattr=+m -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefixes=CHECK,RV64I
; RUN: llc -mtriple=riscv64 -mattr=+m,+zba -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-
prefixes=CHECK,RV64ZBA,RV64ZBANOZBB
; RUN: llc -mtriple=riscv64 -mattr=+m,+zba,+zbb -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefixes=CHECK,RV64ZBA,RV64ZBAZBB
```

```
define i64 @slliuw(i64 %a) nounwind {
; RV64I-LABEL: slliuw:
; RV64I:    # %bb.0:
```

```

; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 31
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: slliuw:
; RV64ZBA:      # %bb.0:
; RV64ZBA-NEXT:  slli.uw a0, a0, 1
; RV64ZBA-NEXT:  ret
%conv1 = shl i64 %a, 1
%shl = and i64 %conv1, 8589934590
ret i64 %shl
}

define i128 @slliuw_2(i32 signext %0, ptr %1) {
; RV64I-LABEL:
slliuw_2:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 28
; RV64I-NEXT:  add a1, a1, a0
; RV64I-NEXT:  ld a0, 0(a1)
; RV64I-NEXT:  ld a1, 8(a1)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: slliuw_2:
; RV64ZBA:      # %bb.0:
; RV64ZBA-NEXT:  slli.uw a0, a0, 4
; RV64ZBA-NEXT:  add a1, a1, a0
; RV64ZBA-NEXT:  ld a0, 0(a1)
; RV64ZBA-NEXT:  ld a1, 8(a1)
; RV64ZBA-NEXT:  ret
%3 = zext i32 %0 to i64
%4 = getelementptr inbounds i128, ptr %1, i64 %3
%5 = load i128, ptr %4
ret i128 %5
}

define i128 @slliuw_3(i32 signext %0, ptr %1) {
; RV64I-LABEL: slliuw_3:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi a0, a0, 1
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 28
; RV64I-NEXT:  add a1, a1, a0
; RV64I-NEXT:  ld a0, 0(a1)
; RV64I-NEXT:  ld a1, 8(a1)
; RV64I-NEXT:  ret
;

```

```

; RV64ZBA-LABEL: slliuw_3:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  addi a0, a0, 1
; RV64ZBA-NEXT:  slli.uw a0, a0, 4
; RV64ZBA-NEXT:
    add a1, a1, a0
; RV64ZBA-NEXT:  ld a0, 0(a1)
; RV64ZBA-NEXT:  ld a1, 8(a1)
; RV64ZBA-NEXT:  ret
%add = add i32 %0, 1
%3 = zext i32 %add to i64
%4 = getelementptr inbounds i128, ptr %1, i64 %3
%5 = load i128, ptr %4
ret i128 %5
}

define i64 @adduw(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: adduw:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  srli a1, a1, 32
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: adduw:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  add.uw a0, a1, a0
; RV64ZBA-NEXT:  ret
%and = and i64 %b, 4294967295
%add = add i64 %and, %a
ret i64 %add
}

define signext i8 @adduw_2(i32 signext %0, ptr %1) {
; RV64I-LABEL: adduw_2:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  lb a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: adduw_2:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  add.uw a0, a0, a1
; RV64ZBA-NEXT:
    lb a0, 0(a0)
; RV64ZBA-NEXT:  ret

```

```

%3 = zext i32 %0 to i64
%4 = getelementptr inbounds i8, ptr %1, i64 %3
%5 = load i8, ptr %4
ret i8 %5
}

define signext i8 @adduw_3(i32 signext %0, ptr %1) {
; RV64I-LABEL: adduw_3:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi a0, a0, 1
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  lb a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: adduw_3:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  addi a0, a0, 1
; RV64ZBA-NEXT:  add.uw a0, a0, a1
; RV64ZBA-NEXT:  lb a0, 0(a0)
; RV64ZBA-NEXT:  ret
%add = add i32 %0, 1
%3 = zext i32 %add to i64
%4 = getelementptr inbounds i8, ptr %1, i64 %3
%5 = load i8, ptr %4
ret i8 %5
}

define i64 @zextw_i64(i64 %a) nounwind {
; RV64I-LABEL: zextw_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: zextw_i64:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:
;   zext.w a0, a0
; RV64ZBA-NEXT:  ret
%and = and i64 %a, 4294967295
ret i64 %and
}

; This makes sure targetShrinkDemandedConstant changes the and immediate to
; allow zext.w or slli+srli.
define i64 @zextw_demandedbits_i64(i64 %0) {

```

```

; RV64I-LABEL: zextw_demandedbits_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  ori a0, a0, 1
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: zextw_demandedbits_i64:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  ori a0, a0, 1
; RV64ZBA-NEXT:  zext.w a0, a0
; RV64ZBA-NEXT:  ret
%2 = and i64 %0, 4294967294
%3 = or i64 %2, 1
ret i64 %3
}

```

```

define signext i16 @sh1add(i64 %0, ptr %1) {
; RV64I-LABEL: sh1add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 1
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  lh a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh1add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh1add a0, a0, a1
; RV64ZBA-NEXT:  lh a0, 0(a0)
; RV64ZBA-NEXT:
    ret
%3 = getelementptr inbounds i16, ptr %1, i64 %0
%4 = load i16, ptr %3
ret i16 %4
}

```

```

define signext i32 @sh2add(i64 %0, ptr %1) {
; RV64I-LABEL: sh2add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 2
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  lw a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh2add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh2add a0, a0, a1
; RV64ZBA-NEXT:  lw a0, 0(a0)

```



```

; RV64ZBA-NEXT:  ret
%3 = getelementptr inbounds i32, ptr %1, i64 %0
%4 = load i32, ptr %3
ret i32 %4
}

```

```

define i64 @sh3add(i64 %0, ptr %1) {
; RV64I-LABEL: sh3add:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 3
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  ld a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh3add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh3add a0, a0, a1
; RV64ZBA-NEXT:  ld a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = getelementptr inbounds i64, ptr %1, i64 %0
%4 = load i64, ptr %3
ret i64 %4
}

```

```

define signext i16 @sh1adduw(i32
signext %0, ptr %1) {
; RV64I-LABEL: sh1adduw:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 31
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  lh a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh1adduw:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh1add.uw a0, a0, a1
; RV64ZBA-NEXT:  lh a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = zext i32 %0 to i64
%4 = getelementptr inbounds i16, ptr %1, i64 %3
%5 = load i16, ptr %4
ret i16 %5
}

```

```

define i64 @sh1adduw_2(i64 %0, i64 %1) {
; RV64I-LABEL: sh1adduw_2:
; RV64I:      # %bb.0:

```

```

; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 31
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh1adduw_2:
; RV64ZBA:      # %bb.0:
; RV64ZBA-NEXT:  sh1add.uw a0, a0, a1
; RV64ZBA-NEXT:  ret
%3 = shl i64 %0, 1
%4 = and i64 %3, 8589934590
%5 = add i64 %4, %1
ret i64 %5
}

define signext i32 @sh2adduw(i32 signext %0, ptr %1) {
; RV64I-LABEL: sh2adduw:
; RV64I:
    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 30
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  lw a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh2adduw:
; RV64ZBA:      # %bb.0:
; RV64ZBA-NEXT:  sh2add.uw a0, a0, a1
; RV64ZBA-NEXT:  lw a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = zext i32 %0 to i64
%4 = getelementptr inbounds i32, ptr %1, i64 %3
%5 = load i32, ptr %4
ret i32 %5
}

define i64 @sh2adduw_2(i64 %0, i64 %1) {
; RV64I-LABEL: sh2adduw_2:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 30
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh2adduw_2:
; RV64ZBA:      # %bb.0:
; RV64ZBA-NEXT:  sh2add.uw a0, a0, a1
; RV64ZBA-NEXT:  ret

```

```

%3 = shl i64 %0, 2
%4 = and i64 %3, 17179869180
%5 = add i64 %4, %1
ret i64 %5
}

define i64 @sh3adduw(i32 signext %0, ptr %1) {
; RV64I-LABEL: sh3adduw:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:
srli a0, a0, 29
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  ld a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh3adduw:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh3add.uw a0, a0, a1
; RV64ZBA-NEXT:  ld a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = zext i32 %0 to i64
%4 = getelementptr inbounds i64, ptr %1, i64 %3
%5 = load i64, ptr %4
ret i64 %5
}

```

```

define i64 @sh3adduw_2(i64 %0, i64 %1) {
; RV64I-LABEL: sh3adduw_2:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 29
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh3adduw_2:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh3add.uw a0, a0, a1
; RV64ZBA-NEXT:  ret
%3 = shl i64 %0, 3
%4 = and i64 %3, 34359738360
%5 = add i64 %4, %1
ret i64 %5
}

```

; Type legalization inserts a sext\_inreg after the first add. That add will be  
; selected as sh2add which does not sign extend. SimplifyDemandedBits is unable  
; to remove the sext\_inreg because it has multiple uses.

```

The ashrl will use the
; sext_inreg to become sraiw. This leaves the sext_inreg only used by the shl.
; If the shl is selected as sllw, we don't need the sext_inreg.
define i64 @sh2add_extra_sext(i32 %x, i32 %y, i32 %z) {
; RV64I-LABEL: sh2add_extra_sext:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 2
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  sllw a1, a2, a0
; RV64I-NEXT:  sraiw a0, a0, 2
; RV64I-NEXT:  mul a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh2add_extra_sext:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh2add a0, a0, a1
; RV64ZBA-NEXT:  sllw a1, a2, a0
; RV64ZBA-NEXT:  sraiw a0, a0, 2
; RV64ZBA-NEXT:  mul a0, a1, a0
; RV64ZBA-NEXT:  ret
%a = shl i32 %x, 2
%b = add i32 %a, %y
%c = shl i32 %z, %b
%d = ashrl i32 %b, 2
%e = sext i32 %c to i64
%f = sext i32 %d to i64
%g = mul i64 %e, %f
ret i64 %g
}

```

```

define i64 @addmul6(i64 %a, i64 %b) {
; RV64I-LABEL: addmul6:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 6
; RV64I-NEXT:  mul
a0, a0, a2
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addmul6:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh1add a0, a0, a0
; RV64ZBA-NEXT:  sh1add a0, a0, a1
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 6
%d = add i64 %c, %b
ret i64 %d
}

```

```

define i64 @addmul10(i64 %a, i64 %b) {
; RV64I-LABEL: addmul10:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 10
; RV64I-NEXT:  mul a0, a0, a2
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addmul10:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh2add a0, a0, a0
; RV64ZBA-NEXT:  sh1add a0, a0, a1
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 10
%d = add i64 %c, %b
ret i64 %d
}

```

```

define i64 @addmul12(i64 %a, i64 %b) {
; RV64I-LABEL: addmul12:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 12
; RV64I-NEXT:  mul a0, a0, a2
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addmul12:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh1add a0, a0, a0
; RV64ZBA-NEXT:  sh2add
a0, a0, a1
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 12
%d = add i64 %c, %b
ret i64 %d
}

```

```

define i64 @addmul18(i64 %a, i64 %b) {
; RV64I-LABEL: addmul18:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 18
; RV64I-NEXT:  mul a0, a0, a2
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addmul18:
; RV64ZBA:    # %bb.0:

```

```

; RV64ZBA-NEXT: sh3add a0, a0, a0
; RV64ZBA-NEXT: sh1add a0, a0, a1
; RV64ZBA-NEXT: ret
%c = mul i64 %a, 18
%d = add i64 %c, %b
ret i64 %d
}

```

```

define i64 @addmul20(i64 %a, i64 %b) {
; RV64I-LABEL: addmul20:
; RV64I: # %bb.0:
; RV64I-NEXT: li a2, 20
; RV64I-NEXT: mul a0, a0, a2
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: addmul20:
; RV64ZBA: # %bb.0:
; RV64ZBA-NEXT: sh2add a0, a0, a0
; RV64ZBA-NEXT: sh2add a0, a0, a1
; RV64ZBA-NEXT: ret
%c = mul i64 %a, 20
%d = add i64 %c, %b
ret i64 %d
}

```

```

define i64 @addmul24(i64 %a, i64 %b) {
; RV64I-LABEL: addmul24:
; RV64I:
# %bb.0:
; RV64I-NEXT: li a2, 24
; RV64I-NEXT: mul a0, a0, a2
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: addmul24:
; RV64ZBA: # %bb.0:
; RV64ZBA-NEXT: sh1add a0, a0, a0
; RV64ZBA-NEXT: sh3add a0, a0, a1
; RV64ZBA-NEXT: ret
%c = mul i64 %a, 24
%d = add i64 %c, %b
ret i64 %d
}

```

```

define i64 @addmul36(i64 %a, i64 %b) {
; RV64I-LABEL: addmul36:
; RV64I: # %bb.0:

```

```

; RV64I-NEXT:  li a2, 36
; RV64I-NEXT:  mul a0, a0, a2
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addmul36:
; RV64ZBA:     # %bb.0:
; RV64ZBA-NEXT:  sh3add a0, a0, a0
; RV64ZBA-NEXT:  sh2add a0, a0, a1
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 36
%d = add i64 %c, %b
ret i64 %d
}

```

```

define i64 @addmul40(i64 %a, i64 %b) {
; RV64I-LABEL: addmul40:
; RV64I:     # %bb.0:
; RV64I-NEXT:  li a2, 40
; RV64I-NEXT:  mul a0, a0, a2
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addmul40:
; RV64ZBA:     # %bb.0:
;
; RV64ZBA-NEXT:  sh2add a0, a0, a0
; RV64ZBA-NEXT:  sh3add a0, a0, a1
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 40
%d = add i64 %c, %b
ret i64 %d
}

```

```

define i64 @addmul72(i64 %a, i64 %b) {
; RV64I-LABEL: addmul72:
; RV64I:     # %bb.0:
; RV64I-NEXT:  li a2, 72
; RV64I-NEXT:  mul a0, a0, a2
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addmul72:
; RV64ZBA:     # %bb.0:
; RV64ZBA-NEXT:  sh3add a0, a0, a0
; RV64ZBA-NEXT:  sh3add a0, a0, a1
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 72

```

```

%d = add i64 %c, %b
ret i64 %d
}

define i64 @mul96(i64 %a) {
; RV64I-LABEL: mul96:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, 96
; RV64I-NEXT:  mul a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: mul96:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh1add a0, a0, a0
; RV64ZBA-NEXT:  slli a0, a0, 5
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 96
ret i64 %c
}

define i64 @mul160(i64 %a) {
; RV64I-LABEL: mul160:
; RV64I:    # %bb.0:
; RV64I-NEXT:
    li a1, 160
; RV64I-NEXT:  mul a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: mul160:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh2add a0, a0, a0
; RV64ZBA-NEXT:  slli a0, a0, 5
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 160
ret i64 %c
}

define i64 @mul288(i64 %a) {
; RV64I-LABEL: mul288:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, 288
; RV64I-NEXT:  mul a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: mul288:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh3add a0, a0, a0
; RV64ZBA-NEXT:  slli a0, a0, 5

```



```

; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 288
ret i64 %c
}

define i64 @zext_mul96(i32 signext %a) {
; RV64I-LABEL: zext_mul96:
; RV64I:      # %bb.0:
; RV64I-NEXT:  li a1, 3
; RV64I-NEXT:  slli a1, a1, 37
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  mulhu a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: zext_mul96:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  slli.uw a0, a0, 5
; RV64ZBA-NEXT:  sh1add a0, a0, a0
; RV64ZBA-NEXT:  ret
%b = zext
i32 %a to i64
%c = mul i64 %b, 96
ret i64 %c
}

define i64 @zext_mul160(i32 signext %a) {
; RV64I-LABEL: zext_mul160:
; RV64I:      # %bb.0:
; RV64I-NEXT:  li a1, 5
; RV64I-NEXT:  slli a1, a1, 37
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  mulhu a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: zext_mul160:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  slli.uw a0, a0, 5
; RV64ZBA-NEXT:  sh2add a0, a0, a0
; RV64ZBA-NEXT:  ret
%b = zext i32 %a to i64
%c = mul i64 %b, 160
ret i64 %c
}

define i64 @zext_mul288(i32 signext %a) {
; RV64I-LABEL: zext_mul288:
; RV64I:      # %bb.0:
; RV64I-NEXT:  li a1, 9

```

```

; RV64I-NEXT:  slli a1, a1, 37
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  mulhu a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: zext_mul288:
; RV64ZBA:      # %bb.0:
; RV64ZBA-NEXT:  slli.uw a0, a0, 5
; RV64ZBA-NEXT:  sh3add a0, a0, a0
; RV64ZBA-NEXT:  ret
%b = zext i32 %a to i64
%c = mul i64 %b, 288
ret i64 %c
}

; We can't use slli.uw becaues
the shift amount is more than 31.
; FIXME: The zext.w is unneeded.
define i64 @zext_mul12884901888(i32 signext %a) {
; RV64I-LABEL: zext_mul12884901888:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  li a1, 3
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  mul a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: zext_mul12884901888:
; RV64ZBA:      # %bb.0:
; RV64ZBA-NEXT:  andi a0, a0, -1
; RV64ZBA-NEXT:  sh1add a0, a0, a0
; RV64ZBA-NEXT:  slli a0, a0, 32
; RV64ZBA-NEXT:  ret
%b = zext i32 %a to i64
%c = mul i64 %b, 12884901888
ret i64 %c
}

; We can't use slli.uw becaues the shift amount is more than 31.
; FIXME: The zext.w is unneeded.
define i64 @zext_mul21474836480(i32 signext %a) {
; RV64I-LABEL: zext_mul21474836480:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  li a1, 5
; RV64I-NEXT:  slli a1, a1, 32

```

```

; RV64I-NEXT:  mul a0, a0, a1
; RV64I-NEXT:
    ret
;
; RV64ZBA-LABEL: zext_mul21474836480:
; RV64ZBA:     # %bb.0:
; RV64ZBA-NEXT:  andi a0, a0, -1
; RV64ZBA-NEXT:  sh2add a0, a0, a0
; RV64ZBA-NEXT:  slli a0, a0, 32
; RV64ZBA-NEXT:  ret
%b = zext i32 %a to i64
%c = mul i64 %b, 21474836480
ret i64 %c
}

; We can't use slli.uw becaues the shift amount is more than 31.
; FIXME: The zext.w is unneeded.
define i64 @zext_mul38654705664(i32 signext %a) {
; RV64I-LABEL: zext_mul38654705664:
; RV64I:     # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  li a1, 9
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  mul a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: zext_mul38654705664:
; RV64ZBA:     # %bb.0:
; RV64ZBA-NEXT:  andi a0, a0, -1
; RV64ZBA-NEXT:  sh3add a0, a0, a0
; RV64ZBA-NEXT:  slli a0, a0, 32
; RV64ZBA-NEXT:  ret
%b = zext i32 %a to i64
%c = mul i64 %b, 38654705664
ret i64 %c
}

define i64 @shladd_imm(i64 %0) {
; CHECK-LABEL: shladd_imm:
;
CHECK:     # %bb.0:
; CHECK-NEXT:  slli a0, a0, 1
; CHECK-NEXT:  addi a0, a0, 5
; CHECK-NEXT:  ret
%a = shl i64 %0, 1
%b = add i64 %a, 5
ret i64 %b

```

```

}

define i64 @sh2add_imm(i64 %0) {
; CHECK-LABEL: sh2add_imm:
; CHECK:      # %bb.0:
; CHECK-NEXT: slli a0, a0, 2
; CHECK-NEXT: addi a0, a0, -6
; CHECK-NEXT: ret
%a = shl i64 %0, 2
%b = add i64 %a, -6
ret i64 %b
}

define i64 @sh3add_imm(i64 %0) {
; CHECK-LABEL: sh3add_imm:
; CHECK:      # %bb.0:
; CHECK-NEXT: slli a0, a0, 3
; CHECK-NEXT: addi a0, a0, 7
; CHECK-NEXT: ret
%a = shl i64 %0, 3
%b = add i64 %a, 7
ret i64 %b
}

define i64 @sh1adduw_imm(i32 signext %0) {
; RV64I-LABEL: sh1adduw_imm:
; RV64I:      # %bb.0:
; RV64I-NEXT: slli a0, a0, 32
; RV64I-NEXT: srli a0, a0, 31
; RV64I-NEXT: addi a0, a0, 11
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: sh1adduw_imm:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT: slli.uw a0, a0, 1
; RV64ZBA-NEXT: addi a0, a0, 11
; RV64ZBA-NEXT: ret
%a =
zext i32 %0 to i64
%b = shl i64 %a, 1
%c = add i64 %b, 11
ret i64 %c
}

define i64 @sh2adduw_imm(i32 signext %0) {
; RV64I-LABEL: sh2adduw_imm:
; RV64I:      # %bb.0:
; RV64I-NEXT: slli a0, a0, 32

```

```

; RV64I-NEXT: srli a0, a0, 30
; RV64I-NEXT: addi a0, a0, -12
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: sh2adduw_imm:
; RV64ZBA: # %bb.0:
; RV64ZBA-NEXT: slli.uw a0, a0, 2
; RV64ZBA-NEXT: addi a0, a0, -12
; RV64ZBA-NEXT: ret
%a = zext i32 %0 to i64
%b = shl i64 %a, 2
%c = add i64 %b, -12
ret i64 %c
}

```

```

define i64 @sh3adduw_imm(i32 signext %0) {
; RV64I-LABEL: sh3adduw_imm:
; RV64I: # %bb.0:
; RV64I-NEXT: slli a0, a0, 32
; RV64I-NEXT: srli a0, a0, 29
; RV64I-NEXT: addi a0, a0, 13
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: sh3adduw_imm:
; RV64ZBA: # %bb.0:
; RV64ZBA-NEXT: slli.uw a0, a0, 3
; RV64ZBA-NEXT: addi a0, a0, 13
; RV64ZBA-NEXT: ret
%a = zext i32 %0 to i64
%b = shl i64 %a, 3
%c = add i64 %b, 13
ret i64 %c
}

```

```

define i64
@adduw_imm(i32 signext %0) nounwind {
; RV64I-LABEL: adduw_imm:
; RV64I: # %bb.0:
; RV64I-NEXT: slli a0, a0, 32
; RV64I-NEXT: srli a0, a0, 32
; RV64I-NEXT: addi a0, a0, 5
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: adduw_imm:
; RV64ZBA: # %bb.0:
; RV64ZBA-NEXT: zext.w a0, a0
; RV64ZBA-NEXT: addi a0, a0, 5
; RV64ZBA-NEXT: ret

```

```
%a = zext i32 %0 to i64
%b = add i64 %a, 5
ret i64 %b
}
```

```
define i64 @mul258(i64 %a) {
; CHECK-LABEL: mul258:
; CHECK:      # %bb.0:
; CHECK-NEXT: li a1, 258
; CHECK-NEXT: mul a0, a0, a1
; CHECK-NEXT: ret
%c = mul i64 %a, 258
ret i64 %c
}
```

```
define i64 @mul260(i64 %a) {
; CHECK-LABEL: mul260:
; CHECK:      # %bb.0:
; CHECK-NEXT: li a1, 260
; CHECK-NEXT: mul a0, a0, a1
; CHECK-NEXT: ret
%c = mul i64 %a, 260
ret i64 %c
}
```

```
define i64 @mul264(i64 %a) {
; CHECK-LABEL: mul264:
; CHECK:      # %bb.0:
; CHECK-NEXT: li a1, 264
; CHECK-NEXT: mul a0, a0, a1
; CHECK-NEXT: ret
%c = mul i64 %a, 264
ret i64
%c
}
```

```
define i64 @imm_zextw() nounwind {
; RV64I-LABEL: imm_zextw:
; RV64I:      # %bb.0:
; RV64I-NEXT: li a0, 1
; RV64I-NEXT: slli a0, a0, 32
; RV64I-NEXT: addi a0, a0, -2
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: imm_zextw:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT: li a0, -2
; RV64ZBA-NEXT: zext.w a0, a0
}
```

```
; RV64ZBA-NEXT:  ret
ret i64 4294967294 ; -2 in 32 bits.
}
```

```
define i64 @mul11(i64 %a) {
; RV64I-LABEL: mul11:
; RV64I:      # %bb.0:
; RV64I-NEXT:  li a1, 11
; RV64I-NEXT:  mul a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: mul11:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT: sh2add a1, a0, a0
; RV64ZBA-NEXT: sh1add a0, a1, a0
; RV64ZBA-NEXT: ret
%c = mul i64 %a, 11
ret i64 %c
}
```

```
define i64 @mul19(i64 %a) {
; RV64I-LABEL: mul19:
; RV64I:      # %bb.0:
; RV64I-NEXT:  li a1, 19
; RV64I-NEXT:  mul a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: mul19:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT: sh3add a1, a0, a0
; RV64ZBA-NEXT: sh1add a0,
a1, a0
; RV64ZBA-NEXT: ret
%c = mul i64 %a, 19
ret i64 %c
}
```

```
define i64 @mul13(i64 %a) {
; RV64I-LABEL: mul13:
; RV64I:      # %bb.0:
; RV64I-NEXT:  li a1, 13
; RV64I-NEXT:  mul a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: mul13:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT: sh1add a1, a0, a0
; RV64ZBA-NEXT: sh2add a0, a1, a0
}
```

```
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 13
ret i64 %c
}
```

```
define i64 @mul21(i64 %a) {
; RV64I-LABEL: mul21:
; RV64I:      # %bb.0:
; RV64I-NEXT:  li a1, 21
; RV64I-NEXT:  mul a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: mul21:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh2add a1, a0, a0
; RV64ZBA-NEXT:  sh2add a0, a1, a0
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 21
ret i64 %c
}
```

```
define i64 @mul37(i64 %a) {
; RV64I-LABEL: mul37:
; RV64I:      # %bb.0:
; RV64I-NEXT:  li a1, 37
; RV64I-NEXT:  mul a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: mul37:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh3add a1, a0, a0
; RV64ZBA-NEXT:
    sh2add a0, a1, a0
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 37
ret i64 %c
}
```

```
define i64 @mul25(i64 %a) {
; RV64I-LABEL: mul25:
; RV64I:      # %bb.0:
; RV64I-NEXT:  li a1, 25
; RV64I-NEXT:  mul a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: mul25:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh1add a1, a0, a0
```



```
; RV64ZBA-NEXT: sh3add a0, a1, a0
; RV64ZBA-NEXT: ret
%c = mul i64 %a, 25
ret i64 %c
}
```

```
define i64 @mul41(i64 %a) {
; RV64I-LABEL: mul41:
; RV64I: # %bb.0:
; RV64I-NEXT: li a1, 41
; RV64I-NEXT: mul a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: mul41:
; RV64ZBA: # %bb.0:
; RV64ZBA-NEXT: sh2add a1, a0, a0
; RV64ZBA-NEXT: sh3add a0, a1, a0
; RV64ZBA-NEXT: ret
%c = mul i64 %a, 41
ret i64 %c
}
```

```
define i64 @mul73(i64 %a) {
; RV64I-LABEL: mul73:
; RV64I: # %bb.0:
; RV64I-NEXT: li a1, 73
; RV64I-NEXT: mul a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: mul73:
; RV64ZBA: # %bb.0:
; RV64ZBA-NEXT: sh3add
a1, a0, a0
; RV64ZBA-NEXT: sh3add a0, a1, a0
; RV64ZBA-NEXT: ret
%c = mul i64 %a, 73
ret i64 %c
}
```

```
define i64 @mul27(i64 %a) {
; RV64I-LABEL: mul27:
; RV64I: # %bb.0:
; RV64I-NEXT: li a1, 27
; RV64I-NEXT: mul a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: mul27:
; RV64ZBA: # %bb.0:
```

```

; RV64ZBA-NEXT: sh3add a0, a0, a0
; RV64ZBA-NEXT: sh1add a0, a0, a0
; RV64ZBA-NEXT: ret
%c = mul i64 %a, 27
ret i64 %c
}

```

```

define i64 @mul45(i64 %a) {
; RV64I-LABEL: mul45:
; RV64I: # %bb.0:
; RV64I-NEXT: li a1, 45
; RV64I-NEXT: mul a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: mul45:
; RV64ZBA: # %bb.0:
; RV64ZBA-NEXT: sh3add a0, a0, a0
; RV64ZBA-NEXT: sh2add a0, a0, a0
; RV64ZBA-NEXT: ret
%c = mul i64 %a, 45
ret i64 %c
}

```

```

define i64 @mul81(i64 %a) {
; RV64I-LABEL: mul81:
; RV64I: # %bb.0:
; RV64I-NEXT: li a1, 81
; RV64I-NEXT: mul a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: mul81:
; RV64ZBA: # %bb.0:
;
RV64ZBA-NEXT: sh3add a0, a0, a0
; RV64ZBA-NEXT: sh3add a0, a0, a0
; RV64ZBA-NEXT: ret
%c = mul i64 %a, 81
ret i64 %c
}

```

```

define i64 @mul4098(i64 %a) {
; RV64I-LABEL: mul4098:
; RV64I: # %bb.0:
; RV64I-NEXT: slli a1, a0, 1
; RV64I-NEXT: slli a0, a0, 12
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: ret
;

```

```

; RV64ZBA-LABEL: mul4098:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  slli a1, a0, 12
; RV64ZBA-NEXT:  sh1add a0, a0, a1
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 4098
ret i64 %c
}

```

```

define i64 @mul4100(i64 %a) {
; RV64I-LABEL: mul4100:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a1, a0, 2
; RV64I-NEXT:  slli a0, a0, 12
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: mul4100:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  slli a1, a0, 12
; RV64ZBA-NEXT:  sh2add a0, a0, a1
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 4100
ret i64 %c
}

```

```

define i64 @mul4104(i64 %a) {
; RV64I-LABEL: mul4104:
; RV64I:    # %bb.0:
; RV64I-NEXT:
    slli a1, a0, 3
; RV64I-NEXT:  slli a0, a0, 12
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: mul4104:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  slli a1, a0, 12
; RV64ZBA-NEXT:  sh3add a0, a0, a1
; RV64ZBA-NEXT:  ret
%c = mul i64 %a, 4104
ret i64 %c
}

```

```

define signext i32 @mulw192(i32 signext %a) {
; CHECK-LABEL: mulw192:
; CHECK:    # %bb.0:
; CHECK-NEXT:  li a1, 192

```

```

; CHECK-NEXT:  mulw a0, a0, a1
; CHECK-NEXT:  ret
%c = mul i32 %a, 192
ret i32 %c
}

define signext i32 @mulw320(i32 signext %a) {
; CHECK-LABEL: mulw320:
; CHECK:      # %bb.0:
; CHECK-NEXT: li a1, 320
; CHECK-NEXT: mulw a0, a0, a1
; CHECK-NEXT: ret
%c = mul i32 %a, 320
ret i32 %c
}

define signext i32 @mulw576(i32 signext %a) {
; CHECK-LABEL: mulw576:
; CHECK:      # %bb.0:
; CHECK-NEXT: li a1, 576
; CHECK-NEXT: mulw a0, a0, a1
; CHECK-NEXT: ret
%c = mul i32 %a, 576
ret i32 %c
}

define i64 @add4104(i64 %a) {
; RV64I-LABEL: add4104:
; RV64I:
;   # %bb.0:
; RV64I-NEXT: lui a1, 1
; RV64I-NEXT: addiw a1, a1, 8
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: add4104:
; RV64ZBA:   # %bb.0:
; RV64ZBA-NEXT: li a1, 1026
; RV64ZBA-NEXT: sh2add a0, a1, a0
; RV64ZBA-NEXT: ret
%c = add i64 %a, 4104
ret i64 %c
}

define i64 @add8208(i64 %a) {
; RV64I-LABEL: add8208:
; RV64I:   # %bb.0:
; RV64I-NEXT: lui a1, 2

```

```

; RV64I-NEXT:  addiw a1, a1, 16
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: add8208:
; RV64ZBA:     # %bb.0:
; RV64ZBA-NEXT:  li a1, 1026
; RV64ZBA-NEXT:  sh3add a0, a1, a0
; RV64ZBA-NEXT:  ret
%c = add i64 %a, 8208
ret i64 %c
}

; Make sure we prefer LUI for the 8192 instead of using sh3add.
define signext i32 @add8192_i32(i32 signext %a) {
; CHECK-LABEL: add8192_i32:
; CHECK:      # %bb.0:
; CHECK-NEXT:  lui a1, 2
; CHECK-NEXT:  addw a0, a0, a1
; CHECK-NEXT:  ret
%c = add i32 %a, 8192
ret i32 %c
}

; Make sure we prefer LUI
for the 8192 instead of using sh3add.
define i64 @add8192(i64 %a) {
; CHECK-LABEL: add8192:
; CHECK:      # %bb.0:
; CHECK-NEXT:  lui a1, 2
; CHECK-NEXT:  add a0, a0, a1
; CHECK-NEXT:  ret
%c = add i64 %a, 8192
ret i64 %c
}

define signext i32 @addshl32_5_6(i32 signext %a, i32 signext %b) {
; RV64I-LABEL: addshl32_5_6:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 5
; RV64I-NEXT:  slli a1, a1, 6
; RV64I-NEXT:  addw a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addshl32_5_6:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh1add a0, a1, a0
; RV64ZBA-NEXT:  slliw a0, a0, 5

```

```

; RV64ZBA-NEXT:  ret
%c = shl i32 %a, 5
%d = shl i32 %b, 6
%e = add i32 %c, %d
ret i32 %e
}

define i64 @addshl64_5_6(i64 %a, i64 %b) {
; RV64I-LABEL: addshl64_5_6:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 5
; RV64I-NEXT:  slli a1, a1, 6
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addshl64_5_6:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:
    sh1add a0, a1, a0
; RV64ZBA-NEXT:  slli a0, a0, 5
; RV64ZBA-NEXT:  ret
%c = shl i64 %a, 5
%d = shl i64 %b, 6
%e = add i64 %c, %d
ret i64 %e
}

define signext i32 @addshl32_5_7(i32 signext %a, i32 signext %b) {
; RV64I-LABEL: addshl32_5_7:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 5
; RV64I-NEXT:  slli a1, a1, 7
; RV64I-NEXT:  addw a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addshl32_5_7:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh2add a0, a1, a0
; RV64ZBA-NEXT:  slliw a0, a0, 5
; RV64ZBA-NEXT:  ret
%c = shl i32 %a, 5
%d = shl i32 %b, 7
%e = add i32 %c, %d
ret i32 %e
}

define i64 @addshl64_5_7(i64 %a, i64 %b) {
; RV64I-LABEL: addshl64_5_7:

```

```

; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 5
; RV64I-NEXT:  slli a1, a1, 7
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addshl64_5_7:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh2add a0, a1, a0
; RV64ZBA-NEXT:  slli a0, a0, 5
; RV64ZBA-NEXT:  ret
%c
= shl i64 %a, 5
%d = shl i64 %b, 7
%e = add i64 %c, %d
ret i64 %e
}

define signext i32 @addshl32_5_8(i32 signext %a, i32 signext %b) {
; RV64I-LABEL: addshl32_5_8:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 5
; RV64I-NEXT:  slli a1, a1, 8
; RV64I-NEXT:  addw a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addshl32_5_8:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh3add a0, a1, a0
; RV64ZBA-NEXT:  slliw a0, a0, 5
; RV64ZBA-NEXT:  ret
%c = shl i32 %a, 5
%d = shl i32 %b, 8
%e = add i32 %c, %d
ret i32 %e
}

define i64 @addshl64_5_8(i64 %a, i64 %b) {
; RV64I-LABEL: addshl64_5_8:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 5
; RV64I-NEXT:  slli a1, a1, 8
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: addshl64_5_8:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  sh3add a0, a1, a0

```

```

; RV64ZBA-NEXT:  slli a0, a0, 5
; RV64ZBA-NEXT:  ret
%c = shl i64 %a, 5
%d = shl i64 %b, 8
%e = add i64 %c, %d
ret i64 %e
}

; Make
sure we use sext.h+slli+srli for Zba+Zbb.
; FIXME: The RV64I and Zba only cases can be done with only 3 shifts.
define zeroext i32 @sext_ashr_zext_i8(i8 %a) nounwind {
; RV64I-LABEL: sext_ashr_zext_i8:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 24
; RV64I-NEXT:  sraiw a0, a0, 31
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  ret
;
; RV64ZBANOZBB-LABEL: sext_ashr_zext_i8:
; RV64ZBANOZBB:  # %bb.0:
; RV64ZBANOZBB-NEXT:  slli a0, a0, 24
; RV64ZBANOZBB-NEXT:  sraiw a0, a0, 31
; RV64ZBANOZBB-NEXT:  zext.w a0, a0
; RV64ZBANOZBB-NEXT:  ret
;
; RV64ZBAZBB-LABEL: sext_ashr_zext_i8:
; RV64ZBAZBB:   # %bb.0:
; RV64ZBAZBB-NEXT:  sext.b a0, a0
; RV64ZBAZBB-NEXT:  sraiw a0, a0, 9
; RV64ZBAZBB-NEXT:  zext.w a0, a0
; RV64ZBAZBB-NEXT:  ret
%ext = sext i8 %a to i32
%1 = ashr i32 %ext, 9
ret i32 %1
}

; Make sure we use sext.h+slli+srli for Zba+Zbb.
; FIXME: The RV64I and Zba only cases can be done with only 3 shifts.
define
zeroext i32 @sext_ashr_zext_i16(i16 %a) nounwind {
; RV64I-LABEL: sext_ashr_zext_i16:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 16
; RV64I-NEXT:  sraiw a0, a0, 25
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32

```



```

; RV64I-NEXT:  ret
;
; RV64ZBANOZBB-LABEL: sext_ashr_zext_i16:
; RV64ZBANOZBB:    # %bb.0:
; RV64ZBANOZBB-NEXT:  slli a0, a0, 16
; RV64ZBANOZBB-NEXT:  sraiw a0, a0, 25
; RV64ZBANOZBB-NEXT:  zext.w a0, a0
; RV64ZBANOZBB-NEXT:  ret
;
; RV64ZBAZBB-LABEL: sext_ashr_zext_i16:
; RV64ZBAZBB:    # %bb.0:
; RV64ZBAZBB-NEXT:  slli a0, a0, 48
; RV64ZBAZBB-NEXT:  srai a0, a0, 57
; RV64ZBAZBB-NEXT:  zext.w a0, a0
; RV64ZBAZBB-NEXT:  ret
%ext = sext i16 %a to i32
%1 = ashr i32 %ext, 9
ret i32 %1
}

; This the IR you get from InstCombine if take the difference of 2 pointers and
; cast is to unsigned before using as an index.
define signext i16 @sh1adduw_ptrdiff(i64 %diff, ptr %baseptr) {
; RV64I-LABEL: sh1adduw_ptrdiff:
; RV64I:
;   # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  slli a2, a2, 33
; RV64I-NEXT:  addi a2, a2, -2
; RV64I-NEXT:  and a0, a0, a2
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  lh a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh1adduw_ptrdiff:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srli a0, a0, 1
; RV64ZBA-NEXT:  sh1add.uw a0, a0, a1
; RV64ZBA-NEXT:  lh a0, 0(a0)
; RV64ZBA-NEXT:  ret
%ptrdiff = lshr exact i64 %diff, 1
%cast = and i64 %ptrdiff, 4294967295
%ptr = getelementptr inbounds i16, ptr %baseptr, i64 %cast
%res = load i16, ptr %ptr
ret i16 %res
}

define signext i32 @sh2adduw_ptrdiff(i64 %diff, ptr %baseptr) {

```

```

; RV64I-LABEL: sh2adduw_ptrdiff:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  slli a2, a2, 34
; RV64I-NEXT:  addi a2, a2, -4
; RV64I-NEXT:  and a0, a0, a2
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  lw a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh2adduw_ptrdiff:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:
;   srli a0, a0, 2
; RV64ZBA-NEXT:  sh2add.uw a0, a0, a1
; RV64ZBA-NEXT:  lw a0, 0(a0)
; RV64ZBA-NEXT:  ret
%ptrdiff = lshr exact i64 %diff, 2
%cast = and i64 %ptrdiff, 4294967295
%ptr = getelementptr inbounds i32, ptr %baseptr, i64 %cast
%res = load i32, ptr %ptr
ret i32 %res
}

define i64 @sh3adduw_ptrdiff(i64 %diff, ptr %baseptr) {
; RV64I-LABEL: sh3adduw_ptrdiff:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  slli a2, a2, 35
; RV64I-NEXT:  addi a2, a2, -8
; RV64I-NEXT:  and a0, a0, a2
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  ld a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: sh3adduw_ptrdiff:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srli a0, a0, 3
; RV64ZBA-NEXT:  sh3add.uw a0, a0, a1
; RV64ZBA-NEXT:  ld a0, 0(a0)
; RV64ZBA-NEXT:  ret
%ptrdiff = lshr exact i64 %diff, 3
%cast = and i64 %ptrdiff, 4294967295
%ptr = getelementptr inbounds i64, ptr %baseptr, i64 %cast
%res = load i64, ptr %ptr
ret i64 %res
}

```

```

define signext
i16 @srlw_1_sh1add(ptr %0, i32 signext %1) {
; RV64I-LABEL: srlw_1_sh1add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a1, a1, 1
; RV64I-NEXT:  slli a1, a1, 1
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  lh a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: srlw_1_sh1add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srlw a1, a1, 1
; RV64ZBA-NEXT:  sh1add a0, a1, a0
; RV64ZBA-NEXT:  lh a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = lshr i32 %1, 1
%4 = zext i32 %3 to i64
%5 = getelementptr inbounds i16, ptr %0, i64 %4
%6 = load i16, ptr %5, align 2
ret i16 %6
}

define i128 @slliw_ptrdiff(i64 %diff, ptr %baseptr) {
; RV64I-LABEL: slliw_ptrdiff:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a2, 1
; RV64I-NEXT:  slli a2, a2, 36
; RV64I-NEXT:  addi a2, a2, -16
; RV64I-NEXT:  and a0, a0, a2
; RV64I-NEXT:  add a1, a1, a0
; RV64I-NEXT:  ld a0, 0(a1)
; RV64I-NEXT:  ld a1, 8(a1)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: slliw_ptrdiff:
; RV64ZBA:    # %bb.0:
;
RV64ZBA-NEXT:  srli a0, a0, 4
; RV64ZBA-NEXT:  slli.uw a0, a0, 4
; RV64ZBA-NEXT:  add a1, a1, a0
; RV64ZBA-NEXT:  ld a0, 0(a1)
; RV64ZBA-NEXT:  ld a1, 8(a1)
; RV64ZBA-NEXT:  ret
%ptrdiff = lshr exact i64 %diff, 4
%cast = and i64 %ptrdiff, 4294967295
%ptr = getelementptr inbounds i128, ptr %baseptr, i64 %cast
%res = load i128, ptr %ptr

```

```

ret i128 %res
}

define signext i32 @srlw_2_sh2add(ptr %0, i32 signext %1) {
; RV64I-LABEL: srlw_2_sh2add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a1, a1, 2
; RV64I-NEXT:  slli a1, a1, 2
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  lw a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: srlw_2_sh2add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srlw a1, a1, 2
; RV64ZBA-NEXT:  sh2add a0, a1, a0
; RV64ZBA-NEXT:  lw a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = lshr i32 %1, 2
%4 = zext i32 %3 to i64
%5 = getelementptr inbounds i32, ptr %0, i64 %4
%6 = load i32, ptr %5, align 4
ret i32 %6
}

define i64 @srlw_3_sh3add(ptr
%0, i32 signext %1) {
; RV64I-LABEL: srlw_3_sh3add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a1, a1, 3
; RV64I-NEXT:  slli a1, a1, 3
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ld a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: srlw_3_sh3add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srlw a1, a1, 3
; RV64ZBA-NEXT:  sh3add a0, a1, a0
; RV64ZBA-NEXT:  ld a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = lshr i32 %1, 3
%4 = zext i32 %3 to i64
%5 = getelementptr inbounds i64, ptr %0, i64 %4
%6 = load i64, ptr %5, align 8
ret i64 %6
}

```

```

define signext i32 @srliw_1_sh2add(ptr %0, i32 signext %1) {
; RV64I-LABEL: srliw_1_sh2add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srliw a1, a1, 1
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  srli a1, a1, 30
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  lw a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: srliw_1_sh2add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srliw a1, a1, 1
; RV64ZBA-NEXT:  sh2add a0, a1, a0
;
; RV64ZBA-NEXT:  lw a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = lshr i32 %1, 1
%4 = zext i32 %3 to i64
%5 = getelementptr inbounds i32, ptr %0, i64 %4
%6 = load i32, ptr %5, align 4
ret i32 %6
}

```

```

define i64 @srliw_1_sh3add(ptr %0, i32 signext %1) {
; RV64I-LABEL: srliw_1_sh3add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srliw a1, a1, 1
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  srli a1, a1, 29
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ld a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: srliw_1_sh3add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srliw a1, a1, 1
; RV64ZBA-NEXT:  sh3add a0, a1, a0
; RV64ZBA-NEXT:  ld a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = lshr i32 %1, 1
%4 = zext i32 %3 to i64
%5 = getelementptr inbounds i64, ptr %0, i64 %4
%6 = load i64, ptr %5, align 8
ret i64 %6
}

```

```

define i64 @srliw_2_sh3add(ptr %0, i32 signext %1) {

```

```

; RV64I-LABEL: srlw_2_sh3add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a1, a1, 2
; RV64I-NEXT:  slli a1, a1, 32
;
RV64I-NEXT:  srli a1, a1, 29
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ld a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: srlw_2_sh3add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srlw a1, a1, 2
; RV64ZBA-NEXT:  sh3add a0, a1, a0
; RV64ZBA-NEXT:  ld a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = lshr i32 %1, 2
%4 = zext i32 %3 to i64
%5 = getelementptr inbounds i64, ptr %0, i64 %4
%6 = load i64, ptr %5, align 8
ret i64 %6
}

define signext i16 @srlw_2_sh1add(ptr %0, i32 signext %1) {
; RV64I-LABEL: srlw_2_sh1add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a1, a1, 2
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  srli a1, a1, 31
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  lh a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: srlw_2_sh1add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srlw a1, a1, 2
; RV64ZBA-NEXT:  sh1add a0, a1, a0
; RV64ZBA-NEXT:  lh a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = lshr i32 %1, 2
%4 = zext i32 %3 to i64
%5 = getelementptr
inbounds i16, ptr %0, i64 %4
%6 = load i16, ptr %5, align 2
ret i16 %6
}

```

```

define signext i32 @srlw_3_sh2add(ptr %0, i32 signext %1) {
; RV64I-LABEL: srlw_3_sh2add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a1, a1, 3
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  srli a1, a1, 30
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  lw a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: srlw_3_sh2add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srlw a1, a1, 3
; RV64ZBA-NEXT:  sh2add a0, a1, a0
; RV64ZBA-NEXT:  lw a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = lshr i32 %1, 3
%4 = zext i32 %3 to i64
%5 = getelementptr inbounds i32, ptr %0, i64 %4
%6 = load i32, ptr %5, align 4
ret i32 %6
}

```

```

define i64 @srlw_4_sh3add(ptr %0, i32 signext %1) {
; RV64I-LABEL: srlw_4_sh3add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a1, a1, 4
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  srli a1, a1, 29
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ld a0, 0(a0)
; RV64I-NEXT:
ret
;
; RV64ZBA-LABEL: srlw_4_sh3add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srlw a1, a1, 4
; RV64ZBA-NEXT:  sh3add a0, a1, a0
; RV64ZBA-NEXT:  ld a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = lshr i32 %1, 4
%4 = zext i32 %3 to i64
%5 = getelementptr inbounds i64, ptr %0, i64 %4
%6 = load i64, ptr %5, align 8
ret i64 %6
}

```

```

define signext i32 @srli_1_sh2add(ptr %0, i64 %1) {

```

```

; RV64I-LABEL: srli_1_sh2add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a1, a1, 1
; RV64I-NEXT:  andi a1, a1, -4
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  lw a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: srli_1_sh2add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srli a1, a1, 1
; RV64ZBA-NEXT:  sh2add a0, a1, a0
; RV64ZBA-NEXT:  lw a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = lshr i64 %1, 1
%4 = getelementptr inbounds i32, ptr %0, i64 %3
%5 = load i32, ptr %4, align 4
ret i32 %5
}

```

```

define i64 @srli_2_sh3add(ptr %0, i64 %1) {
; RV64I-LABEL: srli_2_sh3add:
; RV64I:    # %bb.0:
;
; RV64I-NEXT:  slli a1, a1, 1
; RV64I-NEXT:  andi a1, a1, -8
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ld a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: srli_2_sh3add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  srli a1, a1, 2
; RV64ZBA-NEXT:  sh3add a0, a1, a0
; RV64ZBA-NEXT:  ld a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = lshr i64 %1, 2
%4 = getelementptr inbounds i64, ptr %0, i64 %3
%5 = load i64, ptr %4, align 8
ret i64 %5
}

```

```

define signext i16 @srli_2_sh1add(ptr %0, i64 %1) {
; RV64I-LABEL: srli_2_sh1add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srli a1, a1, 1
; RV64I-NEXT:  andi a1, a1, -2
; RV64I-NEXT:  add a0, a0, a1

```



```

; RV64I-NEXT: lh a0, 0(a0)
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: srli_2_sh1add:
; RV64ZBA: # %bb.0:
; RV64ZBA-NEXT: srli a1, a1, 2
; RV64ZBA-NEXT: sh1add a0, a1, a0
; RV64ZBA-NEXT: lh a0, 0(a0)
; RV64ZBA-NEXT: ret
%3 = lshr i64 %1, 2
%4 = getelementptr inbounds i16, ptr %0, i64 %3
%5 = load i16, ptr %4, align
2
ret i16 %5
}

define signext i32 @srli_3_sh2add(ptr %0, i64 %1) {
; RV64I-LABEL: srli_3_sh2add:
; RV64I: # %bb.0:
; RV64I-NEXT: srli a1, a1, 1
; RV64I-NEXT: andi a1, a1, -4
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: lw a0, 0(a0)
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: srli_3_sh2add:
; RV64ZBA: # %bb.0:
; RV64ZBA-NEXT: srli a1, a1, 3
; RV64ZBA-NEXT: sh2add a0, a1, a0
; RV64ZBA-NEXT: lw a0, 0(a0)
; RV64ZBA-NEXT: ret
%3 = lshr i64 %1, 3
%4 = getelementptr inbounds i32, ptr %0, i64 %3
%5 = load i32, ptr %4, align 4
ret i32 %5
}

define i64 @srli_4_sh3add(ptr %0, i64 %1) {
; RV64I-LABEL: srli_4_sh3add:
; RV64I: # %bb.0:
; RV64I-NEXT: srli a1, a1, 1
; RV64I-NEXT: andi a1, a1, -8
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: ld a0, 0(a0)
; RV64I-NEXT: ret
;
; RV64ZBA-LABEL: srli_4_sh3add:
; RV64ZBA: # %bb.0:

```

```

;RV64ZBA-NEXT: srli a1, a1, 4
;RV64ZBA-NEXT: sh3add a0, a1, a0
;RV64ZBA-NEXT: ld a0, 0(a0)
;RV64ZBA-NEXT:
    ret
%3 = lshr i64 %1, 4
%4 = getelementptr inbounds i64, ptr %0, i64 %3
%5 = load i64, ptr %4, align 8
ret i64 %5
}

define signext i16 @shl_2_sh1add(ptr %0, i32 signext %1) {
;RV64I-LABEL: shl_2_sh1add:
;RV64I:    # %bb.0:
;RV64I-NEXT: slli a1, a1, 2
;RV64I-NEXT: slli a1, a1, 32
;RV64I-NEXT: srli a1, a1, 31
;RV64I-NEXT: add a0, a0, a1
;RV64I-NEXT: lh a0, 0(a0)
;RV64I-NEXT: ret
;
;RV64ZBA-LABEL: shl_2_sh1add:
;RV64ZBA:    # %bb.0:
;RV64ZBA-NEXT: slli a1, a1, 2
;RV64ZBA-NEXT: zext.w a1, a1
;RV64ZBA-NEXT: sh1add a0, a1, a0
;RV64ZBA-NEXT: lh a0, 0(a0)
;RV64ZBA-NEXT: ret
%3 = shl i32 %1, 2
%4 = zext i32 %3 to i64
%5 = getelementptr inbounds i16, ptr %0, i64 %4
%6 = load i16, ptr %5, align 2
ret i16 %6
}

define signext i32 @shl_16_sh2add(ptr %0, i32 signext %1) {
;RV64I-LABEL: shl_16_sh2add:
;RV64I:    # %bb.0:
;RV64I-NEXT: slli a1, a1, 16
;RV64I-NEXT: slli a1, a1, 32
;RV64I-NEXT: srli a1, a1, 30
;
RV64I-NEXT: add a0, a0, a1
;RV64I-NEXT: lw a0, 0(a0)
;RV64I-NEXT: ret
;
;RV64ZBA-LABEL: shl_16_sh2add:
;RV64ZBA:    # %bb.0:

```

```

; RV64ZBA-NEXT:  slli a1, a1, 16
; RV64ZBA-NEXT:  zext.w a1, a1
; RV64ZBA-NEXT:  sh2add a0, a1, a0
; RV64ZBA-NEXT:  lw a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = shl i32 %1, 16
%4 = zext i32 %3 to i64
%5 = getelementptr inbounds i32, ptr %0, i64 %4
%6 = load i32, ptr %5, align 4
ret i32 %6
}

```

```

define i64 @shl_31_sh3add(ptr %0, i32 signext %1) {
; RV64I-LABEL: shl_31_sh3add:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a1, a1, 31
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  srli a1, a1, 29
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ld a0, 0(a0)
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: shl_31_sh3add:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  slli a1, a1, 31
; RV64ZBA-NEXT:  zext.w a1, a1
; RV64ZBA-NEXT:  sh3add a0, a1, a0
; RV64ZBA-NEXT:  ld a0, 0(a0)
; RV64ZBA-NEXT:  ret
%3 = shl i32 %1, 31
%4 = zext i32 %3
to i64
%5 = getelementptr inbounds i64, ptr %0, i64 %4
%6 = load i64, ptr %5, align 8
ret i64 %6
}

```

```

define i64 @pack_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: pack_i64:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: pack_i64:
; RV64ZBA:    # %bb.0:

```

```

; RV64ZBA-NEXT:  slli a1, a1, 32
; RV64ZBA-NEXT:  add.uw a0, a0, a1
; RV64ZBA-NEXT:  ret
%shl = and i64 %a, 4294967295
%shl1 = shl i64 %b, 32
%or = or i64 %shl1, %shl
ret i64 %or
}

define i64 @pack_i64_2(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: pack_i64_2:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: pack_i64_2:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  slli a1, a1, 32
; RV64ZBA-NEXT:  add.uw a0, a0,
a1
; RV64ZBA-NEXT:  ret
%zexta = zext i32 %a to i64
%zextb = zext i32 %b to i64
%shl1 = shl i64 %zextb, 32
%or = or i64 %shl1, %zexta
ret i64 %or
}

define i64 @pack_i64_3(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: pack_i64_3:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi a0, a0, 1
; RV64I-NEXT:  addi a1, a1, 1
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
; RV64I-NEXT:  slli a1, a1, 32
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBA-LABEL: pack_i64_3:
; RV64ZBA:    # %bb.0:
; RV64ZBA-NEXT:  addi a0, a0, 1
; RV64ZBA-NEXT:  addi a1, a1, 1
; RV64ZBA-NEXT:  slli a1, a1, 32
; RV64ZBA-NEXT:  add.uw a0, a0, a1

```

```
; RV64ZBA-NEXT:  ret
%adda = add i32 %a, 1
%addb = add i32 %b, 1
%zexta = zext i32 %adda to i64
%zextb = zext i32 %addb to i64
%shl1 = shl i64 %zextb, 32
%or = or i64 %shl1, %zexta
ret i64 %or
}
```

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; NOTE: Assertions have been autogenerated by utils/update\_llc\_test\_checks.py  
; RUN: llc -mtriple=riscv64 -mattr=+zbb -verify-machineinstrs < %s \  
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefix=RV64ZBB

```
declare i32 @llvm.riscv.orc.b.i32(i32)

define signext i32 @orc32(i32 signext %a) nounwind {
```

```

; RV64ZBB-LABEL: orcb32:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  orc.b a0, a0
; RV64ZBB-NEXT:  sext.w a0, a0
; RV64ZBB-NEXT:  ret
%tmp = call i32 @llvm.riscv.orc.b.i32(i32 %a)
ret i32 %tmp
}

define zeroext i32 @orcb32_zext(i32 zeroext %a) nounwind {
; RV64ZBB-LABEL: orcb32_zext:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  orc.b a0, a0
; RV64ZBB-NEXT:  ret
%tmp = call i32 @llvm.riscv.orc.b.i32(i32 %a)
ret i32 %tmp
}

```

; Second and+or is redundant with the first, make sure we remove them.

```

define signext i32 @orcb32_knownbits(i32 signext %a) nounwind {
; RV64ZBB-LABEL: orcb32_knownbits:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  lui a1, 1044480
; RV64ZBB-NEXT:
    and a0, a0, a1
; RV64ZBB-NEXT:  lui a1, 2048
; RV64ZBB-NEXT:  addi a1, a1, 1
; RV64ZBB-NEXT:  or a0, a0, a1
; RV64ZBB-NEXT:  orc.b a0, a0
; RV64ZBB-NEXT:  sext.w a0, a0
; RV64ZBB-NEXT:  ret
%tmp = and i32 %a, 4278190080 ; 0xFF000000
%tmp2 = or i32 %tmp, 8388609 ; 0x800001
%tmp3 = call i32 @llvm.riscv.orc.b.i32(i32 %tmp2)
%tmp4 = and i32 %tmp3, 4278190080 ; 0xFF000000
%tmp5 = or i32 %tmp4, 16711935 ; 0xFF00FF
ret i32 %tmp5
}

```

```

declare i64 @llvm.riscv.orc.b.i64(i64)

```

```

define i64 @orcb64(i64 %a) nounwind {
; RV64ZBB-LABEL: orcb64:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  orc.b a0, a0
; RV64ZBB-NEXT:  ret
%tmp = call i64 @llvm.riscv.orc.b.i64(i64 %a)
ret i64 %tmp
}

```

```

}

; Second and+or is redundant with the first, make sure we remove them.
define i64 @orcb64_knownbits(i64 %a) nounwind {
; RV64ZBB-LABEL: orcb64_knownbits:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  lui a1, 65535
; RV64ZBB-NEXT:  slli a1, a1, 12
; RV64ZBB-NEXT:  and a0, a0, a1
;
; RV64ZBB-NEXT:  lui a1, 256
; RV64ZBB-NEXT:  addiw a1, a1, 8
; RV64ZBB-NEXT:  slli a2, a1, 42
; RV64ZBB-NEXT:  add a1, a1, a2
; RV64ZBB-NEXT:  or a0, a0, a1
; RV64ZBB-NEXT:  orc.b a0, a0
; RV64ZBB-NEXT:  ret
%tmp = and i64 %a, 1099494850560 ; 0x000000ffff000000
%tmp2 = or i64 %tmp, 4611721202800525320 ; 0x4000200000100008
%tmp3 = call i64 @llvm.riscv.orc.b.i64(i64 %tmp2)
%tmp4 = and i64 %tmp3, 1099494850560 ; 0x000000ffff000000
%tmp5 = or i64 %tmp4, 18374966855153418495 ; 0xff00ff0000ff00ff
ret i64 %tmp5
}

```

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```

; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc -mtriple=riscv64 -mattr=+zbc -verify-machineinstrs < %s \
; RUN:  -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefix=RV64ZBC

```

```

declare i64 @llvm.riscv.cmulr.i64(i64 %a, i64 %b)

define i64 @cmul64r(i64 %a, i64 %b) nounwind {
; RV64ZBC-LABEL: cmul64r:
; RV64ZBC:    # %bb.0:
; RV64ZBC-NEXT:  cmulr a0, a0, a1
; RV64ZBC-NEXT:  ret
%tmp = call i64 @llvm.riscv.cmulr.i64(i64 %a, i64 %b)
ret i64 %tmp
}

declare i32 @llvm.riscv.cmulr.i32(i32 %a, i32 %b)

define signext i32 @cmul32r(i32 signext %a, i32 signext %b) nounwind {
; RV64ZBC-LABEL: cmul32r:
; RV64ZBC:    # %bb.0:
; RV64ZBC-NEXT:  slli a1, a1, 32
; RV64ZBC-NEXT:  slli a0, a0, 32
; RV64ZBC-NEXT:  cmulr a0, a0, a1
; RV64ZBC-NEXT:  srai a0, a0, 32
; RV64ZBC-NEXT:  ret
%tmp = call i32 @llvm.riscv.cmulr.i32(i32 %a, i32 %b)
ret i32 %tmp
}

; FIXME: We could avoid the slli instructions by using cmul+srli+sext.w
since
; the inputs are zero extended.
define signext i32 @cmul32r_zext(i32 zeroext %a, i32 zeroext %b) nounwind {
; RV64ZBC-LABEL: cmul32r_zext:
; RV64ZBC:    # %bb.0:
; RV64ZBC-NEXT:  slli a1, a1, 32
; RV64ZBC-NEXT:  slli a0, a0, 32
; RV64ZBC-NEXT:  cmulr a0, a0, a1
; RV64ZBC-NEXT:  srai a0, a0, 32
; RV64ZBC-NEXT:  ret
%tmp = call i32 @llvm.riscv.cmulr.i32(i32 %a, i32 %b)
ret i32 %tmp
}

; RUN: opt %s -passes=inline -S | FileCheck %s

define internal void @innerSmall() "min-legal-vector-width"="128" {
ret void
}

define internal void @innerLarge() "min-legal-vector-width"="512" {
ret void
}

```

```
}
```

```
define internal void @innerNoAttribute() {  
  ret void  
}
```

```
; We should not add an attribute during inlining. No attribute means unknown.  
; Inlining doesn't change the fact that we don't know anything about this  
; function.
```

```
define void @outerNoAttribute() {  
  call void @innerLarge()  
  ret void  
}
```

```
define void @outerConflictingAttributeSmall() "min-legal-vector-width"="128" {  
  call void @innerLarge()  
  ret void  
}
```

```
define void @outerConflictingAttributeLarge() "min-legal-vector-width"="512" {  
  call void @innerSmall()  
  ret void  
}
```

```
; We should remove the attribute after inlining since the callee's  
; vector width requirements are unknown.
```

```
define void @outerAttribute() "min-legal-vector-width"="128" {  
  call void @innerNoAttribute()  
  ret void  
}
```

```
; CHECK: define void @outerNoAttribute()  
{
```

```
; CHECK: define void @outerConflictingAttributeSmall() #0
```

```
; CHECK: define void @outerConflictingAttributeLarge() #0
```

```
; CHECK: define void @outerAttribute() {
```

```
; CHECK: attributes #0 = { "min-legal-vector-width"="512" }
```

```
; RUN: opt -mtriple=aarch64-linux-gnu -mattr=+sve -passes=sanitize-masked-mem-intrin -S < %s | FileCheck %s
```

```
; Testing that masked scatters operating on scalable vectors that are  
; packed in SVE registers are not scalarized.
```

```
; CHECK-LABEL: @masked_scatter_nxv4i32(  
; CHECK: call void @llvm.masked.scatter.nxv4i32
```

```
define void @masked_scatter_nxv4i32(<vscale x 4 x i32> %data, <vscale x 4 x ptr> %ptrs, <vscale x 4 x i1>
```

```
%masks) {
```

```
  call void @llvm.masked.scatter.nxv4i32(<vscale x 4 x i32> %data, <vscale x 4 x ptr> %ptrs, i32 0, <vscale x 4 x
```

```
i1> %masks)
```

```

ret void
}

; Testing that masked scatters operating on scalable vectors of FP
; data that is packed in SVE registers are not scalarized.

; CHECK-LABEL: @masked_scatter_nxv2f64(
; CHECK: call void @llvm.masked.scatter.nxv2f64
define void @masked_scatter_nxv2f64(<vscale x 2 x double> %data, <vscale x 2 x ptr> %ptrs, <vscale x 2 x i1>
%mask) {
call void @llvm.masked.scatter.nxv2f64(<vscale x 2 x double> %data, <vscale x 2 x ptr> %ptrs,
i32 0, <vscale x 2 x i1> %mask)
ret void
}

; Testing that masked scatters operating on scalable vectors of FP
; data that is unpacked in SVE registers are not scalarized.

; CHECK-LABEL: @masked_scatter_nxv2f16(
; CHECK: call void @llvm.masked.scatter.nxv2f16
define void @masked_scatter_nxv2f16(<vscale x 2 x half> %data, <vscale x 2 x ptr> %ptrs, <vscale x 2 x i1>
%mask) {
call void @llvm.masked.scatter.nxv2f16(<vscale x 2 x half> %data, <vscale x 2 x ptr> %ptrs, i32 0, <vscale x 2 x
i1> %mask)
ret void
}

; Testing that masked scatters operating on 64-bit fixed vectors are
; scalarized because NEON doesn't have support for masked scatter
; instructions.

; CHECK-LABEL: @masked_scatter_v2f32(
; CHECK-NOT: @llvm.masked.scatter.v2f32(
define void @masked_scatter_v2f32(<2 x float> %data, <2 x ptr> %ptrs, <2 x i1> %mask) {
call void @llvm.masked.scatter.v2f32(<2 x float> %data, <2 x ptr> %ptrs, i32 0, <2 x i1> %mask)
ret void
}

; Testing that masked scatters operating on 128-bit
fixed vectors are
; scalarized because NEON doesn't have support for masked scatter
; instructions and because we are not targeting fixed width SVE.

; CHECK-LABEL: @masked_scatter_v4i32(
; CHECK-NOT: @llvm.masked.scatter.v4i32(
define void @masked_scatter_v4i32(<4 x i32> %data, <4 x ptr> %ptrs, <4 x i1> %mask) {
call void @llvm.masked.scatter.v4i32(<4 x i32> %data, <4 x ptr> %ptrs, i32 0, <4 x i1> %mask)
ret void
}

```



```

}

declare void @llvm.masked.scatter.nxv4i32(<vscale x 4 x i32> %data, <vscale x 4 x ptr> %ptrs, i32 %align,
<vscale x 4 x i1> %masks)
declare void @llvm.masked.scatter.nxv2f64(<vscale x 2 x double> %data, <vscale x 2 x ptr> %ptrs, i32 %align,
<vscale x 2 x i1> %masks)
declare void @llvm.masked.scatter.nxv2f16(<vscale x 2 x half> %data, <vscale x 2 x ptr> %ptrs, i32 %align,
<vscale x 2 x i1> %masks)
declare void @llvm.masked.scatter.v2f32(<2 x float> %data, <2 x ptr> %ptrs, i32 %align, <2 x i1> %masks)
declare void @llvm.masked.scatter.v4i32(<4 x i32> %data, <4 x
ptr> %ptrs, i32 %align, <4 x i1> %masks)
! RUN: %python %S/../test_errors.py %s %flang -fopenmp -Werror -pedantic
! OpenMP Version 5.0
! 2.19.4.4 firstprivate Clause
! 2.19.4.5 lastprivate Clause
! 2.19.6.1 copyin Clause
! 2.19.6.2 copyprivate Clause
! If the list item is a polymorphic variable with the allocatable attribute,
! the behavior is unspecified.

subroutine firstprivate()
class(*), allocatable, save :: x

!PORTABILITY: If a polymorphic variable with allocatable attribute 'x' is in FIRSTPRIVATE clause, the behavior
is unspecified
!$omp parallel firstprivate(x)
call sub()
!$omp end parallel

end

subroutine lastprivate()
class(*), allocatable, save :: x

!PORTABILITY: If a polymorphic variable with allocatable attribute 'x' is in LASTPRIVATE clause, the behavior
is unspecified
!$omp do lastprivate(x)
do i = 1, 10
call sub()
enddo
!$omp end do

end

subroutine copyin()
class(*), allocatable, save :: x
!$omp threadprivate(x)

```

```
!PORTABILITY: If a polymorphic variable with allocatable attribute
'x' is in COPYIN clause, the behavior is unspecified
!$omp parallel copyin(x)
  call sub()
!$omp end parallel
```

end

```
subroutine copyprivate()
class(*), allocatable, save :: x
!$omp threadprivate(x)
```

```
!$omp single
  call sub()
```

```
!PORTABILITY: If a polymorphic variable with allocatable attribute 'x' is in COPYPRIVATE clause, the behavior
is unspecified
!$omp end single copyprivate(x)
```

end

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```
static_library("BSD-Archive") {
  output_name = "lldbPluginObjectContainerBSDArchive"
  configs += [ "//llvm/utils/gn/build:lldb_code" ]
  deps = [
    "//lldb/source/Core",
    "//lldb/source/Host",
    "//lldb/source/Symbol",
    "//llvm/lib/Support",
  ]
  sources = [ "ObjectContainerBSDArchive.cpp" ]
}
; RUN: opt -mtriple=aarch64-linux-gnu -mattr=+sve -passes=simplifyCFG-mem-intrin -S < %s | FileCheck %s
```

```
; Testing that masked gathers operating on scalable vectors that are
; packed in SVE registers are not scalarized.
```

```
; CHECK-LABEL: @masked_gather_nxv4i32(
; CHECK: call <vscale x 4 x i32> @llvm.masked.gather.nxv4i32
define <vscale x 4 x i32> @masked_gather_nxv4i32(<vscale x 4 x ptr> %ld, <vscale x 4 x i1> %masks, <vscale x 4
x i32> %passthru) {
  %res = call <vscale x 4 x i32> @llvm.masked.gather.nxv4i32(<vscale x 4 x ptr> %ld, i32 0, <vscale x 4 x i1>
%masks, <vscale x 4 x i32> %passthru)
  ret <vscale x 4 x i32> %res
}
```

```
; Testing that masked gathers operating on scalable vectors of FP data
; that is packed in SVE registers are not scalarized.
```

```
; CHECK-LABEL: @masked_gather_nxv2f64(
; CHECK: call <vscale x 2 x double> @llvm.masked.gather.nxv2f64
define <vscale x 2 x double> @masked_gather_nxv2f64(<vscale x 2 x ptr> %ld, <vscale x 2 x i1> %masks, <vscale
x 2 x double> %passthru)
{
  %res = call <vscale x 2 x double> @llvm.masked.gather.nxv2f64(<vscale x 2 x ptr> %ld, i32 0, <vscale x 2 x i1>
%masks, <vscale x 2 x double> %passthru)
  ret <vscale x 2 x double> %res
}
```

```
; Testing that masked gathers operating on scalable vectors of FP data
```

; that is unpacked in SVE registers are not scalarized.

```
; CHECK-LABEL: @masked_gather_nxv2f16(  
; CHECK: call <vscale x 2 x half> @llvm.masked.gather.nxv2f16  
define <vscale x 2 x half> @masked_gather_nxv2f16(<vscale x 2 x ptr> %ld, <vscale x 2 x i1> %masks, <vscale x  
2 x half> %passthru) {  
  %res = call <vscale x 2 x half> @llvm.masked.gather.nxv2f16(<vscale x 2 x ptr> %ld, i32 0, <vscale x 2 x i1>  
%masks, <vscale x 2 x half> %passthru)  
  ret <vscale x 2 x half> %res  
}
```

; Testing that masked gathers operating on 64-bit fixed vectors are  
; scalarized because NEON doesn't have support for masked gather  
; instructions.

```
; CHECK-LABEL: @masked_gather_v2f32(  
; CHECK-NOT: @llvm.masked.gather.v2f32(  
define <2 x float> @masked_gather_v2f32(<2  
x ptr> %ld, <2 x i1> %masks, <2 x float> %passthru) {  
  %res = call <2 x float> @llvm.masked.gather.v2f32(<2 x ptr> %ld, i32 0, <2 x i1> %masks, <2 x float> %passthru)  
  ret <2 x float> %res  
}
```

; Testing that masked gathers operating on 128-bit fixed vectors are  
; scalarized because NEON doesn't have support for masked gather  
; instructions and because we are not targeting fixed width SVE.

```
; CHECK-LABEL: @masked_gather_v4i32(  
; CHECK-NOT: @llvm.masked.gather.v4i32(  
define <4 x i32> @masked_gather_v4i32(<4 x ptr> %ld, <4 x i1> %masks, <4 x i32> %passthru) {  
  %res = call <4 x i32> @llvm.masked.gather.v4i32(<4 x ptr> %ld, i32 0, <4 x i1> %masks, <4 x i32> %passthru)  
  ret <4 x i32> %res  
}
```

```
declare <vscale x 4 x i32> @llvm.masked.gather.nxv4i32(<vscale x 4 x ptr> %ptrs, i32 %align, <vscale x 4 x i1>  
%masks, <vscale x 4 x i32> %passthru)  
declare <vscale x 2 x double> @llvm.masked.gather.nxv2f64(<vscale x 2 x ptr> %ptrs, i32 %align, <vscale x 2 x  
i1> %masks, <vscale x 2 x double>  
%passthru)  
declare <vscale x 2 x half> @llvm.masked.gather.nxv2f16(<vscale x 2 x ptr> %ptrs, i32 %align, <vscale x 2 x i1>  
%masks, <vscale x 2 x half> %passthru)  
declare <2 x float> @llvm.masked.gather.v2f32(<2 x ptr> %ptrs, i32 %align, <2 x i1> %masks, <2 x float>  
%passthru)  
declare <4 x i32> @llvm.masked.gather.v4i32(<4 x ptr> %ptrs, i32 %align, <4 x i1> %masks, <4 x i32> %passthru)  
# RUN: llc -O0 -mtriple=m68k -start-after=prologuepilog -verify-machineinstrs %s -o - | FileCheck %s
```

name: is-pcrel-register-operand-legal

body: |

bb.0.entry:

; CHECK: move.l (0,%pc,%a0), (%a1)

; CHECK: move.l (%a0), (0,%pc,%a1)

MOV32jk \$a1, 0, \$a0, implicit-def \$ccr

MOV32kj 0, \$a1, \$a0, implicit-def \$ccr

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; NOTE: Assertions have been autogenerated by utils/update\_llc\_test\_checks.py

; RUN: llc < %s -mtriple=x86\_64-linux-android -mattr=+mmx -enable-legalize-types-checking | FileCheck %s

;

; D31946

; Check that we dont end up with the ""LLVM ERROR: Cannot select" error.

; Additionally ensure that the output code actually put fp128 values in SSE registers.

```
declare fp128 @llvm.fabs.f128(fp128)
```

```
declare fp128 @llvm.copysign.f128(fp128, fp128)
```

```
define fp128 @TestSelect(fp128 %a, fp128 %b) {
```

```
; CHECK-LABEL: TestSelect:
```

```
; CHECK:      # %bb.0:
```

```
; CHECK-NEXT:  pushq %rbx
```

```
; CHECK-NEXT:  .cfi_def_cfa_offset 16
```

```
; CHECK-NEXT:  subq $32, %rsp
```

```
; CHECK-NEXT:  .cfi_def_cfa_offset 48
```

```
; CHECK-NEXT:  .cfi_offset %rbx, -16
```

```
; CHECK-NEXT:  movaps %xmm1, {[[-0-9]+]}(%r{[sb]})p) # 16-byte Spill
```

```
; CHECK-NEXT:  movaps %xmm0, (%rsp) # 16-byte Spill
```

```
; CHECK-NEXT:  callq __gttf2@PLT
```

```
; CHECK-NEXT:  movl %eax, %ebx
```

```
; CHECK-NEXT:  movaps (%rsp), %xmm0 # 16-byte Reload
```

```
; CHECK-NEXT:  movaps {[[-0-9]+]}(%r{[sb]})p),
```

```
%xmm1 # 16-byte Reload
```

```
; CHECK-NEXT:  callq __subtf3@PLT
```

```
; CHECK-NEXT:  testl %ebx, %ebx
```

```
; CHECK-NEXT:  jg .LBB0_2
```

```
; CHECK-NEXT:  # %bb.1:
```



```

; CHECK-NEXT: xorps %xmm0, %xmm0
; CHECK-NEXT: .LBB0_2:
; CHECK-NEXT: addq $32, %rsp
; CHECK-NEXT: .cfi_def_cfa_offset 16
; CHECK-NEXT: popq %rbx
; CHECK-NEXT: .cfi_def_cfa_offset 8
; CHECK-NEXT: retq
%cmp = fcmp ogt fp128 %a, %b
%sub = fsub fp128 %a, %b
%res = select il %cmp, fp128 %sub, fp128 0xL00000000000000000000000000000000
ret fp128 %res
}

```

```

define fp128 @TestFabs(fp128 %a) {
; CHECK-LABEL: TestFabs:
; CHECK: # %bb.0:
; CHECK-NEXT: andps {{\.?LCPI[0-9]+_[0-9]+}}(%rip), %xmm0
; CHECK-NEXT: retq
%res = call fp128 @llvm.fabs.f128(fp128 %a)
ret fp128 %res
}

```

```

define fp128 @TestCopysign(fp128 %a, fp128 %b) {
; CHECK-LABEL: TestCopysign:
; CHECK: # %bb.0:
; CHECK-NEXT: andps {{\.?LCPI[0-9]+_[0-9]+}}(%rip), %xmm1
; CHECK-NEXT: andps {{\.?LCPI[0-9]+_[0-9]+}}(%rip), %xmm0
; CHECK-NEXT:
orps %xmm1, %xmm0
; CHECK-NEXT: retq
%res = call fp128 @llvm.copysign.f128(fp128 %a, fp128 %b)
ret fp128 %res
}

```

```

define fp128 @TestFneg(fp128 %a) {
; CHECK-LABEL: TestFneg:
; CHECK: # %bb.0:
; CHECK-NEXT: pushq %rax
; CHECK-NEXT: .cfi_def_cfa_offset 16
; CHECK-NEXT: movaps %xmm0, %xmm1
; CHECK-NEXT: callq __multf3@PLT
; CHECK-NEXT: xorps {{\.?LCPI[0-9]+_[0-9]+}}(%rip), %xmm0
; CHECK-NEXT: popq %rax
; CHECK-NEXT: .cfi_def_cfa_offset 8
; CHECK-NEXT: retq
%mul = fmul fp128 %a, %a
%res = fsub fp128 0xL00000000000000008000000000000000, %mul
ret fp128 %res
}

```

}

---

clang-tidy CERT Files

---

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THE SOFTWARE.

; NOTE: Assertions have been autogenerated by utils/update\_llc\_test\_checks.py

; RUN: llc -mtriple=riscv64 -mattr=+zbbk -verify-machineinstrs < %s \

; RUN: | FileCheck %s -check-prefix=RV64ZBKB

declare i64 @llvm.riscv.brev8.i64(i64)

```
define i64 @brev8(i64 %a) nounwind {
; RV64ZBKB-LABEL: brev8:
; RV64ZBKB:      # %bb.0:
; RV64ZBKB-NEXT:  brev8 a0, a0
; RV64ZBKB-NEXT:  ret
%val = call i64 @llvm.riscv.brev8.i64(i64 %a)
ret i64 %val
}
```

; Test that rev8 is recognized as preserving zero extension.

```
define zeroext i16 @brev8_knownbits(i16 zeroext %a) nounwind {
; RV64ZBKB-LABEL: brev8_knownbits:
; RV64ZBKB:      # %bb.0:
; RV64ZBKB-NEXT:  brev8 a0, a0
; RV64ZBKB-NEXT:  ret
%zext = zext i16 %a to i64
%val = call i64 @llvm.riscv.brev8.i64(i64 %zext)
%trunc = trunc i64 %val to i16
ret i16 %trunc
}
```

declare i64 @llvm.bswap.i64(i64)

```
define i64 @rev8_i64(i64 %a) {
; RV64ZBKB-LABEL: rev8_i64:
; RV64ZBKB:      # %bb.0:
; RV64ZBKB-NEXT:  rev8 a0, a0
; RV64ZBKB-NEXT:  ret
%l = call i64 @llvm.bswap.i64(i64 %a)
ret i64 %l
}
```

declare i32 @llvm.riscv.brev8.i32(i32)

```
define signext i32 @brev8_i32(i32 signext %a) nounwind {
; RV64ZBKB-LABEL: brev8_i32:
; RV64ZBKB:      # %bb.0:
; RV64ZBKB-NEXT:  brev8 a0, a0
; RV64ZBKB-NEXT:  sext.w a0, a0
; RV64ZBKB-NEXT:  ret
%val = call i32 @llvm.riscv.brev8.i32(i32 %a)
```

```
ret i32 %val
}
```

; Test that rev8 is recognized as preserving zero extension.

```
define zeroext i16 @brev8_i32_knownbits(i16 zeroext %a) nounwind {
; RV64ZBKB-LABEL: brev8_i32_knownbits:
; RV64ZBKB:      # %bb.0:
; RV64ZBKB-NEXT:  brev8 a0, a0
; RV64ZBKB-NEXT:  ret
%zext = zext i16 %a to i32
%val = call i32 @llvm.riscv.brev8.i32(i32 %zext)
%trunc = trunc i32 %val to i16
ret i16 %trunc
}
```

```
declare i32 @llvm.bswap.i32(i32)
```

```
define signext i32 @rev8_i32(i32 signext %a) {
; RV64ZBKB-LABEL: rev8_i32:
; RV64ZBKB:      # %bb.0:
; RV64ZBKB-NEXT:  rev8 a0, a0
; RV64ZBKB-NEXT:  srai a0, a0, 32
; RV64ZBKB-NEXT:  ret
%1 = call i32 @llvm.bswap.i32(i32
%a)
ret i32 %1
}
```

; NOTE: Assertions have been autogenerated by utils/update\_llc\_test\_checks.py

; RUN: llc -mtriple=amdgcncpu=fiji < %s | FileCheck -check-prefixes=VI %s

; FIXME: This one should fold to rcp

```
define half @select_fneg_posk_src_rcp_f16(i32 %c, half %x, half %y) {
; VI-LABEL: select_fneg_posk_src_rcp_f16:
; VI:      ; %bb.0:
; VI-NEXT:  s_waitcnt vmcnt(0) expcnt(0) lgkmcnt(0)
; VI-NEXT:  v_rcp_f16_e64 v1, -v1
; VI-NEXT:  v_mov_b32_e32 v2, 0x4000
; VI-NEXT:  v_cmp_eq_u32_e32 vcc, 0, v0
; VI-NEXT:  v_cndmask_b32_e32 v0, v2, v1, vcc
; VI-NEXT:  s_setpc_b64 s[30:31]
%cmp = icmp eq i32 %c, 0
%rcp = call half @llvm.amdgcn.rcp.f16(half %x)
%fneg = fneg half %rcp
%select = select i1 %cmp, half %fneg, half 2.0
ret half %select
}
```

```
declare half @llvm.amdgcn.rcp.f16(half) #0
```

```

attributes #0 = { nocallback nofree nosync nounwind speculatable willreturn memory(none) }
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; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc -mtriple=riscv64 -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefixes=CHECK,RV64I
; RUN: llc -mtriple=riscv64 -mattr=+zbb -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefixes=CHECK,RV64ZBB-ZBKB,RV64ZBB
; RUN: llc -mtriple=riscv64 -mattr=+zbb -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefixes=CHECK,RV64ZBB-
ZBKB,RV64ZBKB

```

```

define signext i32 @andn_i32(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: andn_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  not a1, a1
; RV64I-NEXT:  and a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: andn_i32:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  andn a0, a0, a1
; RV64ZBB-ZBKB-NEXT:  ret
%neg = xor i32 %b, -1
%and = and i32 %neg, %a
ret i32 %and
}

```

```

define i64 @andn_i64(i64 %a, i64
%b) nounwind {
; RV64I-LABEL: andn_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  not a1, a1
; RV64I-NEXT:  and a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: andn_i64:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  andn a0, a0, a1
; RV64ZBB-ZBKB-NEXT:  ret
%neg = xor i64 %b, -1
%and = and i64 %neg, %a
ret i64 %and
}

```

```

define signext i32 @orn_i32(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: orn_i32:
; RV64I:    # %bb.0:

```

```

; RV64I-NEXT:  not a1, a1
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: orn_i32:
; RV64ZBB-ZBKB:   # %bb.0:
; RV64ZBB-ZBKB-NEXT:  orn a0, a0, a1
; RV64ZBB-ZBKB-NEXT:  ret
%neg = xor i32 %b, -1
%or = or i32 %neg, %a
ret i32 %or
}

define i64 @orn_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: orn_i64:
; RV64I:   # %bb.0:
; RV64I-NEXT:  not a1, a1
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: orn_i64:
; RV64ZBB-ZBKB:   # %bb.0:
; RV64ZBB-ZBKB-NEXT:
    orn a0, a0, a1
; RV64ZBB-ZBKB-NEXT:  ret
%neg = xor i64 %b, -1
%or = or i64 %neg, %a
ret i64 %or
}

define signext i32 @xnor_i32(i32 signext %a, i32 signext %b) nounwind {
; CHECK-LABEL: xnor_i32:
; CHECK:   # %bb.0:
; CHECK-NEXT:  xor a0, a0, a1
; CHECK-NEXT:  not a0, a0
; CHECK-NEXT:  ret
%neg = xor i32 %a, -1
%xor = xor i32 %neg, %b
ret i32 %xor
}

define i64 @xnor_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: xnor_i64:
; RV64I:   # %bb.0:
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  not a0, a0
; RV64I-NEXT:  ret
;

```

```

; RV64ZBB-ZBKB-LABEL: xnor_i64:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  xnor a0, a0, a1
; RV64ZBB-ZBKB-NEXT:  ret
%neg = xor i64 %a, -1
%xor = xor i64 %neg, %b
ret i64 %xor
}

declare i32 @llvm.fshl.i32(i32, i32, i32)

define signext i32 @rol_i32(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: rol_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  andi a2, a1, -1
; RV64I-NEXT:  sllw a1, a0, a1
; RV64I-NEXT:
    negw a2, a2
; RV64I-NEXT:  srlw a0, a0, a2
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: rol_i32:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  rolw a0, a0, a1
; RV64ZBB-ZBKB-NEXT:  ret
%1 = tail call i32 @llvm.fshl.i32(i32 %a, i32 %a, i32 %b)
ret i32 %1
}

```

; Similar to rol\_i32, but doesn't sign extend the result.

```

define void @rol_i32_nosext(i32 signext %a, i32 signext %b, ptr %x) nounwind {
; RV64I-LABEL: rol_i32_nosext:
; RV64I:    # %bb.0:
; RV64I-NEXT:  andi a3, a1, -1
; RV64I-NEXT:  sllw a1, a0, a1
; RV64I-NEXT:  negw a3, a3
; RV64I-NEXT:  srlw a0, a0, a3
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  sw a0, 0(a2)
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: rol_i32_nosext:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  rolw a0, a0, a1
; RV64ZBB-ZBKB-NEXT:  sw a0, 0(a2)
; RV64ZBB-ZBKB-NEXT:  ret
%1 = tail call i32 @llvm.fshl.i32(i32 %a, i32 %a, i32 %b)
}

```

```

store i32 %1, ptr %x
ret void
}

define signext
i32 @rol_i32_neg_constant_rhs(i32 signext %a) nounwind {
; RV64I-LABEL: rol_i32_neg_constant_rhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  andi a1, a0, -1
; RV64I-NEXT:  li a2, -2
; RV64I-NEXT:  sllw a0, a2, a0
; RV64I-NEXT:  negw a1, a1
; RV64I-NEXT:  srlw a1, a2, a1
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: rol_i32_neg_constant_rhs:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  li a1, -2
; RV64ZBB-ZBKB-NEXT:  rolw a0, a1, a0
; RV64ZBB-ZBKB-NEXT:  ret
%1 = tail call i32 @llvm.fshl.i32(i32 -2, i32 -2, i32 %a)
ret i32 %1
}

declare i64 @llvm.fshl.i64(i64, i64, i64)

define i64 @rol_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: rol_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  sll a2, a0, a1
; RV64I-NEXT:  negw a1, a1
; RV64I-NEXT:  srl a0, a0, a1
; RV64I-NEXT:  or a0, a2, a0
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: rol_i64:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  rol a0, a0, a1
; RV64ZBB-ZBKB-NEXT:
ret
%or = tail call i64 @llvm.fshl.i64(i64 %a, i64 %a, i64 %b)
ret i64 %or
}

declare i32 @llvm.fshr.i32(i32, i32, i32)

define signext i32 @ror_i32(i32 signext %a, i32 signext %b) nounwind {

```

```

; RV64I-LABEL: ror_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  andi a2, a1, -1
; RV64I-NEXT:  srlw a1, a0, a1
; RV64I-NEXT:  negw a2, a2
; RV64I-NEXT:  sllw a0, a0, a2
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: ror_i32:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  rorw a0, a0, a1
; RV64ZBB-ZBKB-NEXT:  ret
%1 = tail call i32 @llvm.fshr.i32(i32 %a, i32 %a, i32 %b)
ret i32 %1
}

; Similar to ror_i32, but doesn't sign extend the result.
define void @ror_i32_nosext(i32 signext %a, i32 signext %b, ptr %x) nounwind {
; RV64I-LABEL: ror_i32_nosext:
; RV64I:    # %bb.0:
; RV64I-NEXT:  andi a3, a1, -1
; RV64I-NEXT:  srlw a1, a0, a1
; RV64I-NEXT:  negw a3, a3
; RV64I-NEXT:  sllw a0, a0, a3
; RV64I-NEXT:  or a0, a1, a0
; RV64I-NEXT:
sw a0, 0(a2)
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: ror_i32_nosext:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  rorw a0, a0, a1
; RV64ZBB-ZBKB-NEXT:  sw a0, 0(a2)
; RV64ZBB-ZBKB-NEXT:  ret
%1 = tail call i32 @llvm.fshr.i32(i32 %a, i32 %a, i32 %b)
store i32 %1, ptr %x
ret void
}

define signext i32 @ror_i32_neg_constant_rhs(i32 signext %a) nounwind {
; RV64I-LABEL: ror_i32_neg_constant_rhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  andi a1, a0, -1
; RV64I-NEXT:  li a2, -2
; RV64I-NEXT:  srlw a0, a2, a0
; RV64I-NEXT:  negw a1, a1
; RV64I-NEXT:  sllw a1, a2, a1

```

```

; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: ror_i32_neg_constant_rhs:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  li a1, -2
; RV64ZBB-ZBKB-NEXT:  rorw a0, a1, a0
; RV64ZBB-ZBKB-NEXT:  ret
%1 = tail call i32 @llvm.fshr.i32(i32 -2, i32 -2, i32 %a)
ret i32 %1
}

declare i64 @llvm.fshr.i64(i64, i64, i64)

define i64 @ror_i64(i64 %a, i64 %b) nounwind {
;
RV64I-LABEL: ror_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srl a2, a0, a1
; RV64I-NEXT:  negw a1, a1
; RV64I-NEXT:  sll a0, a0, a1
; RV64I-NEXT:  or a0, a2, a0
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: ror_i64:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  ror a0, a0, a1
; RV64ZBB-ZBKB-NEXT:  ret
%or = tail call i64 @llvm.fshr.i64(i64 %a, i64 %a, i64 %b)
ret i64 %or
}

define signext i32 @rori_i32_fshl(i32 signext %a) nounwind {
; RV64I-LABEL: rori_i32_fshl:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a1, a0, 1
; RV64I-NEXT:  sllw a0, a0, 31
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: rori_i32_fshl:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  roriw a0, a0, 1
; RV64ZBB-ZBKB-NEXT:  ret
%1 = tail call i32 @llvm.fshl.i32(i32 %a, i32 %a, i32 31)
ret i32 %1
}

```



```

; Similar to rori_i32_fshl, but doesn't sign extend the result.
define void @rori_i32_fshl_nosext(i32 signext %a, ptr %x) nounwind {
; RV64I-LABEL: rori_i32_fshl_nosext:
;
RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a2, a0, 1
; RV64I-NEXT:  slli a0, a0, 31
; RV64I-NEXT:  or a0, a0, a2
; RV64I-NEXT:  sw a0, 0(a1)
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: rori_i32_fshl_nosext:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  roriw a0, a0, 1
; RV64ZBB-ZBKB-NEXT:  sw a0, 0(a1)
; RV64ZBB-ZBKB-NEXT:  ret
%1 = tail call i32 @llvm.fshl.i32(i32 %a, i32 %a, i32 31)
store i32 %1, ptr %x
ret void
}

```

```

define signext i32 @rori_i32_fshr(i32 signext %a) nounwind {
; RV64I-LABEL: rori_i32_fshr:
; RV64I:    # %bb.0:
; RV64I-NEXT:  sllw a1, a0, 1
; RV64I-NEXT:  srlw a0, a0, 31
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: rori_i32_fshr:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  roriw a0, a0, 31
; RV64ZBB-ZBKB-NEXT:  ret
%1 = tail call i32 @llvm.fshr.i32(i32 %a, i32 %a, i32 31)
ret i32 %1
}

```

```

; Similar to rori_i32_fshr, but doesn't sign extend the result.
define void @rori_i32_fshr_nosext(i32
signext %a, ptr %x) nounwind {
; RV64I-LABEL: rori_i32_fshr_nosext:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a2, a0, 1
; RV64I-NEXT:  srlw a0, a0, 31
; RV64I-NEXT:  or a0, a0, a2
; RV64I-NEXT:  sw a0, 0(a1)
; RV64I-NEXT:  ret
;

```

```

; RV64ZBB-ZBKB-LABEL: rori_i32_fshr_nosext:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  roriw a0, a0, 31
; RV64ZBB-ZBKB-NEXT:  sw a0, 0(a1)
; RV64ZBB-ZBKB-NEXT:  ret
%1 = tail call i32 @llvm.fshr.i32(i32 %a, i32 %a, i32 31)
store i32 %1, ptr %x
ret void
}

```

```

; This test is similar to the type legalized version of the fshl/fshr tests, but
; instead of having the same input to both shifts it has different inputs. Make
; sure we don't match it as a roriw.
define signext i32 @not_ropi_i32(i32 signext %x, i32 signext %y) nounwind {
; CHECK-LABEL: not_ropi_i32:
; CHECK:    # %bb.0:
; CHECK-NEXT:  slliw a0, a0, 31
; CHECK-NEXT:  srliw a1, a1, 1
; CHECK-NEXT:  or a0, a0, a1
; CHECK-NEXT:  ret
%a = shl
i32 %x, 31
%b = lshr i32 %y, 1
%c = or i32 %a, %b
ret i32 %c
}

```

```

; This is similar to the type legalized roriw pattern, but the and mask is more
; than 32 bits so the lshr doesn't shift zeroes into the lower 32 bits. Make
; sure we don't match it to roriw.
define i64 @ropiw_bug(i64 %x) nounwind {
; CHECK-LABEL: ropiw_bug:
; CHECK:    # %bb.0:
; CHECK-NEXT:  slli a1, a0, 31
; CHECK-NEXT:  andi a2, a0, -2
; CHECK-NEXT:  srli a0, a0, 1
; CHECK-NEXT:  or a0, a1, a0
; CHECK-NEXT:  sext.w a0, a0
; CHECK-NEXT:  xor a0, a2, a0
; CHECK-NEXT:  ret
%a = shl i64 %x, 31
%b = and i64 %x, 18446744073709551614
%c = lshr i64 %b, 1
%d = or i64 %a, %c
%e = shl i64 %d, 32
%f = ashr i64 %e, 32
%g = xor i64 %b, %f ; to increase the use count on %b to disable SimplifyDemandedBits.
ret i64 %g

```

```

}

define i64 @rori_i64_fshl(i64 %a) nounwind {
; RV64I-LABEL: rori_i64_fshl:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srl  a1, a0, 1
; RV64I-NEXT:  slli a0, a0, 63
; RV64I-NEXT:
;   or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: rori_i64_fshl:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  rori a0, a0, 1
; RV64ZBB-ZBKB-NEXT:  ret
%1 = tail call i64 @llvm.fshl.i64(i64 %a, i64 %a, i64 63)
ret i64 %1
}

```

```

define i64 @rori_i64_fshr(i64 %a) nounwind {
; RV64I-LABEL: rori_i64_fshr:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a1, a0, 1
; RV64I-NEXT:  srl  a0, a0, 63
; RV64I-NEXT:  or  a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: rori_i64_fshr:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  rori a0, a0, 63
; RV64ZBB-ZBKB-NEXT:  ret
%1 = tail call i64 @llvm.fshr.i64(i64 %a, i64 %a, i64 63)
ret i64 %1
}

```

```

define signext i32 @not_shl_one_i32(i32 signext %x) {
; RV64I-LABEL: not_shl_one_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li  a1, 1
; RV64I-NEXT:  sllw a0, a1, a0
; RV64I-NEXT:  not a0, a0
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: not_shl_one_i32:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  li  a1,
-2
; RV64ZBB-ZBKB-NEXT:  rolw a0, a1, a0

```

```

; RV64ZBB-ZBKB-NEXT:  ret
%1 = shl i32 1, %x
%2 = xor i32 %1, -1
ret i32 %2
}

define i64 @not_shl_one_i64(i64 %x) {
; RV64I-LABEL: not_shl_one_i64:
; RV64I:      # %bb.0:
; RV64I-NEXT:  li a1, 1
; RV64I-NEXT:  sll a0, a1, a0
; RV64I-NEXT:  not a0, a0
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: not_shl_one_i64:
; RV64ZBB-ZBKB:  # %bb.0:
; RV64ZBB-ZBKB-NEXT:  li a1, -2
; RV64ZBB-ZBKB-NEXT:  rol a0, a1, a0
; RV64ZBB-ZBKB-NEXT:  ret
%1 = shl i64 1, %x
%2 = xor i64 %1, -1
ret i64 %2
}

define i8 @srli_i8(i8 %a) nounwind {
; CHECK-LABEL: srli_i8:
; CHECK:      # %bb.0:
; CHECK-NEXT:  slli a0, a0, 56
; CHECK-NEXT:  srli a0, a0, 62
; CHECK-NEXT:  ret
%1 = lshr i8 %a, 6
ret i8 %1
}

```

; We could use sext.b+srai, but slli+srai offers more opportunities for  
; compressed instructions.

```

define i8 @srai_i8(i8 %a) nounwind {
; RV64I-LABEL: srai_i8:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 24
; RV64I-NEXT:
    sraiw a0, a0, 29
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: srai_i8:
; RV64ZBB:    # %bb.0:
; RV64ZBB-NEXT:  slli a0, a0, 56
; RV64ZBB-NEXT:  srai a0, a0, 61

```

```

; RV64ZBB-NEXT:  ret
;
; RV64ZBKB-LABEL: srail8:
; RV64ZBKB:      # %bb.0:
; RV64ZBKB-NEXT:  slli a0, a0, 24
; RV64ZBKB-NEXT:  srailw a0, a0, 29
; RV64ZBKB-NEXT:  ret
%1 = ashr i8 %a, 5
ret i8 %1
}

```

; We could use zext.h+srli, but slli+srli offers more opportunities for  
; compressed instructions.

```

define i16 @srli_i16(i16 %a) nounwind {
; CHECK-LABEL: srli_i16:
; CHECK:      # %bb.0:
; CHECK-NEXT:  slli a0, a0, 48
; CHECK-NEXT:  srli a0, a0, 54
; CHECK-NEXT:  ret
%1 = lshr i16 %a, 6
ret i16 %1
}

```

; We could use sext.h+srai, but slli+srai offers more opportunities for  
; compressed instructions.

```

define i16 @srai_i16(i16 %a) nounwind {
; RV64I-LABEL: srai_i16:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 16
; RV64I-NEXT:  sraiw a0, a0, 25
; RV64I-NEXT:  ret
;
; RV64ZBB-LABEL: srail16:
;
; RV64ZBB:      # %bb.0:
; RV64ZBB-NEXT:  slli a0, a0, 48
; RV64ZBB-NEXT:  sraiw a0, a0, 57
; RV64ZBB-NEXT:  ret
;
; RV64ZBKB-LABEL: srail16:
; RV64ZBKB:      # %bb.0:
; RV64ZBKB-NEXT:  slli a0, a0, 16
; RV64ZBKB-NEXT:  sraiw a0, a0, 25
; RV64ZBKB-NEXT:  ret
%1 = ashr i16 %a, 9
ret i16 %1
}

```

```

define il @andn_seqz_i32(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: andn_seqz_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  seqz a0, a0
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: andn_seqz_i32:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  andn a0, a1, a0
; RV64ZBB-ZBKB-NEXT:  seqz a0, a0
; RV64ZBB-ZBKB-NEXT:  ret
%and = and i32 %a, %b
%cmpeq = icmp eq i32 %and, %b
ret il %cmpeq
}

```

```

define il @andn_seqz_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: andn_seqz_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  seqz a0, a0
; RV64I-NEXT:
ret
;
; RV64ZBB-ZBKB-LABEL: andn_seqz_i64:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  andn a0, a1, a0
; RV64ZBB-ZBKB-NEXT:  seqz a0, a0
; RV64ZBB-ZBKB-NEXT:  ret
%and = and i64 %a, %b
%cmpeq = icmp eq i64 %and, %b
ret il %cmpeq
}

```

```

define il @andn_snez_i32(i32 signext %a, i32 signext %b) nounwind {
; RV64I-LABEL: andn_snez_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  snez a0, a0
; RV64I-NEXT:  ret
;
; RV64ZBB-ZBKB-LABEL: andn_snez_i32:
; RV64ZBB-ZBKB:    # %bb.0:
; RV64ZBB-ZBKB-NEXT:  andn a0, a1, a0

```

```

; RV64ZBB-ZBKB-NEXT: snez a0, a0
; RV64ZBB-ZBKB-NEXT: ret
%and = and i32 %a, %b
%cmpeq = icmp ne i32 %and, %b
ret il %cmpeq
}

define i1 @andn_snez_i64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: andn_snez_i64:
; RV64I: # %bb.0:
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: xor a0, a0, a1
; RV64I-NEXT: snez a0, a0
; RV64I-NEXT: ret
;
; RV64ZBB-ZBKB-LABEL: andn_snez_i64:
;
RV64ZBB-ZBKB: # %bb.0:
; RV64ZBB-ZBKB-NEXT: andn a0, a1, a0
; RV64ZBB-ZBKB-NEXT: snez a0, a0
; RV64ZBB-ZBKB-NEXT: ret
%and = and i64 %a, %b
%cmpeq = icmp ne i64 %and, %b
ret il %cmpeq
}
; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc -mtriple=riscv64 -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck -check-prefix=RV64I %s
; RUN: llc -mtriple=riscv64 -mattr=+m -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck -check-prefix=RV64IM %s

define i32 @urem(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: urem:
; RV64I: # %bb.0:
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: slli a0, a0, 32
; RV64I-NEXT: srli a0, a0, 32
; RV64I-NEXT: slli a1, a1, 32
; RV64I-NEXT: srli a1, a1, 32
; RV64I-NEXT: call __umoddi3
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64IM-LABEL: urem:
; RV64IM: # %bb.0:
; RV64IM-NEXT: remuw a0, a0, a1

```

```

; RV64I-NEXT:  ret
%1 = urem i32 %a, %b
ret i32 %1
}

define i32 @urem_constant_lhs(i32 %a) nounwind {
;
RV64I-LABEL: urem_constant_lhs:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a1, a0, 32
; RV64I-NEXT:  li a0, 10
; RV64I-NEXT:  call __umoddi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: urem_constant_lhs:
; RV64IM:     # %bb.0:
; RV64IM-NEXT: li a1, 10
; RV64IM-NEXT: remuw a0, a1, a0
; RV64IM-NEXT: ret
%1 = urem i32 10, %a
ret i32 %1
}

define i32 @srem(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: srem:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  sext.w a0, a0
; RV64I-NEXT:  sext.w a1, a1
; RV64I-NEXT:  call __moddi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: srem:
; RV64IM:     # %bb.0:
; RV64IM-NEXT:
remw a0, a0, a1
; RV64IM-NEXT:  ret
%1 = srem i32 %a, %b
ret i32 %1
}

```



```

define i32 @srem_pow2(i32 %a) nounwind {
; RV64I-LABEL: srem_pow2:
; RV64I:    # %bb.0:
; RV64I-NEXT:  sraiw a1, a0, 31
; RV64I-NEXT:  srliw a1, a1, 29
; RV64I-NEXT:  add a1, a0, a1
; RV64I-NEXT:  andi a1, a1, -8
; RV64I-NEXT:  subw a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: srem_pow2:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  sraiw a1, a0, 31
; RV64IM-NEXT:  srliw a1, a1, 29
; RV64IM-NEXT:  add a1, a0, a1
; RV64IM-NEXT:  andi a1, a1, -8
; RV64IM-NEXT:  subw a0, a0, a1
; RV64IM-NEXT:  ret
%1 = srem i32 %a, 8
ret i32 %1
}

```

```

define i32 @srem_pow2_2(i32 %a) nounwind {
; RV64I-LABEL: srem_pow2_2:
; RV64I:    # %bb.0:
; RV64I-NEXT:  sraiw a1, a0, 31
; RV64I-NEXT:  srliw a1, a1, 16
; RV64I-NEXT:  add a1, a0, a1
; RV64I-NEXT:  lui a2, 1048560
; RV64I-NEXT:  and a1, a1, a2
; RV64I-NEXT:  subw a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: srem_pow2_2:
; RV64IM:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  sraiw a1, a0, 31
; RV64IM-NEXT:  srliw a1, a1, 16
; RV64IM-NEXT:  add a1, a0, a1
; RV64IM-NEXT:  lui a2, 1048560
; RV64IM-NEXT:  and a1, a1, a2
; RV64IM-NEXT:  subw a0, a0, a1
; RV64IM-NEXT:  ret
%1 = srem i32 %a, 65536
ret i32 %1
}

```

```

define i32 @srem_constant_lhs(i32 %a) nounwind {
; RV64I-LABEL: srem_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  sext.w a1, a0
; RV64I-NEXT:  li a0, -10
; RV64I-NEXT:  call __moddi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: srem_constant_lhs:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  li a1, -10
; RV64IM-NEXT:  remw a0, a1, a0
; RV64IM-NEXT:  ret
%1 = srem i32 -10, %a
ret i32 %1
}

```

```

define i64 @urem64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: urem64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  tail __umoddi3
;
; RV64IM-LABEL:
urem64:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  remu a0, a0, a1
; RV64IM-NEXT:  ret
%1 = urem i64 %a, %b
ret i64 %1
}

```

```

define i64 @urem64_constant_lhs(i64 %a) nounwind {
; RV64I-LABEL: urem64_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  mv a1, a0
; RV64I-NEXT:  li a0, 10
; RV64I-NEXT:  tail __umoddi3
;
; RV64IM-LABEL: urem64_constant_lhs:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  li a1, 10
; RV64IM-NEXT:  remu a0, a1, a0
; RV64IM-NEXT:  ret
%1 = urem i64 10, %a

```

```

ret i64 %1
}

define i64 @srem64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: srem64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  tail __moddi3
;
; RV64IM-LABEL: srem64:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  rem a0, a0, a1
; RV64IM-NEXT:  ret
%1 = srem i64 %a, %b
ret i64 %1
}

define i64 @srem64_constant_lhs(i64 %a) nounwind {
; RV64I-LABEL: srem64_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  mv a1, a0
; RV64I-NEXT:  li a0, -10
; RV64I-NEXT:  tail __moddi3
;
; RV64IM-LABEL: srem64_constant_lhs:
;
RV64IM:    # %bb.0:
; RV64IM-NEXT:  li a1, -10
; RV64IM-NEXT:  rem a0, a1, a0
; RV64IM-NEXT:  ret
%1 = srem i64 -10, %a
ret i64 %1
}

define i8 @urem8(i8 %a, i8 %b) nounwind {
; RV64I-LABEL: urem8:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  andi a0, a0, 255
; RV64I-NEXT:  andi a1, a1, 255
; RV64I-NEXT:  call __umoddi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: urem8:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  andi a1, a1, 255

```

```

; RV64IM-NEXT: andi a0, a0, 255
; RV64IM-NEXT: remuw a0, a0, a1
; RV64IM-NEXT: ret
%1 = urem i8 %a, %b
ret i8 %1
}

define i8 @urem8_constant_lhs(i8 %a) nounwind {
; RV64I-LABEL: urem8_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: andi a1, a0, 255
; RV64I-NEXT:
    li a0, 10
; RV64I-NEXT: call __umoddi3
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64IM-LABEL: urem8_constant_lhs:
; RV64IM:    # %bb.0:
; RV64IM-NEXT: andi a0, a0, 255
; RV64IM-NEXT: li a1, 10
; RV64IM-NEXT: remuw a0, a1, a0
; RV64IM-NEXT: ret
%1 = urem i8 10, %a
ret i8 %1
}

```

```

define i8 @srem8(i8 %a, i8 %b) nounwind {
; RV64I-LABEL: srem8:
; RV64I:    # %bb.0:
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: slli a1, a1, 24
; RV64I-NEXT: sraiw a1, a1, 24
; RV64I-NEXT: slli a0, a0, 24
; RV64I-NEXT: sraiw a0, a0, 24
; RV64I-NEXT: call __moddi3
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64IM-LABEL: srem8:
; RV64IM:    # %bb.0:
; RV64IM-NEXT: slli a1, a1, 24

```

```

; RV64IM-NEXT:  sraiw a1, a1, 24
; RV64IM-NEXT:  slli a0, a0, 24
; RV64IM-NEXT:  sraiw
a0, a0, 24
; RV64IM-NEXT:  remw a0, a0, a1
; RV64IM-NEXT:  ret
%1 = srem i8 %a, %b
ret i8 %1
}

define i8 @srem8_constant_lhs(i8 %a) nounwind {
; RV64I-LABEL: srem8_constant_lhs:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a0, a0, 24
; RV64I-NEXT:  sraiw a1, a0, 24
; RV64I-NEXT:  li a0, -10
; RV64I-NEXT:  call __moddi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: srem8_constant_lhs:
; RV64IM:     # %bb.0:
; RV64IM-NEXT:  slli a0, a0, 24
; RV64IM-NEXT:  sraiw a0, a0, 24
; RV64IM-NEXT:  li a1, -10
; RV64IM-NEXT:  remw a0, a1, a0
; RV64IM-NEXT:  ret
%1 = srem i8 -10, %a
ret i8 %1
}

define i16 @urem16(i16 %a, i16 %b) nounwind {
; RV64I-LABEL: urem16:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  lui a2, 16
; RV64I-NEXT:
    addiw a2, a2, -1
; RV64I-NEXT:  and a0, a0, a2
; RV64I-NEXT:  and a1, a1, a2
; RV64I-NEXT:  call __umoddi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16

```

```

; RV64I-NEXT:  ret
;
; RV64IM-LABEL: urem16:
; RV64IM:      # %bb.0:
; RV64IM-NEXT:  lui a2, 16
; RV64IM-NEXT:  addi a2, a2, -1
; RV64IM-NEXT:  and a1, a1, a2
; RV64IM-NEXT:  and a0, a0, a2
; RV64IM-NEXT:  remuw a0, a0, a1
; RV64IM-NEXT:  ret
%1 = urem i16 %a, %b
ret i16 %1
}

define i16 @urem16_constant_lhs(i16 %a) nounwind {
; RV64I-LABEL: urem16_constant_lhs:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a0, a0, 48
; RV64I-NEXT:  srli a1, a0, 48
; RV64I-NEXT:  li a0, 10
; RV64I-NEXT:  call __umoddi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: urem16_constant_lhs:
; RV64IM:      # %bb.0:
;
RV64IM-NEXT:  slli a0, a0, 48
; RV64IM-NEXT:  srli a0, a0, 48
; RV64IM-NEXT:  li a1, 10
; RV64IM-NEXT:  remuw a0, a1, a0
; RV64IM-NEXT:  ret
%1 = urem i16 10, %a
ret i16 %1
}

define i16 @srem16(i16 %a, i16 %b) nounwind {
; RV64I-LABEL: srem16:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a1, a1, 16
; RV64I-NEXT:  sraiw a1, a1, 16
; RV64I-NEXT:  slli a0, a0, 16
; RV64I-NEXT:  sraiw a0, a0, 16

```

```

; RV64I-NEXT:  call __moddi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: srem16:
; RV64IM:      # %bb.0:
; RV64IM-NEXT:  slli a1, a1, 16
; RV64IM-NEXT:  sraiw a1, a1, 16
; RV64IM-NEXT:  slli a0, a0, 16
; RV64IM-NEXT:  sraiw a0, a0, 16
; RV64IM-NEXT:  remw a0, a0, a1
; RV64IM-NEXT:  ret
%1 = srem i16 %a, %b
ret i16 %1
}

define i16 @srem16_constant_lhs(i16 %a) nounwind {
; RV64I-LABEL: srem16_constant_lhs:
;
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a0, a0, 16
; RV64I-NEXT:  sraiw a1, a0, 16
; RV64I-NEXT:  li a0, -10
; RV64I-NEXT:  call __moddi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: srem16_constant_lhs:
; RV64IM:      # %bb.0:
; RV64IM-NEXT:  slli a0, a0, 16
; RV64IM-NEXT:  sraiw a0, a0, 16
; RV64IM-NEXT:  li a1, -10
; RV64IM-NEXT:  remw a0, a1, a0
; RV64IM-NEXT:  ret
%1 = srem i16 -10, %a
ret i16 %1
}

; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc -mtriple=aarch64-apple-ios %s -o - | FileCheck %s

define <16 x double> @test_sitofp_fixed(<16 x i32> %in) {
; CHECK-LABEL: test_sitofp_fixed:
; CHECK:      ; %bb.0:
; CHECK-NEXT:  sshll2.2d v4, v0, #0

```

```

; CHECK-NEXT:  sshll.2d v0, v0, #0
; CHECK-NEXT:  sshll.2d v5, v1, #0
; CHECK-NEXT:  sshll.2d v6, v1, #0
; CHECK-NEXT:  sshll.2d v7, v2, #0
; CHECK-NEXT:  sshll.2d v16, v2, #0
; CHECK-NEXT:  sshll.2d v17, v3, #0
; CHECK-NEXT:  sshll.2d v18, v3, #0
; CHECK-NEXT:  scvtf.2d v1, v4, #6
; CHECK-NEXT:  scvtf.2d v0, v0, #6
; CHECK-NEXT:  scvtf.2d v3, v5, #6
; CHECK-NEXT:  scvtf.2d v2, v6, #6
; CHECK-NEXT:  scvtf.2d v4, v7, #6
; CHECK-NEXT:  scvtf.2d v5, v16, #6
; CHECK-NEXT:  scvtf.2d v7, v17, #6
; CHECK-NEXT:  scvtf.2d v6, v18, #6
; CHECK-NEXT:  ret

```

```

%flt = sitofp <16 x i32> %in to <16 x double>
%res = fdiv <16 x double> %flt, <double 64.0, double 64.0, double 64.0,
double 64.0, double 64.0, double 64.0, double 64.0, double 64.0, double
64.0, double 64.0, double 64.0, double 64.0, double 64.0>
ret <16 x double> %res
}

```

; This one is small enough to satisfy isSimple, but still illegally large.

```

define <4 x double> @test_sitofp_fixed_shortish(<4 x i64> %in) {
; CHECK-LABEL: test_sitofp_fixed_shortish:
; CHECK:      ; %bb.0:
; CHECK-NEXT:  scvtf.2d v0, v0, #6
; CHECK-NEXT:  scvtf.2d v1, v1, #6
; CHECK-NEXT:  ret

```

```

%flt = sitofp <4 x i64> %in to <4 x double>
%res = fdiv <4 x double> %flt, <double 64.0, double 64.0, double 64.0, double 64.0>
ret <4 x double> %res
}

```

; NOTE: Assertions have been autogenerated by utils/update\_llc\_test\_checks.py

; RUN: llc -mtriple=riscv64 -verify-machineinstrs < %s \

; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefix=RV64I

; These tests are each targeted at a particular RISC-V ALU instruction. Most  
; other files in this folder exercise LLVM IR instructions that don't directly  
; match a RISC-V instruction.

; Register-immediate instructions.

```

define i32 @addi(i32 %a) nounwind {

```



```

; RV64I-LABEL: addi:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addiw a0, a0, 1
; RV64I-NEXT:  ret
%1 = add i32 %a, 1
ret i32 %1
}

define i32 @slti(i32 %a) nounwind {
; RV64I-LABEL: slti:
; RV64I:    # %bb.0:
; RV64I-NEXT:  sext.w a0, a0
; RV64I-NEXT:  slti a0, a0, 2
; RV64I-NEXT:  ret
%1 = icmp slt i32 %a, 2
%2 = zext i1 %1 to i32
ret i32 %2
}

define i32 @sltiu(i32 %a) nounwind {
; RV64I-LABEL: sltiu:
; RV64I:    # %bb.0:
; RV64I-NEXT:  sext.w a0, a0
; RV64I-NEXT:  sltiu a0, a0, 3
; RV64I-NEXT:
    ret
%1 = icmp ult i32 %a, 3
%2 = zext i1 %1 to i32
ret i32 %2
}

define i32 @xori(i32 %a) nounwind {
; RV64I-LABEL: xori:
; RV64I:    # %bb.0:
; RV64I-NEXT:  xori a0, a0, 4
; RV64I-NEXT:  ret
%1 = xor i32 %a, 4
ret i32 %1
}

define i32 @ori(i32 %a) nounwind {
; RV64I-LABEL: ori:
; RV64I:    # %bb.0:
; RV64I-NEXT:  ori a0, a0, 5
; RV64I-NEXT:  ret
%1 = or i32 %a, 5
ret i32 %1
}

```

```

define i32 @andi(i32 %a) nounwind {
; RV64I-LABEL: andi:
; RV64I:    # %bb.0:
; RV64I-NEXT:  andi a0, a0, 6
; RV64I-NEXT:  ret
%1 = and i32 %a, 6
ret i32 %1
}

```

```

define i32 @slli(i32 %a) nounwind {
; RV64I-LABEL: slli:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slliw a0, a0, 7
; RV64I-NEXT:  ret
%1 = shl i32 %a, 7
ret i32 %1
}

```

```

define i32 @srli(i32 %a) nounwind {
; RV64I-LABEL: srli:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srliw a0, a0, 8
; RV64I-NEXT:  ret
%1 = lshr i32 %a, 8
ret i32 %1
}

```

```

define i32 @srai(i32 %a) nounwind {
; RV64I-LABEL: srai:
; RV64I:
# %bb.0:
; RV64I-NEXT:  sraiw a0, a0, 9
; RV64I-NEXT:  ret
%1 = ashr i32 %a, 9
ret i32 %1
}

```

```

; Register-register instructions

```

```

define i32 @add(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: add:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addw a0, a0, a1
; RV64I-NEXT:  ret
%1 = add i32 %a, %b
ret i32 %1
}

```

```

define i32 @sub(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: sub:
; RV64I:    # %bb.0:
; RV64I-NEXT:  subw a0, a0, a1
; RV64I-NEXT:  ret
%1 = sub i32 %a, %b
ret i32 %1
}

```

```

define i32 @sub_negative_constant_lhs(i32 %a) nounwind {
; RV64I-LABEL: sub_negative_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, -2
; RV64I-NEXT:  subw a0, a1, a0
; RV64I-NEXT:  ret
%1 = sub i32 -2, %a
ret i32 %1
}

```

```

define i32 @sll(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: sll:
; RV64I:    # %bb.0:
; RV64I-NEXT:  sllw a0, a0, a1
; RV64I-NEXT:  ret
%1 = shl i32 %a, %b
ret i32 %1
}

```

; Make sure we don't emit instructions to zero extend the shift amount to i64.

```

define
i32 @sll_shamt_zext(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: sll_shamt_zext:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi a1, a1, 1
; RV64I-NEXT:  sllw a0, a0, a1
; RV64I-NEXT:  ret
%shamt = add i32 %b, 1
%1 = shl i32 %a, %shamt
ret i32 %1
}

```

```

define i32 @sll_negative_constant_lhs(i32 %a) nounwind {
; RV64I-LABEL: sll_negative_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, -1
; RV64I-NEXT:  sllw a0, a1, a0
; RV64I-NEXT:  ret

```

```

%1 = shl i32 -1, %a
ret i32 %1
}

define i32 @slt(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: slt:
; RV64I:    # %bb.0:
; RV64I-NEXT:  sext.w a1, a1
; RV64I-NEXT:  sext.w a0, a0
; RV64I-NEXT:  slt a0, a0, a1
; RV64I-NEXT:  ret
%1 = icmp slt i32 %a, %b
%2 = zext i1 %1 to i32
ret i32 %2
}

define i32 @sltu(i32 %a, i32 %b) nounwind {
;
; RV64I-LABEL: sltu:
; RV64I:    # %bb.0:
; RV64I-NEXT:  sext.w a1, a1
; RV64I-NEXT:  sext.w a0, a0
; RV64I-NEXT:  sltu a0, a0, a1
; RV64I-NEXT:  ret
%1 = icmp ult i32 %a,
%b
%2 = zext i1 %1 to i32
ret i32 %2
}

define i32 @xor(i32 %a, i32 %b) nounwind {
;
; RV64I-LABEL: xor:
; RV64I:    # %bb.0:
; RV64I-NEXT:  xor a0, a0, a1
; RV64I-NEXT:  ret
%1 = xor i32 %a, %b
ret i32 %1
}

define i32 @srl(i32 %a, i32 %b) nounwind {
;
; RV64I-LABEL: srl:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a0, a0, a1
; RV64I-NEXT:  ret
%1 = lshr i32 %a, %b
ret i32 %1
}

```

```

}

; Make sure we don't emit instructions to zero extend the shift amount to i64.
define i32 @srl_shamt_zext(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: srl_shamt_zext:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi a1, a1, 1
; RV64I-NEXT:  srlw a0, a0, a1
; RV64I-NEXT:  ret
%shamt = add i32 %b, 1
%1 = lshr i32 %a, %shamt
ret i32 %1
}

define i32 @srl_negative_constant_lhs(i32 %a) nounwind {
;
; RV64I-LABEL: srl_negative_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, -1
; RV64I-NEXT:  srlw a0, a1, a0
; RV64I-NEXT:  ret
%1 = lshr i32 -1, %a
ret i32 %1
}

define
i32 @sra(i32 %a, i32 %b) nounwind {
;
; RV64I-LABEL: sra:
; RV64I:    # %bb.0:
; RV64I-NEXT:  saw a0, a0, a1
; RV64I-NEXT:  ret
%1 = ashr i32 %a, %b
ret i32 %1
}

; Make sure we don't emit instructions to zero extend the shift amount to i64.
define i32 @sra_shamt_zext(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: sra_shamt_zext:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi a1, a1, 1
; RV64I-NEXT:  saw a0, a0, a1
; RV64I-NEXT:  ret
%shamt = add i32 %b, 1
%1 = ashr i32 %a, %shamt
ret i32 %1
}

```

```

define i32 @sra_negative_constant_lhs(i32 %a) nounwind {
;
; RV64I-LABEL: sra_negative_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a1, 524288
; RV64I-NEXT:  sraw a0, a1, a0
; RV64I-NEXT:  ret
%1 = ashr i32 2147483648, %a
ret i32 %1
}

```

```

define i32 @or(i32 %a, i32 %b) nounwind {
;
; RV64I-LABEL: or:
; RV64I:    # %bb.0:
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
%1 = or i32 %a, %b
ret i32 %1
}

```

```

define i32 @and(i32 %a, i32 %b) nounwind {
;
; RV64I-LABEL:
and:
; RV64I:    # %bb.0:
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  ret
%1 = and i32 %a, %b
ret i32 %1
}

```

; NOTE: Assertions have been autogenerated by utils/update\_test\_checks.py UTC\_ARGS: --include-generated-funcs

; RUN: opt -S -passes=verify,iroutliner -ir-outlining-no-cost < %s | FileCheck %s

; This test checks that we do outline indirect calls when it is not specified

; that we should not.

```
declare void @f1(ptr, ptr);
```

```
declare void @f2(ptr, ptr);
```

```
define void @function1(ptr %func) {
```

```
entry:
```

```
%a = alloca i32, align 4
```

```
%b = alloca i32, align 4
```

```
%c = alloca i32, align 4
```

```
store i32 2, ptr %a, align 4
```

```
store i32 3, ptr %b, align 4
```

```

store i32 4, ptr %c, align 4
call void %func()
%al = load i32, ptr %a
%bl = load i32, ptr %b
%cl = load i32, ptr %c
ret void
}

define void @function2(ptr %func) {
entry:
%a = alloca i32, align 4
%b = alloca i32, align 4
%c = alloca i32, align 4
store i32 2, ptr %a, align 4
store i32 3, ptr %b, align 4
store i32 4, ptr %c, align 4
call void %func()
%al = load i32, ptr %a
%bl = load i32, ptr %b
%cl = load i32, ptr %c
ret void
}
;
CHECK-LABEL: @function1(
; CHECK-NEXT: entry:
; CHECK-NEXT: [[A:%.*]] = alloca i32, align 4
; CHECK-NEXT: [[B:%.*]] = alloca i32, align 4
; CHECK-NEXT: [[C:%.*]] = alloca i32, align 4
; CHECK-NEXT: call void @outlined_ir_func_0(ptr [[A]], ptr [[B]], ptr [[C]], ptr [[FUNC:%.*]])
; CHECK-NEXT: ret void
;
;
; CHECK-LABEL: @function2(
; CHECK-NEXT: entry:
; CHECK-NEXT: [[A:%.*]] = alloca i32, align 4
; CHECK-NEXT: [[B:%.*]] = alloca i32, align 4
; CHECK-NEXT: [[C:%.*]] = alloca i32, align 4
; CHECK-NEXT: call void @outlined_ir_func_0(ptr [[A]], ptr [[B]], ptr [[C]], ptr [[FUNC:%.*]])
; CHECK-NEXT: ret void
;
;
; CHECK-LABEL: define internal void @outlined_ir_func_0(
; CHECK-NEXT: newFuncRoot:
; CHECK-NEXT: br label [[ENTRY_TO_OUTLINE:%.*]]
; CHECK: entry_to_outline:
; CHECK-NEXT: store i32 2, ptr [[TMP0:%.*]], align 4
; CHECK-NEXT: store i32 3, ptr [[TMP1:%.*]], align 4
; CHECK-NEXT: store i32 4, ptr [[TMP2:%.*]], align 4

```

```

; CHECK-NEXT:
    call void [[TMP3:%.*]]()
; CHECK-NEXT:  [[AL:%.*]] = load i32, ptr [[TMP0]], align 4
; CHECK-NEXT:  [[BL:%.*]] = load i32, ptr [[TMP1]], align 4
; CHECK-NEXT:  [[CL:%.*]] = load i32, ptr [[TMP2]], align 4
; CHECK-NEXT:  br label [[ENTRY_AFTER_OUTLINE_EXITSTUB:%.*]]
; CHECK:      entry_after_outline.exitStub:
; CHECK-NEXT:  ret void
;
; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc -mtriple=riscv64 -verify-machineinstrs < %s \
; RUN:  -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefix=RV64I
; RUN: llc -mtriple=riscv64 -mattr=+xtheadbb -verify-machineinstrs < %s \
; RUN:  -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefix=RV64XTHEADBB

```

```

declare i32 @llvmctlz.i32(i32, i1)

```

```

define signext i32 @ctlz_i32(i32 signext %a) nounwind {
; RV64I-LABEL: ctlz_i32:
; RV64I:      # %bb.0:
; RV64I-NEXT:  beqz a0, .LBB0_2
; RV64I-NEXT:  # %bb.1: # %cond.false
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  srlw a1, a0, 1
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  srlw a1, a0, 2
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  srlw a1, a0, 4
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  srlw a1, a0, 8
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  srlw a1, a0, 16
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:
    not a0, a0
; RV64I-NEXT:  srlw a1, a0, 1
; RV64I-NEXT:  lui a2, 349525
; RV64I-NEXT:  addi a2, a2, 1365
; RV64I-NEXT:  and a1, a1, a2
; RV64I-NEXT:  subw a0, a0, a1
; RV64I-NEXT:  lui a1, 209715
; RV64I-NEXT:  addi a1, a1, 819
; RV64I-NEXT:  and a2, a0, a1
; RV64I-NEXT:  srlw a0, a0, 2
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  add a0, a2, a0
; RV64I-NEXT:  srlw a1, a0, 4

```



```

; RV64I-NEXT: addw a0, a0, a1
; RV64I-NEXT: lui a1, 61681
; RV64I-NEXT: addiw a1, a1, -241
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, 4112
; RV64I-NEXT: addiw a1, a1, 257
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: sriw a0, a0, 24
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
; RV64I-NEXT: .LBB0_2:
; RV64I-NEXT: li a0, 32
; RV64I-NEXT: ret
;
; RV64XTHEADBB-LABEL: ctlz_i32:
; RV64XTHEADBB:    # %bb.0:
; RV64XTHEADBB-NEXT: th.extu a0, a0, 31, 0
; RV64XTHEADBB-NEXT: th.ff1 a0,
a0
; RV64XTHEADBB-NEXT: addi a0, a0, -32
; RV64XTHEADBB-NEXT: ret
%1 = call i32 @llvm.ctlz.i32(i32 %a, i1 false)
ret i32 %1
}

define signext i32 @log2_i32(i32 signext %a) nounwind {
; RV64I-LABEL: log2_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT: beqz a0, .LBB1_2
; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: sriw a1, a0, 1
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: sriw a1, a0, 2
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: sriw a1, a0, 4
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: sriw a1, a0, 8
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: sriw a1, a0, 16
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: not a0, a0
; RV64I-NEXT: sriw a1, a0, 1
; RV64I-NEXT: lui a2, 349525
; RV64I-NEXT: addi a2, a2, 1365
; RV64I-NEXT: and a1, a1, a2

```

```

; RV64I-NEXT: subw a0, a0, a1
; RV64I-NEXT: lui a1, 209715
; RV64I-NEXT: addi a1, a1, 819
; RV64I-NEXT:
and a2, a0, a1
; RV64I-NEXT: srlw a0, a0, 2
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: add a0, a2, a0
; RV64I-NEXT: srlw a1, a0, 4
; RV64I-NEXT: addw a0, a0, a1
; RV64I-NEXT: lui a1, 61681
; RV64I-NEXT: addiw a1, a1, -241
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, 4112
; RV64I-NEXT: addiw a1, a1, 257
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srlw a0, a0, 24
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: j .LBB1_3
; RV64I-NEXT: .LBB1_2:
; RV64I-NEXT: li a0, 32
; RV64I-NEXT: .LBB1_3: # %cond.end
; RV64I-NEXT: li a1, 31
; RV64I-NEXT: subw a0, a1, a0
; RV64I-NEXT: ret
;
; RV64XTHEADBB-LABEL: log2_i32:
; RV64XTHEADBB: # %bb.0:
; RV64XTHEADBB-NEXT: th.extu a0, a0, 31, 0
; RV64XTHEADBB-NEXT: th.ff1 a0, a0
; RV64XTHEADBB-NEXT: addi a0, a0, -32
; RV64XTHEADBB-NEXT: li a1, 31
; RV64XTHEADBB-NEXT: subw a0, a1, a0
; RV64XTHEADBB-NEXT: ret
%1 = call i32 @llvm.ctlz.i32(i32
%a, i1 false)
%2 = sub i32 31, %1
ret i32 %2
}

define signext i32 @log2_ceil_i32(i32 signext %a) nounwind {
; RV64I-LABEL: log2_ceil_i32:
; RV64I: # %bb.0:
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: sd s0, 0(sp) # 8-byte Folded Spill
; RV64I-NEXT: addiw a0, a0, -1

```

```

; RV64I-NEXT: li s0, 32
; RV64I-NEXT: li a1, 32
; RV64I-NEXT: beqz a0, .LBB2_2
; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT: srlw a1, a0, 1
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 2
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 4
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 8
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 16
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: not a0, a0
; RV64I-NEXT: srlw a1, a0, 1
; RV64I-NEXT: lui a2, 349525
; RV64I-NEXT: addi a2, a2, 1365
; RV64I-NEXT: and a1, a1, a2
; RV64I-NEXT: subw a0, a0, a1
; RV64I-NEXT:
    lui a1, 209715
; RV64I-NEXT: addi a1, a1, 819
; RV64I-NEXT: and a2, a0, a1
; RV64I-NEXT: srlw a0, a0, 2
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: add a0, a2, a0
; RV64I-NEXT: srlw a1, a0, 4
; RV64I-NEXT: addw a0, a0, a1
; RV64I-NEXT: lui a1, 61681
; RV64I-NEXT: addiw a1, a1, -241
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, 4112
; RV64I-NEXT: addiw a1, a1, 257
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srlw a1, a0, 24
; RV64I-NEXT: .LBB2_2: # %cond.end
; RV64I-NEXT: subw a0, s0, a1
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: ld s0, 0(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64XTHEADBB-LABEL: log2_ceil_i32:
; RV64XTHEADBB:    # %bb.0:
; RV64XTHEADBB-NEXT: addi a0, a0, -1
; RV64XTHEADBB-NEXT: slli a0, a0, 32
; RV64XTHEADBB-NEXT: srli a0, a0, 32

```

```

; RV64XTHEADBB-NEXT: th.ffl a0, a0
; RV64XTHEADBB-NEXT: addi a0, a0, -32
; RV64XTHEADBB-NEXT:
    li a1, 32
; RV64XTHEADBB-NEXT: subw a0, a1, a0
; RV64XTHEADBB-NEXT: ret
%1 = sub i32 %a, 1
%2 = call i32 @llvmctlz.i32(i32 %1, i1 false)
%3 = sub i32 32, %2
ret i32 %3
}

```

```

define signext i32 @findLastSet_i32(i32 signext %a) nounwind {

```

```

; RV64I-LABEL: findLastSet_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  sd s0, 0(sp) # 8-byte Folded Spill
; RV64I-NEXT:  mv s0, a0
; RV64I-NEXT:  srlw a0, a0, 1
; RV64I-NEXT:  or a0, s0, a0
; RV64I-NEXT:  srlw a1, a0, 2
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  srlw a1, a0, 4
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  srlw a1, a0, 8
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  srlw a1, a0, 16
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  not a0, a0
; RV64I-NEXT:  srlw a1, a0, 1
; RV64I-NEXT:  lui a2, 349525
; RV64I-NEXT:  addi a2, a2, 1365
; RV64I-NEXT:  and a1, a1, a2
; RV64I-NEXT:  subw a0, a0, a1
; RV64I-NEXT:
    lui a1, 209715
; RV64I-NEXT:  addi a1, a1, 819
; RV64I-NEXT:  and a2, a0, a1
; RV64I-NEXT:  srlw a0, a0, 2
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  add a0, a2, a0
; RV64I-NEXT:  srlw a1, a0, 4
; RV64I-NEXT:  addw a0, a0, a1
; RV64I-NEXT:  lui a1, 61681
; RV64I-NEXT:  addiw a1, a1, -241
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  lui a1, 4112

```

```

; RV64I-NEXT: addiw a1, a1, 257
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srlw a0, a0, 24
; RV64I-NEXT: xori a0, a0, 31
; RV64I-NEXT: snez a1, s0
; RV64I-NEXT: addiw a1, a1, -1
; RV64I-NEXT: or a0, a1, a0
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: ld s0, 0(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64XTHEADBB-LABEL: findLastSet_i32:
; RV64XTHEADBB:    # %bb.0:
; RV64XTHEADBB-NEXT: th.extu a1, a0, 31, 0
; RV64XTHEADBB-NEXT: th.ff1 a1, a1
; RV64XTHEADBB-NEXT: addiw a1, a1, -32
; RV64XTHEADBB-NEXT: xori a1, a1,
31
; RV64XTHEADBB-NEXT: snez a0, a0
; RV64XTHEADBB-NEXT: addiw a0, a0, -1
; RV64XTHEADBB-NEXT: or a0, a0, a1
; RV64XTHEADBB-NEXT: ret
%1 = call i32 @llvm.ctlz.i32(i32 %a, i1 true)
%2 = xor i32 31, %1
%3 = icmp eq i32 %a, 0
%4 = select i1 %3, i32 -1, i32 %2
ret i32 %4
}

define i32 @ctlz_lshr_i32(i32 signext %a) {
; RV64I-LABEL: ctlz_lshr_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT: srlw a0, a0, 1
; RV64I-NEXT: beqz a0, .LBB4_2
; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: .cfi_def_cfa_offset 16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: .cfi_offset ra, -8
; RV64I-NEXT: srlw a1, a0, 1
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 2
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 4
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srlw a1, a0, 8
; RV64I-NEXT: or a0, a0, a1

```

```

; RV64I-NEXT: srlw a1, a0, 16
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: not
a0, a0
; RV64I-NEXT: srlw a1, a0, 1
; RV64I-NEXT: lui a2, 349525
; RV64I-NEXT: addi a2, a2, 1365
; RV64I-NEXT: and a1, a1, a2
; RV64I-NEXT: subw a0, a0, a1
; RV64I-NEXT: lui a1, 209715
; RV64I-NEXT: addi a1, a1, 819
; RV64I-NEXT: and a2, a0, a1
; RV64I-NEXT: srlw a0, a0, 2
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: add a0, a2, a0
; RV64I-NEXT: srlw a1, a0, 4
; RV64I-NEXT: addw a0, a0, a1
; RV64I-NEXT: lui a1, 61681
; RV64I-NEXT: addiw a1, a1, -241
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, 4112
; RV64I-NEXT: addiw a1, a1, 257
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srlw a0, a0, 24
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
; RV64I-NEXT: .LBB4_2:
; RV64I-NEXT: li a0, 32
; RV64I-NEXT: ret
;
; RV64XTHEADBB-LABEL: ctlz_lshr_i32:
; RV64XTHEADBB: # %bb.0:
; RV64XTHEADBB-NEXT: srlw a0, a0, 1
; RV64XTHEADBB-NEXT: th.ff1 a0, a0
; RV64XTHEADBB-NEXT:
addi a0, a0, -32
; RV64XTHEADBB-NEXT: ret
%1 = lshr i32 %a, 1
%2 = call i32 @llvm.ctlz.i32(i32 %1, i1 false)
ret i32 %2
}

declare i64 @llvm.ctlz.i64(i64, i1)

define i64 @ctlz_i64(i64 %a) nounwind {
; RV64I-LABEL: ctlz_i64:
; RV64I: # %bb.0:

```

```

; RV64I-NEXT: beqz a0, .LBB5_2
; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: srli a1, a0, 1
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srli a1, a0, 2
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srli a1, a0, 4
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srli a1, a0, 8
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srli a1, a0, 16
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: srli a1, a0, 32
; RV64I-NEXT: or a0, a0, a1
; RV64I-NEXT: not a0, a0
; RV64I-NEXT: srli a1, a0, 1
; RV64I-NEXT: lui a2, 349525
; RV64I-NEXT: addiw a2, a2, 1365
; RV64I-NEXT: slli a3, a2, 32
; RV64I-NEXT: add a2, a2,
a3
; RV64I-NEXT: and a1, a1, a2
; RV64I-NEXT: sub a0, a0, a1
; RV64I-NEXT: lui a1, 209715
; RV64I-NEXT: addiw a1, a1, 819
; RV64I-NEXT: slli a2, a1, 32
; RV64I-NEXT: add a1, a1, a2
; RV64I-NEXT: and a2, a0, a1
; RV64I-NEXT: srli a0, a0, 2
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: add a0, a2, a0
; RV64I-NEXT: srli a1, a0, 4
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: lui a1, 61681
; RV64I-NEXT: addiw a1, a1, -241
; RV64I-NEXT: slli a2, a1, 32
; RV64I-NEXT: add a1, a1, a2
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, 4112
; RV64I-NEXT: addiw a1, a1, 257
; RV64I-NEXT: slli a2, a1, 32
; RV64I-NEXT: add a1, a1, a2
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srli a0, a0, 56
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16

```

```

; RV64I-NEXT:  ret
; RV64I-NEXT:  .LBB5_2:
; RV64I-NEXT:  li a0, 64
; RV64I-NEXT:  ret
;
; RV64XTHEADBB-LABEL: ctlz_i64:
; RV64XTHEADBB:      # %bb.0:
; RV64XTHEADBB-NEXT:
    th.ffl a0, a0
; RV64XTHEADBB-NEXT:  ret
%1 = call i64 @llvm.ctlz.i64(i64 %a, i1 false)
ret i64 %1
}

declare i32 @llvm.cttz.i32(i32, i1)

define signext i32 @cttz_i32(i32 signext %a) nounwind {
; RV64I-LABEL: cttz_i32:
; RV64I:      # %bb.0:
; RV64I-NEXT:  beqz a0, .LBB6_2
; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  negw a1, a0
; RV64I-NEXT:  and a0, a0, a1
; RV64I-NEXT:  lui a1, 30667
; RV64I-NEXT:  addiw a1, a1, 1329
; RV64I-NEXT:  call __muldi3
; RV64I-NEXT:  srlw a0, a0, 27
; RV64I-NEXT:  lui a1, %hi(.LCPI6_0)
; RV64I-NEXT:  addi a1, a1, %lo(.LCPI6_0)
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  lbu a0, 0(a0)
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
; RV64I-NEXT: .LBB6_2:
; RV64I-NEXT:  li a0, 32
; RV64I-NEXT:  ret
;
; RV64XTHEADBB-LABEL: cttz_i32:
; RV64XTHEADBB:      #
%bb.0:
; RV64XTHEADBB-NEXT:  beqz a0, .LBB6_2
; RV64XTHEADBB-NEXT: # %bb.1: # %cond.false
; RV64XTHEADBB-NEXT:  addi sp, sp, -16
; RV64XTHEADBB-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64XTHEADBB-NEXT:  negw a1, a0

```



```

; RV64XTHEADBB-NEXT: and a0, a0, a1
; RV64XTHEADBB-NEXT: lui a1, 30667
; RV64XTHEADBB-NEXT: addiw a1, a1, 1329
; RV64XTHEADBB-NEXT: call __muldi3
; RV64XTHEADBB-NEXT: srlw a0, a0, 27
; RV64XTHEADBB-NEXT: lui a1, %hi(.LCPI6_0)
; RV64XTHEADBB-NEXT: addi a1, a1, %lo(.LCPI6_0)
; RV64XTHEADBB-NEXT: add a0, a1, a0
; RV64XTHEADBB-NEXT: lbu a0, 0(a0)
; RV64XTHEADBB-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64XTHEADBB-NEXT: addi sp, sp, 16
; RV64XTHEADBB-NEXT: ret
; RV64XTHEADBB-NEXT: .LBB6_2:
; RV64XTHEADBB-NEXT: li a0, 32
; RV64XTHEADBB-NEXT: ret
; RV64ZBB-LABEL: cttz_i32:
; RV64ZBB: # %bb.0:
; RV64ZBB-NEXT: ctw a0, a0
; RV64ZBB-NEXT: ret
%1 = call i32 @llvm.cttz.i32(i32 %a, i1 false)
ret i32 %1
}

```

define

```

signext i32 @cttz_zero_undef_i32(i32 signext %a) nounwind {
; RV64I-LABEL: cttz_zero_undef_i32:
; RV64I: # %bb.0:
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: negw a1, a0
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, 30667
; RV64I-NEXT: addiw a1, a1, 1329
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srlw a0, a0, 27
; RV64I-NEXT: lui a1, %hi(.LCPI7_0)
; RV64I-NEXT: addi a1, a1, %lo(.LCPI7_0)
; RV64I-NEXT: add a0, a1, a0
; RV64I-NEXT: lbu a0, 0(a0)
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64XTHEADBB-LABEL: cttz_zero_undef_i32:
; RV64XTHEADBB: # %bb.0:
; RV64XTHEADBB-NEXT: addi sp, sp, -16
; RV64XTHEADBB-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64XTHEADBB-NEXT: negw a1, a0

```

```

; RV64XTHEADBB-NEXT: and a0, a0, a1
; RV64XTHEADBB-NEXT: lui a1, 30667
; RV64XTHEADBB-NEXT: addiw a1, a1, 1329
; RV64XTHEADBB-NEXT:
    call __muldi3
; RV64XTHEADBB-NEXT: srlw a0, a0, 27
; RV64XTHEADBB-NEXT: lui a1, %hi(.LCPI7_0)
; RV64XTHEADBB-NEXT: addi a1, a1, %lo(.LCPI7_0)
; RV64XTHEADBB-NEXT: add a0, a1, a0
; RV64XTHEADBB-NEXT: lbu a0, 0(a0)
; RV64XTHEADBB-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64XTHEADBB-NEXT: addi sp, sp, 16
; RV64XTHEADBB-NEXT: ret
%1 = call i32 @llvm.cttz.i32(i32 %a, i1 true)
ret i32 %1
}

```

```

define signext i32 @findFirstSet_i32(i32 signext %a) nounwind {

```

```

; RV64I-LABEL: findFirstSet_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: sd s0, 0(sp) # 8-byte Folded Spill
; RV64I-NEXT: mv s0, a0
; RV64I-NEXT: negw a0, a0
; RV64I-NEXT: and a0, s0, a0
; RV64I-NEXT: lui a1, 30667
; RV64I-NEXT: addiw a1, a1, 1329
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srlw a0, a0, 27
; RV64I-NEXT: lui a1, %hi(.LCPI8_0)
; RV64I-NEXT: addi a1, a1, %lo(.LCPI8_0)
; RV64I-NEXT:
    add a0, a1, a0
; RV64I-NEXT: lbu a0, 0(a0)
; RV64I-NEXT: snez a1, s0
; RV64I-NEXT: addi a1, a1, -1
; RV64I-NEXT: or a0, a1, a0
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: ld s0, 0(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64XTHEADBB-LABEL: findFirstSet_i32:
; RV64XTHEADBB:    # %bb.0:
; RV64XTHEADBB-NEXT: addi sp, sp, -16
; RV64XTHEADBB-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64XTHEADBB-NEXT: sd s0, 0(sp) # 8-byte Folded Spill

```

```

;RV64XTHEADBB-NEXT: mv s0, a0
;RV64XTHEADBB-NEXT: negw a0, a0
;RV64XTHEADBB-NEXT: and a0, s0, a0
;RV64XTHEADBB-NEXT: lui a1, 30667
;RV64XTHEADBB-NEXT: addiw a1, a1, 1329
;RV64XTHEADBB-NEXT: call __muldi3
;RV64XTHEADBB-NEXT: srlw a0, a0, 27
;RV64XTHEADBB-NEXT: lui a1, %hi(.LCPI8_0)
;RV64XTHEADBB-NEXT: addi a1, a1, %lo(.LCPI8_0)
;RV64XTHEADBB-NEXT: add a0, a1, a0
;RV64XTHEADBB-NEXT: lbu a0, 0(a0)
;RV64XTHEADBB-NEXT:
    snez a1, s0
;RV64XTHEADBB-NEXT: addi a1, a1, -1
;RV64XTHEADBB-NEXT: or a0, a1, a0
;RV64XTHEADBB-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
;RV64XTHEADBB-NEXT: ld s0, 0(sp) # 8-byte Folded Reload
;RV64XTHEADBB-NEXT: addi sp, sp, 16
;RV64XTHEADBB-NEXT: ret
%1 = call i32 @llvm.cttz.i32(i32 %a, i1 true)
%2 = icmp eq i32 %a, 0
%3 = select i1 %2, i32 -1, i32 %1
ret i32 %3
}

```

```
define signext i32 @ffs_i32(i32 signext %a) nounwind {
```

```

;RV64I-LABEL: ffs_i32:
;RV64I:    # %bb.0:
;RV64I-NEXT: addi sp, sp, -16
;RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
;RV64I-NEXT: sd s0, 0(sp) # 8-byte Folded Spill
;RV64I-NEXT: mv s0, a0
;RV64I-NEXT: negw a0, a0
;RV64I-NEXT: and a0, s0, a0
;RV64I-NEXT: lui a1, 30667
;RV64I-NEXT: addiw a1, a1, 1329
;RV64I-NEXT: call __muldi3
;RV64I-NEXT: srlw a0, a0, 27
;RV64I-NEXT: lui a1, %hi(.LCPI9_0)
;RV64I-NEXT: addi a1, a1, %lo(.LCPI9_0)
;RV64I-NEXT: add a0, a1, a0
;RV64I-NEXT:
    lbu a0, 0(a0)
;RV64I-NEXT: addi a0, a0, 1
;RV64I-NEXT: seqz a1, s0
;RV64I-NEXT: addi a1, a1, -1
;RV64I-NEXT: and a0, a1, a0
;RV64I-NEXT: slli a0, a0, 32

```

```

; RV64I-NEXT: srli a0, a0, 32
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: ld s0, 0(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64XTHEADBB-LABEL: ffs_i32:
; RV64XTHEADBB: # %bb.0:
; RV64XTHEADBB-NEXT: addi sp, sp, -16
; RV64XTHEADBB-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64XTHEADBB-NEXT: sd s0, 0(sp) # 8-byte Folded Spill
; RV64XTHEADBB-NEXT: mv s0, a0
; RV64XTHEADBB-NEXT: negw a0, a0
; RV64XTHEADBB-NEXT: and a0, s0, a0
; RV64XTHEADBB-NEXT: lui a1, 30667
; RV64XTHEADBB-NEXT: addiw a1, a1, 1329
; RV64XTHEADBB-NEXT: call __muldi3
; RV64XTHEADBB-NEXT: srlw a0, a0, 27
; RV64XTHEADBB-NEXT: lui a1, %hi(LCPI9_0)
; RV64XTHEADBB-NEXT: addi a1, a1, %lo(LCPI9_0)
; RV64XTHEADBB-NEXT: add a0, a1, a0
;
RV64XTHEADBB-NEXT: lbu a0, 0(a0)
; RV64XTHEADBB-NEXT: addi a0, a0, 1
; RV64XTHEADBB-NEXT: seqz a1, s0
; RV64XTHEADBB-NEXT: addi a1, a1, -1
; RV64XTHEADBB-NEXT: and a0, a1, a0
; RV64XTHEADBB-NEXT: slli a0, a0, 32
; RV64XTHEADBB-NEXT: srli a0, a0, 32
; RV64XTHEADBB-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64XTHEADBB-NEXT: ld s0, 0(sp) # 8-byte Folded Reload
; RV64XTHEADBB-NEXT: addi sp, sp, 16
; RV64XTHEADBB-NEXT: ret
%1 = call i32 @llvm.cttz.i32(i32 %a, i1 true)
%2 = add i32 %1, 1
%3 = icmp eq i32 %a, 0
%4 = select i1 %3, i32 0, i32 %2
ret i32 %4
}

declare i64 @llvm.cttz.i64(i64, i1)

define i64 @cttz_i64(i64 %a) nounwind {
; RV64I-LABEL: cttz_i64:
; RV64I: # %bb.0:
; RV64I-NEXT: beqz a0, .LBB10_2
; RV64I-NEXT: # %bb.1: # %cond.false
; RV64I-NEXT: addi sp, sp, -16

```

```

; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: neg a1, a0
; RV64I-NEXT: and a0, a0, a1
; RV64I-NEXT: lui a1, %hi(.LCPI10_0)
; RV64I-NEXT:
    ld a1, %lo(.LCPI10_0)(a1)
; RV64I-NEXT: call __muldi3
; RV64I-NEXT: srli a0, a0, 58
; RV64I-NEXT: lui a1, %hi(.LCPI10_1)
; RV64I-NEXT: addi a1, a1, %lo(.LCPI10_1)
; RV64I-NEXT: add a0, a1, a0
; RV64I-NEXT: lbu a0, 0(a0)
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
; RV64I-NEXT: .LBB10_2:
; RV64I-NEXT: li a0, 64
; RV64I-NEXT: ret
;
; RV64XTHEADBB-LABEL: cttz_i64:
; RV64XTHEADBB:    # %bb.0:
; RV64XTHEADBB-NEXT: beqz a0, .LBB10_2
; RV64XTHEADBB-NEXT: # %bb.1: # %cond.false
; RV64XTHEADBB-NEXT: addi a1, a0, -1
; RV64XTHEADBB-NEXT: not a0, a0
; RV64XTHEADBB-NEXT: and a0, a0, a1
; RV64XTHEADBB-NEXT: th.ff1 a0, a0
; RV64XTHEADBB-NEXT: li a1, 64
; RV64XTHEADBB-NEXT: sub a0, a1, a0
; RV64XTHEADBB-NEXT: ret
; RV64XTHEADBB-NEXT: .LBB10_2:
; RV64XTHEADBB-NEXT: li a0, 64
; RV64XTHEADBB-NEXT: ret
%1 = call i64 @llvm.cttz.i64(i64 %a, i1 false)
ret i64 %1
}

```

```

define signext
i32 @sextb_i32(i32 signext %a) nounwind {
; RV64I-LABEL: sextb_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT: slli a0, a0, 56
; RV64I-NEXT: srli a0, a0, 56
; RV64I-NEXT: ret
;
; RV64XTHEADBB-LABEL: sextb_i32:
; RV64XTHEADBB:    # %bb.0:
; RV64XTHEADBB-NEXT: th.ext a0, a0, 7, 0

```

```

; RV64XTHEADBB-NEXT:  ret
%shl = shl i32 %a, 24
%shr = ashr exact i32 %shl, 24
ret i32 %shr
}

define i64 @sextb_i64(i64 %a) nounwind {
; RV64I-LABEL: sextb_i64:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 56
; RV64I-NEXT:  srai a0, a0, 56
; RV64I-NEXT:  ret
;
; RV64XTHEADBB-LABEL: sextb_i64:
; RV64XTHEADBB:  # %bb.0:
; RV64XTHEADBB-NEXT:  th.ext a0, a0, 7, 0
; RV64XTHEADBB-NEXT:  ret
%shl = shl i64 %a, 56
%shr = ashr exact i64 %shl, 56
ret i64 %shr
}

define signext i32 @sexth_i32(i32 signext %a) nounwind {
; RV64I-LABEL: sexth_i32:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 48
; RV64I-NEXT:  srai a0, a0, 48
; RV64I-NEXT:  ret
;
; RV64XTHEADBB-LABEL:
sexth_i32:
; RV64XTHEADBB:  # %bb.0:
; RV64XTHEADBB-NEXT:  th.ext a0, a0, 15, 0
; RV64XTHEADBB-NEXT:  ret
%shl = shl i32 %a, 16
%shr = ashr exact i32 %shl, 16
ret i32 %shr
}

define signext i32 @no_sexth_i32(i32 signext %a) nounwind {
; RV64I-LABEL: no_sexth_i32:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 17
; RV64I-NEXT:  sraiw a0, a0, 16
; RV64I-NEXT:  ret
;
; RV64XTHEADBB-LABEL: no_sexth_i32:
; RV64XTHEADBB:  # %bb.0:

```

```

; RV64XTHEADBB-NEXT:  slli a0, a0, 17
; RV64XTHEADBB-NEXT:  sraiw a0, a0, 16
; RV64XTHEADBB-NEXT:  ret
%shl = shl i32 %a, 17
%shr = ashr exact i32 %shl, 16
ret i32 %shr
}

define i64 @sexth_i64(i64 %a) nounwind {
; RV64I-LABEL: sexth_i64:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 48
; RV64I-NEXT:  srai a0, a0, 48
; RV64I-NEXT:  ret
;
; RV64XTHEADBB-LABEL: sexth_i64:
; RV64XTHEADBB:  # %bb.0:
; RV64XTHEADBB-NEXT:  th.ext a0, a0, 15, 0
; RV64XTHEADBB-NEXT:  ret
%shl = shl i64 %a, 48
%shr = ashr
exact i64 %shl, 48
ret i64 %shr
}

define i64 @no_sexth_i64(i64 %a) nounwind {
; RV64I-LABEL: no_sexth_i64:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 49
; RV64I-NEXT:  srai a0, a0, 48
; RV64I-NEXT:  ret
;
; RV64XTHEADBB-LABEL: no_sexth_i64:
; RV64XTHEADBB:  # %bb.0:
; RV64XTHEADBB-NEXT:  slli a0, a0, 49
; RV64XTHEADBB-NEXT:  srai a0, a0, 48
; RV64XTHEADBB-NEXT:  ret
%shl = shl i64 %a, 49
%shr = ashr exact i64 %shl, 48
ret i64 %shr
}

define i32 @zexth_i32(i32 %a) nounwind {
; RV64I-LABEL: zexth_i32:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 48
; RV64I-NEXT:  srli a0, a0, 48
; RV64I-NEXT:  ret

```

```

;
; RV64XTHEADBB-LABEL: zexth_i32:
; RV64XTHEADBB:    # %bb.0:
; RV64XTHEADBB-NEXT:  th.extu a0, a0, 15, 0
; RV64XTHEADBB-NEXT:  ret
%and = and i32 %a, 65535
ret i32 %and
}

```

```

define i64 @zexth_i64(i64 %a) nounwind {
; RV64I-LABEL: zexth_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 48
; RV64I-NEXT:  srli a0, a0, 48
; RV64I-NEXT:
    ret

```

```

;
; RV64XTHEADBB-LABEL: zexth_i64:
; RV64XTHEADBB:    # %bb.0:
; RV64XTHEADBB-NEXT:  th.extu a0, a0, 15, 0
; RV64XTHEADBB-NEXT:  ret
%and = and i64 %a, 65535
ret i64 %and
}

```

```

define i64 @zext_bf_i64(i64 %a) nounwind {
; RV64I-LABEL: zext_bf_i64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 47
; RV64I-NEXT:  srli a0, a0, 48
; RV64I-NEXT:  ret
;
; RV64XTHEADBB-LABEL: zext_bf_i64:
; RV64XTHEADBB:    # %bb.0:
; RV64XTHEADBB-NEXT:  th.extu a0, a0, 16, 1
; RV64XTHEADBB-NEXT:  ret
%1 = lshr i64 %a, 1
%and = and i64 %1, 65535
ret i64 %and
}

```

```

define i64 @zext_i64_srliw(i64 %a) nounwind {
; RV64I-LABEL: zext_i64_srliw:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srliw a0, a0, 16
; RV64I-NEXT:  ret
;
; RV64XTHEADBB-LABEL: zext_i64_srliw:

```



```

; RV64XTHEADBB:    # %bb.0:
; RV64XTHEADBB-NEXT:  srlw a0, a0, 16
; RV64XTHEADBB-NEXT:  ret
%1 = lshr i64 %a, 16
%and = and i64 %1, 65535
ret i64 %and
}

```

```
declare i32 @llvm.bswap.i32(i32)
```

```

define signext
i32 @bswap_i32(i32 signext %a) nounwind {
; RV64I-LABEL: bswap_i32:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a1, a0, 8
; RV64I-NEXT:  lui a2, 16
; RV64I-NEXT:  addiw a2, a2, -256
; RV64I-NEXT:  and a1, a1, a2
; RV64I-NEXT:  srlw a3, a0, 24
; RV64I-NEXT:  or a1, a1, a3
; RV64I-NEXT:  and a2, a0, a2
; RV64I-NEXT:  sllw a2, a2, 8
; RV64I-NEXT:  sllw a0, a0, 24
; RV64I-NEXT:  or a0, a0, a2
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
;
; RV64XTHEADBB-LABEL: bswap_i32:
; RV64XTHEADBB:    # %bb.0:
; RV64XTHEADBB-NEXT:  th.rev w a0, a0
; RV64XTHEADBB-NEXT:  ret
%1 = tail call i32 @llvm.bswap.i32(i32 %a)
ret i32 %1
}

```

; Similar to bswap\_i32 but the result is not sign extended.

```

define void @bswap_i32_nosext(i32 signext %a, ptr %x) nounwind {
; RV64I-LABEL: bswap_i32_nosext:
; RV64I:    # %bb.0:
; RV64I-NEXT:  srlw a2, a0, 8
; RV64I-NEXT:  lui a3, 16
; RV64I-NEXT:  addi a3, a3, -256
; RV64I-NEXT:  and a2, a2, a3
; RV64I-NEXT:  srlw
a4, a0, 24
; RV64I-NEXT:  or a2, a2, a4
; RV64I-NEXT:  and a3, a0, a3
; RV64I-NEXT:  slli a3, a3, 8

```

```

; RV64I-NEXT:  slli a0, a0, 24
; RV64I-NEXT:  or a0, a0, a3
; RV64I-NEXT:  or a0, a0, a2
; RV64I-NEXT:  sw a0, 0(a1)
; RV64I-NEXT:  ret
;
; RV64XTHEADBB-LABEL: bswap_i32_nosext:
; RV64XTHEADBB:      # %bb.0:
; RV64XTHEADBB-NEXT:  th.rev w a0, a0
; RV64XTHEADBB-NEXT:  sw a0, 0(a1)
; RV64XTHEADBB-NEXT:  ret
%1 = tail call i32 @llvm.bswap.i32(i32 %a)
store i32 %1, ptr %x
ret void
}

```

```
declare i64 @llvm.bswap.i64(i64)
```

```

define i64 @bswap_i64(i64 %a) {
; RV64I-LABEL: bswap_i64:
; RV64I:      # %bb.0:
; RV64I-NEXT:  srli a1, a0, 40
; RV64I-NEXT:  lui a2, 16
; RV64I-NEXT:  addiw a2, a2, -256
; RV64I-NEXT:  and a1, a1, a2
; RV64I-NEXT:  srli a3, a0, 56
; RV64I-NEXT:  or a1, a1, a3
; RV64I-NEXT:  srli a3, a0, 24
; RV64I-NEXT:  lui a4, 4080
; RV64I-NEXT:  and a3, a3, a4
; RV64I-NEXT:  srli a5, a0, 8
; RV64I-NEXT:  srlw a5, a5, 24
; RV64I-NEXT:  slli
a5, a5, 24
; RV64I-NEXT:  or a3, a5, a3
; RV64I-NEXT:  or a1, a3, a1
; RV64I-NEXT:  and a4, a0, a4
; RV64I-NEXT:  slli a4, a4, 24
; RV64I-NEXT:  srlw a3, a0, 24
; RV64I-NEXT:  slli a3, a3, 32
; RV64I-NEXT:  or a3, a4, a3
; RV64I-NEXT:  and a2, a0, a2
; RV64I-NEXT:  slli a2, a2, 40
; RV64I-NEXT:  slli a0, a0, 56
; RV64I-NEXT:  or a0, a0, a2
; RV64I-NEXT:  or a0, a0, a3
; RV64I-NEXT:  or a0, a0, a1
; RV64I-NEXT:  ret
}

```

```

;
; RV64XTHEADBB-LABEL: bswap_i64:
; RV64XTHEADBB:    # %bb.0:
; RV64XTHEADBB-NEXT:  th.rev a0, a0
; RV64XTHEADBB-NEXT:  ret
%1 = call i64 @llvm.bswap.i64(i64 %a)
ret i64 %1
}
; RUN: llc < %s -mtriple=s390x-linux-gnu -mcpu=zEC12 -verify-machineinstrs | FileCheck %s
;
; Test that early if conversion produces LOCR with operands of the right
; register classes.

define void @autogen_SD4739(ptr) {
; CHECK-NOT: Expected a GR32Bit register, but got a GRX32Bit register
BB:
%L34 = load i8, ptr %0
%Cmp56 = icmp sgt i8 undef, %L34
br label %CF246

CF246:                                ; preds = %CF246, %BB
%S1163 = select i1 %Cmp56, i8 %L34, i8 undef
br i1 undef, label %CF246, label %CF248

CF248:                                ; preds = %CF248, %CF246
store i8 %S1163, ptr %0
br label %CF248
}
; RUN: llc -march=hexagon -hexagon-hvx-widen=32 < %s | FileCheck %s

; Truncating a type-to-be-widened to a legal type (v8i8).
; Check that this compiles successfully.
; CHECK-LABEL: f0:
; CHECK: dealloc_return

target datalayout = "e-m:e-p:32:32:32-a:0-n16:32-i64:64:64-i32:32:32-i16:16:16-i1:8:8-f32:32:32-f64:64:64-
v32:32:32-v64:64:64-v512:512:512-v1024:1024:1024-v2048:2048:2048"
target triple = "hexagon"

define dlllexport void @f0(ptr %a0) local_unnamed_addr #0 {
b0:
%v0 = load i8, ptr undef, align 1
%v1 = zext i8 %v0 to i16
%v2 = add i16 0, %v1
%v3 = icmp sgt i16 %v2, 1
%v4 = select i1 %v3, i16 %v2, i16 1
%v5 = udiv i16 -32768, %v4
%v6 = zext i16 %v5 to i32

```

```

%v7 = insertelement <8 x i32> undef, i32 %v6, i32 0
%v8 = shufflevector <8 x i32> %v7, <8 x i32> undef, <8 x i32> zeroinitializer
%v9 = load <8 x i16>, ptr undef, align 2
%v10 = sext <8 x i16> %v9 to <8 x i32>
%v11 = mul nsw <8 x i32> %v8, %v10
%v12 = add nsw <8 x i32> %v11, <i32 16384, i32 16384, i32 16384,
i32 16384, i32 16384, i32 16384, i32 16384, i32 16384>
%v13 = lshr <8 x i32> %v12, <i32 15, i32 15, i32 15, i32 15, i32 15, i32 15, i32 15, i32 15>
%v14 = trunc <8 x i32> %v13 to <8 x i8>
%v15 = getelementptr inbounds i8, ptr %a0, i32 undef
store <8 x i8> %v14, ptr %v15, align 1
ret void
}

attributes #0 = { "target-features"="+hvx,+hvx-length128b" }
; RUN: llc -O3 -mtriple=powerpc-unknown-linux-gnu -mcpu=e500 -mattr=spe < %s | FileCheck %s

; PowerPC SPE is a rare in-tree target that has the FP_TO_SINT node marked
; as Legal.

; Verify that fptosi(42.1) isn't simplified when the rounding mode is
; unknown.
; Verify that no gross errors happen.
; CHECK-LABEL: @f20
; COMMON: cfdctsiz
define i32 @f20(double %a) strictfp {
entry:
  %result = call i32 @llvm.experimental.constrained.fptosi.i32.f64(double 42.1,
      metadata !"fpexcept.strict")
      strictfp
  ret i32 %result
}

@llvm.fp.env = thread_local global i8 zeroinitializer, section "llvm.metadata"
declare i32 @llvm.experimental.constrained.fptosi.i32.f64(double, metadata)
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```

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OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS  
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CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN  
ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH  
DAMAGE.

; NOTE: Assertions have been autogenerated by utils/update\_analyze\_test\_checks.py

; RUN: opt < %s -passes="print<cost-model>" 2>&1 -disable-output -mtriple=x86\_64-apple-macosx10.8.0 -  
mattr=+avx2 | FileCheck %s --check-prefixes=VEC256,AVX

; RUN: opt < %s -passes="print<cost-model>" 2>&1 -disable-output -mtriple=x86\_64-apple-macosx10.8.0 -  
mattr=+avx512vl,+prefer-256-bit | FileCheck %s --check-prefixes=VEC256,AVX512VL256

; RUN: opt < %s -passes="print<cost-model>" 2>&1 -disable-output -mtriple=x86\_64-apple-macosx10.8.0 -  
mattr=+avx512vl,-prefer-256-bit | FileCheck %s --check-prefixes=AVX512VL512

; RUN: opt < %s -passes="print<cost-model>" 2>&1 -disable-output -mtriple=x86\_64-apple-macosx10.8.0 -  
mattr=+avx512vl,+avx512bw,+avx512dq,+prefer-256-bit | FileCheck %s --check-prefixes=VEC256,SKX256

; RUN: opt < %s -passes="print<cost-model>" 2>&1 -disable-output -mtriple=x86\_64-apple-macosx10.8.0 -  
mattr=+avx512vl,+avx512bw,+avx512dq,-prefer-256-bit | FileCheck %s --check-prefixes=SKX512

define

void @zext256() "min-legal-vector-width"="256" {

; AVX-LABEL: 'zext256'

; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %A = zext <8 x i16> undef to <8 x i64>

; AVX-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %B = zext <8 x i32> undef to <8 x i64>

; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %C = zext <16 x i8> undef to <16 x i32>

; AVX-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %D = zext <16 x i16> undef to <16 x  
i32>

; AVX-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %E = zext <32 x i8> undef to <32 x i16>

; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void

;

; AVX512VL256-LABEL: 'zext256'

; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %A = zext <8 x i16> undef to  
<8 x i64>

; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %B = zext <8 x i32> undef to  
<8 x i64>

; AVX512VL256-NEXT: Cost

Model: Found an estimated cost of 2 for instruction: %C = zext <16 x i8> undef to <16 x i32>

; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %D = zext <16 x i16> undef to  
<16 x i32>

; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %E = zext <32 x i8> undef to  
<32 x i16>

; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void

;

; AVX512VL512-LABEL: 'zext256'

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = zext <8 x i16> undef to  
<8 x i64>

```

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %B = zext <8 x i32> undef to
<8 x i64>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %C = zext <16 x i8> undef to
<16 x i32>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %D = zext <16 x i16> undef to
<16 x i32>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction:
%E = zext <32 x i8> undef to <32 x i16>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; SKX256-LABEL: 'zext256'
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %A = zext <8 x i16> undef to <8 x
i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %B = zext <8 x i32> undef to <8 x
i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %C = zext <16 x i8> undef to <16 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %D = zext <16 x i16> undef to <16 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %E = zext <32 x i8> undef to <32 x
i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; SKX512-LABEL: 'zext256'
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = zext <8 x i16> undef to <8 x
i64>
; SKX512-NEXT: Cost Model: Found an estimated
cost of 1 for instruction: %B = zext <8 x i32> undef to <8 x i64>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %C = zext <16 x i8> undef to <16 x
i32>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %D = zext <16 x i16> undef to <16 x
i32>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %E = zext <32 x i8> undef to <32 x
i16>
; SKX512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
%A = zext <8 x i16> undef to <8 x i64>
%B = zext <8 x i32> undef to <8 x i64>
%C = zext <16 x i8> undef to <16 x i32>
%D = zext <16 x i16> undef to <16 x i32>
%E = zext <32 x i8> undef to <32 x i16>
ret void
}

define void @zext512() "min-legal-vector-width"="512" {
; AVX-LABEL: 'zext512'
; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %A = zext <8 x i16> undef to <8 x i64>
; AVX-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %B = zext <8 x i32>

```

```

undef to <8 x i64>
; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %C = zext <16 x i8> undef to <16 x i32>
; AVX-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %D = zext <16 x i16> undef to <16 x
i32>
; AVX-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %E = zext <32 x i8> undef to <32 x i16>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; AVX512VL256-LABEL: 'zext512'
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = zext <8 x i16> undef to
<8 x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %B = zext <8 x i32> undef to
<8 x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %C = zext <16 x i8> undef to
<16 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %D = zext <16 x i16> undef to
<16 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost
of 3 for instruction: %E = zext <32 x i8> undef to <32 x i16>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; AVX512VL512-LABEL: 'zext512'
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = zext <8 x i16> undef to
<8 x i64>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %B = zext <8 x i32> undef to
<8 x i64>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %C = zext <16 x i8> undef to
<16 x i32>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %D = zext <16 x i16> undef to
<16 x i32>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %E = zext <32 x i8> undef to
<32 x i16>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; SKX256-LABEL: 'zext512'
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = zext <8 x i16> undef to <8
x i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %B = zext <8 x i32> undef to <8 x
i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %C = zext <16 x i8> undef to <16 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %D = zext <16 x i16> undef to <16 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %E = zext <32 x i8> undef to <32 x
i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; SKX512-LABEL: 'zext512'
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = zext <8 x i16> undef to <8 x

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i64>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %B = zext <8 x i32> undef to <8 x
i64>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %C = zext <16 x i8> undef to <16 x
i32>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %D = zext <16
x i16> undef to <16 x i32>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %E = zext <32 x i8> undef to <32 x
i16>
; SKX512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
%A = zext <8 x i16> undef to <8 x i64>
%B = zext <8 x i32> undef to <8 x i64>
%C = zext <16 x i8> undef to <16 x i32>
%D = zext <16 x i16> undef to <16 x i32>
%E = zext <32 x i8> undef to <32 x i16>
ret void
}

define void @sext256() "min-legal-vector-width"="256" {
; AVX-LABEL: 'sext256'
; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %A = sext <8 x i8> undef to <8 x i64>
; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %B = sext <8 x i16> undef to <8 x i64>
; AVX-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %C = sext <8 x i32> undef to <8 x i64>
; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %D = sext <16 x i8> undef to <16 x i32>
; AVX-NEXT: Cost Model: Found
an estimated cost of 3 for instruction: %E = sext <16 x i16> undef to <16 x i32>
; AVX-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %F = sext <32 x i8> undef to <32 x i16>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; AVX512VL256-LABEL: 'sext256'
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %A = sext <8 x i8> undef to <8
x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %B = sext <8 x i16> undef to
<8 x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %C = sext <8 x i32> undef to
<8 x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %D = sext <16 x i8> undef to
<16 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %E = sext <16 x i16> undef to
<16 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %F = sext <32 x i8> undef
to <32 x i16>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; AVX512VL512-LABEL: 'sext256'
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = sext <8 x i8> undef to <8
x i64>

```



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; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %B = sext <8 x i16> undef to
<8 x i64>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %C = sext <8 x i32> undef to
<8 x i64>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %D = sext <16 x i8> undef to
<16 x i32>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %E = sext <16 x i16> undef to
<16 x i32>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %F = sext <32 x i8> undef to
<32 x i16>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; SKX256-LABEL: 'sext256'
; SKX256-NEXT: Cost Model: Found an
estimated cost of 2 for instruction: %A = sext <8 x i8> undef to <8 x i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %B = sext <8 x i16> undef to <8 x
i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %C = sext <8 x i32> undef to <8 x
i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %D = sext <16 x i8> undef to <16 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %E = sext <16 x i16> undef to <16 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %F = sext <32 x i8> undef to <32 x
i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; SKX512-LABEL: 'sext256'
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = sext <8 x i8> undef to <8 x i64>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %B = sext <8 x i16> undef to <8 x
i64>
; SKX512-NEXT: Cost
Model: Found an estimated cost of 1 for instruction: %C = sext <8 x i32> undef to <8 x i64>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %D = sext <16 x i8> undef to <16 x
i32>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %E = sext <16 x i16> undef to <16 x
i32>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %F = sext <32 x i8> undef to <32 x
i16>
; SKX512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
%A = sext <8 x i8> undef to <8 x i64>
%B = sext <8 x i16> undef to <8 x i64>
%C = sext <8 x i32> undef to <8 x i64>
%D = sext <16 x i8> undef to <16 x i32>
%E = sext <16 x i16> undef to <16 x i32>
%F = sext <32 x i8> undef to <32 x i16>
ret void

```

```

}

define void @sext512() "min-legal-vector-width"="512" {
; AVX-LABEL: 'sext512'
; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %A = sext <8 x i8> undef to <8 x i64>
; AVX-NEXT: Cost Model: Found
an estimated cost of 4 for instruction: %B = sext <8 x i16> undef to <8 x i64>
; AVX-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %C = sext <8 x i32> undef to <8 x i64>
; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %D = sext <16 x i8> undef to <16 x i32>
; AVX-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %E = sext <16 x i16> undef to <16 x i32>
; AVX-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %F = sext <32 x i8> undef to <32 x i16>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; AVX512VL256-LABEL: 'sext512'
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = sext <8 x i8> undef to <8
x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %B = sext <8 x i16> undef to
<8 x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %C = sext <8 x i32> undef to
<8 x i64>
; AVX512VL256-NEXT:
Cost Model: Found an estimated cost of 1 for instruction: %D = sext <16 x i8> undef to <16 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %E = sext <16 x i16> undef to
<16 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %F = sext <32 x i8> undef to
<32 x i16>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; AVX512VL512-LABEL: 'sext512'
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = sext <8 x i8> undef to <8
x i64>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %B = sext <8 x i16> undef to
<8 x i64>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %C = sext <8 x i32> undef to
<8 x i64>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %D = sext <16 x i8> undef to
<16 x i32>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost
of 1 for instruction: %E = sext <16 x i16> undef to <16 x i32>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %F = sext <32 x i8> undef to
<32 x i16>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; SKX256-LABEL: 'sext512'
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = sext <8 x i8> undef to <8 x i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %B = sext <8 x i16> undef to <8 x
i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %C = sext <8 x i32> undef to <8 x

```

```

i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %D = sext <16 x i8> undef to <16 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %E = sext <16 x i16> undef to <16 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %F = sext <32 x i8> undef to <32 x
i16>
; SKX256-NEXT: Cost
Model: Found an estimated cost of 0 for instruction: ret void
;
; SKX512-LABEL: 'sext512'
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = sext <8 x i8> undef to <8 x i64>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %B = sext <8 x i16> undef to <8 x
i64>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %C = sext <8 x i32> undef to <8 x
i64>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %D = sext <16 x i8> undef to <16 x
i32>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %E = sext <16 x i16> undef to <16 x
i32>
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %F = sext <32 x i8> undef to <32 x
i16>
; SKX512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
%A = sext <8 x i8> undef to <8 x i64>
%B = sext <8 x i16> undef to <8 x i64>
%C = sext <8 x i32> undef to <8 x i64>
%D = sext <16 x i8>
undef to <16 x i32>
%E = sext <16 x i16> undef to <16 x i32>
%F = sext <32 x i8> undef to <32 x i16>
ret void
}

define void @trunc256() "min-legal-vector-width"="256" {
; VEC256-LABEL: 'trunc256'
; VEC256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %A = trunc <8 x i64> undef to <8 x
i32>
; VEC256-NEXT: Cost Model: Found an estimated cost of 10 for instruction: %B = trunc <8 x i64> undef to <8 x
i16>
; VEC256-NEXT: Cost Model: Found an estimated cost of 8 for instruction: %C = trunc <8 x i64> undef to <8 x
i8>
; VEC256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %D = trunc <16 x i32> undef to <16 x
i16>
; VEC256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %E = trunc <16 x i32> undef to <16 x
i8>
; VEC256-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %F = trunc <32 x i16> undef to <32 x
i8>

```

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; VEC256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; AVX512VL512-LABEL: 'trunc256'
;
AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = trunc <8 x i64> undef to
<8 x i32>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %B = trunc <8 x i64> undef to
<8 x i16>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %C = trunc <8 x i64> undef to
<8 x i8>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %D = trunc <16 x i32> undef
to <16 x i16>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %E = trunc <16 x i32> undef to
<16 x i8>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 8 for instruction: %F = trunc <32 x i16> undef to
<32 x i8>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
; SKX512-LABEL: 'trunc256'
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %A = trunc <8 x i64> undef to <8 x
i32>
; SKX512-NEXT: Cost Model: Found an estimated
cost of 2 for instruction: %B = trunc <8 x i64> undef to <8 x i16>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %C = trunc <8 x i64> undef to <8 x
i8>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %D = trunc <16 x i32> undef to <16 x
i16>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %E = trunc <16 x i32> undef to <16 x
i8>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %F = trunc <32 x i16> undef to <32 x
i8>
; SKX512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret void
;
%A = trunc <8 x i64> undef to <8 x i32>
%B = trunc <8 x i64> undef to <8 x i16>
%C = trunc <8 x i64> undef to <8 x i8>
%D = trunc <16 x i32> undef to <16 x i16>
%E = trunc <16 x i32> undef to <16 x i8>
%F = trunc <32 x i16> undef to <32 x i8>
ret void
}

define i32 @zext256_vXi1() "min-legal-vector-width"="256" {
; AVX-LABEL: 'zext256_vXi1'
; AVX-NEXT: Cost Model: Found
an estimated cost of 1 for instruction: %V2i64 = zext <2 x i1> undef to <2 x i64>
; AVX-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V4i64 = zext <4 x i1> undef to <4 x
i64>

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; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V8i64 = zext <8 x i1> undef to <8 x i64>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i32 = zext <2 x i1> undef to <2 x i32>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i32 = zext <4 x i1> undef to <4 x i32>
; AVX-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V8i32 = zext <8 x i1> undef to <8 x i32>
; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V16i32 = zext <16 x i1> undef to <16 x i32>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i16 = zext <2 x i1> undef to <2 x i16>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i16 = zext <4 x i1> undef to <4 x i16>
; AVX-NEXT:
  Cost Model: Found an estimated cost of 1 for instruction: %V8i16 = zext <8 x i1> undef to <8 x i16>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V16i16 = zext <16 x i1> undef to <16 x i16>
; AVX-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V32i16 = zext <32 x i1> undef to <32 x i16>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i8 = zext <2 x i1> undef to <2 x i8>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i8 = zext <4 x i1> undef to <4 x i8>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V8i8 = zext <8 x i1> undef to <8 x i8>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V16i8 = zext <16 x i1> undef to <16 x i8>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V32i8 = zext <32 x i1> undef to <32 x i8>
; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V64i8 = zext <64 x i1> undef to <64 x i8>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef
;
; AVX512VL256-LABEL: 'zext256_vXi1'
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i64 = zext <2 x i1> undef to <2 x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i64 = zext <4 x i1> undef to <4 x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %V8i64 = zext <8 x i1> undef to <8 x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i32 = zext <2 x i1> undef to <2 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i32 = zext <4 x i1> undef to <4 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i32 = zext <8 x i1> undef to <8 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V16i32 = zext <16 x i1> undef to <16 x i32>
; AVX512VL256-NEXT:

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Cost Model: Found an estimated cost of 5 for instruction: %V2i16 = zext <2 x i1> undef to <2 x i16>  
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %V4i16 = zext <4 x i1> undef to <4 x i16>  
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %V8i16 = zext <8 x i1> undef to <8 x i16>  
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 12 for instruction: %V16i16 = zext <16 x i1> undef to <16 x i16>  
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 24 for instruction: %V32i16 = zext <32 x i1> undef to <32 x i16>  
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 6 for instruction: %V2i8 = zext <2 x i1> undef to <2 x i8>  
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 6 for instruction: %V4i8 = zext <4 x i1> undef to <4 x i8>  
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 6 for instruction: %V8i8 = zext <8 x i1> undef to <8 x i8>  
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 12 for instruction: %V16i8 = zext <16 x i1> undef to <16 x i8>  
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 25 for instruction: %V32i8 = zext <32 x i1> undef to <32 x i8>  
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 50 for instruction: %V64i8 = zext <64 x i1> undef to <64 x i8>  
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef  
;  
; AVX512VL512-LABEL: 'zext256\_vXi1'  
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i64 = zext <2 x i1> undef to <2 x i64>  
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i64 = zext <4 x i1> undef to <4 x i64>  
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i64 = zext <8 x i1> undef to <8 x i64>  
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i32 = zext <2 x i1> undef to <2 x i32>  
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i32 = zext <4 x i1> undef to <4 x i32>  
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i32 = zext <8 x i1> undef to <8 x i32>  
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i32 = zext <16 x i1> undef to <16 x i32>  
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V2i16 = zext <2 x i1> undef to <2 x i16>  
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V4i16 = zext <4 x i1> undef to <4 x i16>  
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V8i16 = zext <8 x i1> undef to <8 x i16>  
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V16i16 = zext <16 x i1> undef to <16 x i16>  
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 9 for instruction: %V32i16 = zext <32 x i1> undef to <32 x i16>

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; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V2i8
= zext <2 x i1> undef to <2 x i8>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V4i8 = zext <4 x i1> undef to
<4 x i8>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V8i8 = zext <8 x i1> undef to
<8 x i8>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V16i8 = zext <16 x i1> undef
to <16 x i8>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 9 for instruction: %V32i8 = zext <32 x i1> undef
to <32 x i8>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 19 for instruction: %V64i8 = zext <64 x i1>
undef to <64 x i8>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef
;
; SKX256-LABEL: 'zext256_vXi1'
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i64 = zext <2 x i1> undef to <2 x
i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i64 = zext <4 x i1> undef to <4 x
i64>
;
; SKX256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V8i64 = zext <8 x i1> undef to <8 x
i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i32 = zext <2 x i1> undef to <2 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i32 = zext <4 x i1> undef to <4 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i32 = zext <8 x i1> undef to <8 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V16i32 = zext <16 x i1> undef to
<16 x i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i16 = zext <2 x i1> undef to <2 x
i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i16 = zext <4 x i1> undef to <4 x
i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i16 = zext <8 x i1> undef to <8 x
i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction:
%V16i16 = zext <16 x i1> undef to <16 x i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V32i16 = zext <32 x i1> undef to
<32 x i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i8 = zext <2 x i1> undef to <2 x
i8>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i8 = zext <4 x i1> undef to <4 x
i8>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i8 = zext <8 x i1> undef to <8 x
i8>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i8 = zext <16 x i1> undef to <16
x i8>

```

```

; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V32i8 = zext <32 x i1> undef to <32
x i8>
; SKX256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V64i8 = zext <64 x i1> undef to <64
x i8>
; SKX256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef
;
; SKX512-LABEL: 'zext256_vXi1'
; SKX512-NEXT: Cost
Model: Found an estimated cost of 2 for instruction: %V2i64 = zext <2 x i1> undef to <2 x i64>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i64 = zext <4 x i1> undef to <4 x
i64>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i64 = zext <8 x i1> undef to <8 x
i64>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i32 = zext <2 x i1> undef to <2 x
i32>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i32 = zext <4 x i1> undef to <4 x
i32>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i32 = zext <8 x i1> undef to <8 x
i32>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i32 = zext <16 x i1> undef to
<16 x i32>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i16 = zext <2 x i1> undef to <2 x
i16>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i16 = zext
<4 x i1> undef to <4 x i16>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i16 = zext <8 x i1> undef to <8 x
i16>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i16 = zext <16 x i1> undef to
<16 x i16>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V32i16 = zext <32 x i1> undef to
<32 x i16>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i8 = zext <2 x i1> undef to <2 x
i8>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i8 = zext <4 x i1> undef to <4 x
i8>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i8 = zext <8 x i1> undef to <8 x
i8>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i8 = zext <16 x i1> undef to <16
x i8>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V32i8 = zext <32 x i1> undef to <32
x i8>
; SKX512-NEXT: Cost Model: Found an estimated
cost of 2 for instruction: %V64i8 = zext <64 x i1> undef to <64 x i8>
; SKX512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef
;
%V2i64 = zext <2 x i1> undef to <2 x i64>
%V4i64 = zext <4 x i1> undef to <4 x i64>
%V8i64 = zext <8 x i1> undef to <8 x i64>

```



```
%V2i32 = zext <2 x i1> undef to <2 x i32>
%V4i32 = zext <4 x i1> undef to <4 x i32>
%V8i32 = zext <8 x i1> undef to <8 x i32>
%V16i32 = zext <16 x i1> undef to <16 x i32>
```

```
%V2i16 = zext <2 x i1> undef to <2 x i16>
%V4i16 = zext <4 x i1> undef to <4 x i16>
%V8i16 = zext <8 x i1> undef to <8 x i16>
%V16i16 = zext <16 x i1> undef to <16 x i16>
%V32i16 = zext <32 x i1> undef to <32 x i16>
```

```
%V2i8 = zext <2 x i1> undef to <2 x i8>
%V4i8 = zext <4 x i1> undef to <4 x i8>
%V8i8 = zext <8 x i1> undef to <8 x i8>
%V16i8 = zext <16 x i1> undef to <16 x i8>
%V32i8 = zext <32 x i1> undef to <32 x i8>
%V64i8 = zext <64 x i1> undef to <64 x i8>
```

```
ret i32 undef
}
```

```
define i32 @sext256_vXi1()
  "min-legal-vector-width"="256" {
; AVX-LABEL: 'sext256_vXi1'
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I64 = sext i1 undef to i64
; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i64 = sext <2 x i1> undef to <2 x i64>
; AVX-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V4i64 = sext <4 x i1> undef to <4 x i64>
; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V8i64 = sext <8 x i1> undef to <8 x i64>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I32 = sext i1 undef to i32
; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i32 = sext <2 x i1> undef to <2 x i32>
; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i32 = sext <4 x i1> undef to <4 x i32>
; AVX-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V8i32 = sext <8 x i1> undef to <8 x i32>
; AVX-NEXT: Cost Model: Found an estimated cost
of 4 for instruction: %V16i32 = sext <16 x i1> undef to <16 x i32>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I16 = sext i1 undef to i16
; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i16 = sext <2 x i1> undef to <2 x i16>
; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i16 = sext <4 x i1> undef to <4 x i16>
; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i16 = sext <8 x i1> undef to <8 x i16>
```

```

; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V16i16 = sext <16 x i1> undef to <16 x i16>
; AVX-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V32i16 = sext <32 x i1> undef to <32 x i16>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I8 = sext i1 undef to i8
; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i8 = sext <2 x i1> undef to <2 x i8>
; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i8 = sext <4 x i1> undef to <4 x i8>
; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i8 = sext <8 x i1> undef to <8 x i8>
; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i8 = sext <16 x i1> undef to <16 x i8>
; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V32i8 = sext <32 x i1> undef to <32 x i8>
; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V64i8 = sext <64 x i1> undef to <64 x i8>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef
;
; AVX512VL256-LABEL: 'sext256_vXi1'
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I64 = sext i1 undef to i64
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i64 = sext <2 x i1> undef to <2 x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i64 = sext <4 x i1> undef to <4 x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V8i64 = sext <8 x i1> undef to <8 x i64>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I32 = sext i1 undef to i32
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i32 = sext <2 x i1> undef to <2 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i32 = sext <4 x i1> undef to <4 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V8i32 = sext <8 x i1> undef to <8 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i32 = sext <16 x i1> undef to <16 x i32>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I16 = sext i1 undef to i16
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V2i16 = sext <2 x i1> undef to <2 x i16>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V4i16 = sext <4 x i1> undef to <4 x i16>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V8i16 = sext <8 x i1> undef to <8 x i16>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 10 for instruction: %V16i16 = sext <16 x i1> undef to <16 x i16>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 20 for instruction: %V32i16 = sext <32 x i1> undef to <32 x i16>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I8 = sext i1 undef to i8
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %V2i8 = sext <2 x i1> undef to <2 x i8>

```

; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %V4i8 = sext <4 x i1> undef to <4 x i8>

; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 5 for instruction: %V8i8 = sext <8 x i1> undef to <8 x i8>

; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 10 for instruction: %V16i8 = sext <16 x i1> undef to <16 x i8>

;

AVX512VL256-NEXT: Cost Model: Found an estimated cost of 21 for instruction: %V32i8 = sext <32 x i1> undef to <32 x i8>

; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 42 for instruction: %V64i8 = sext <64 x i1> undef to <64 x i8>

; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef

;

; AVX512VL512-LABEL: 'sext256\_vXi1'

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I64 = sext i1 undef to i64

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i64 = sext <2 x i1> undef to <2 x i64>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i64 = sext <4 x i1> undef to <4 x i64>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V8i64 = sext <8 x i1> undef to <8 x i64>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I32 = sext i1 undef to i32

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i32 = sext <2 x i1> undef to <2 x i32>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i32 = sext <4 x i1> undef to <4 x i32>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V8i32 = sext <8 x i1> undef to <8 x i32>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V16i32 = sext <16 x i1> undef to <16 x i32>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I16 = sext i1 undef to i16

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V2i16 = sext <2 x i1> undef to <2 x i16>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V4i16 = sext <4 x i1> undef to <4 x i16>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V8i16 = sext <8 x i1> undef to <8 x i16>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V16i16 = sext <16 x i1> undef to <16 x i16>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 7 for instruction: %V32i16 = sext <32 x i1> undef to <32 x i16>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I8 = sext i1 undef to i8

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V2i8 = sext <2 x i1> undef to <2 x i8>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V4i8 = sext <4 x i1> undef to <4 x i8>

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V8i8 = sext <8 x i1> undef to <8 x i8>

```

; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V16i8 = sext <16 x i1> undef
to <16 x i8>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 7 for instruction: %V32i8 = sext <32 x i1> undef
to <32 x i8>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 15 for instruction: %V64i8 = sext <64 x i1>
undef to <64 x i8>
; AVX512VL512-NEXT:
  Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef
;
; SKX256-LABEL: 'sext256_vXi1'
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I64 = sext i1 undef to i64
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i64 = sext <2 x i1> undef to <2 x
i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i64 = sext <4 x i1> undef to <4 x
i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i64 = sext <8 x i1> undef to <8 x
i64>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I32 = sext i1 undef to i32
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i32 = sext <2 x i1> undef to <2 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i32 = sext <4 x i1> undef to <4 x
i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V8i32 = sext <8 x i1> undef
to <8 x i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i32 = sext <16 x i1> undef to
<16 x i32>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I16 = sext i1 undef to i16
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i16 = sext <2 x i1> undef to <2 x
i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i16 = sext <4 x i1> undef to <4 x
i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V8i16 = sext <8 x i1> undef to <8 x
i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V16i16 = sext <16 x i1> undef to
<16 x i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V32i16 = sext <32 x i1> undef to
<32 x i16>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I8 = sext i1 undef to i8
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i8
= sext <2 x i1> undef to <2 x i8>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i8 = sext <4 x i1> undef to <4 x
i8>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V8i8 = sext <8 x i1> undef to <8 x
i8>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V16i8 = sext <16 x i1> undef to <16
x i8>
; SKX256-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V32i8 = sext <32 x i1> undef to <32
x i8>

```

; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V64i8 = sext <64 x i1> undef to <64 x i8>  
; SKX256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef  
;  
; SKX512-LABEL: 'sext256\_vXi1'  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I64 = sext i1 undef to i64  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i64 = sext <2 x i1> undef to <2 x i64>  
; SKX512-NEXT: Cost Model: Found an estimated  
cost of 1 for instruction: %V4i64 = sext <4 x i1> undef to <4 x i64>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V8i64 = sext <8 x i1> undef to <8 x i64>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I32 = sext i1 undef to i32  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i32 = sext <2 x i1> undef to <2 x i32>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i32 = sext <4 x i1> undef to <4 x i32>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V8i32 = sext <8 x i1> undef to <8 x i32>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V16i32 = sext <16 x i1> undef to <16 x i32>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I16 = sext i1 undef to i16  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i16 = sext <2 x i1> undef to <2 x i16>  
; SKX512-NEXT: Cost Model:  
Found an estimated cost of 1 for instruction: %V4i16 = sext <4 x i1> undef to <4 x i16>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V8i16 = sext <8 x i1> undef to <8 x i16>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V16i16 = sext <16 x i1> undef to <16 x i16>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V32i16 = sext <32 x i1> undef to <32 x i16>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %I8 = sext i1 undef to i8  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i8 = sext <2 x i1> undef to <2 x i8>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i8 = sext <4 x i1> undef to <4 x i8>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V8i8 = sext <8 x i1> undef to <8 x i8>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V16i8 = sext <16 x i1> undef to <16 x i8>  
;  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V32i8 = sext <32 x i1> undef to <32 x i8>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V64i8 = sext <64 x i1> undef to <64 x i8>  
; SKX512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef  
;

```
%I64 = sext i1 undef to i64
%V2i64 = sext <2 x i1> undef to <2 x i64>
%V4i64 = sext <4 x i1> undef to <4 x i64>
%V8i64 = sext <8 x i1> undef to <8 x i64>
```

```
%I32 = sext i1 undef to i32
%V2i32 = sext <2 x i1> undef to <2 x i32>
%V4i32 = sext <4 x i1> undef to <4 x i32>
%V8i32 = sext <8 x i1> undef to <8 x i32>
%V16i32 = sext <16 x i1> undef to <16 x i32>
```

```
%I16 = sext i1 undef to i16
%V2i16 = sext <2 x i1> undef to <2 x i16>
%V4i16 = sext <4 x i1> undef to <4 x i16>
%V8i16 = sext <8 x i1> undef to <8 x i16>
%V16i16 = sext <16 x i1> undef to <16 x i16>
%V32i16 = sext <32 x i1> undef to <32 x i16>
```

```
%I8 = sext i1 undef to i8
%V2i8 = sext <2
x i1> undef to <2 x i8>
%V4i8 = sext <4 x i1> undef to <4 x i8>
%V8i8 = sext <8 x i1> undef to <8 x i8>
%V16i8 = sext <16 x i1> undef to <16 x i8>
%V32i8 = sext <32 x i1> undef to <32 x i8>
%V64i8 = sext <64 x i1> undef to <64 x i8>
```

```
ret i32 undef
}
```

```
define i32 @trunc_vXi1() "min-legal-vector-width"="256" {
; AVX-LABEL: 'trunc_vXi1'
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V2i64 = trunc <2 x i64> undef to <2 x
i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V4i64 = trunc <4 x i64> undef to <4 x
i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 9 for instruction: %V8i64 = trunc <8 x i64> undef to <8 x
i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 11 for instruction: %V16i64 = trunc <16 x i64> undef to
<16 x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V32i64 = trunc <32 x i64> undef to <32
x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V64i64
= trunc <64 x i64> undef to <64 x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i32 = trunc <2 x i32> undef to <2 x
i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V4i32 = trunc <4 x i32> undef to <4 x
i1>
```

```

; AVX-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i32 = trunc <8 x i32> undef to <8 x
i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 8 for instruction: %V16i32 = trunc <16 x i32> undef to <16
x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V32i32 = trunc <32 x i32> undef to <32
x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V64i32 = trunc <64 x i32> undef to <64
x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i16 = trunc <2 x i16> undef to <2 x
i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i16 = trunc <4 x i16> undef to <4 x
i1>
; AVX-NEXT: Cost Model: Found an estimated
cost of 0 for instruction: %V8i16 = trunc <8 x i16> undef to <8 x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V16i16 = trunc <16 x i16> undef to <16
x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V32i16 = trunc <32 x i16> undef to <32
x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V64i16 = trunc <64 x i16> undef to <64
x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V2i8 = trunc <2 x i8> undef to <2 x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V4i8 = trunc <4 x i8> undef to <4 x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 1 for instruction: %V8i8 = trunc <8 x i8> undef to <8 x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V16i8 = trunc <16 x i8> undef to <16 x
i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V32i8 = trunc <32 x i8> undef to <32 x
i1>
; AVX-NEXT:
Cost Model: Found an estimated cost of 0 for instruction: %V64i8 = trunc <64 x i8> undef to <64 x i1>
; AVX-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef
;
; AVX512VL256-LABEL: 'trunc_vXi1'
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i64 = trunc <2 x i64>
undef to <2 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i64 = trunc <4 x i64>
undef to <4 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 9 for instruction: %V8i64 = trunc <8 x i64>
undef to <8 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 11 for instruction: %V16i64 = trunc <16 x i64>
undef to <16 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V32i64 = trunc <32 x i64>
undef to <32 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V64i64 = trunc <64 x i64>
undef to <64 x i1>
; AVX512VL256-NEXT: Cost Model:
Found an estimated cost of 2 for instruction: %V2i32 = trunc <2 x i32> undef to <2 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i32 = trunc <4 x i32>
undef to <4 x i1>

```

```

; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i32 = trunc <8 x i32>
undef to <8 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V16i32 = trunc <16 x i32>
undef to <16 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 8 for instruction: %V32i32 = trunc <32 x i32>
undef to <32 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 16 for instruction: %V64i32 = trunc <64 x i32>
undef to <64 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V2i16 = trunc <2 x i16>
undef to <2 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V4i16 = trunc <4 x i16>
undef to <4 x i1>
; AVX512VL256-NEXT: Cost Model: Found an
estimated cost of 3 for instruction: %V8i16 = trunc <8 x i16> undef to <8 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 8 for instruction: %V16i16 = trunc <16 x i16>
undef to <16 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 16 for instruction: %V32i16 = trunc <32 x i16>
undef to <32 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 32 for instruction: %V64i16 = trunc <64 x i16>
undef to <64 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V2i8 = trunc <2 x i8> undef
to <2 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V4i8 = trunc <4 x i8> undef
to <4 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V8i8 = trunc <8 x i8> undef
to <8 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 8 for instruction: %V16i8 = trunc <16 x i8>
undef to <16 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of
0 for instruction: %V32i8 = trunc <32 x i8> undef to <32 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V64i8 = trunc <64 x i8>
undef to <64 x i1>
; AVX512VL256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef
;
; AVX512VL512-LABEL: 'trunc_vXi1'
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i64 = trunc <2 x i64>
undef to <2 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i64 = trunc <4 x i64>
undef to <4 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i64 = trunc <8 x i64>
undef to <8 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 11 for instruction: %V16i64 = trunc <16 x i64>
undef to <16 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V32i64 = trunc <32 x i64>
undef to <32 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction:
%V64i64 = trunc <64 x i64> undef to <64 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i32 = trunc <2 x i32>

```



```

undef to <2 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i32 = trunc <4 x i32>
undef to <4 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i32 = trunc <8 x i32>
undef to <8 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i32 = trunc <16 x i32>
undef to <16 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V32i32 = trunc <32 x i32>
undef to <32 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 8 for instruction: %V64i32 = trunc <64 x i32>
undef to <64 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V2i16 = trunc <2 x i16>
undef to <2 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction:
%V4i16 = trunc <4 x i16> undef to <4 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V8i16 = trunc <8 x i16>
undef to <8 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V16i16 = trunc <16 x i16>
undef to <16 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V32i16 = trunc <32 x i16>
undef to <32 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V64i16 = trunc <64 x i16>
undef to <64 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V2i8 = trunc <2 x i8> undef
to <2 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V4i8 = trunc <4 x i8> undef
to <4 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V8i8 = trunc <8 x i8> undef
to <8 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 3 for instruction: %V16i8 = trunc <16 x
i8> undef to <16 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V32i8 = trunc <32 x i8>
undef to <32 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V64i8 = trunc <64 x i8>
undef to <64 x i1>
; AVX512VL512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef
;
; SKX256-LABEL: 'trunc_vXi1'
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i64 = trunc <2 x i64> undef to <2
x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i64 = trunc <4 x i64> undef to <4
x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 9 for instruction: %V8i64 = trunc <8 x i64> undef to <8
x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 11 for instruction: %V16i64 = trunc <16 x i64> undef to
<16 x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V32i64 = trunc <32 x i64> undef to
<32 x i1>

```

```

; SKX256-NEXT:
  Cost Model: Found an estimated cost of 0 for instruction: %V64i64 = trunc <64 x i64> undef to <64 x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i32 = trunc <2 x i32> undef to <2
x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i32 = trunc <4 x i32> undef to <4
x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i32 = trunc <8 x i32> undef to <8
x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V16i32 = trunc <16 x i32> undef to
<16 x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V32i32 = trunc <32 x i32> undef to
<32 x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V64i32 = trunc <64 x i32> undef to
<64 x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i16 = trunc <2 x i16> undef to <2
x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction:
  %V4i16 = trunc <4 x i16> undef to <4 x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i16 = trunc <8 x i16> undef to <8
x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i16 = trunc <16 x i16> undef to
<16 x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V32i16 = trunc <32 x i16> undef to
<32 x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 8 for instruction: %V64i16 = trunc <64 x i16> undef to
<64 x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i8 = trunc <2 x i8> undef to <2 x
i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i8 = trunc <4 x i8> undef to <4 x
i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i8 = trunc <8 x i8> undef to <8 x
i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i8 = trunc <16 x i8> undef to
<16 x i1>
; SKX256-NEXT:
  Cost Model: Found an estimated cost of 2 for instruction: %V32i8 = trunc <32 x i8> undef to <32 x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V64i8 = trunc <64 x i8> undef to
<64 x i1>
; SKX256-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef
;
; SKX512-LABEL: 'trunc_vXi1'
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i64 = trunc <2 x i64> undef to <2
x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i64 = trunc <4 x i64> undef to <4
x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i64 = trunc <8 x i64> undef to <8
x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 11 for instruction: %V16i64 = trunc <16 x i64> undef to

```

```

<16 x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V32i64 = trunc <32 x i64> undef to
<32 x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 0 for instruction:
%V64i64 = trunc <64 x i64> undef to <64 x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i32 = trunc <2 x i32> undef to <2
x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i32 = trunc <4 x i32> undef to <4
x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i32 = trunc <8 x i32> undef to <8
x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i32 = trunc <16 x i32> undef to
<16 x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V32i32 = trunc <32 x i32> undef to
<32 x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: %V64i32 = trunc <64 x i32> undef to
<64 x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i16 = trunc <2 x i16> undef to <2
x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i16 = trunc <4 x i16> undef to <4
x i1>
;
SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i16 = trunc <8 x i16> undef to <8
x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i16 = trunc <16 x i16> undef to
<16 x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V32i16 = trunc <32 x i16> undef to
<32 x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 4 for instruction: %V64i16 = trunc <64 x i16> undef to
<64 x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V2i8 = trunc <2 x i8> undef to <2 x
i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V4i8 = trunc <4 x i8> undef to <4 x
i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V8i8 = trunc <8 x i8> undef to <8 x
i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V16i8 = trunc <16 x i8> undef to
<16 x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for
instruction: %V32i8 = trunc <32 x i8> undef to <32 x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 2 for instruction: %V64i8 = trunc <64 x i8> undef to
<64 x i1>
; SKX512-NEXT: Cost Model: Found an estimated cost of 0 for instruction: ret i32 undef
;
%V2i64 = trunc <2 x i64> undef to <2 x i1>
%V4i64 = trunc <4 x i64> undef to <4 x i1>
%V8i64 = trunc <8 x i64> undef to <8 x i1>
%V16i64 = trunc <16 x i64> undef to <16 x i1>

```

%V32i64 = trunc <32 x i64> undef to <32 x i1>

%V64i64 = trunc <64 x i64> undef to <64 x i1>

%V2i32 = trunc <2 x i32> undef to <2 x i1>

%V4i32 = trunc <4 x i32> undef to <4 x i1>

%V8i32 = trunc <8 x i32> undef to <8 x i1>

%V16i32 = trunc <16 x i32> undef to <16 x i1>

%V32i32 = trunc <32 x i32> undef to <32 x i1>

%V64i32 = trunc <64 x i32> undef to <64 x i1>

%V2i16 = trunc <2 x i16> undef to <2 x i1>

%V4i16 = trunc <4 x i16> undef to <4 x i1>

%V8i16 = trunc <8 x i16> undef to <8 x i1>

%V16i16 = trunc <16 x i16> undef to

<16 x i1>

%V32i16 = trunc <32 x i16> undef to <32 x i1>

%V64i16 = trunc <64 x i16> undef to <64 x i1>

%V2i8 = trunc <2 x i8> undef to <2 x i1>

%V4i8 = trunc <4 x i8> undef to <4 x i1>

%V8i8 = trunc <8 x i8> undef to <8 x i1>

%V16i8 = trunc <16 x i8> undef to <16 x i1>

%V32i8 = trunc <32 x i8> undef to <32 x i1>

%V64i8 = trunc <64 x i8> undef to <64 x i1>

ret i32 undef

}

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; NOTE: Assertions have been autogenerated by utils/update\_llc\_test\_checks.py

; RUN: llc -mtriple=riscv64 -mattr=+m -verify-machineinstrs < %s \

; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefix=RV64

;

; Get the actual value of the overflow bit.

;

define zeroext i1 @saddo1.i32(i32 signext %v1, i32 signext %v2, ptr %res) {

; RV64-LABEL: saddo1.i32:

; RV64: # %bb.0: # %entry

; RV64-NEXT: addw a3, a0, a1

; RV64-NEXT: slt a0, a3, a0

; RV64-NEXT: slti a1, a1, 0

; RV64-NEXT: xor a0, a1, a0

; RV64-NEXT: sw a3, 0(a2)

; RV64-NEXT: ret

entry:

%t = call {i32, i1} @llvm.sadd.with.overflow.i32(i32 %v1, i32 %v2)

%val = extractvalue {i32, i1} %t, 0

%obit = extractvalue {i32, i1} %t, 1

store i32 %val, ptr %res

ret i1 %obit

}

; Test the immediate version.

define zeroext i1 @saddo2.i32(i32 signext %v1, ptr %res) {

; RV64-LABEL: saddo2.i32:

; RV64: # %bb.0: # %entry

; RV64-NEXT: addiw a2, a0, 4

; RV64-NEXT: slt a0, a2, a0

; RV64-NEXT:

```

    sw a2, 0(a1)
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.sadd.with.overflow.i32(i32 %v1, i32 4)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

; Test negative immediates.
define zeroext i1 @saddo3.i32(i32 signext %v1, ptr %res) {
; RV64-LABEL: saddo3.i32:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:  addiw a2, a0, -4
; RV64-NEXT:  slt a0, a2, a0
; RV64-NEXT:  xori a0, a0, 1
; RV64-NEXT:  sw a2, 0(a1)
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.sadd.with.overflow.i32(i32 %v1, i32 -4)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

; Test immediates that are too large to be encoded.
define zeroext i1 @saddo4.i32(i32 signext %v1, ptr %res) {
; RV64-LABEL: saddo4.i32:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:  lui a2, 4096
; RV64-NEXT:  addi a2, a2, -1
; RV64-NEXT:  addw a2, a0, a2
; RV64-NEXT:  slt
a0, a2, a0
; RV64-NEXT:  sw a2, 0(a1)
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.sadd.with.overflow.i32(i32 %v1, i32 16777215)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @saddo1.i64(i64 %v1, i64 %v2, ptr %res) {
; RV64-LABEL: saddo1.i64:

```

```

; RV64:    # %bb.0: # %entry
; RV64-NEXT:  add a3, a0, a1
; RV64-NEXT:  slt a0, a3, a0
; RV64-NEXT:  slti a1, a1, 0
; RV64-NEXT:  xor a0, a1, a0
; RV64-NEXT:  sd a3, 0(a2)
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.sadd.with.overflow.i64(i64 %v1, i64 %v2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
store i64 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @saddo2.i64(i64 %v1, ptr %res) {
; RV64-LABEL: saddo2.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  addi a2, a0, 4
; RV64-NEXT:  slt a0, a2, a0
; RV64-NEXT:  sd a2, 0(a1)
; RV64-NEXT:  ret
entry:
%t = call {i64, i1}
@llvm.sadd.with.overflow.i64(i64 %v1, i64 4)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
store i64 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @saddo3.i64(i64 %v1, ptr %res) {
; RV64-LABEL: saddo3.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  addi a2, a0, -4
; RV64-NEXT:  slt a0, a2, a0
; RV64-NEXT:  xori a0, a0, 1
; RV64-NEXT:  sd a2, 0(a1)
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.sadd.with.overflow.i64(i64 %v1, i64 -4)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
store i64 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @uaddo.i32(i32 signext %v1, i32 signext %v2, ptr %res) {

```

```

; RV64-LABEL: uaddo.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  addw a1, a0, a1
; RV64-NEXT:  sltu a0, a1, a0
; RV64-NEXT:  sw a1, 0(a2)
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.uadd.with.overflow.i32(i32 %v1, i32 %v2)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32,
i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @uaddo.i32.constant(i32 signext %v1, ptr %res) {
; RV64-LABEL: uaddo.i32.constant:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  addiw a2, a0, -2
; RV64-NEXT:  sltu a0, a2, a0
; RV64-NEXT:  sw a2, 0(a1)
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.uadd.with.overflow.i32(i32 %v1, i32 -2)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @uaddo.i32.constant_one(i32 signext %v1, ptr %res) {
; RV64-LABEL: uaddo.i32.constant_one:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  addiw a2, a0, 1
; RV64-NEXT:  seqz a0, a2
; RV64-NEXT:  sw a2, 0(a1)
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.uadd.with.overflow.i32(i32 %v1, i32 1)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @uaddo.i64(i64 %v1, i64 %v2, ptr
%res) {
; RV64-LABEL: uaddo.i64:

```

```

; RV64:    # %bb.0: # %entry
; RV64-NEXT:  add a1, a0, a1
; RV64-NEXT:  sltu a0, a1, a0
; RV64-NEXT:  sd a1, 0(a2)
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.uadd.with.overflow.i64(i64 %v1, i64 %v2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
store i64 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @uaddo.i64.constant_one(i64 %v1, ptr %res) {
; RV64-LABEL: uaddo.i64.constant_one:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  addi a2, a0, 1
; RV64-NEXT:  seqz a0, a2
; RV64-NEXT:  sd a2, 0(a1)
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.uadd.with.overflow.i64(i64 %v1, i64 1)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
store i64 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @ssubol.i32(i32 signext %v1, i32 signext %v2, ptr %res) {
; RV64-LABEL: ssubol.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  sgtz a3, a1
; RV64-NEXT:  subw a1,
a0, a1
; RV64-NEXT:  slt a0, a1, a0
; RV64-NEXT:  xor a0, a3, a0
; RV64-NEXT:  sw a1, 0(a2)
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.ssub.with.overflow.i32(i32 %v1, i32 %v2)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @ssubol.i32(i32 signext %v1, ptr %res) {
; RV64-LABEL: ssubol.i32:

```

```

; RV64:    # %bb.0: # %entry
; RV64-NEXT:  addiw a2, a0, 4
; RV64-NEXT:  slt a0, a2, a0
; RV64-NEXT:  sw a2, 0(a1)
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.ssub.with.overflow.i32(i32 %v1, i32 -4)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @ssubo.i64(i64 %v1, i64 %v2, ptr %res) {
; RV64-LABEL: ssubo.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  sgtz a3, a1
; RV64-NEXT:  sub a1, a0, a1
; RV64-NEXT:  slt a0, a1, a0
; RV64-NEXT:  xor a0, a3, a0
; RV64-NEXT:  sd a1,
0(a2)
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.ssub.with.overflow.i64(i64 %v1, i64 %v2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
store i64 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @usubo.i32(i32 signext %v1, i32 signext %v2, ptr %res) {
; RV64-LABEL: usubo.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  subw a1, a0, a1
; RV64-NEXT:  sltu a0, a0, a1
; RV64-NEXT:  sw a1, 0(a2)
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.usub.with.overflow.i32(i32 %v1, i32 %v2)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @usubo.i32.constant.rhs(i32 signext %v1, ptr %res) {
; RV64-LABEL: usubo.i32.constant.rhs:

```



```

; RV64:    # %bb.0: # %entry
; RV64-NEXT:  addiw a2, a0, 2
; RV64-NEXT:  sltu a0, a0, a2
; RV64-NEXT:  sw a2, 0(a1)
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.usub.with.overflow.i32(i32 %v1, i32 -2)

%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @usubo.i32.constant.lhs(i32 signext %v1, ptr %res) {
; RV64-LABEL: usubo.i32.constant.lhs:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  li a2, -2
; RV64-NEXT:  subw a2, a2, a0
; RV64-NEXT:  addi a0, a2, 1
; RV64-NEXT:  seqz a0, a0
; RV64-NEXT:  sw a2, 0(a1)
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.usub.with.overflow.i32(i32 -2, i32 %v1)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @usubo.i64(i64 %v1, i64 %v2, ptr %res) {
; RV64-LABEL: usubo.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  sub a1, a0, a1
; RV64-NEXT:  sltu a0, a0, a1
; RV64-NEXT:  sd a1, 0(a2)
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.usub.with.overflow.i64(i64 %v1, i64 %v2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t,
1
store i64 %val, ptr %res
ret i1 %obit
}

define zeroext i1 @smulo.i32(i32 signext %v1, i32 signext %v2, ptr %res) {

```

```

; RV64-LABEL: smulo.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  mul a1, a0, a1
; RV64-NEXT:  srai a0, a1, 32
; RV64-NEXT:  sraiw a3, a1, 31
; RV64-NEXT:  xor a0, a0, a3
; RV64-NEXT:  snez a0, a0
; RV64-NEXT:  sw a1, 0(a2)
; RV64-NEXT:  ret

entry:
%t = call {i32, i1} @llvm.smul.with.overflow.i32(i32 %v1, i32 %v2)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

```

```

define zeroext i1 @smulo2.i32(i32 signext %v1, ptr %res) {
; RV64-LABEL: smulo2.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  li a2, 13
; RV64-NEXT:  mul a2, a0, a2
; RV64-NEXT:  srai a0, a2, 32
; RV64-NEXT:  sraiw a3, a2, 31
; RV64-NEXT:  xor a0, a0, a3
; RV64-NEXT:  snez a0, a0
; RV64-NEXT:  sw a2, 0(a1)
; RV64-NEXT:  ret

entry:
%t = call {i32, i1} @llvm.smul.with.overflow.i32(i32 %v1, i32
13)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

```

```

define zeroext i1 @smulo.i64(i64 %v1, i64 %v2, ptr %res) {
; RV64-LABEL: smulo.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  mulh a3, a0, a1
; RV64-NEXT:  mul a1, a0, a1
; RV64-NEXT:  srai a0, a1, 63
; RV64-NEXT:  xor a0, a3, a0
; RV64-NEXT:  snez a0, a0
; RV64-NEXT:  sd a1, 0(a2)
; RV64-NEXT:  ret

entry:

```

```

%t = call {i64, i1} @llvm.smul.with.overflow.i64(i64 %v1, i64 %v2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
store i64 %val, ptr %res
ret i1 %obit
}

```

```

define zeroext i1 @smulo2.i64(i64 %v1, ptr %res) {
; RV64-LABEL: smulo2.i64:
; RV64:      # %bb.0: # %entry
; RV64-NEXT: li a2, 13
; RV64-NEXT: mulh a3, a0, a2
; RV64-NEXT: mul a2, a0, a2
; RV64-NEXT: srai a0, a2, 63
; RV64-NEXT: xor a0, a3, a0
; RV64-NEXT: snez a0, a0
; RV64-NEXT: sd a2, 0(a1)
; RV64-NEXT: ret
entry:
%t = call
{i64, i1} @llvm.smul.with.overflow.i64(i64 %v1, i64 13)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
store i64 %val, ptr %res
ret i1 %obit
}

```

```

define zeroext i1 @umulo.i32(i32 signext %v1, i32 signext %v2, ptr %res) {
; RV64-LABEL: umulo.i32:
; RV64:      # %bb.0: # %entry
; RV64-NEXT: slli a1, a1, 32
; RV64-NEXT: slli a0, a0, 32
; RV64-NEXT: mulhu a1, a0, a1
; RV64-NEXT: srai a0, a1, 32
; RV64-NEXT: snez a0, a0
; RV64-NEXT: sw a1, 0(a2)
; RV64-NEXT: ret
entry:
%t = call {i32, i1} @llvm.umul.with.overflow.i32(i32 %v1, i32 %v2)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
store i32 %val, ptr %res
ret i1 %obit
}

```

```

define zeroext i1 @umulo2.i32(i32 signext %v1, ptr %res) {
; RV64-LABEL: umulo2.i32:
; RV64:      # %bb.0: # %entry

```

```

; RV64-NEXT: li a2, 13
; RV64-NEXT: slli a2, a2, 32
; RV64-NEXT: slli a0, a0, 32
; RV64-NEXT: mulhu a2, a0, a2
; RV64-NEXT: srli a0, a2, 32
; RV64-NEXT:
    snez a0, a0
; RV64-NEXT: sw a2, 0(a1)
; RV64-NEXT: ret
entry:
    %t = call {i32, i1} @llvm.umul.with.overflow.i32(i32 %v1, i32 13)
    %val = extractvalue {i32, i1} %t, 0
    %obit = extractvalue {i32, i1} %t, 1
    store i32 %val, ptr %res
    ret i1 %obit
}

; Similar to umulo.i32, but storing the overflow and returning the result.
define signext i32 @umulo3.i32(i32 signext %0, i32 signext %1, ptr %2) {
; RV64-LABEL: umulo3.i32:
; RV64:    # %bb.0:
; RV64-NEXT: slli a1, a1, 32
; RV64-NEXT: slli a0, a0, 32
; RV64-NEXT: mulhu a0, a0, a1
; RV64-NEXT: srai a1, a0, 32
; RV64-NEXT: snez a1, a1
; RV64-NEXT: sext.w a0, a0
; RV64-NEXT: sw a1, 0(a2)
; RV64-NEXT: ret
    %4 = tail call { i32, i1 } @llvm.umul.with.overflow.i32(i32 %0, i32 %1)
    %5 = extractvalue { i32, i1 } %4, 1
    %6 = extractvalue { i32, i1 } %4, 0
    %7 = zext i1 %5 to i32
    store i32 %7, ptr %2, align 4
    ret i32 %6
}

define zeroext i1 @umulo.i64(i64 %v1, i64 %v2, ptr %res) {
; RV64-LABEL: umulo.i64:
;
; RV64:    # %bb.0: # %entry
; RV64-NEXT: mulhu a3, a0, a1
; RV64-NEXT: snez a3, a3
; RV64-NEXT: mul a0, a0, a1
; RV64-NEXT: sd a0, 0(a2)
; RV64-NEXT: mv a0, a3
; RV64-NEXT: ret
entry:

```

```

%t = call {i64, i1} @llvm.umul.with.overflow.i64(i64 %v1, i64 %v2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
store i64 %val, ptr %res
ret i1 %obit
}

```

```

define zeroext i1 @umulo2.i64(i64 %v1, ptr %res) {
; RV64-LABEL: umulo2.i64:
; RV64:      # %bb.0: # %entry
; RV64-NEXT: li a3, 13
; RV64-NEXT: mulhu a2, a0, a3
; RV64-NEXT: snez a2, a2
; RV64-NEXT: mul a0, a0, a3
; RV64-NEXT: sd a0, 0(a1)
; RV64-NEXT: mv a0, a2
; RV64-NEXT: ret
entry:
%t = call {i64, i1} @llvm.umul.with.overflow.i64(i64 %v1, i64 13)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
store i64 %val, ptr %res
ret i1 %obit
}

```

```

;
; Check the use of the overflow bit in combination with a select instruction.
;

```

```

define i32 @saddo.select.i32(i32
signext %v1, i32 signext %v2) {
; RV64-LABEL: saddo.select.i32:
; RV64:      # %bb.0: # %entry
; RV64-NEXT: addw a2, a0, a1
; RV64-NEXT: slt a2, a2, a0
; RV64-NEXT: slti a3, a1, 0
; RV64-NEXT: bne a3, a2, .LBB28_2
; RV64-NEXT: # %bb.1: # %entry
; RV64-NEXT: mv a0, a1
; RV64-NEXT: .LBB28_2: # %entry
; RV64-NEXT: ret
entry:
%t = call {i32, i1} @llvm.sadd.with.overflow.i32(i32 %v1, i32 %v2)
%obit = extractvalue {i32, i1} %t, 1
%ret = select i1 %obit, i32 %v1, i32 %v2
ret i32 %ret
}

```

```

define i1 @saddo.not.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: saddo.not.i32:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:  addw a2, a0, a1
; RV64-NEXT:  slt a0, a2, a0
; RV64-NEXT:  slti a1, a1, 0
; RV64-NEXT:  xor a0, a1, a0
; RV64-NEXT:  xori a0, a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.sadd.with.overflow.i32(i32 %v1, i32 %v2)
%obit = extractvalue {i32, i1} %t, 1
%ret = xor i1 %obit, true
ret i1 %ret
}

```

```

define i64 @saddo.select.i64(i64
%v1, i64 %v2) {
; RV64-LABEL: saddo.select.i64:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:  add a2, a0, a1
; RV64-NEXT:  slt a2, a2, a0
; RV64-NEXT:  slti a3, a1, 0
; RV64-NEXT:  bne a3, a2, .LBB30_2
; RV64-NEXT:  # %bb.1: # %entry
; RV64-NEXT:  mv a0, a1
; RV64-NEXT:  .LBB30_2: # %entry
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.sadd.with.overflow.i64(i64 %v1, i64 %v2)
%obit = extractvalue {i64, i1} %t, 1
%ret = select i1 %obit, i64 %v1, i64 %v2
ret i64 %ret
}

```

```

define i1 @saddo.not.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: saddo.not.i64:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:  add a2, a0, a1
; RV64-NEXT:  slt a0, a2, a0
; RV64-NEXT:  slti a1, a1, 0
; RV64-NEXT:  xor a0, a1, a0
; RV64-NEXT:  xori a0, a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.sadd.with.overflow.i64(i64 %v1, i64 %v2)
%obit = extractvalue {i64, i1} %t, 1
%ret = xor i1 %obit, true

```

```

ret i1 %ret
}

define i32 @uaddo.select.i32(i32 signext %v1,
i32 signext %v2) {
; RV64-LABEL: uaddo.select.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  addw a2, a0, a1
; RV64-NEXT:  bltu a2, a0, .LBB32_2
; RV64-NEXT: # %bb.1: # %entry
; RV64-NEXT:  mv a0, a1
; RV64-NEXT: .LBB32_2: # %entry
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.uadd.with.overflow.i32(i32 %v1, i32 %v2)
%obit = extractvalue {i32, i1} %t, 1
%ret = select i1 %obit, i32 %v1, i32 %v2
ret i32 %ret
}

```

```

define i1 @uaddo.not.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: uaddo.not.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  addw a1, a0, a1
; RV64-NEXT:  sltu a0, a1, a0
; RV64-NEXT:  xori a0, a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.uadd.with.overflow.i32(i32 %v1, i32 %v2)
%obit = extractvalue {i32, i1} %t, 1
%ret = xor i1 %obit, true
ret i1 %ret
}

```

```

define i64 @uaddo.select.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: uaddo.select.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  add a2, a0, a1
; RV64-NEXT:
; RV64-NEXT:  bltu a2, a0, .LBB34_2
; RV64-NEXT: # %bb.1: # %entry
; RV64-NEXT:  mv a0, a1
; RV64-NEXT: .LBB34_2: # %entry
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.uadd.with.overflow.i64(i64 %v1, i64 %v2)
%obit = extractvalue {i64, i1} %t, 1
%ret = select i1 %obit, i64 %v1, i64 %v2

```

```

ret i64 %ret
}

define i1 @uaddo.not.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: uaddo.not.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  add a1, a0, a1
; RV64-NEXT:  sltu a0, a1, a0
; RV64-NEXT:  xori a0, a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.uadd.with.overflow.i64(i64 %v1, i64 %v2)
%obit = extractvalue {i64, i1} %t, 1
%ret = xor i1 %obit, true
ret i1 %ret
}

define i32 @ssubo.select.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: ssubo.select.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  sgtz a2, a1
; RV64-NEXT:  subw a3, a0, a1
; RV64-NEXT:  slt a3, a3, a0
; RV64-NEXT:  bne a2, a3, .LBB36_2
; RV64-NEXT:  # %bb.1: # %entry
; RV64-NEXT:  mv a0,
a1
; RV64-NEXT:  .LBB36_2: # %entry
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.ssub.with.overflow.i32(i32 %v1, i32 %v2)
%obit = extractvalue {i32, i1} %t, 1
%ret = select i1 %obit, i32 %v1, i32 %v2
ret i32 %ret
}

define i1 @ssubo.not.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: ssubo.not.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  sgtz a2, a1
; RV64-NEXT:  subw a1, a0, a1
; RV64-NEXT:  slt a0, a1, a0
; RV64-NEXT:  xor a0, a2, a0
; RV64-NEXT:  xori a0, a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.ssub.with.overflow.i32(i32 %v1, i32 %v2)
%obit = extractvalue {i32, i1} %t, 1

```



```

%ret = xor i1 %obit, true
ret i1 %ret
}

define i64 @ssubo.select.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: ssubo.select.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  sgtz a2, a1
; RV64-NEXT:  sub a3, a0, a1
; RV64-NEXT:  slt a3, a3, a0
; RV64-NEXT:  bne a2, a3, .LBB38_2
; RV64-NEXT:  # %bb.1: # %entry
; RV64-NEXT:  mv a0, a1
; RV64-NEXT:
.LBB38_2: # %entry
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.ssub.with.overflow.i64(i64 %v1, i64 %v2)
%obit = extractvalue {i64, i1} %t, 1
%ret = select i1 %obit, i64 %v1, i64 %v2
ret i64 %ret
}

define i1 @ssub.not.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: ssub.not.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  sgtz a2, a1
; RV64-NEXT:  sub a1, a0, a1
; RV64-NEXT:  slt a0, a1, a0
; RV64-NEXT:  xor a0, a2, a0
; RV64-NEXT:  xori a0, a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.ssub.with.overflow.i64(i64 %v1, i64 %v2)
%obit = extractvalue {i64, i1} %t, 1
%ret = xor i1 %obit, true
ret i1 %ret
}

define i32 @usubo.select.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: usubo.select.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  subw a2, a0, a1
; RV64-NEXT:  bltu a0, a2, .LBB40_2
; RV64-NEXT:  # %bb.1: # %entry
; RV64-NEXT:  mv a0, a1
; RV64-NEXT:  .LBB40_2: # %entry
; RV64-NEXT:  ret

```

```

entry:
%t = call {i32, i1} @llvm.usub.with.overflow.i32(i32
%v1, i32 %v2)
%obit = extractvalue {i32, i1} %t, 1
%ret = select i1 %obit, i32 %v1, i32 %v2
ret i32 %ret
}

define i1 @usubo.not.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: usubo.not.i32:
; RV64:      # %bb.0: # %entry
; RV64-NEXT: subw a1, a0, a1
; RV64-NEXT: sltu a0, a0, a1
; RV64-NEXT: xori a0, a0, 1
; RV64-NEXT: ret
entry:
%t = call {i32, i1} @llvm.usub.with.overflow.i32(i32 %v1, i32 %v2)
%obit = extractvalue {i32, i1} %t, 1
%ret = xor i1 %obit, true
ret i1 %ret
}

define i64 @usubo.select.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: usubo.select.i64:
; RV64:      # %bb.0: # %entry
; RV64-NEXT: sub a2, a0, a1
; RV64-NEXT: bltu a0, a2, .LBB42_2
; RV64-NEXT: # %bb.1: # %entry
; RV64-NEXT: mv a0, a1
; RV64-NEXT: .LBB42_2: # %entry
; RV64-NEXT: ret
entry:
%t = call {i64, i1} @llvm.usub.with.overflow.i64(i64 %v1, i64 %v2)
%obit = extractvalue {i64, i1} %t, 1
%ret = select i1 %obit, i64 %v1, i64 %v2
ret i64 %ret
}

define
i1 @usubo.not.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: usubo.not.i64:
; RV64:      # %bb.0: # %entry
; RV64-NEXT: sub a1, a0, a1
; RV64-NEXT: sltu a0, a0, a1
; RV64-NEXT: xori a0, a0, 1
; RV64-NEXT: ret
entry:
%t = call {i64, i1} @llvm.usub.with.overflow.i64(i64 %v1, i64 %v2)

```

```

%obit = extractvalue {i64, i1} %t, 1
%ret = xor i1 %obit, true
ret i1 %ret
}

define i32 @smulo.select.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: smulo.select.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  mul a2, a0, a1
; RV64-NEXT:  srai a3, a2, 32
; RV64-NEXT:  sraiw a2, a2, 31
; RV64-NEXT:  bne a3, a2, .LBB44_2
; RV64-NEXT:  # %bb.1: # %entry
; RV64-NEXT:  mv a0, a1
; RV64-NEXT:  .LBB44_2: # %entry
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.smul.with.overflow.i32(i32 %v1, i32 %v2)
%obit = extractvalue {i32, i1} %t, 1
%ret = select i1 %obit, i32 %v1, i32 %v2
ret i32 %ret
}

define i1 @smulo.not.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL:
smulo.not.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  mul a0, a0, a1
; RV64-NEXT:  srai a1, a0, 32
; RV64-NEXT:  sraiw a0, a0, 31
; RV64-NEXT:  xor a0, a1, a0
; RV64-NEXT:  snez a0, a0
; RV64-NEXT:  xori a0, a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.smul.with.overflow.i32(i32 %v1, i32 %v2)
%obit = extractvalue {i32, i1} %t, 1
%ret = xor i1 %obit, true
ret i1 %ret
}

define i64 @smulo.select.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: smulo.select.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  mulh a2, a0, a1
; RV64-NEXT:  mul a3, a0, a1
; RV64-NEXT:  srai a3, a3, 63
; RV64-NEXT:  bne a2, a3, .LBB46_2

```

```

; RV64-NEXT: # %bb.1: # %entry
; RV64-NEXT: mv a0, a1
; RV64-NEXT: .LBB46_2: # %entry
; RV64-NEXT: ret
entry:
%t = call {i64, i1} @llvm.smul.with.overflow.i64(i64 %v1, i64 %v2)
%obit = extractvalue {i64, i1} %t, 1
%ret = select i1 %obit, i64 %v1, i64 %v2
ret i64 %ret
}

```

```

define i1 @smulo.not.i64(i64 %v1, i64 %v2) {
; RV64-LABEL:
smulo.not.i64:
; RV64: # %bb.0: # %entry
; RV64-NEXT: mulh a2, a0, a1
; RV64-NEXT: mul a0, a0, a1
; RV64-NEXT: srai a0, a0, 63
; RV64-NEXT: xor a0, a2, a0
; RV64-NEXT: snez a0, a0
; RV64-NEXT: xori a0, a0, 1
; RV64-NEXT: ret
entry:
%t = call {i64, i1} @llvm.smul.with.overflow.i64(i64 %v1, i64 %v2)
%obit = extractvalue {i64, i1} %t, 1
%ret = xor i1 %obit, true
ret i1 %ret
}

```

```

define i32 @umulo.select.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: umulo.select.i32:
; RV64: # %bb.0: # %entry
; RV64-NEXT: slli a2, a1, 32
; RV64-NEXT: slli a3, a0, 32
; RV64-NEXT: mulhu a2, a3, a2
; RV64-NEXT: srai a2, a2, 32
; RV64-NEXT: bnez a2, .LBB48_2
; RV64-NEXT: # %bb.1: # %entry
; RV64-NEXT: mv a0, a1
; RV64-NEXT: .LBB48_2: # %entry
; RV64-NEXT: ret
entry:
%t = call {i32, i1} @llvm.umul.with.overflow.i32(i32 %v1, i32 %v2)
%obit = extractvalue {i32, i1} %t, 1
%ret = select i1 %obit, i32 %v1, i32 %v2
ret i32 %ret
}

```

```

define
i1 @umulo.not.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: umulo.not.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  slli a1, a1, 32
; RV64-NEXT:  slli a0, a0, 32
; RV64-NEXT:  mulhu a0, a0, a1
; RV64-NEXT:  srai a0, a0, 32
; RV64-NEXT:  snez a0, a0
; RV64-NEXT:  xori a0, a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.umul.with.overflow.i32(i32 %v1, i32 %v2)
%obit = extractvalue {i32, i1} %t, 1
%ret = xor i1 %obit, true
ret i1 %ret
}

```

```

define i64 @umulo.select.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: umulo.select.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  mulhu a2, a0, a1
; RV64-NEXT:  bnez a2, .LBB50_2
; RV64-NEXT:  # %bb.1: # %entry
; RV64-NEXT:  mv a0, a1
; RV64-NEXT:  .LBB50_2: # %entry
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.umul.with.overflow.i64(i64 %v1, i64 %v2)
%obit = extractvalue {i64, i1} %t, 1
%ret = select i1 %obit, i64 %v1, i64 %v2
ret i64 %ret
}

```

```

define i1 @umulo.not.i64(i64 %v1, i64 %v2)
{
; RV64-LABEL: umulo.not.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  mulhu a0, a0, a1
; RV64-NEXT:  snez a0, a0
; RV64-NEXT:  xori a0, a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.umul.with.overflow.i64(i64 %v1, i64 %v2)
%obit = extractvalue {i64, i1} %t, 1
%ret = xor i1 %obit, true
ret i1 %ret
}

```

```

;
; Check the use of the overflow bit in combination with a branch instruction.
;
define zeroext i1 @saddo.br.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: saddo.br.i32:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  addw a2, a0, a1
; RV64-NEXT:  slt a0, a2, a0
; RV64-NEXT:  slti a1, a1, 0
; RV64-NEXT:  beq a1, a0, .LBB52_2
; RV64-NEXT:  # %bb.1: # %overflow
; RV64-NEXT:  li a0, 0
; RV64-NEXT:  ret
; RV64-NEXT:  .LBB52_2: # %continue
; RV64-NEXT:  li a0, 1
; RV64-NEXT:  ret
entry:
    %t = call {i32, i1} @llvm.sadd.with.overflow.i32(i32 %v1, i32 %v2)
    %val = extractvalue {i32, i1} %t, 0
    %obit = extractvalue {i32, i1} %t, 1
    br i1
        %obit, label %overflow, label %continue

overflow:
    ret i1 false

continue:
    ret i1 true
}

```

```

define zeroext i1 @saddo.br.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: saddo.br.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  add a2, a0, a1
; RV64-NEXT:  slt a0, a2, a0
; RV64-NEXT:  slti a1, a1, 0
; RV64-NEXT:  beq a1, a0, .LBB53_2
; RV64-NEXT:  # %bb.1: # %overflow
; RV64-NEXT:  li a0, 0
; RV64-NEXT:  ret
; RV64-NEXT:  .LBB53_2: # %continue
; RV64-NEXT:  li a0, 1
; RV64-NEXT:  ret
entry:
    %t = call {i64, i1} @llvm.sadd.with.overflow.i64(i64 %v1, i64 %v2)
    %val = extractvalue {i64, i1} %t, 0

```

```

%obit = extractvalue {i64, i1} %t, 1
br i1 %obit, label %overflow, label %continue

overflow:
ret i1 false

continue:
ret i1 true
}

define zeroext i1 @uaddo.br.i32(i32 %v1, i32 %v2) {
; RV64-LABEL: uaddo.br.i32:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:  addw a1, a0, a1
; RV64-NEXT:  sext.w a0, a0
; RV64-NEXT:  bgeu a1, a0, .LBB54_2
; RV64-NEXT:  # %bb.1: # %overflow
;
RV64-NEXT:  li a0, 0
; RV64-NEXT:  ret
; RV64-NEXT:  .LBB54_2: # %continue
; RV64-NEXT:  li a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.uadd.with.overflow.i32(i32 %v1, i32 %v2)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
br i1 %obit, label %overflow, label %continue

overflow:
ret i1 false

continue:
ret i1 true
}

define zeroext i1 @uaddo.br.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: uaddo.br.i64:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:  add a1, a0, a1
; RV64-NEXT:  bgeu a1, a0, .LBB55_2
; RV64-NEXT:  # %bb.1: # %overflow
; RV64-NEXT:  li a0, 0
; RV64-NEXT:  ret
; RV64-NEXT:  .LBB55_2: # %continue
; RV64-NEXT:  li a0, 1
; RV64-NEXT:  ret
entry:

```

```
%t = call {i64, i1} @llvm.uadd.with.overflow.i64(i64 %v1, i64 %v2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
br i1 %obit, label %overflow, label %continue
```

```
overflow:
ret i1 false
```

```
continue:
ret i1 true
}
```

```
define zeroext i1 @ssubo.br.i32(i32
signext %v1, i32 signext %v2) {
; RV64-LABEL: ssubo.br.i32:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:  sgtz a2, a1
; RV64-NEXT:  subw a1, a0, a1
; RV64-NEXT:  slt a0, a1, a0
; RV64-NEXT:  beq a2, a0, .LBB56_2
; RV64-NEXT:  # %bb.1: # %overflow
; RV64-NEXT:  li a0, 0
; RV64-NEXT:  ret
; RV64-NEXT:  .LBB56_2: # %continue
; RV64-NEXT:  li a0, 1
; RV64-NEXT:  ret
```

```
entry:
%t = call {i32, i1} @llvm.ssub.with.overflow.i32(i32 %v1, i32 %v2)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
br i1 %obit, label %overflow, label %continue
```

```
overflow:
ret i1 false
```

```
continue:
ret i1 true
}
```

```
define zeroext i1 @ssubo.br.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: ssubo.br.i64:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:  sgtz a2, a1
; RV64-NEXT:  sub a1, a0, a1
; RV64-NEXT:  slt a0, a1, a0
; RV64-NEXT:  beq a2, a0, .LBB57_2
; RV64-NEXT:  # %bb.1: # %overflow
; RV64-NEXT:  li a0, 0
```



```

; RV64-NEXT:  ret
; RV64-NEXT:  .LBB57_2: # %continue
;
RV64-NEXT:  li a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.ssub.with.overflow.i64(i64 %v1, i64 %v2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
br i1 %obit, label %overflow, label %continue

overflow:
ret i1 false

continue:
ret i1 true
}

define zeroext i1 @usubo.br.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: usubo.br.i32:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:  subw a1, a0, a1
; RV64-NEXT:  bgeu a0, a1, .LBB58_2
; RV64-NEXT:  # %bb.1: # %overflow
; RV64-NEXT:  li a0, 0
; RV64-NEXT:  ret
; RV64-NEXT:  .LBB58_2: # %continue
; RV64-NEXT:  li a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i32, i1} @llvm.usub.with.overflow.i32(i32 %v1, i32 %v2)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
br i1 %obit, label %overflow, label %continue

overflow:
ret i1 false

continue:
ret i1 true
}

define zeroext i1 @usubo.br.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: usubo.br.i64:
;
RV64:      # %bb.0: # %entry
; RV64-NEXT:  sub a1, a0, a1
; RV64-NEXT:  bgeu a0, a1, .LBB59_2

```

```

; RV64-NEXT: # %bb.1: # %overflow
; RV64-NEXT: li a0, 0
; RV64-NEXT: ret
; RV64-NEXT: .LBB59_2: # %continue
; RV64-NEXT: li a0, 1
; RV64-NEXT: ret
entry:
%t = call {i64, i1} @llvm.usub.with.overflow.i64(i64 %v1, i64 %v2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
br i1 %obit, label %overflow, label %continue

overflow:
ret i1 false

continue:
ret i1 true
}

define zeroext i1 @smulo.br.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: smulo.br.i32:
; RV64: # %bb.0: # %entry
; RV64-NEXT: mul a0, a0, a1
; RV64-NEXT: srai a1, a0, 32
; RV64-NEXT: sraiw a0, a0, 31
; RV64-NEXT: beq a1, a0, .LBB60_2
; RV64-NEXT: # %bb.1: # %overflow
; RV64-NEXT: li a0, 0
; RV64-NEXT: ret
; RV64-NEXT: .LBB60_2: # %continue
; RV64-NEXT: li a0, 1
; RV64-NEXT: ret
entry:
%t = call {i32, i1} @llvm.smul.with.overflow.i32(i32
%v1, i32 %v2)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
br i1 %obit, label %overflow, label %continue

overflow:
ret i1 false

continue:
ret i1 true
}

define zeroext i1 @smulo.br.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: smulo.br.i64:

```

```

; RV64:    # %bb.0: # %entry
; RV64-NEXT:  mulh a2, a0, a1
; RV64-NEXT:  mul a0, a0, a1
; RV64-NEXT:  srai a0, a0, 63
; RV64-NEXT:  beq a2, a0, .LBB61_2
; RV64-NEXT:  # %bb.1: # %overflow
; RV64-NEXT:  li a0, 0
; RV64-NEXT:  ret
; RV64-NEXT:  .LBB61_2: # %continue
; RV64-NEXT:  li a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.smul.with.overflow.i64(i64 %v1, i64 %v2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
br i1 %obit, label %overflow, label %continue

overflow:
ret i1 false

continue:
ret i1 true
}

define zeroext i1 @smulo2.br.i64(i64 %v1) {
; RV64-LABEL: smulo2.br.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  li a1, -13
; RV64-NEXT:
    mulh a2, a0, a1
; RV64-NEXT:  mul a0, a0, a1
; RV64-NEXT:  srai a0, a0, 63
; RV64-NEXT:  beq a2, a0, .LBB62_2
; RV64-NEXT:  # %bb.1: # %overflow
; RV64-NEXT:  li a0, 0
; RV64-NEXT:  ret
; RV64-NEXT:  .LBB62_2: # %continue
; RV64-NEXT:  li a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.smul.with.overflow.i64(i64 %v1, i64 -13)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
br i1 %obit, label %overflow, label %continue

overflow:
ret i1 false

```

```

continue:
ret i1 true
}

define zeroext i1 @umulo.br.i32(i32 signext %v1, i32 signext %v2) {
; RV64-LABEL: umulo.br.i32:
; RV64:      # %bb.0: # %entry
; RV64-NEXT: slli a1, a1, 32
; RV64-NEXT: slli a0, a0, 32
; RV64-NEXT: mulhu a0, a0, a1
; RV64-NEXT: srai a0, a0, 32
; RV64-NEXT: beqz a0, .LBB63_2
; RV64-NEXT: # %bb.1: # %overflow
; RV64-NEXT: li a0, 0
; RV64-NEXT: ret
; RV64-NEXT: .LBB63_2: # %continue
; RV64-NEXT: li a0, 1
; RV64-NEXT: ret
entry:
%t = call
{i32, i1} @llvm.umul.with.overflow.i32(i32 %v1, i32 %v2)
%val = extractvalue {i32, i1} %t, 0
%obit = extractvalue {i32, i1} %t, 1
br i1 %obit, label %overflow, label %continue

overflow:
ret i1 false

continue:
ret i1 true
}

define zeroext i1 @umulo.br.i64(i64 %v1, i64 %v2) {
; RV64-LABEL: umulo.br.i64:
; RV64:      # %bb.0: # %entry
; RV64-NEXT: mulhu a0, a0, a1
; RV64-NEXT: beqz a0, .LBB64_2
; RV64-NEXT: # %bb.1: # %overflow
; RV64-NEXT: li a0, 0
; RV64-NEXT: ret
; RV64-NEXT: .LBB64_2: # %continue
; RV64-NEXT: li a0, 1
; RV64-NEXT: ret
entry:
%t = call {i64, i1} @llvm.umul.with.overflow.i64(i64 %v1, i64 %v2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
br i1 %obit, label %overflow, label %continue

```

```

overflow:
ret i1 false

continue:
ret i1 true
}

define zeroext i1 @umulo2.br.i64(i64 %v1) {
; RV64-LABEL: umulo2.br.i64:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  add a1, a0, a0
; RV64-NEXT:  bgeu a1, a0,
.LBB65_2
; RV64-NEXT: # %bb.1: # %overflow
; RV64-NEXT:  li a0, 0
; RV64-NEXT:  ret
; RV64-NEXT: .LBB65_2: # %continue
; RV64-NEXT:  li a0, 1
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.umul.with.overflow.i64(i64 %v1, i64 2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
br i1 %obit, label %overflow, label %continue

overflow:
ret i1 false

continue:
ret i1 true
}

define zeroext i1 @uaddo.i64.constant(i64 %v1, ptr %res) {
; RV64-LABEL: uaddo.i64.constant:
; RV64:    # %bb.0: # %entry
; RV64-NEXT:  addi a2, a0, 2
; RV64-NEXT:  sltu a0, a2, a0
; RV64-NEXT:  sd a2, 0(a1)
; RV64-NEXT:  ret
entry:
%t = call {i64, i1} @llvm.uadd.with.overflow.i64(i64 %v1, i64 2)
%val = extractvalue {i64, i1} %t, 0
%obit = extractvalue {i64, i1} %t, 1
store i64 %val, ptr %res
ret i1 %obit
}

```

```

define zeroext i1 @uaddo.i64.constant_2048(i64 %v1, ptr %res) {
; RV64-LABEL: uaddo.i64.constant_2048:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:
    addi a2, a0, 2047
; RV64-NEXT:  addi a2, a2, 1
; RV64-NEXT:  sltu a0, a2, a0
; RV64-NEXT:  sd a2, 0(a1)
; RV64-NEXT:  ret
entry:
    %t = call {i64, i1} @llvm.uadd.with.overflow.i64(i64 %v1, i64 2048)
    %val = extractvalue {i64, i1} %t, 0
    %obit = extractvalue {i64, i1} %t, 1
    store i64 %val, ptr %res
    ret i1 %obit
}

```

```

define zeroext i1 @uaddo.i64.constant_2049(i64 %v1, ptr %res) {
; RV64-LABEL: uaddo.i64.constant_2049:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:  addi a2, a0, 2047
; RV64-NEXT:  addi a2, a2, 2
; RV64-NEXT:  sltu a0, a2, a0
; RV64-NEXT:  sd a2, 0(a1)
; RV64-NEXT:  ret
entry:
    %t = call {i64, i1} @llvm.uadd.with.overflow.i64(i64 %v1, i64 2049)
    %val = extractvalue {i64, i1} %t, 0
    %obit = extractvalue {i64, i1} %t, 1
    store i64 %val, ptr %res
    ret i1 %obit
}

```

```

define i64 @uaddo.i64.constant_setcc_on_overflow_flag(ptr %p) {
; RV64-LABEL: uaddo.i64.constant_setcc_on_overflow_flag:
; RV64:      # %bb.0: # %entry
; RV64-NEXT:  ld a1, 0(a0)
;
; RV64-NEXT:  addi a0, a1, 2
; RV64-NEXT:  bltu a0, a1, .LBB69_2
; RV64-NEXT:  # %bb.1: # %IfOverflow
; RV64-NEXT:  li a0, 0
; RV64-NEXT:  .LBB69_2: # %IfNoOverflow
; RV64-NEXT:  ret
entry:
    %v1 = load i64, ptr %p
    %t = call {i64, i1} @llvm.uadd.with.overflow.i64(i64 %v1, i64 2)
    %val = extractvalue {i64, i1} %t, 0

```

```

%obit = extractvalue {i64, i1} %t, 1
br i1 %obit, label %IfNoOverflow, label %IfOverflow
IfOverflow:
ret i64 0
IfNoOverflow:
ret i64 %val
}

declare {i32, i1} @llvm.sadd.with.overflow.i32(i32, i32) nounwind readnone
declare {i64, i1} @llvm.sadd.with.overflow.i64(i64, i64) nounwind readnone
declare {i32, i1} @llvm.uadd.with.overflow.i32(i32, i32) nounwind readnone
declare {i64, i1} @llvm.uadd.with.overflow.i64(i64, i64) nounwind readnone
declare {i32, i1} @llvm.ssub.with.overflow.i32(i32, i32) nounwind readnone
declare {i64, i1} @llvm.ssub.with.overflow.i64(i64, i64) nounwind readnone
declare {i32, i1} @llvm.usub.with.overflow.i32(i32, i32) nounwind readnone
declare
  {i64, i1} @llvm.usub.with.overflow.i64(i64, i64) nounwind readnone
declare {i32, i1} @llvm.smul.with.overflow.i32(i32, i32) nounwind readnone
declare {i64, i1} @llvm.smul.with.overflow.i64(i64, i64) nounwind readnone
declare {i32, i1} @llvm.umul.with.overflow.i32(i32, i32) nounwind readnone
declare {i64, i1} @llvm.umul.with.overflow.i64(i64, i64) nounwind readnone
2cc784086c8a087e4008cc9f558624bd
add_llvm_library(lldbPluginObjectContainerBSDArchive PLUGIN
ObjectContainerBSDArchive.cpp

```

#### LINK\_LIBS

```

lldbCore
lldbHost
lldbSymbol

```

#### LINK\_COMPONENTS

```

Support
)

```

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```
; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc -mtriple=riscv64 -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck -check-prefix=RV64I %s
; RUN: llc -mtriple=riscv64 -mattr=+m -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck -check-prefix=RV64IM %s
```

```
define i32 @udiv(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: udiv:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a0, a0, 32
```

```

; RV64I-NEXT: slli a1, a1, 32
; RV64I-NEXT: srli a1, a1, 32
; RV64I-NEXT: call __udivdi3
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64IM-LABEL: udiv:
; RV64IM: # %bb.0:
; RV64IM-NEXT: divuw a0, a0, a1
; RV64IM-NEXT: ret
%1 = udiv i32 %a, %b
ret i32 %1
}

```

```

define i32 @udiv_constant(i32 %a) nounwind {
; RV64I-LABEL:
udiv_constant:
; RV64I: # %bb.0:
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: slli a0, a0, 32
; RV64I-NEXT: srli a0, a0, 32
; RV64I-NEXT: li a1, 5
; RV64I-NEXT: call __udivdi3
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64IM-LABEL: udiv_constant:
; RV64IM: # %bb.0:
; RV64IM-NEXT: slli a0, a0, 32
; RV64IM-NEXT: lui a1, 838861
; RV64IM-NEXT: addi a1, a1, -819
; RV64IM-NEXT: slli a1, a1, 32
; RV64IM-NEXT: mulhu a0, a0, a1
; RV64IM-NEXT: srli a0, a0, 34
; RV64IM-NEXT: ret
%1 = udiv i32 %a, 5
ret i32 %1
}

```

```

define i32 @udiv_pow2(i32 %a) nounwind {
; RV64I-LABEL: udiv_pow2:
; RV64I: # %bb.0:
; RV64I-NEXT: srliw a0, a0, 3
; RV64I-NEXT: ret
;

```

```

; RV64IM-LABEL: udiv_pow2:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  srlw a0, a0, 3
; RV64IM-NEXT:  ret
%1 = udiv i32 %a, 8
ret i32 %1
}

define i32 @udiv_constant_lhs(i32
%a) nounwind {
; RV64I-LABEL: udiv_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a0, a0, 32
; RV64I-NEXT:  srli a1, a0, 32
; RV64I-NEXT:  li a0, 10
; RV64I-NEXT:  call __udivdi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: udiv_constant_lhs:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  li a1, 10
; RV64IM-NEXT:  divuw a0, a1, a0
; RV64IM-NEXT:  ret
%1 = udiv i32 10, %a
ret i32 %1
}

define i64 @udiv64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: udiv64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  tail __udivdi3
;
; RV64IM-LABEL: udiv64:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  divu a0, a0, a1
; RV64IM-NEXT:  ret
%1 = udiv i64 %a, %b
ret i64 %1
}

define i64 @udiv64_constant(i64 %a) nounwind {
; RV64I-LABEL: udiv64_constant:
; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, 5

```

```

; RV64I-NEXT:
    tail __udivdi3
;
; RV64IM-LABEL: udiv64_constant:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  lui a1, 838861
; RV64IM-NEXT:  addiw a1, a1, -819
; RV64IM-NEXT:  slli a2, a1, 32
; RV64IM-NEXT:  add a1, a1, a2
; RV64IM-NEXT:  mulhu a0, a0, a1
; RV64IM-NEXT:  srli a0, a0, 2
; RV64IM-NEXT:  ret
%1 = udiv i64 %a, 5
ret i64 %1
}

define i64 @udiv64_constant_lhs(i64 %a) nounwind {
; RV64I-LABEL: udiv64_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  mv a1, a0
; RV64I-NEXT:  li a0, 10
; RV64I-NEXT:  tail __udivdi3
;
; RV64IM-LABEL: udiv64_constant_lhs:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  li a1, 10
; RV64IM-NEXT:  divu a0, a1, a0
; RV64IM-NEXT:  ret
%1 = udiv i64 10, %a
ret i64 %1
}

define i8 @udiv8(i8 %a, i8 %b) nounwind {
; RV64I-LABEL: udiv8:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  andi a0, a0, 255
; RV64I-NEXT:  andi a1, a1, 255
; RV64I-NEXT:  call
    __udivdi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: udiv8:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  andi a1, a1, 255

```



```

; RV64IM-NEXT:  andi a0, a0, 255
; RV64IM-NEXT:  divuw a0, a0, a1
; RV64IM-NEXT:  ret
%1 = udiv i8 %a, %b
ret i8 %1
}

define i8 @udiv8_constant(i8 %a) nounwind {
; RV64I-LABEL: udiv8_constant:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  andi a0, a0, 255
; RV64I-NEXT:  li a1, 5
; RV64I-NEXT:  call __udivdi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: udiv8_constant:
; RV64IM:      # %bb.0:
; RV64IM-NEXT:  andi a0, a0, 255
; RV64IM-NEXT:  li a1, 205
; RV64IM-NEXT:  mul a0, a0, a1
; RV64IM-NEXT:  srliw a0, a0, 10
; RV64IM-NEXT:  ret
%1 = udiv i8 %a, 5
ret i8 %1
}

define i8 @udiv8_pow2(i8 %a) nounwind
{
; RV64I-LABEL: udiv8_pow2:
; RV64I:      # %bb.0:
; RV64I-NEXT:  slli a0, a0, 56
; RV64I-NEXT:  srli a0, a0, 59
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: udiv8_pow2:
; RV64IM:      # %bb.0:
; RV64IM-NEXT:  slli a0, a0, 56
; RV64IM-NEXT:  srli a0, a0, 59
; RV64IM-NEXT:  ret
%1 = udiv i8 %a, 8
ret i8 %1
}

define i8 @udiv8_constant_lhs(i8 %a) nounwind {

```

```

; RV64I-LABEL: udiv8_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  andi a1, a0, 255
; RV64I-NEXT:  li a0, 10
; RV64I-NEXT:  call __udivdi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: udiv8_constant_lhs:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  andi a0, a0, 255
; RV64IM-NEXT:  li a1, 10
; RV64IM-NEXT:  divuw a0, a1, a0
; RV64IM-NEXT:  ret
%1 = udiv i8 10, %a
ret i8 %1
}

define i16 @udiv16(i16 %a, i16 %b) nounwind {
; RV64I-LABEL: udiv16:
;
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  lui a2, 16
; RV64I-NEXT:  addiw a2, a2, -1
; RV64I-NEXT:  and a0, a0, a2
; RV64I-NEXT:  and a1, a1, a2
; RV64I-NEXT:  call __udivdi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: udiv16:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  lui a2, 16
; RV64IM-NEXT:  addi a2, a2, -1
; RV64IM-NEXT:  and a1, a1, a2
; RV64IM-NEXT:  and a0, a0, a2
; RV64IM-NEXT:  divuw a0, a0, a1
; RV64IM-NEXT:  ret
%1 = udiv i16 %a, %b
ret i16 %1
}

```

```

define i16 @udiv16_constant(i16 %a) nounwind {
; RV64I-LABEL: udiv16_constant:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a0, a0, 48
; RV64I-NEXT:  srli a0, a0, 48
; RV64I-NEXT:  li a1, 5
; RV64I-NEXT:  call __udivdi3
; RV64I-NEXT:  ld ra, 8(sp)
# 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: udiv16_constant:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  lui a1, 52429
; RV64IM-NEXT:  slli a1, a1, 4
; RV64IM-NEXT:  slli a0, a0, 48
; RV64IM-NEXT:  mulhu a0, a0, a1
; RV64IM-NEXT:  srliw a0, a0, 18
; RV64IM-NEXT:  ret
%1 = udiv i16 %a, 5
ret i16 %1
}

```

```

define i16 @udiv16_pow2(i16 %a) nounwind {
; RV64I-LABEL: udiv16_pow2:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a0, a0, 48
; RV64I-NEXT:  srli a0, a0, 51
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: udiv16_pow2:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  slli a0, a0, 48
; RV64IM-NEXT:  srli a0, a0, 51
; RV64IM-NEXT:  ret
%1 = udiv i16 %a, 8
ret i16 %1
}

```

```

define i16 @udiv16_constant_lhs(i16 %a) nounwind {
; RV64I-LABEL: udiv16_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a0, a0, 48

```

```

; RV64I-NEXT: srli a1, a0, 48
; RV64I-NEXT:
    li a0, 10
; RV64I-NEXT: call __udivdi3
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64IM-LABEL: udiv16_constant_lhs:
; RV64IM:    # %bb.0:
; RV64IM-NEXT: slli a0, a0, 48
; RV64IM-NEXT: srli a0, a0, 48
; RV64IM-NEXT: li a1, 10
; RV64IM-NEXT: divuw a0, a1, a0
; RV64IM-NEXT: ret
%1 = udiv i16 10, %a
ret i16 %1
}

```

```

define i32 @sdiv(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: sdiv:
; RV64I:    # %bb.0:
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: sext.w a0, a0
; RV64I-NEXT: sext.w a1, a1
; RV64I-NEXT: call __divdi3
; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64IM-LABEL: sdiv:
; RV64IM:    # %bb.0:
; RV64IM-NEXT: divw a0, a0, a1
; RV64IM-NEXT: ret
%1 = sdiv i32 %a, %b
ret i32 %1
}

```

```

define i32 @sdiv_constant(i32 %a) nounwind {
; RV64I-LABEL: sdiv_constant:
;
; RV64I:    # %bb.0:
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: sext.w a0, a0
; RV64I-NEXT: li a1, 5
; RV64I-NEXT: call __divdi3

```

```

; RV64I-NEXT: ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
;
; RV64IM-LABEL: sdiv_constant:
; RV64IM: # %bb.0:
; RV64IM-NEXT: sext.w a0, a0
; RV64IM-NEXT: lui a1, 419430
; RV64IM-NEXT: addiw a1, a1, 1639
; RV64IM-NEXT: mul a0, a0, a1
; RV64IM-NEXT: srli a1, a0, 63
; RV64IM-NEXT: srai a0, a0, 33
; RV64IM-NEXT: addw a0, a0, a1
; RV64IM-NEXT: ret
%1 = sdiv i32 %a, 5
ret i32 %1
}

```

```

define i32 @sdiv_pow2(i32 %a) nounwind {
; RV64I-LABEL: sdiv_pow2:
; RV64I: # %bb.0:
; RV64I-NEXT: sraiw a1, a0, 31
; RV64I-NEXT: srliw a1, a1, 29
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: sraiw a0, a0, 3
; RV64I-NEXT: ret
;
; RV64IM-LABEL: sdiv_pow2:
; RV64IM: # %bb.0:
; RV64IM-NEXT: sraiw a1, a0,
31
; RV64IM-NEXT: srliw a1, a1, 29
; RV64IM-NEXT: add a0, a0, a1
; RV64IM-NEXT: sraiw a0, a0, 3
; RV64IM-NEXT: ret
%1 = sdiv i32 %a, 8
ret i32 %1
}

```

```

define i32 @sdiv_pow2_2(i32 %a) nounwind {
; RV64I-LABEL: sdiv_pow2_2:
; RV64I: # %bb.0:
; RV64I-NEXT: sraiw a1, a0, 31
; RV64I-NEXT: srliw a1, a1, 16
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: sraiw a0, a0, 16
; RV64I-NEXT: ret
;

```

```

; RV64IM-LABEL: sdiv_pow2_2:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  sraiw a1, a0, 31
; RV64IM-NEXT:  srlw a1, a1, 16
; RV64IM-NEXT:  add a0, a0, a1
; RV64IM-NEXT:  sraiw a0, a0, 16
; RV64IM-NEXT:  ret
%1 = sdiv i32 %a, 65536
ret i32 %1
}

define i32 @sdiv_constant_lhs(i32 %a) nounwind {
; RV64I-LABEL: sdiv_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  sext.w a1, a0
; RV64I-NEXT:  li a0, -10
; RV64I-NEXT:  call __divdi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded
Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: sdiv_constant_lhs:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  li a1, -10
; RV64IM-NEXT:  divw a0, a1, a0
; RV64IM-NEXT:  ret
%1 = sdiv i32 -10, %a
ret i32 %1
}

define i64 @sdiv64(i64 %a, i64 %b) nounwind {
; RV64I-LABEL: sdiv64:
; RV64I:    # %bb.0:
; RV64I-NEXT:  tail __divdi3
;
; RV64IM-LABEL: sdiv64:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  div a0, a0, a1
; RV64IM-NEXT:  ret
%1 = sdiv i64 %a, %b
ret i64 %1
}

define i64 @sdiv64_constant(i64 %a) nounwind {
; RV64I-LABEL: sdiv64_constant:

```

```

; RV64I:    # %bb.0:
; RV64I-NEXT:  li a1, 5
; RV64I-NEXT:  tail __divdi3
;
; RV64IM-LABEL: sdiv64_constant:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  lui a1, %hi(.LCPI21_0)
; RV64IM-NEXT:  ld a1, %lo(.LCPI21_0)(a1)
; RV64IM-NEXT:  mulh a0, a0, a1
; RV64IM-NEXT:  srli a1, a0, 63
; RV64IM-NEXT:  srai a0, a0, 1
; RV64IM-NEXT:  add a0, a0, a1
; RV64IM-NEXT:  ret
%1 = sdiv i64 %a,
5
ret i64 %1
}

```

```

define i64 @sdiv64_constant_lhs(i64 %a) nounwind {
; RV64I-LABEL: sdiv64_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  mv a1, a0
; RV64I-NEXT:  li a0, 10
; RV64I-NEXT:  tail __divdi3
;
; RV64IM-LABEL: sdiv64_constant_lhs:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  li a1, 10
; RV64IM-NEXT:  div a0, a1, a0
; RV64IM-NEXT:  ret
%1 = sdiv i64 10, %a
ret i64 %1
}

```

; Although this sdiv has two sexti32 operands, it shouldn't compile to divw on  
; RV64M as that wouldn't produce the correct result for e.g. INT\_MIN/-1.

```

define i64 @sdiv64_sext_operands(i32 %a, i32 %b) nounwind {
; RV64I-LABEL: sdiv64_sext_operands:
; RV64I:    # %bb.0:
; RV64I-NEXT:  sext.w a0, a0
; RV64I-NEXT:  sext.w a1, a1
; RV64I-NEXT:  tail __divdi3
;
; RV64IM-LABEL: sdiv64_sext_operands:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  sext.w a0, a0
; RV64IM-NEXT:  sext.w a1, a1

```

```

; RV64IM-NEXT:  div a0, a0, a1
; RV64IM-NEXT:  ret
%1 = sext i32 %a to i64
%2 = sext i32 %b to
i64
%3 = sdiv i64 %1, %2
ret i64 %3
}

define i8 @sdiv8(i8 %a, i8 %b) nounwind {
; RV64I-LABEL: sdiv8:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a1, a1, 24
; RV64I-NEXT:  sraiw a1, a1, 24
; RV64I-NEXT:  slli a0, a0, 24
; RV64I-NEXT:  sraiw a0, a0, 24
; RV64I-NEXT:  call __divdi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: sdiv8:
; RV64IM:     # %bb.0:
; RV64IM-NEXT:  slli a1, a1, 24
; RV64IM-NEXT:  sraiw a1, a1, 24
; RV64IM-NEXT:  slli a0, a0, 24
; RV64IM-NEXT:  sraiw a0, a0, 24
; RV64IM-NEXT:  divw a0, a0, a1
; RV64IM-NEXT:  ret
%1 = sdiv i8 %a, %b
ret i8 %1
}

define i8 @sdiv8_constant(i8 %a) nounwind {
; RV64I-LABEL: sdiv8_constant:
; RV64I:     # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a0, a0, 24
; RV64I-NEXT:
; RV64I-NEXT:  sraiw a0, a0, 24
; RV64I-NEXT:  li a1, 5
; RV64I-NEXT:  call __divdi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret

```



```

;
; RV64IM-LABEL: sdiv8_constant:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  slli a0, a0, 24
; RV64IM-NEXT:  sraiw a0, a0, 24
; RV64IM-NEXT:  li a1, 103
; RV64IM-NEXT:  mul a0, a0, a1
; RV64IM-NEXT:  sraiw a1, a0, 9
; RV64IM-NEXT:  slli a0, a0, 48
; RV64IM-NEXT:  srli a0, a0, 63
; RV64IM-NEXT:  addw a0, a1, a0
; RV64IM-NEXT:  ret
%1 = sdiv i8 %a, 5
ret i8 %1
}

```

```

define i8 @sdiv8_pow2(i8 %a) nounwind {
; RV64I-LABEL: sdiv8_pow2:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a1, a0, 24
; RV64I-NEXT:  sraiw a1, a1, 24
; RV64I-NEXT:  slli a1, a1, 49
; RV64I-NEXT:  srli a1, a1, 61
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  slli a0, a0, 24
; RV64I-NEXT:  sraiw a0, a0, 27
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: sdiv8_pow2:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  slli a1, a0,
24
; RV64IM-NEXT:  sraiw a1, a1, 24
; RV64IM-NEXT:  slli a1, a1, 49
; RV64IM-NEXT:  srli a1, a1, 61
; RV64IM-NEXT:  add a0, a0, a1
; RV64IM-NEXT:  slli a0, a0, 24
; RV64IM-NEXT:  sraiw a0, a0, 27
; RV64IM-NEXT:  ret
%1 = sdiv i8 %a, 8
ret i8 %1
}

```

```

define i8 @sdiv8_constant_lhs(i8 %a) nounwind {
; RV64I-LABEL: sdiv8_constant_lhs:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill

```

```

; RV64I-NEXT:  slli a0, a0, 24
; RV64I-NEXT:  sraiw a1, a0, 24
; RV64I-NEXT:  li a0, -10
; RV64I-NEXT:  call __divdi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: sdiv8_constant_lhs:
; RV64IM:      # %bb.0:
; RV64IM-NEXT:  slli a0, a0, 24
; RV64IM-NEXT:  sraiw a0, a0, 24
; RV64IM-NEXT:  li a1, -10
; RV64IM-NEXT:  divw a0, a1, a0
; RV64IM-NEXT:  ret
%1 = sdiv i8 -10, %a
ret i8 %1
}

```

```

define i16 @sdiv16(i16 %a, i16 %b) nounwind {
; RV64I-LABEL:
sdiv16:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a1, a1, 16
; RV64I-NEXT:  sraiw a1, a1, 16
; RV64I-NEXT:  slli a0, a0, 16
; RV64I-NEXT:  sraiw a0, a0, 16
; RV64I-NEXT:  call __divdi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: sdiv16:
; RV64IM:      # %bb.0:
; RV64IM-NEXT:  slli a1, a1, 16
; RV64IM-NEXT:  sraiw a1, a1, 16
; RV64IM-NEXT:  slli a0, a0, 16
; RV64IM-NEXT:  sraiw a0, a0, 16
; RV64IM-NEXT:  divw a0, a0, a1
; RV64IM-NEXT:  ret
%1 = sdiv i16 %a, %b
ret i16 %1
}

```

```

define i16 @sdiv16_constant(i16 %a) nounwind {
; RV64I-LABEL: sdiv16_constant:

```

```

; RV64I:    # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a0, a0, 16
; RV64I-NEXT:  sraiw a0, a0, 16
; RV64I-NEXT:  li a1, 5
; RV64I-NEXT:  call __divdi3
; RV64I-NEXT:
    ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: sdiv16_constant:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  slli a0, a0, 16
; RV64IM-NEXT:  sraiw a0, a0, 16
; RV64IM-NEXT:  lui a1, 6
; RV64IM-NEXT:  addi a1, a1, 1639
; RV64IM-NEXT:  mul a0, a0, a1
; RV64IM-NEXT:  srlw a1, a0, 31
; RV64IM-NEXT:  sraiw a0, a0, 17
; RV64IM-NEXT:  addw a0, a0, a1
; RV64IM-NEXT:  ret
%1 = sdiv i16 %a, 5
ret i16 %1
}

define i16 @sdiv16_pow2(i16 %a) nounwind {
; RV64I-LABEL: sdiv16_pow2:
; RV64I:    # %bb.0:
; RV64I-NEXT:  slli a1, a0, 16
; RV64I-NEXT:  sraiw a1, a1, 16
; RV64I-NEXT:  slli a1, a1, 33
; RV64I-NEXT:  srli a1, a1, 61
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  slli a0, a0, 16
; RV64I-NEXT:  sraiw a0, a0, 19
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: sdiv16_pow2:
; RV64IM:    # %bb.0:
; RV64IM-NEXT:  slli a1, a0, 16
; RV64IM-NEXT:  sraiw a1, a1, 16
; RV64IM-NEXT:  slli a1, a1, 33
;
; RV64IM-NEXT:  srli a1, a1, 61
; RV64IM-NEXT:  add a0, a0, a1
; RV64IM-NEXT:  slli a0, a0, 16

```

```

; RV64IM-NEXT:  sraiw a0, a0, 19
; RV64IM-NEXT:  ret
%1 = sdiv i16 %a, 8
ret i16 %1
}

define i16 @sdiv16_constant_lhs(i16 %a) nounwind {
; RV64I-LABEL: sdiv16_constant_lhs:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi sp, sp, -16
; RV64I-NEXT:  sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT:  slli a0, a0, 16
; RV64I-NEXT:  sraiw a1, a0, 16
; RV64I-NEXT:  li a0, -10
; RV64I-NEXT:  call __divdi3
; RV64I-NEXT:  ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT:  addi sp, sp, 16
; RV64I-NEXT:  ret
;
; RV64IM-LABEL: sdiv16_constant_lhs:
; RV64IM:     # %bb.0:
; RV64IM-NEXT:  slli a0, a0, 16
; RV64IM-NEXT:  sraiw a0, a0, 16
; RV64IM-NEXT:  li a1, -10
; RV64IM-NEXT:  divw a0, a1, a0
; RV64IM-NEXT:  ret
%1 = sdiv i16 -10, %a
ret i16 %1
}

```

LLVM System Interface Library

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```
; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc -mtriple=riscv64 -verify-machineinstrs < %s \
; RUN: -riscv-experimental-rv64-legal-i32 | FileCheck -check-prefix=RV64I %s
```

```
; Check indexed and unindexed, sext, zext and anyext loads
```

```
define dso_local i64 @lb(ptr %a) nounwind {
; RV64I-LABEL: lb:
; RV64I:      # %bb.0:
; RV64I-NEXT: lb a1, 1(a0)
```

```

; RV64I-NEXT:  lbu zero, 0(a0)
; RV64I-NEXT:  mv a0, a1
; RV64I-NEXT:  ret
%1 = getelementptr i8, ptr %a, i32 1
%2 = load i8, ptr %1
%3 = sext i8 %2 to i64
; the unused load will produce an anyext for selection
%4 = load volatile i8, ptr %a
ret i64 %3
}

```

```

define dso_local i64 @lh(ptr %a) nounwind {
; RV64I-LABEL: lh:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lh a1, 4(a0)
; RV64I-NEXT:  lh zero, 0(a0)
; RV64I-NEXT:  mv a0, a1
; RV64I-NEXT:  ret
%1 = getelementptr i16, ptr %a, i32 2
%2 = load i16, ptr %1
%3 = sext i16 %2 to i64
; the unused load will produce an anyext for selection
%4 = load volatile i16, ptr %a
ret i64 %3
}

```

```

define dso_local i64 @lw(ptr %a) nounwind {
; RV64I-LABEL: lw:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lw a1, 12(a0)
; RV64I-NEXT:  lw zero, 0(a0)
; RV64I-NEXT:  mv a0, a1
; RV64I-NEXT:  ret
%1 = getelementptr i32, ptr %a, i32 3
%2 = load i32, ptr %1
%3 = sext i32 %2 to i64
; the unused load will produce an anyext for selection
%4 = load volatile i32, ptr %a
ret i64 %3
}

```

```

define dso_local i64 @lbu(ptr %a) nounwind {
; RV64I-LABEL: lbu:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lbu a1, 4(a0)
; RV64I-NEXT:  lbu a0, 0(a0)
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  ret

```

```

%1 = getelementptr i8, ptr %a, i32 4
%2 = load i8, ptr %1
%3 = zext i8 %2 to i64
%4 = load volatile i8, ptr %a
%5 = zext i8 %4 to i64
%6 = add i64 %3, %5
ret i64 %6
}

```

```

define dso_local i64 @lhu(ptr %a) nounwind {
; RV64I-LABEL: lhu:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lhu a1, 10(a0)
; RV64I-NEXT:  lhu a0, 0(a0)
; RV64I-NEXT:
    add a0, a1, a0
; RV64I-NEXT:  ret
%1 = getelementptr i16, ptr %a, i32 5
%2 = load i16, ptr %1
%3 = zext i16 %2 to i64
%4 = load volatile i16, ptr %a
%5 = zext i16 %4 to i64
%6 = add i64 %3, %5
ret i64 %6
}

```

```

define dso_local i64 @lwu(ptr %a) nounwind {
; RV64I-LABEL: lwu:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lwu a1, 24(a0)
; RV64I-NEXT:  lwu a0, 0(a0)
; RV64I-NEXT:  add a0, a1, a0
; RV64I-NEXT:  ret
%1 = getelementptr i32, ptr %a, i32 6
%2 = load i32, ptr %1
%3 = zext i32 %2 to i64
%4 = load volatile i32, ptr %a
%5 = zext i32 %4 to i64
%6 = add i64 %3, %5
ret i64 %6
}

```

; 64-bit loads and stores

```

define dso_local i64 @ld(ptr %a) nounwind {
; RV64I-LABEL: ld:
; RV64I:      # %bb.0:
; RV64I-NEXT:  ld a1, 80(a0)

```

```

; RV64I-NEXT: ld zero, 0(a0)
; RV64I-NEXT: mv a0, a1
; RV64I-NEXT: ret
%1 = getelementptr i64, ptr %a, i32 10
%2 = load i64, ptr %1
%3 = load volatile i64, ptr %a
ret i64 %2
}

define dso_local void @sd(ptr %a, i64 %b)
nounwind {
; RV64I-LABEL: sd:
; RV64I: # %bb.0:
; RV64I-NEXT: sd a1, 0(a0)
; RV64I-NEXT: sd a1, 88(a0)
; RV64I-NEXT: ret
store i64 %b, ptr %a
%1 = getelementptr i64, ptr %a, i32 11
store i64 %b, ptr %1
ret void
}

; Check load and store to an i1 location
define dso_local i64 @load_sext_zext_anyext_i1(ptr %a) nounwind {
; RV64I-LABEL: load_sext_zext_anyext_i1:
; RV64I: # %bb.0:
; RV64I-NEXT: lbu a1, 1(a0)
; RV64I-NEXT: lbu a2, 2(a0)
; RV64I-NEXT: lbu zero, 0(a0)
; RV64I-NEXT: sub a0, a2, a1
; RV64I-NEXT: ret
; sextload i1
%1 = getelementptr i1, ptr %a, i32 1
%2 = load i1, ptr %1
%3 = sext i1 %2 to i64
; zextload i1
%4 = getelementptr i1, ptr %a, i32 2
%5 = load i1, ptr %4
%6 = zext i1 %5 to i64
%7 = add i64 %3, %6
; extload i1 (anyext). Produced as the load is unused.
%8 = load volatile i1, ptr %a
ret i64 %7
}

define dso_local i16 @load_sext_zext_anyext_i1_i16(ptr %a) nounwind {
; RV64I-LABEL: load_sext_zext_anyext_i1_i16:
;

```

```

RV64I:    # %bb.0:
; RV64I-NEXT:  lbu a1, 1(a0)
; RV64I-NEXT:  lbu a2, 2(a0)
; RV64I-NEXT:  lbu zero, 0(a0)
; RV64I-NEXT:  subw a0, a2, a1
; RV64I-NEXT:  ret
; sextload i1
%1 = getelementptr i1, ptr %a, i32 1
%2 = load i1, ptr %1
%3 = sext i1 %2 to i16
; zextload i1
%4 = getelementptr i1, ptr %a, i32 2
%5 = load i1, ptr %4
%6 = zext i1 %5 to i16
%7 = add i16 %3, %6
; extload i1 (anyext). Produced as the load is unused.
%8 = load volatile i1, ptr %a
ret i16 %7
}

; Check load and store to a global
@G = dso_local global i64 0

define dso_local i64 @ld_sd_global(i64 %a) nounwind {
; RV64I-LABEL: ld_sd_global:
; RV64I:    # %bb.0:
; RV64I-NEXT:  lui a2, %hi(G)
; RV64I-NEXT:  ld a1, %lo(G)(a2)
; RV64I-NEXT:  addi a3, a2, %lo(G)
; RV64I-NEXT:  sd a0, %lo(G)(a2)
; RV64I-NEXT:  ld zero, 72(a3)
; RV64I-NEXT:  sd a0, 72(a3)
; RV64I-NEXT:  mv a0, a1
; RV64I-NEXT:  ret
%1 = load volatile i64, ptr @G
store i64 %a, ptr @G
%2 = getelementptr
i64, ptr @G, i64 9
%3 = load volatile i64, ptr %2
store i64 %a, ptr %2
ret i64 %1
}

define i64 @lw_near_local(ptr %a) {
; RV64I-LABEL: lw_near_local:
; RV64I:    # %bb.0:
; RV64I-NEXT:  addi a0, a0, 2047
; RV64I-NEXT:  ld a0, 9(a0)

```

```

; RV64I-NEXT:  ret
%1 = getelementptr inbounds i64, ptr %a, i64 257
%2 = load volatile i64, ptr %1
ret i64 %2
}

```

```

define void @st_near_local(ptr %a, i64 %b) {
; RV64I-LABEL: st_near_local:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi a0, a0, 2047
; RV64I-NEXT:  sd a1, 9(a0)
; RV64I-NEXT:  ret
%1 = getelementptr inbounds i64, ptr %a, i64 257
store i64 %b, ptr %1
ret void
}

```

```

define i64 @lw_sw_near_local(ptr %a, i64 %b) {
; RV64I-LABEL: lw_sw_near_local:
; RV64I:      # %bb.0:
; RV64I-NEXT:  addi a2, a0, 2047
; RV64I-NEXT:  ld a0, 9(a2)
; RV64I-NEXT:  sd a1, 9(a2)
; RV64I-NEXT:  ret
%1 = getelementptr inbounds i64, ptr %a, i64 257
%2 = load volatile i64, ptr %1
store i64 %b, ptr %1
ret i64 %2
}

```

```

define
i64 @lw_far_local(ptr %a) {
; RV64I-LABEL: lw_far_local:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lui a1, 8
; RV64I-NEXT:  add a0, a0, a1
; RV64I-NEXT:  ld a0, -8(a0)
; RV64I-NEXT:  ret
%1 = getelementptr inbounds i64, ptr %a, i64 4095
%2 = load volatile i64, ptr %1
ret i64 %2
}

```

```

define void @st_far_local(ptr %a, i64 %b) {
; RV64I-LABEL: st_far_local:
; RV64I:      # %bb.0:
; RV64I-NEXT:  lui a2, 8
; RV64I-NEXT:  add a0, a0, a2

```



```

; RV64I-NEXT: sd a1, -8(a0)
; RV64I-NEXT: ret
%1 = getelementptr inbounds i64, ptr %a, i64 4095
store i64 %b, ptr %1
ret void
}

```

```

define i64 @lw_sw_far_local(ptr %a, i64 %b) {
; RV64I-LABEL: lw_sw_far_local:
; RV64I: # %bb.0:
; RV64I-NEXT: lui a2, 8
; RV64I-NEXT: add a2, a0, a2
; RV64I-NEXT: ld a0, -8(a2)
; RV64I-NEXT: sd a1, -8(a2)
; RV64I-NEXT: ret
%1 = getelementptr inbounds i64, ptr %a, i64 4095
%2 = load volatile i64, ptr %1
store i64 %b, ptr %1
ret i64 %2
}

```

; Make sure we don't fold the addiw into the load offset. The sign extend of the addiw is required.

```

define i64 @lw_really_far_local(ptr %a) {
; RV64I-LABEL: lw_really_far_local:
; RV64I: # %bb.0:
; RV64I-NEXT: lui a1, 524288
; RV64I-NEXT: addiw a1, a1, -2048
; RV64I-NEXT: add a0, a0, a1
; RV64I-NEXT: ld a0, 0(a0)
; RV64I-NEXT: ret
%1 = getelementptr inbounds i64, ptr %a, i64 268435200
%2 = load volatile i64, ptr %1
ret i64 %2
}

```

; Make sure we don't fold the addiw into the store offset. The sign extend of the addiw is required.

```

define void @st_really_far_local(ptr %a, i64 %b) {
; RV64I-LABEL: st_really_far_local:
; RV64I: # %bb.0:
; RV64I-NEXT: lui a2, 524288
; RV64I-NEXT: addiw a2, a2, -2048
; RV64I-NEXT: add a0, a0, a2
; RV64I-NEXT: sd a1, 0(a0)
; RV64I-NEXT: ret
%1 = getelementptr inbounds i64, ptr %a, i64 268435200

```

```

store i64 %b, ptr %1
ret void
}

```

; Make sure we don't fold the addiw into the load/store offset. The sign extend  
; of the addiw is required.

```

define
i64 @lw_sw_really_far_local(ptr %a, i64 %b) {
; RV64I-LABEL: lw_sw_really_far_local:
; RV64I:      # %bb.0:
; RV64I-NEXT: lui a2, 524288
; RV64I-NEXT: addiw a2, a2, -2048
; RV64I-NEXT: add a2, a0, a2
; RV64I-NEXT: ld a0, 0(a2)
; RV64I-NEXT: sd a1, 0(a2)
; RV64I-NEXT: ret
%1 = getelementptr inbounds i64, ptr %a, i64 268435200
%2 = load volatile i64, ptr %1
store i64 %b, ptr %1
ret i64 %2
}

```

```

%struct.quux = type { i32, [0 x i8] }

```

; Make sure we don't remove the addi and fold the C from  
; (add (addi FrameIndex, C), X) into the store address.  
; FrameIndex cannot be the operand of an ADD. We must keep the ADDI.

```

define void @addi_fold_crash(i64 %arg) nounwind {
; RV64I-LABEL: addi_fold_crash:
; RV64I:      # %bb.0: # %bb
; RV64I-NEXT: addi sp, sp, -16
; RV64I-NEXT: sd ra, 8(sp) # 8-byte Folded Spill
; RV64I-NEXT: addi a1, sp, 4
; RV64I-NEXT: add a0, a1, a0
; RV64I-NEXT: sb zero, 0(a0)
; RV64I-NEXT: mv a0, a1
; RV64I-NEXT: call snork
; RV64I-NEXT:
    ld ra, 8(sp) # 8-byte Folded Reload
; RV64I-NEXT: addi sp, sp, 16
; RV64I-NEXT: ret
bb:
%tmp = alloca %struct.quux, align 8
%tmp1 = getelementptr inbounds %struct.quux, ptr %tmp, i64 0, i32 1
%tmp2 = getelementptr inbounds %struct.quux, ptr %tmp, i64 0, i32 1, i64 %arg
store i8 0, ptr %tmp2, align 1
call void @snork(ptr %tmp1)
ret void

```

```

}

declare void @snork(ptr)
; NOTE: Assertions have been autogenerated by utils/update_test_checks.py UTC_ARGS: --function-signature --
scrub-attributes
; RUN: opt -S -passes=argpromotion < %s | FileCheck %s
; Test that we only promote arguments when the caller/callee have compatible
; function attributes.

target triple = "x86_64-unknown-linux-gnu"

; This should promote
define internal fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer512(ptr %arg, ptr
readonly %arg1) #0 {
; CHECK-LABEL: define {{{^@+}}}@callee_avx512_legal512_prefer512_call_avx512_legal512_prefer512
; CHECK-SAME: (ptr [[ARG:%.*]], <8 x i64> [[ARG1_VAL:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT: store <8 x i64> [[ARG1_VAL]], ptr [[ARG]]
; CHECK-NEXT: ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx512_legal512_prefer512_call_avx512_legal512_prefer512(ptr %arg) #0 {
; CHECK-LABEL: define {{{^@+}}}@avx512_legal512_prefer512_call_avx512_legal512_prefer512
; CHECK-SAME:
(ptr [[ARG:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: [[TMP2:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: call void @llvm.memset.p0.i64(ptr align 32 [[TMP]], i8 0, i64 32, i1 false)
; CHECK-NEXT: [[TMP_VAL:%.*]] = load <8 x i64>, ptr [[TMP]]
; CHECK-NEXT: call fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer512(ptr
[[TMP2]], <8 x i64> [[TMP_VAL]])
; CHECK-NEXT: [[TMP4:%.*]] = load <8 x i64>, ptr [[TMP2]], align 32
; CHECK-NEXT: store <8 x i64> [[TMP4]], ptr [[ARG]], align 2
; CHECK-NEXT: ret void
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align 32
call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
call fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer512(ptr %tmp2, ptr %tmp)
%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2

```

```

ret void
}

; This should promote
define
internal fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer256(ptr %arg, ptr readonly
%arg1) #1 {
; CHECK-LABEL: define {{{^@+}}@callee_avx512_legal512_prefer256_call_avx512_legal512_prefer256
; CHECK-SAME: (ptr [[ARG:%.*]], <8 x i64> [[ARG1_VAL:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT: store <8 x i64> [[ARG1_VAL]], ptr [[ARG]]
; CHECK-NEXT: ret void
;
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx512_legal512_prefer256_call_avx512_legal512_prefer256(ptr %arg) #1 {
; CHECK-LABEL: define {{{^@+}}@avx512_legal512_prefer256_call_avx512_legal512_prefer256
; CHECK-SAME: (ptr [[ARG:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: [[TMP2:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: call void @llvm.memset.p0.i64(ptr align 32 [[TMP]], i8 0, i64 32, i1 false)
; CHECK-NEXT: [[TMP_VAL:%.*]] = load <8 x i64>, ptr [[TMP]]
; CHECK-NEXT: call fastcc
void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer256(ptr [[TMP2]], <8 x i64>
[[TMP_VAL]])
; CHECK-NEXT: [[TMP4:%.*]] = load <8 x i64>, ptr [[TMP2]], align 32
; CHECK-NEXT: store <8 x i64> [[TMP4]], ptr [[ARG]], align 2
; CHECK-NEXT: ret void
;
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align 32
call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer256(ptr %tmp2, ptr %tmp)
%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2
ret void
}

; This should promote
define internal fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer256(ptr %arg, ptr
readonly %arg1) #1 {
; CHECK-LABEL: define {{{^@+}}@callee_avx512_legal512_prefer512_call_avx512_legal512_prefer256

```

```

; CHECK-SAME: (ptr [[ARG:%.*]], <8 x i64> [[ARG1_VAL:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT: store <8 x i64> [[ARG1_VAL]],
ptr [[ARG]]
; CHECK-NEXT: ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx512_legal512_prefer512_call_avx512_legal512_prefer256(ptr %arg) #0 {
; CHECK-LABEL: define {{{^@+}}} @avx512_legal512_prefer512_call_avx512_legal512_prefer256
; CHECK-SAME: (ptr [[ARG:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: [[TMP2:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: call void @llvm.memset.p0.i64(ptr align 32 [[TMP]], i8 0, i64 32, i1 false)
; CHECK-NEXT: [[TMP_VAL:%.*]] = load <8 x i64>, ptr [[TMP]]
; CHECK-NEXT: call fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer256(ptr
[[TMP2]], <8 x i64> [[TMP_VAL]])
; CHECK-NEXT: [[TMP4:%.*]] = load <8 x i64>, ptr [[TMP2]], align 32
; CHECK-NEXT: store <8 x i64> [[TMP4]], ptr [[ARG]], align 2
; CHECK-NEXT: ret void
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align
32
call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
call fastcc void @callee_avx512_legal512_prefer512_call_avx512_legal512_prefer256(ptr %tmp2, ptr %tmp)
%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2
ret void
}

; This should promote
define internal fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer512(ptr %arg, ptr
readonly %arg1) #0 {
; CHECK-LABEL: define {{{^@+}}} @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer512
; CHECK-SAME: (ptr [[ARG:%.*]], <8 x i64> [[ARG1_VAL:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT: store <8 x i64> [[ARG1_VAL]], ptr [[ARG]]
; CHECK-NEXT: ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1

```

```

store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx512_legal512_prefer256_call_avx512_legal512_prefer512(ptr %arg) #1 {
; CHECK-LABEL: define {{{^@}+}}@avx512_legal512_prefer256_call_avx512_legal512_prefer512
; CHECK-SAME: (ptr [[ARG:%.*]])
; CHECK-NEXT:
bb:
; CHECK-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: [[TMP2:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: call void @llvm.memset.p0.i64(ptr align 32 [[TMP]], i8 0, i64 32, i1 false)
; CHECK-NEXT: [[TMP_VAL:%.*]] = load <8 x i64>, ptr [[TMP]]
; CHECK-NEXT: call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer512(ptr
[[TMP2]], <8 x i64> [[TMP_VAL]])
; CHECK-NEXT: [[TMP4:%.*]] = load <8 x i64>, ptr [[TMP2]], align 32
; CHECK-NEXT: store <8 x i64> [[TMP4]], ptr [[ARG]], align 2
; CHECK-NEXT: ret void
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align 32
call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal512_prefer512(ptr %tmp2, ptr %tmp)
%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2
ret void
}

; This should not promote
define internal fastcc void @callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256(ptr
%arg, ptr readonly %arg1) #1 {
; CHECK-LABEL: define {{{^@}+}}@callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256
; CHECK-SAME: (ptr [[ARG:%.*]], ptr readonly [[ARG1:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT: [[TMP:%.*]] = load <8 x i64>, ptr [[ARG1]]
; CHECK-NEXT: store <8 x i64> [[TMP]], ptr [[ARG]]
; CHECK-NEXT: ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx512_legal256_prefer256_call_avx512_legal512_prefer256(ptr %arg) #2 {
; CHECK-LABEL: define {{{^@}+}}@avx512_legal256_prefer256_call_avx512_legal512_prefer256
; CHECK-SAME: (ptr [[ARG:%.*]])

```

```

; CHECK-NEXT: bb:
; CHECK-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: [[TMP2:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: call void @llvm.memset.p0.i64(ptr align 32 [[TMP]], i8 0, i64 32, i1 false)
; CHECK-NEXT: call fastcc void @callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256(ptr
[[TMP2]], ptr [[TMP]])
; CHECK-NEXT: [[TMP4:%.*]] = load <8 x i64>, ptr [[TMP2]], align 32
; CHECK-NEXT: store <8 x i64> [[TMP4]], ptr [[ARG]], align 2
; CHECK-NEXT: ret void
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align 32
call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
call fastcc void @callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256(ptr %tmp2, ptr %tmp)
%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2
ret void
}

; This should not promote
define internal fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256(ptr %arg, ptr
readonly %arg1) #2 {
; CHECK-LABEL: define {{{^@+}}}@callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256
; CHECK-SAME: (ptr [[ARG:%.*]], ptr readonly [[ARG1:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT: [[TMP:%.*]] = load <8 x i64>, ptr [[ARG1]]
; CHECK-NEXT: store <8 x i64>
[[TMP]], ptr [[ARG]]
; CHECK-NEXT: ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx512_legal512_prefer256_call_avx512_legal256_prefer256(ptr %arg) #1 {
; CHECK-LABEL: define {{{^@+}}}@avx512_legal512_prefer256_call_avx512_legal256_prefer256
; CHECK-SAME: (ptr [[ARG:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: [[TMP2:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: call void @llvm.memset.p0.i64(ptr align 32 [[TMP]], i8 0, i64 32, i1 false)
; CHECK-NEXT: call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256(ptr
[[TMP2]], ptr [[TMP]])
; CHECK-NEXT: [[TMP4:%.*]] = load <8 x i64>, ptr [[TMP2]], align 32
; CHECK-NEXT: store <8 x i64> [[TMP4]], ptr [[ARG]], align 2

```

```

; CHECK-NEXT:  ret void
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align 32
call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64
32, i1 false)
call fastcc void @callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256(ptr %tmp2, ptr %tmp)
%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2
ret void
}

; This should promote
define internal fastcc void @callee_avx2_legal256_prefer256_call_avx2_legal512_prefer256(ptr %arg, ptr readonly
%arg1) #3 {
; CHECK-LABEL: define {{{^@+}}}@callee_avx2_legal256_prefer256_call_avx2_legal512_prefer256
; CHECK-SAME: (ptr [[ARG:%.*]], <8 x i64> [[ARG1_VAL:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT:  store <8 x i64> [[ARG1_VAL]], ptr [[ARG]]
; CHECK-NEXT:  ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx2_legal256_prefer256_call_avx2_legal512_prefer256(ptr %arg) #4 {
; CHECK-LABEL: define {{{^@+}}}@avx2_legal256_prefer256_call_avx2_legal512_prefer256
; CHECK-SAME: (ptr [[ARG:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT:  [[TMP:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT:
[[TMP2:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT:  call void @llvm.memset.p0.i64(ptr align 32 [[TMP]], i8 0, i64 32, i1 false)
; CHECK-NEXT:  [[TMP_VAL:%.*]] = load <8 x i64>, ptr [[TMP]]
; CHECK-NEXT:  call fastcc void @callee_avx2_legal256_prefer256_call_avx2_legal512_prefer256(ptr
[[TMP2]], <8 x i64> [[TMP_VAL]])
; CHECK-NEXT:  [[TMP4:%.*]] = load <8 x i64>, ptr [[TMP2]], align 32
; CHECK-NEXT:  store <8 x i64> [[TMP4]], ptr [[ARG]], align 2
; CHECK-NEXT:  ret void
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align 32
call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
call fastcc void @callee_avx2_legal256_prefer256_call_avx2_legal512_prefer256(ptr %tmp2, ptr %tmp)

```



```

%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2
ret void
}

; This should promote
define internal fastcc void @callee_avx2_legal512_prefer256_call_avx2_legal256_prefer256(ptr %arg, ptr readonly
%arg1) #4 {
;
CHECK-LABEL: define {[^@]+}@callee_avx2_legal512_prefer256_call_avx2_legal256_prefer256
; CHECK-SAME: (ptr [[ARG:%.*]], <8 x i64> [[ARG1_VAL:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT: store <8 x i64> [[ARG1_VAL]], ptr [[ARG]]
; CHECK-NEXT: ret void
;
bb:
%tmp = load <8 x i64>, ptr %arg1
store <8 x i64> %tmp, ptr %arg
ret void
}

define void @avx2_legal512_prefer256_call_avx2_legal256_prefer256(ptr %arg) #3 {
; CHECK-LABEL: define {[^@]+}@avx2_legal512_prefer256_call_avx2_legal256_prefer256
; CHECK-SAME: (ptr [[ARG:%.*]])
; CHECK-NEXT: bb:
; CHECK-NEXT: [[TMP:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: [[TMP2:%.*]] = alloca <8 x i64>, align 32
; CHECK-NEXT: call void @llvm.memset.p0.i64(ptr align 32 [[TMP]], i8 0, i64 32, i1 false)
; CHECK-NEXT: [[TMP_VAL:%.*]] = load <8 x i64>, ptr [[TMP]]
; CHECK-NEXT: call fastcc void @callee_avx2_legal512_prefer256_call_avx2_legal256_prefer256(ptr
[[TMP2]], <8 x i64> [[TMP_VAL]])
; CHECK-NEXT: [[TMP4:%.*]] = load
<8 x i64>, ptr [[TMP2]], align 32
; CHECK-NEXT: store <8 x i64> [[TMP4]], ptr [[ARG]], align 2
; CHECK-NEXT: ret void
;
bb:
%tmp = alloca <8 x i64>, align 32
%tmp2 = alloca <8 x i64>, align 32
call void @llvm.memset.p0.i64(ptr align 32 %tmp, i8 0, i64 32, i1 false)
call fastcc void @callee_avx2_legal512_prefer256_call_avx2_legal256_prefer256(ptr %tmp2, ptr %tmp)
%tmp4 = load <8 x i64>, ptr %tmp2, align 32
store <8 x i64> %tmp4, ptr %arg, align 2
ret void
}

; If the arguments are scalar, its ok to promote.
define internal i32 @scalar_callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256(ptr %X, ptr %Y)

```

```

#2 {
; CHECK-LABEL: define
{[^[^@]+]}@scalar_callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256
; CHECK-SAME: (i32 [[X_VAL:%.*]], i32 [[Y_VAL:%.*]])
; CHECK-NEXT:  [[C:%.*]] = add i32 [[X_VAL]], [[Y_VAL]]
; CHECK-NEXT:  ret i32 [[C]]
;
%A = load i32, ptr %X
%B = load i32, ptr %Y
%C = add i32 %A, %B
ret i32 %C
}

define i32 @scalar_avx512_legal256_prefer256_call_avx512_legal512_prefer256(ptr
%B) #2 {
; CHECK-LABEL: define {[^[^@]+]}@scalar_avx512_legal256_prefer256_call_avx512_legal512_prefer256
; CHECK-SAME: (ptr [[B:%.*]])
; CHECK-NEXT:  [[A:%.*]] = alloca i32
; CHECK-NEXT:  store i32 1, ptr [[A]]
; CHECK-NEXT:  [[A_VAL:%.*]] = load i32, ptr [[A]]
; CHECK-NEXT:  [[B_VAL:%.*]] = load i32, ptr [[B]]
; CHECK-NEXT:  [[C:%.*]] = call i32
@scalar_callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256(i32 [[A_VAL]], i32 [[B_VAL]])
; CHECK-NEXT:  ret i32 [[C]]
;
%A = alloca i32
store i32 1, ptr %A
%C = call i32 @scalar_callee_avx512_legal256_prefer256_call_avx512_legal512_prefer256(ptr %A, ptr %B)
ret i32 %C
}

; If the arguments are scalar, its ok to promote.
define internal i32 @scalar_callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256(ptr %X, ptr %Y)
#2 {
; CHECK-LABEL: define
{[^[^@]+]}@scalar_callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256
; CHECK-SAME: (i32 [[X_VAL:%.*]],
i32 [[Y_VAL:%.*]])
; CHECK-NEXT:  [[C:%.*]] = add i32 [[X_VAL]], [[Y_VAL]]
; CHECK-NEXT:  ret i32 [[C]]
;
%A = load i32, ptr %X
%B = load i32, ptr %Y
%C = add i32 %A, %B
ret i32 %C
}

define i32 @scalar_avx512_legal512_prefer256_call_avx512_legal256_prefer256(ptr %B) #2 {

```

```

; CHECK-LABEL: define { {[^@]+} }@scalar_avx512_legal512_prefer256_call_avx512_legal256_prefer256
; CHECK-SAME: (ptr [[B:%.*]])
; CHECK-NEXT:  [[A:%.*]] = alloca i32
; CHECK-NEXT:  store i32 1, ptr [[A]]
; CHECK-NEXT:  [[A_VAL:%.*]] = load i32, ptr [[A]]
; CHECK-NEXT:  [[B_VAL:%.*]] = load i32, ptr [[B]]
; CHECK-NEXT:  [[C:%.*]] = call i32
@scalar_callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256(i32 [[A_VAL]], i32 [[B_VAL]])
; CHECK-NEXT:  ret i32 [[C]]
;
%A = alloca i32
store i32 1, ptr %A
%C = call i32 @scalar_callee_avx512_legal512_prefer256_call_avx512_legal256_prefer256(ptr %A, ptr %B)
ret i32 %C
}

; Function Attrs: argmemonly nounwind
declare void @llvm.memset.p0.i64(ptr
nocapture writeonly, i8, i64, i1) #5

attributes #0 = { inlinehint norecurse nounwind uwtable "target-features"="+avx512vl" "min-legal-vector-
width"="512" "prefer-vector-width"="512" }
attributes #1 = { inlinehint norecurse nounwind uwtable "target-features"="+avx512vl" "min-legal-vector-
width"="512" "prefer-vector-width"="256" }
attributes #2 = { inlinehint norecurse nounwind uwtable "target-features"="+avx512vl" "min-legal-vector-
width"="256" "prefer-vector-width"="256" }
attributes #3 = { inlinehint norecurse nounwind uwtable "target-features"="+avx2" "min-legal-vector-width"="512"
"prefer-vector-width"="256" }
attributes #4 = { inlinehint norecurse nounwind uwtable "target-features"="+avx2" "min-legal-vector-width"="256"
"prefer-vector-width"="256" }
attributes #5 = { argmemonly nounwind }
; NOTE: Assertions have been autogenerated by utils/update_llc_test_checks.py
; RUN: llc -mtriple=riscv64 -mattr=+zbc -verify-machineinstrs < %s \
; RUN:  -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefix=RV64ZBC-ZBKC
; RUN: llc -mtriple=riscv64 -mattr=+zbbc -verify-machineinstrs < %s \
; RUN:  -riscv-experimental-rv64-legal-i32 | FileCheck %s -check-prefix=RV64ZBC-ZBKC

declare i64 @llvm.riscv.clmul.i64(i64 %a, i64 %b)

define i64 @clmul64(i64 %a, i64 %b) nounwind {
; RV64ZBC-ZBKC-LABEL: clmul64:
; RV64ZBC-ZBKC:    # %bb.0:
; RV64ZBC-ZBKC-NEXT:  clmul a0, a0, a1
; RV64ZBC-ZBKC-NEXT:  ret
  %tmp = call i64 @llvm.riscv.clmul.i64(i64 %a, i64 %b)
  ret i64 %tmp
}

```

```
declare i64 @llvm.riscv.clmulh.i64(i64 %a, i64 %b)
```

```
define i64 @clmul64h(i64 %a, i64 %b) nounwind {  
; RV64ZBC-ZBKC-LABEL: clmul64h:  
; RV64ZBC-ZBKC:    # %bb.0:  
; RV64ZBC-ZBKC-NEXT:  clmulh a0, a0, a1  
; RV64ZBC-ZBKC-NEXT:  ret  
  %tmp = call i64 @llvm.riscv.clmulh.i64(i64 %a, i64 %b)  
  ret i64 %tmp  
}
```

```
declare
```

```
i32 @llvm.riscv.clmul.i32(i32 %a, i32 %b)
```

```
define signext i32 @clmul32(i32 signext %a, i32 signext %b) nounwind {  
; RV64ZBC-ZBKC-LABEL: clmul32:  
; RV64ZBC-ZBKC:    # %bb.0:  
; RV64ZBC-ZBKC-NEXT:  clmul a0, a0, a1  
; RV64ZBC-ZBKC-NEXT:  sext.w a0, a0  
; RV64ZBC-ZBKC-NEXT:  ret  
  %tmp = call i32 @llvm.riscv.clmul.i32(i32 %a, i32 %b)  
  ret i32 %tmp  
}
```

```
declare i32 @llvm.riscv.clmulh.i32(i32 %a, i32 %b)
```

```
define signext i32 @clmul32h(i32 signext %a, i32 signext %b) nounwind {  
; RV64ZBC-ZBKC-LABEL: clmul32h:  
; RV64ZBC-ZBKC:    # %bb.0:  
; RV64ZBC-ZBKC-NEXT:  slli a1, a1, 32  
; RV64ZBC-ZBKC-NEXT:  slli a0, a0, 32  
; RV64ZBC-ZBKC-NEXT:  clmulh a0, a0, a1  
; RV64ZBC-ZBKC-NEXT:  srai a0, a0, 32  
; RV64ZBC-ZBKC-NEXT:  ret  
  %tmp = call i32 @llvm.riscv.clmulh.i32(i32 %a, i32 %b)  
  ret i32 %tmp  
}
```

```
; FIXME: We could avoid the slli instructions by using clmul+srai since the  
; inputs are zero extended.
```

```
define signext i32 @clmul32h_zext(i32 zeroext %a, i32 zeroext %b) nounwind {  
;  
  RV64ZBC-ZBKC-LABEL: clmul32h_zext:  
; RV64ZBC-ZBKC:    # %bb.0:  
; RV64ZBC-ZBKC-NEXT:  slli a1, a1, 32  
; RV64ZBC-ZBKC-NEXT:  slli a0, a0, 32  
; RV64ZBC-ZBKC-NEXT:  clmulh a0, a0, a1  
; RV64ZBC-ZBKC-NEXT:  srai a0, a0, 32  
}
```

```
; RV64ZBC-ZBKC-NEXT:  ret
    %tmp = call i32 @llvm.riscv.clmulh.i32(i32 %a, i32 %b)
    ret i32 %tmp
}
```

# 1.400 open-vm-tools 12.4.5-1~ubuntu0.24.04.1

## 1.400.1 Available under license :

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Version 2.1, February 1999

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Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License.

Section 6 states terms for distribution of such executables.

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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may

distribute the object code for the work under the terms of Section 6.

Any executables

containing that work also fall under Section 6,

whether or not they are linked directly with the Library itself.

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source code for the Library including whatever

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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base64.c -- routines to encode/decode base64 data

\$OpenLDAP: pkg/ldap/libraries/liblutil/base64.c,v 1.15 2006/01/03 22:12:11 kurt Exp \$ /

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In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <https://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations, which became Zope Corporation. In 2001, the Python Software Foundation (PSF, see <https://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation was a sponsoring member of the PSF.

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```

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```

```
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```

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<signature of Ty Coon>, 1 April 1989
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Upstream-Contact: cloud-init-dev@lists.launchpad.net

Source: <https://launchpad.net/cloud-init>

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Upstream-Name: lxd

Upstream-Contact: [lxc-devel@lists.linuxcontainers.org](mailto:lxc-devel@lists.linuxcontainers.org)

Source: <https://github.com/canonical/lxd>

Comment: The content of this package is synced with [https://github.com/canonical/lxd/blob/main/lxd/instance/drivers/driver\\_qemu.go](https://github.com/canonical/lxd/blob/main/lxd/instance/drivers/driver_qemu.go)

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## 1.419 pyasn1 0.4.8-4

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Metadata-Version: 1.2

Name: pyasn1

Version: 0.4.8

Summary: ASN.1 types and codecs

Home-page: <https://github.com/etingof/pyasn1>

Author: Ilya Etingof

Author-email: [etingof@gmail.com](mailto:etingof@gmail.com)

Maintainer: Ilya Etingof <[etingof@gmail.com](mailto:etingof@gmail.com)>

License: BSD

Description: Pure-Python implementation of ASN.1 types and DER/BER/CER codecs (X.208)

Platform: any

Classifier: Development Status :: 5 - Production/Stable

Classifier: Environment :: Console

Classifier: Intended Audience :: Developers

Classifier: Intended Audience :: Education

Classifier: Intended Audience :: Information Technology

Classifier: Intended Audience :: System Administrators

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Classifier: Programming Language :: Python :: 2.7  
Classifier: Programming Language :: Python :: 3  
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Classifier: Topic :: Communications  
Classifier: Topic :: Software Development :: Libraries :: Python Modules

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\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/pyasn1.egg-info/PKG-INFO

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ASN.1 library for Python

-----  
[![PyPI](https://img.shields.io/pypi/v/pyasn1.svg?maxAge=2592000)](https://pypi.org/project/pyasn1)  
[![Python Versions](https://img.shields.io/pypi/pyversions/pyasn1.svg)](https://pypi.org/project/pyasn1/  
[![Build status](https://travis-ci.org/etingof/pyasn1.svg?branch=master)](https://secure.travis-ci.org/etingof/pyasn1)  
[![Coverage  
Status](https://img.shields.io/codecov/c/github/etingof/pyasn1.svg)](https://codecov.io/github/etingof/pyasn1)  
[![GitHub license](https://img.shields.io/badge/license-BSD-  
blue.svg)](https://raw.githubusercontent.com/etingof/pyasn1/master/LICENSE.txt)

This is a free and open source implementation of ASN.1 types and codecs as a Python package. It has been first written to support particular protocol (SNMP) but then generalized to be suitable for a wide range of protocols based on

[ASN.1 specification](https://www.itu.int/rec/dologin\_pub.asp?lang=e&id=T-REC-X.208-198811-W!!PDF-E&type=items).

## Features

-----

- \*  
Generic implementation of ASN.1 types (X.208)
- \* Standards compliant BER/CER/DER codecs
- \* Dumps/loads ASN.1 structures from Python types
- \* 100% Python, works with Python 2.4 up to Python 3.7
- \* MT-safe
- \* Contributed ASN.1 compiler [Asn1ate](https://github.com/kimgr/asn1ate)

## Why using pyasn1

-----

ASN.1 solves the data serialisation problem. This solution was designed long ago by the wise Ancients. Back then, they did not have the luxury of wasting bits. That is why ASN.1 is designed to serialise data structures of unbounded complexity into something compact and efficient when it comes to processing the data.

That probably explains why many network protocols and file formats still rely on the 30+ years old technology. Including a number of high-profile Internet protocols and file formats.

Quite a number of books cover the topic of ASN.1.

[Communication between heterogeneous systems](http://www.oss.com/asn1/dubuisson.html)  
by

Olivier Dubuisson is one of those high quality books freely available on the Internet.

The pyasn1 package is designed to help Python programmers tackling



network protocols and file formats at the comfort of their Python prompt. The tool struggles to capture all aspects of a rather complicated ASN.1 system and to represent it on the Python terms.

How to use pyasn1

-----

With pyasn1 you can build Python objects from ASN.1 data structures. For example, the following ASN.1 data structure:

```
```bash
Record ::= SEQUENCE {
  id    INTEGER,
  room  [0] INTEGER OPTIONAL,
  house [1] INTEGER DEFAULT 0
}
```
```

Could be expressed in pyasn1 like this:

```
```python
class Record(Sequence):
    componentType = NamedTypes(
        NamedType('id', Integer()),
        OptionalNamedType(
            'room', Integer().subtype(
                implicitTag=Tag(tagClassContext, tagFormatSimple, 0)
            )
        ),
        DefaultedNamedType(
            'house',
            Integer(0).subtype(
                implicitTag=Tag(tagClassContext, tagFormatSimple, 1)
            )
        )
    )
```
```

It is in the spirit of ASN.1 to take abstract data description and turn it into a programming language specific form.

Once you have your ASN.1 data structure expressed in Python, you can use it along the lines of similar Python type (e.g. ASN.1 `SET` is similar to Python `dict`, `SET OF` to `list`):

```
```python
>>> record = Record()
>>> record['id'] = 123
>>> record['room'] = 321
```
```

```
>>> str(record)
Record:
id=123
room=321
>>>
'''
```

Part of the power of ASN.1 comes from its serialisation features. You can serialise your data structure and send it over the network.

```
```python
>>> from pyasn1.codec.der.encoder import encode
>>> substrate = encode(record)
>>> hexdump(substrate)
00000: 30 07 02 01 7B 80 02 01 41
'''
```

Conversely, you can turn serialised ASN.1 content, as received from network or read from a file, into a Python object which you can introspect, modify, encode and send back.

```
```python
>>> from pyasn1.codec.der.decoder import decode
>>> received_record, rest_of_substrate = decode(substrate, asn1Spec=Record())
>>>
>>> for field in received_record:
>>>     print('{} is {}'.format(field, received_record[field]))
id is 123
room is 321
house is 0
>>>
>>> record == received_record
True
>>> received_record.update(room=123)
>>> substrate = encode(received_record)
>>> hexdump(substrate)
00000: 30 06 02 01 7B 80 01 7B
'''
```

The pyasn1 classes struggle to emulate their Python prototypes (e.g. int, list, dict etc.). But ASN.1 types exhibit more complicated behaviour. To make life easier for a Pythonista, they can turn their pyasn1 classes into Python built-ins:

```
```python
>>> from pyasn1.codec.native.encoder import encode
>>> encode(record)
```

```
{'id': 123, 'room': 321, 'house': 0}
...

```

Or vice-versa -- you can initialize an ASN.1 structure from a tree of Python objects:

```
```python
>>> from pyasn1.codec.native.decoder import decode
>>> record = decode({'id':
123, 'room': 321, 'house': 0}, asn1Spec=Record())
>>> str(record)
Record:
id=123
room=321
>>>
...

```

With ASN.1 design, serialisation codecs are decoupled from data objects, so you could turn every single ASN.1 object into many different serialised forms. As of this moment, pyasn1 supports BER, DER, CER and Python built-ins codecs. The extremely compact PER encoding is expected to be introduced in the upcoming pyasn1 release.

More information on pyasn1 APIs can be found in the [documentation](<http://snmplabs.com/pyasn1/>), compiled ASN.1 modules for different protocols and file formats could be found in the pyasn1-modules [repo](<https://github.com/etingof/pyasn1-modules>).

How to get pyasn1

-----

The pyasn1 package is distributed under terms and conditions of 2-clause BSD [license](<http://snmplabs.com/pyasn1/license.html>). Source code is freely available as a GitHub [repo](<https://github.com/etingof/pyasn1>).

You could `pip install pyasn1` or download it from [PyPI](<https://pypi.org/project/pyasn1>).

If

something does not work as expected, [open an issue](<https://github.com/etingof/pyasn1/issues>) at GitHub or post your question [on Stack Overflow](<https://stackoverflow.com/questions/ask>) or try browsing pyasn1 [mailing list archives](<https://sourceforge.net/p/pyasn1/mailman/pyasn1-users/>).

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Found in path(s):

\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/README.md

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# License: <http://snmplabs.com/pyasn1/license.html>

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\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/pyasn1/codec/native/decoder.py

\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/pyasn1/compat/dateandtime.py

\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/pyasn1/compat/calling.py

\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/tests/type/test\_opentype.py

\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/tests/compat/test\_binary.py

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\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/tests/compat/test\_integer.py

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\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/tests/type/test\_constraint.py

\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/tests/compat/\_\_main\_\_.py

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\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/tests/codec/cer/test\_encoder.py

\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/tests/codec/der/test\_encoder.py

\* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/pyasn1/type/useful.py

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/opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/pyasn1/debug.py

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0.4.8/tests/codec/cer/test\_decoder.py

- \* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/tests/type/test\_univ.py
- \* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/tests/test\_debug.py
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- /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/tests/type/test\_tag.py
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- \* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/tests/codec/der/test\_decoder.py
- \* /opt/cola/permits/2253876629\_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-

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0.4.8/pyasn1/type/opentype.py
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```

ASN.1 library for Python

=====

```

.. toctree::
   :maxdepth: 1

```

Abstract Syntax Notation One (ASN.1

[http://en.wikipedia.org/wiki/Abstract\\_Syntax\\_Notation\\_1x](http://en.wikipedia.org/wiki/Abstract_Syntax_Notation_1x)) is a technology for exchanging structured data in a universally understood, hardware agnostic way. Many industrial, security and telephony applications heavily rely on ASN.1.

The `pyasn1` <https://pypi.org/project/pyasn1/> library implements ASN.1 support in pure-Python.

What is ASN.1

-----

ASN.1 is a large, arguably over-engineered and extremely old data modelling and serialisation tool. It is probably among the first serialisation protocols in

the history of computer science and technology.

ASN.1 started its life over 30 years ago as a serialisation mechanism for the first electronic mail (known as X.400). Later on it was split off the e-mail application and became a stand-alone tech still being actively supported by its designers and widely used in industry and technology.

Since then ASN.1 is sort of haunted by its relations with the OSI model -- the first, unsuccessful, version of the Internet. You can read many interesting discussions <<https://news.ycombinator.com/item?id=8871453>> on that topic.

In the following years, generations of software engineers tackled the serialisation problem many times. We can see that in Google's ProtoBuffers <<https://developers.google.com/protocol-buffers/>> or FlatBuffers <<https://google.github.io/flatbuffers/>>, for example. Interestingly, many new takes on binary protocol design do not depart far from ASN.1 from technical perspective. It's more of a matter of striking a balance between processing overhead, wire format overhead and human readability.

Looking at what ASN.1 has to offer, it has three loosely coupled parts:

- \* Data types: the standard introduces a collection of basic data types (integers, bits, strings, arrays and records) that can be used for describing arbitrarily complex, nested data structures.
- \* Serialisation protocols: the above data structures could be converted into a series of octets for storage or transmission over the wire as well as recovered back into their structured form. The system is fully agnostic to hardware architectures differences.
- \* Schema language: ASN.1 data structures could be described in terms of a schema language for ASN.1 compiler to turn it into platform-specific implementation.

ASN.1 applications

-----

Being an old and generally successful standard, ASN.1 is widely adopted for many uses. To give you an example, these technologies use ASN.1 for their data exchange needs:

- \* Signaling standards for the public switched telephone network (SS7 family)
- \* Network management standards (SNMP, CMIP)
- \* Directory standards (X.500 family, LDAP)
- \* Public Key Infrastructure standards (X.509, etc.)
- \* PBX control (CSTA)

- \* IP-based Videoconferencing (H.323 family)
- \* Biometrics (BIP, CBEFF, ACBio)
- \* Intelligent transportation (SAE J2735)
- \* Cellular telephony (GSM, GPRS/EDGE, UMTS, LTE)

## ASN.1 gotchas

-----

Apparently, ASN.1 is hard to implement properly. Quality open-source ASN.1 tools are rare, but ad-hoc implementations are numerous. Judging from the ``statistics <http://cve.mitre.org/cgi-bin/cvekey.cgi?keyword=ASN.1>`` on discovered security vulnerabilities, many people have implemented ASN.1 parsers and oftentimes fell victim to its edge cases.

On the bright side, ASN.1 has been around for a long time, it is well understood and security reviewed.

## Documentation

-----

```
.. toctree::  
    :maxdepth: 2
```

`/pyasn1/contents`

## Use case

-----

```
.. toctree::  
    :maxdepth: 2
```

`/example-use-case`

## Download & Install

-----

```
.. toctree::  
    :maxdepth: 2
```

`/download`

## Changes

-----

All changes and release history is maintained in changelog. There you could also download the latest unreleased pyasn1 tarball containing the latest fixes and improvements.



```
..
toctree::
: maxdepth: 1
```

/changelog

License

-----

The PyASN1 software is distributed under 2-clause BSD License.

```
.. toctree::
: maxdepth: 2
```

/license

Getting help

-----

Please, file your `issues` <<https://github.com/etingof/pyasn1/issues>>`\_`  
and `PRs` <<https://github.com/etingof/pyasn1/pulls>>`\_` at GitHub.  
Alternatively, you could ask for help at  
`Stack Overflow` <<http://stackoverflow.com/questions/tagged/pyasn1>>`\_`  
or search  
`pyasn1-users` <<https://lists.sourceforge.net/lists/listinfo/pyasn1-users>>`\_`  
mailing list archive.

Books on ASN.1

-----

The pyasn1 implementation is largely based on reading up the following awesome books:

- \* `ASN.1 - Communication between heterogeneous systems` <<http://www.oss.com/asn1/dubuisson.html>>`\_` by Olivier Dubuisson
- \* `ASN.1 Complete` <<http://www.oss.com/asn1/resources/books-whitepapers-pubs/larmouth-asn1-book.pdf>>`\_` by Prof John Larmouth

Here you can get the official standards which is hard to read:

- \* `ITU standards`  
<<http://www.itu.int/ITU-T/studygroups/com17/languages/X.680-X.693-0207w.zip>>`\_`

On the other end of the readability spectrum, here is a quick and sweet write up:

- \* `A Layman's Guide to a Subset of ASN.1, BER, and DER` <<ftp://ftp.rsasecurity.com/pub/pkcs/ascii/layman.asc>>`\_` by Burton S. Kaliski

If you are working with ASN.1, we'd highly recommend reading a proper book on the subject.

Found in path(s):

```
* /opt/cola/permits/2253876629_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/docs/source/contents.rst
```

No license file was found, but licenses were detected in source scan.

```
.. _license:
```

License

```
=====
```

```
.. include:: ../LICENSE.rst
```

Found in path(s):

```
* /opt/cola/permits/2253876629_1730744483.769766/0/pyasn1-0-4-8-orig-1-tar-gz/pyasn1-0.4.8/docs/source/license.rst
```

## 1.420 automat 22.10.0-2

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## 1.422 python-pyasn1-modules 0.2.8-1

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# 1.423 cloud-initramfs-tools 0.49~24.04.1

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Version 3, 29 June 2007

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# 1.426 update-manager 24.04.8

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