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Text Part Number: 78EE117C99-1093999702

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Ned Batchelder
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Brett Cannon
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Tim Graham
Thomas Grainger
Max Grender-Jones

Joshua Harlow
Anselm Kruis
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1.4 unattended-upgrades 0.1

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1.7 libapparmor 2.10.95

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* /opt/ws_local/PERMITS_SQL/1049628793_1591314969.13/0/markupsafe-1-1-1-1-tar-gz/MarkupSafe-1.1.1/src/markupsafe/_native.py

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/**
* markupsafe._speedups
* ~~~~~
*
* C implementation of escaping for better performance. Used instead of
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*
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1.12 idna 2.10

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```

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```
"""
```

A library to support the Internationalised Domain Names in Applications (IDNA) protocol as specified in RFC 5890 et.al. This new methodology, known as IDNA 2008, can generate materially different results to the previous standard. The library can act as a drop-in replacement for the "encodings.idna" module.

```
"""
```

```
import io, sys
```

```
from setuptools import setup
```

```
def main():
```

```
    python_version = sys.version_info[:2]
```

```
    if python_version < (2,7):
```

```
        raise SystemExit("Sorry, Python 2.7 or newer required")
```

```
    package_data = { }
```

```
    exec(open('idna/package_data.py').read(), package_data)
```

```
    arguments = {
```

```
        'name': 'idna',
```

```
        'packages': ['idna'],
```

```
        'version': package_data['__version__'],
```

```
        'description': 'Internationalized Domain Names in Applications (IDNA)',
```

```
        'long_description': io.open("README.rst", encoding="UTF-8").read(),
```

```
        'author': 'Kim Davies',
```

```
        'author_email': 'kim@cynosure.com.au',
```

```
        'license': 'BSD-like',
```

```
        'url': 'https://github.com/kjd/idna',
```

```
        'classifiers': [
```

```
            'Development Status :: 5 - Production/Stable',
```

```
            'Intended Audience :: Developers',
```

```
            'Intended Audience :: System Administrators',
```

```
            'License :: OSI Approved :: BSD License',
```

```
            'Operating System :: OS Independent',
```

```
            'Programming Language :: Python',
```

```
            'Programming Language :: Python :: 2',
```

```
            'Programming Language :: Python :: 2.7',
```

```
            'Programming Language :: Python :: 3',
```

```
            'Programming Language :: Python :: 3.4',
```

```
            'Programming Language :: Python :: 3.5',
```

```
            'Programming Language :: Python :: 3.6',
```



```

'Programming Language :: Python :: 3.7',
'Programming Language :: Python :: 3.8',
'Programming Language :: Python :: Implementation :: CPython',
'Programming Language :: Python :: Implementation :: PyPy',
'Topic :: Internet :: Name Service (DNS)',
'Topic :: Software Development :: Libraries :: Python Modules',
'Topic :: Utilities',
],
'python_requires': '>=2.7, !=3.0.*, !=3.1.*, !=3.2.*, !=3.3.*',
}

setup(**arguments)

if __name__ == '__main__':
    main()

Found in path(s):
* /opt/ws_local/PERMITS_SQL/1093669067_1600973094.05/0/kjd-idna-v2-10-0-ge5c11db-1-tar-gz/kjd-idna-
b8defb9/setup.py

```

1.13 pygobject 3.20.0

1.13.1 Available under license :

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

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If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to

distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

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When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

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

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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That's all there is to it!

1.15 python-pip 20.2.3

1.15.1 Available under license :

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In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <http://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations (now Zope Corporation, see <http://www.zope.com>). In 2001, the Python Software Foundation (PSF, see <http://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation is a sponsoring member of the PSF.

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2.5	2.4	2006	PSF	yes
2.5.1	2.5	2007	PSF	yes
2.5.2	2.5.1	2008	PSF	yes
2.5.3	2.5.2	2008	PSF	yes
2.6	2.5	2008	PSF	yes
2.6.1	2.6	2008	PSF	yes
2.6.2	2.6.1	2009	PSF	yes
2.6.3	2.6.2	2009	PSF	yes
2.6.4	2.6.3	2009	PSF	yes
2.6.5	2.6.4	2010	PSF	yes
3.0	2.6	2008	PSF	yes
3.0.1	3.0	2009	PSF	yes
3.1	3.0.1	2009	PSF	yes
3.1.1	3.1	2009	PSF	yes
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In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <http://www.cnri.reston.va.us>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations (now Zope Corporation, see <http://www.zope.com>). In 2001, the Python Software Foundation (PSF, see <http://www.python.org/psf/>) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation is a sponsoring member of the PSF.

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1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
2.0.1	2.0+1.6.1	2001	PSF	yes
2.1.1	2.1+2.0.1	2001	PSF	yes
2.2	2.1.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3	2.1.2	2002	PSF	yes
2.2.1	2.2	2002	PSF	yes
2.2.2	2.2.1	2002	PSF	yes
2.2.3	2.2.2	2003	PSF	yes
2.3	2.2.2	2002-2003	PSF	yes
2.3.1	2.3	2002-2003	PSF	yes
2.3.2	2.3.1	2002-2003	PSF	yes
2.3.3	2.3.2	2002-2003	PSF	yes
2.3.4	2.3.3	2004	PSF	yes
2.3.5	2.3.4	2005	PSF	yes
2.4	2.3	2004	PSF	yes
2.4.1	2.4	2005	PSF	yes
2.4.2	2.4.1	2005	PSF	yes
2.4.3	2.4.2	2006	PSF	yes
2.4.4	2.4.3	2006	PSF	yes
2.5	2.4	2006	PSF	yes
2.5.1	2.5	2007	PSF	yes
2.5.2	2.5.1	2008	PSF	yes
2.5.3	2.5.2	2008	PSF	yes
2.6	2.5	2008	PSF	yes
2.6.1	2.6	2008	PSF	yes
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2.3.1	2.3	2002-2003	PSF	yes
2.3.2	2.3.1	2002-2003	PSF	yes
2.3.3	2.3.2	2002-2003	PSF	yes
2.3.4	2.3.3	2004	PSF	yes
2.3.5	2.3.4	2005	PSF	yes
2.4	2.3	2004	PSF	yes
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2.4.2	2.4.1	2005	PSF	yes
2.4.3	2.4.2	2006	PSF	yes
2.4.4	2.4.3	2006	PSF	yes
2.5	2.4	2006	PSF	yes
2.5.1	2.5	2007	PSF	yes
2.5.2	2.5.1	2008	PSF	yes
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2.6.4	2.6.3	2009	PSF	yes
2.6.5	2.6.4	2010	PSF	yes
3.0	2.6	2008	PSF	yes
3.0.1	3.0	2009	PSF	yes
3.1	3.0.1	2009	PSF	yes

3.1.1	3.1	2009	PSF	yes
3.1.2	3.1	2010	PSF	yes
3.2	3.1	2010	PSF	yes

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This package contains a modified version of ca-bundle.crt:

ca-bundle.crt -- Bundle of CA Root Certificates

Certificate data from Mozilla as of: Thu Nov 3 19:04:19 2011#

This is a bundle of X.509 certificates of public Certificate Authorities (CA). These were automatically extracted from Mozilla's root certificates file (certdata.txt). This file can be found in the mozilla source tree:

<http://mxr.mozilla.org/mozilla/source/security/nss/lib/ckfw/builtins/certdata.txt?raw=1#>

It contains the certificates in PEM format and therefore can be directly used with curl / libcurl / php_curl, or with an Apache+mod_ssl webserver for SSL client authentication.

Just configure this file as the SSLCACertificateFile.#

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@(#) \$RCSfile: certdata.txt,v \$ \$Revision: 1.80 \$ \$Date: 2011/11/03 15:11:58 \$

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History

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The project repository then had a clean start with some files taken from Python 2.7.1, so definitely all files are under Python License now.

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1.16 python-requests 2.24.0

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1.17 jinja2 2.11.2

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```
import io
import re

from setuptools import find_packages
from setuptools import setup

with io.open("README.rst", "rt", encoding="utf8") as f:
    readme = f.read()

with io.open("src/jinja2/__init__.py", "rt", encoding="utf8") as f:
    version = re.search(r'__version__ = "(.*?)"', f.read(), re.M).group(1)

setup(
    name="Jinja2",
    version=version,
    url="https://palletsprojects.com/p/jinja/",
    project_urls={
        "Documentation": "https://jinja.palletsprojects.com/",
        "Code": "https://github.com/pallets/jinja",
        "Issue tracker": "https://github.com/pallets/jinja/issues",
    },
)
```

```

license="BSD-3-Clause",
author="Armin Ronacher",
author_email="armin.ronacher@active-4.com",
maintainer="Pallets",
maintainer_email="contact@palletsprojects.com",
description="A very fast and expressive template engine.",
long_description=readme,
classifiers=[
    "Development Status :: 5 - Production/Stable",
    "Environment :: Web Environment",
    "Intended Audience :: Developers",
    "License :: OSI Approved :: BSD License",
    "Operating System :: OS Independent",
    "Programming Language :: Python",
    "Programming Language :: Python :: 2",
    "Programming Language :: Python :: 2.7",
    "Programming Language :: Python :: 3",
    "Programming Language :: Python :: 3.5",
    "Programming Language :: Python :: 3.6",
    "Programming Language :: Python :: 3.7",
    "Programming Language :: Python :: 3.8",
    "Programming Language :: Python :: Implementation :: CPython",
    "Programming Language :: Python :: Implementation :: PyPy",
    "Topic :: Internet :: WWW/HTTP :: Dynamic Content",
    "Topic :: Software Development :: Libraries :: Python Modules",
    "Topic :: Text Processing :: Markup :: HTML",
],
packages=find_packages("src"),
package_dir={"": "src"},
include_package_data=True,
python_requires=">=2.7, !=3.0.*, !=3.1.*, !=3.2.*, !=3.3.*, !=3.4.*",
install_requires=["MarkupSafe>=0.23"],
extras_require={"i18n": ["Babel>=0.8"]},
entry_points={"babel.extractors": ["jinja2 = jinja2.ext:babel_extract[i18n]"]},
)

```

Found in path(s):

* /opt/ws_local/PERMITS_SQL/1093542842_1600952950.2/0/jinja2-2-11-2-1-tar-gz/Jinja2-2.11.2/setup.py

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Metadata-Version: 2.1

Name: Jinja2

Version: 2.11.2

Summary: A very fast and expressive template engine.

Home-page: <https://palletsprojects.com/p/jinja/>

Author: Armin Ronacher

Author-email: armin.ronacher@active-4.com

Maintainer: Pallets

Maintainer-email: contact@palletsprojects.com

License: BSD-3-Clause

Project-URL: Documentation, <https://jinja.palletsprojects.com/>

Project-URL: Code, <https://github.com/pallets/jinja>

Project-URL: Issue tracker, <https://github.com/pallets/jinja/issues>

Description: Jinja

=====

Jinja is a fast, expressive, extensible templating engine. Special placeholders in the template allow writing code similar to Python syntax. Then the template is passed data to render the final document.

It includes:

- Template inheritance and inclusion.
- Define and import macros within templates.
- HTML templates can use autoescaping to prevent XSS from untrusted user input.
- A sandboxed environment can safely render untrusted templates.
- AsyncIO support for generating templates and calling async functions.
- I18N support with Babel.
- Templates are compiled to optimized Python code just-in-time and cached, or can be compiled ahead-of-time.
- Exceptions point to the correct line in templates to make debugging easier.
- Extensible filters, tests, functions, and even syntax.

Jinja's philosophy is that while application logic belongs in Python if possible, it shouldn't make the template designer's job difficult by restricting functionality too much.

Installing

Install and update using ``pip`_`:

.. code-block:: text

```
$ pip install -U Jinja2
```

.. `_pip`: <https://pip.pypa.io/en/stable/quickstart/>

In A Nutshell

.. code-block:: jinja

```
{% extends "base.html" % }
{% block title % }Members{% endblock % }
{% block content % }
<ul>
  {% for user in users % }
    <li><a href="{{ user.url }}">{{ user.username }}</a></li>
  {% endfor % }
</ul>
{% endblock % }
```

Links

- Website: <https://palletsprojects.com/p/jinja/>
- Documentation: <https://jinja.palletsprojects.com/>
- Releases: <https://pypi.org/project/Jinja2/>
- Code: <https://github.com/pallets/jinja>
- Issue tracker: <https://github.com/pallets/jinja/issues>
- Test status: https://dev.azure.com/pallets/jinja/_build
- Official chat: <https://discord.gg/t6rrQZH>

Platform: UNKNOWN

Classifier: Development Status :: 5 - Production/Stable

Classifier: Environment :: Web Environment

Classifier: Intended Audience :: Developers

Classifier: License :: OSI Approved :: BSD License

Classifier: Operating System :: OS Independent

Classifier: Programming Language :: Python

Classifier: Programming Language :: Python :: 2

Classifier: Programming Language :: Python :: 2.7

Classifier: Programming Language :: Python :: 3

Classifier: Programming Language :: Python :: 3.5

Classifier: Programming Language :: Python :: 3.6

Classifier: Programming Language :: Python :: 3.7

Classifier: Programming Language :: Python :: 3.8

Classifier: Programming Language :: Python :: Implementation :: CPython

Classifier: Programming Language :: Python :: Implementation :: PyPy

Classifier: Topic :: Internet :: WWW/HTTP :: Dynamic Content

Classifier: Topic :: Software Development :: Libraries :: Python Modules

Classifier: Topic :: Text Processing :: Markup :: HTML

Requires-Python: >=2.7, !=3.0.*, !=3.1.*, !=3.2.*, !=3.3.*, !=3.4.*

Description-Content-Type: text/x-rst

Provides-Extra: i18n

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1.18 python-setuptools 50.3.0

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1.19 pycparser 2.20

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pycparser -- A C parser in Python

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1.20 six 1.15.0

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The primary author and maintainer of six is Benjamin Peterson. He would like to acknowledge the following people who submitted bug reports, pull requests, and otherwise worked to improve six:

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Alexander Artemenko
Aymeric Augustin
Lee Ball
Ben Bariteau
Ned Batchelder
Wouter Bolsterlee
Brett Cannon
Jason R. Coombs
Julien Danjou
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Ben Davis
Jon Dufresne
Tim Graham
Thomas Grainger
Max Grender-Jones
Joshua Harlow
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1.21 jinja2 2.8

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1.22 python-apt 1.1.0b1+ubuntu0.16.4.2

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```

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Building and Distributing Packages with Setuptools
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``Setuptools`` is a collection of enhancements to the Python ``distutils`` (for Python 2.6 and up) that allow developers to more easily build and distribute Python packages, especially ones that have dependencies on other packages.

Packages built and distributed using ``setuptools`` look to the user like ordinary Python packages based on the ``distutils``. Your users don't need to install or even know about setuptools in order to use them, and you don't have to include the entire setuptools package in your distributions. By including just a single ``bootstrap module`` (a 12K .py file), your package will automatically download and install ``setuptools`` if the user is building your package from source and doesn't have a suitable version already installed.

.. _bootstrap module: https://bootstrap.pypa.io/ez_setup.py

Feature Highlights:

* Automatically find/download/install/upgrade dependencies at build time using the ``EasyInstall`` tool <[easy_install.html](#)>, which supports downloading via HTTP, FTP, Subversion, and SourceForge, and automatically scans web pages linked from PyPI to find download links. (It's the closest thing to CPAN currently available for Python.)

* Create ``Python Eggs`` <<http://peak.telecommunity.com/DevCenter/PythonEggs>> - a single-file importable distribution format

- * Enhanced support for accessing data files hosted in zipped packages.
- * Automatically include all packages in your source tree, without listing them individually in setup.py
- * Automatically include all relevant files in your source distributions, without needing to create a ``MANIFEST.in`` file, and without having to force regeneration of the ``MANIFEST`` file when your source tree changes.
- * Automatically generate wrapper scripts or Windows (console and GUI) .exe files for any number of "main" functions in your project. (Note: this is not a py2exe replacement; the .exe files rely on the local Python installation.)
- * Transparent Pyrex support, so that your setup.py can list ``.pyx`` files and still work even when the end-user doesn't have Pyrex installed (as long as you include the Pyrex-generated C in your source distribution)
- * Command aliases - create project-specific, per-user, or site-wide shortcut names for commonly used commands and options
- * PyPI upload support - upload your source distributions and eggs to PyPI
- * Deploy your project in "development mode", such that it's available on ``sys.path``, yet can still be edited directly from its source checkout.
- * Easily extend the distutils with new commands or ``setup()`` arguments, and distribute/reuse your extensions for multiple projects, without copying code.
- * Create extensible applications and frameworks that automatically discover extensions, using simple "entry points" declared in a project's setup script.

In addition to the PyPI downloads, the development version of ``setuptools`` is available from the `Python SVN sandbox`_, and in-development versions of the `0.6 branch`_ are available as well.

.. _0.6 branch: <http://svn.python.org/projects/sandbox/branches/setuptools-0.6/#egg=setuptools-dev06>

.. _Python SVN sandbox: <http://svn.python.org/projects/sandbox/trunk/setuptools/#egg=setuptools-dev>

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.. _ez_setup.py: `bootstrap module`_

 Developer's Guide

Installing ``setuptools``

=====

Please follow the `EasyInstall Installation Instructions`_ to install the current stable version of setuptools. In particular, be sure to read the section on `Custom Installation Locations`_ if you are installing anywhere other than Python's ``site-packages`` directory.

.. _EasyInstall Installation Instructions: easy_install.html#installation-instructions

.. _Custom Installation Locations: easy_install.html#custom-installation-locations

If you want the current in-development version of setuptools, you should first install a stable version, and then run::

```
ez_setup.py setuptools==dev
```

This will download and install the latest development (i.e. unstable) version of setuptools from the Python Subversion sandbox.

Basic Use

=====

For basic use of setuptools, just import things from setuptools instead of the distutils. Here's a minimal setup script using setuptools::

```
from setuptools import setup, find_packages
setup(
    name = "HelloWorld",
    version = "0.1",
    packages = find_packages(),
)
```

As you can see, it doesn't take much to use setuptools in a project. Run that script in your project folder, alongside the Python packages you have developed.

Invoke that script to produce eggs, upload to PyPI, and automatically include all packages in the directory where the setup.py lives. See the `Command Reference`_ section below to see what commands you can give to this setup script. For example, to produce a source distribution, simply invoke::

```
python setup.py sdist
```

Of course, before you release your project to PyPI, you'll want to add a bit more information to your setup script to help people find or learn about your project. And maybe your project will have grown by then to include a few dependencies, and perhaps some data files and scripts::

```
from setuptools import setup, find_packages

setup(
    name = "HelloWorld",
    version = "0.1",
    packages = find_packages(),
    scripts = ['say_hello.py'],

    # Project uses reStructuredText, so ensure that the docutils get
    # installed or upgraded on the target machine
    install_requires = ['docutils>=0.3'],

    package_data = {
        # If any package contains *.txt or *.rst files, include them:
        '': ['*.txt', '*.rst'],
        # And include any *.msg files found in the 'hello' package, too:
        'hello': ['*.msg'],
    },

    # metadata for upload to PyPI
    author = "Me",
    author_email = "me@example.com",
    description = "This is an Example Package",
    license = "PSF",
    keywords = "hello world example examples",
    url = "http://example.com/HelloWorld/", # project home page, if any

    # could also include long_description, download_url, classifiers, etc.
)
```

In the sections that follow, we'll explain what most of these ``setup()`` arguments do (except for the metadata ones), and the various ways you might use them in your own project(s).

Specifying Your Project's Version

Setuptools can work well with most versioning schemes; there are, however, a few special things to watch out for, in order to ensure that setuptools and EasyInstall can always tell what version of your package is newer than another version. Knowing these things will also help you correctly specify what versions of other projects your project depends on.

A version consists of an alternating series of release numbers and pre-release or post-release tags. A release number is a series of digits punctuated by dots, such as ``2.4`` or ``0.5``. Each series of digits is treated numerically, so releases ``2.1`` and ``2.1.0`` are different ways to spell the same release number, denoting the first subrelease of release 2. But ``2.10`` is the *tenth* subrelease of release 2, and so is a different and newer release from ``2.1`` or ``2.1.0``. Leading zeros within a series of digits are also ignored, so ``2.01`` is the same as ``2.1``, and different from ``2.0.1``.

Following a release number, you can have either a pre-release or post-release tag. Pre-release tags make a version be considered *older* than the version they are appended to. So, revision ``2.4`` is *newer* than revision ``2.4c1``, which in turn is newer than ``2.4b1`` or ``2.4a1``. Postrelease tags make a version be considered *newer* than the version they are appended to. So, revisions like ``2.4-1`` and ``2.4pl3`` are newer than ``2.4``, but are *older* than ``2.4.1`` (which has a higher release number).

A pre-release tag is a series of letters that are alphabetically before "final". Some examples of prerelease tags would include ``alpha``, ``beta``, ``a``, ``c``, ``dev``, and so on. You do not have to place a dot or dash before the prerelease tag if it's immediately after a number, but it's okay to do so if you prefer. Thus, ``2.4c1`` and ``2.4.c1`` and ``2.4-c1`` all represent release candidate 1 of version ``2.4``, and are treated as identical by `setuptools`.

In addition, there are three special prerelease tags that are treated as if they were the letter ``c``: ``pre``, ``preview``, and ``rc``. So, version ``2.4rc1``, ``2.4pre1`` and ``2.4preview1`` are all the exact same version as ``2.4c1``, and are treated as identical by `setuptools`.

A post-release tag is either a series of letters that are alphabetically greater than or equal to "final", or a dash (``-``). Post-release tags are generally used to separate patch numbers, port numbers, build numbers, revision numbers, or date stamps from the release number. For example, the version ``2.4-r1263`` might denote Subversion revision 1263 of a post-release patch of version ``2.4``. Or you might use ``2.4-20051127`` to denote a date-stamped post-release.

Notice that after each pre or post-release tag, you are free to place another release number, followed again by more pre- or post-release tags. For example, ``0.6a9.dev-r41475`` could denote Subversion revision 41475 of the in-development version of the ninth alpha of release 0.6. Notice that ``dev`` is a pre-release tag, so this version is a *lower* version number than ``0.6a9``, which would be the actual ninth alpha of release 0.6. But the ``-r41475`` is a post-release tag, so this version is *newer* than ``0.6a9.dev``.

For the most part, `setuptools`' interpretation of version numbers is intuitive, but here are a few tips that will keep you out of trouble in the corner cases:

* Don't stick adjoining pre-release tags together without a dot or number between them. Version `1.9adev` is the `adev` prerelease of `1.9`, *not* a development pre-release of `1.9a`. Use `.dev` instead, as in `1.9a.dev`, or separate the prerelease tags with a number, as in `1.9a0dev`. `1.9a.dev`, `1.9a0dev`, and even `1.9.a.dev` are identical versions from `setuptools`' point of view, so you can use whatever scheme you prefer.

* If you want to be certain that your chosen numbering scheme works the way you think it will, you can use the `pkg_resources.parse_version()` function to compare different version numbers::

```
>>> from pkg_resources import parse_version
>>> parse_version('1.9.a.dev') == parse_version('1.9a0dev')
True
>>> parse_version('2.1-rc2') < parse_version('2.1')
True
>>> parse_version('0.6a9dev-r41475') < parse_version('0.6a9')
True
```

Once you've decided on a version numbering scheme for your project, you can have `setuptools` automatically tag your in-development releases with various pre- or post-release tags. See the following sections for more details:

- * `Tagging and "Daily Build" or "Snapshot" Releases`
- * `Managing "Continuous Releases" Using Subversion`
- * The `egg_info` command

New and Changed `setup()` Keywords

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The following keyword arguments to `setup()` are added or changed by `setuptools`. All of them are optional; you do not have to supply them unless you need the associated `setuptools` feature.

`include_package_data`

If set to `True`, this tells `setuptools` to automatically include any data files it finds inside your package directories that are specified by your `MANIFEST.in` file. For more information, see the section below on `Including Data Files`.

`exclude_package_data`

A dictionary mapping package names to lists of glob patterns that should be *excluded* from your package directories. You can use this to trim back any excess files included by `include_package_data`. For a complete description and examples, see the section below on `Including Data Files`.

```package_data```

A dictionary mapping package names to lists of glob patterns. For a complete description and examples, see the section below on `Including Data Files`_``. You do not need to use this option if you are using ```include_package_data```, unless you need to add e.g. files that are generated by your setup script and build process. (And are therefore not in source control or are files that you don't want to include in your source distribution.)

```zip_safe```

A boolean (True or False) flag specifying whether the project can be safely installed and run from a zip file. If this argument is not supplied, the ```bdist_egg``` command will have to analyze all of your project's contents for possible problems each time it builds an egg.

```install_requires```

A string or list of strings specifying what other distributions need to be installed when this one is. See the section below on `Declaring Dependencies`_`` for details and examples of the format of this argument.

```entry_points```

A dictionary mapping entry point group names to strings or lists of strings defining the entry points. Entry points are used to support dynamic discovery of services or plugins provided by a project. See `Dynamic Discovery of Services and Plugins`_`` for details and examples of the format of this argument. In addition, this keyword is used to support `Automatic Script Creation`_``.

```extras_require```

A dictionary mapping names of "extras" (optional features of your project) to strings or lists of strings specifying what other distributions must be installed to support those features. See the section below on `Declaring Dependencies`_`` for details and examples of the format of this argument.

```setup_requires```

A string or list of strings specifying what other distributions need to be present in order for the `*setup script*` to run. ```setuptools``` will attempt to obtain these (even going so far as to download them using ```EasyInstall```) before processing the rest of the setup script or commands. This argument is needed if you are using distutils extensions as part of your build process; for example, extensions that process `setup()` arguments and turn them into EGG-INFO metadata files.

(Note: projects listed in ```setup_requires``` will NOT be automatically installed on the system where the setup script is being run. They are simply downloaded to the `./eggs` directory if they're not locally available already. If you want them to be installed, as well as being available

when the setup script is run, you should add them to `install_requires`
`**and** setup_requires`.)

`dependency_links`

A list of strings naming URLs to be searched when satisfying dependencies. These links will be used if needed to install packages specified by `setup_requires` or `tests_require`. They will also be written into the egg's metadata for use by tools like EasyInstall to use when installing an `.egg` file.

`namespace_packages`

A list of strings naming the project's "namespace packages". A namespace package is a package that may be split across multiple project distributions. For example, Zope 3's `zope` package is a namespace package, because subpackages like `zope.interface` and `zope.publisher` may be distributed separately. The egg runtime system can automatically merge such subpackages into a single parent package at runtime, as long as you declare them in each project that contains any subpackages of the namespace package, and as long as the namespace package's `__init__.py` does not contain any code other than a namespace declaration. See the section below on `Namespace Packages` for more information.

`test_suite`

A string naming a `unittest.TestCase` subclass (or a package or module containing one or more of them, or a method of such a subclass), or naming a function that can be called with no arguments and returns a `unittest.TestSuite`. If the named suite is a module, and the module has an `additional_tests()` function, it is called and the results are added to the tests to be run. If the named suite is a package, any submodules and subpackages are recursively added to the overall test suite.

Specifying this argument enables use of the `test_` command to run the specified test suite, e.g. via `setup.py test`. See the section on the `test_` command below for more details.

`tests_require`

If your project's tests need one or more additional packages besides those needed to install it, you can use this option to specify them. It should be a string or list of strings specifying what other distributions need to be present for the package's tests to run. When you run the `test` command, `setuptools` will attempt to obtain these (even going so far as to download them using `EasyInstall`). Note that these required projects will *not* be installed on the system where the tests are run, but only downloaded to the project's setup directory if they're not already installed locally.

.. `_test_loader`:

`test_loader`

If you would like to use a different way of finding tests to run than what `setuptools` normally uses, you can specify a module name and class name in this argument. The named class must be instantiable with no arguments, and its instances must support the `loadTestsFromNames()` method as defined in the Python `unittest` module's `TestLoader` class. `Setuptools` will pass only one test "name" in the `names` argument: the value supplied for the `test_suite` argument. The loader you specify may interpret this string in any way it likes, as there are no restrictions on what may be contained in a `test_suite` string.

The module name and class name must be separated by a `:`. The default value of this argument is `setuptools.command.test:ScanningLoader`. If you want to use the default `unittest` behavior, you can specify `unittest:TestLoader` as your `test_loader` argument instead. This will prevent automatic scanning of submodules and subpackages.

The module and class you specify here may be contained in another package, as long as you use the `tests_require` option to ensure that the package containing the loader class is available when the `test` command is run.

`eager_resources`

A list of strings naming resources that should be extracted together, if any of them is needed, or if any C extensions included in the project are imported. This argument is only useful if the project will be installed as a zipfile, and there is a need to have all of the listed resources be extracted to the filesystem *as a unit*. Resources listed here should be `/`-separated paths, relative to the source root, so to list a resource `foo.png` in package `bar.baz`, you would include the string `bar/baz/foo.png` in this argument.

If you only need to obtain resources one at a time, or you don't have any C extensions that access other files in the project (such as data files or shared libraries), you probably do NOT need this argument and shouldn't mess with it. For more details on how this argument works, see the section below on `Automatic Resource Extraction`.

`use_2to3`

Convert the source code from Python 2 to Python 3 with `2to3` during the build process. See `:doc:python3` for more details.

`convert_2to3_doctests`

List of doctest source files that need to be converted with `2to3`. See `:doc:python3` for more details.

`use_2to3_fixers`

A list of modules to search for additional fixers to be used during the `2to3` conversion. See `:doc:python3` for more details.

Using `find_packages()`

For simple projects, it's usually easy enough to manually add packages to the `packages` argument of `setup()`. However, for very large projects (Twisted, PEAK, Zope, Chandler, etc.), it can be a big burden to keep the package list updated. That's what `setuptools.find_packages()` is for.

`find_packages()` takes a source directory and two lists of package name patterns to exclude and include. If omitted, the source directory defaults to the same directory as the setup script. Some projects use a `src` or `lib` directory as the root of their source tree, and those projects would of course use `src` or `lib` as the first argument to `find_packages()`. (And such projects also need something like `package_dir = {'src'}` in their `setup()` arguments, but that's just a normal distutils thing.)

Anyway, `find_packages()` walks the target directory, filtering by inclusion patterns, and finds Python packages (any directory). On Python 3.2 and earlier, packages are only recognized if they include an `__init__.py` file. Finally, exclusion patterns are applied to remove matching packages.

Inclusion and exclusion patterns are package names, optionally including wildcards. For example, `find_packages(exclude=["*.tests"])` will exclude all packages whose last name part is `tests`. Or, `find_packages(exclude=["*.tests", "*.tests.*"])` will also exclude any subpackages of packages named `tests`, but it still won't exclude a top-level `tests` package or the children thereof. In fact, if you really want no `tests` packages at all, you'll need something like this::

```
find_packages(exclude=["*.tests", "*.tests.*", "tests.*", "tests"])
```

in order to cover all the bases. Really, the exclusion patterns are intended to cover simpler use cases than this, like excluding a single, specified package and its subpackages.

Regardless of the parameters, the `find_packages()` function returns a list of package names suitable for use as the `packages` argument to `setup()`, and so is usually the easiest way to set that argument in your setup script. Especially since it frees you from having to remember to modify your setup script whenever your project grows additional top-level packages or subpackages.

Automatic Script Creation

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Packaging and installing scripts can be a bit awkward with the distutils. For one thing, there's no easy way to have a script's filename match local conventions on both Windows and POSIX platforms. For another, you often have to create a separate file just for the "main" script, when your actual "main" is a function in a module somewhere. And even in Python 2.4, using the `--m` option only works for actual `.py` files that aren't installed in a package.

`setuptools` fixes all of these problems by automatically generating scripts for you with the correct extension, and on Windows it will even create an `.exe` file so that users don't have to change their `PATHEXT` settings. The way to use this feature is to define "entry points" in your setup script that indicate what function the generated script should import and run. For example, to create two console scripts called `foo` and `bar`, and a GUI script called `baz`, you might do something like this::

```
setup(  
    # other arguments here...  
    entry_points={  
        'console_scripts': [  
            'foo = my_package.some_module:main_func',  
            'bar = other_module:some_func',  
        ],  
        'gui_scripts': [  
            'baz = my_package_gui:start_func',  
        ]  
    }  
)
```

When this project is installed on non-Windows platforms (using `setup.py install`, `setup.py develop`, or by using EasyInstall), a set of `foo`, `bar`, and `baz` scripts will be installed that import `main_func` and `some_func` from the specified modules. The functions you specify are called with no arguments, and their return value is passed to `sys.exit()`, so you can return an errorlevel or message to print to stderr.

On Windows, a set of `foo.exe`, `bar.exe`, and `baz.exe` launchers are created, alongside a set of `foo.py`, `bar.py`, and `baz.pyw` files. The `.exe` wrappers find and execute the right version of Python to run the `.py` or `.pyw` file.

You may define as many "console script" and "gui script" entry points as you like, and each one can optionally specify "extras" that it depends on, that will be added to `sys.path` when the script is run. For more information on "extras", see the section below on `Declaring Extras`. For more information on "entry points" in general, see the section below on `Dynamic Discovery of Services and Plugins`.

"Eggsecutable" Scripts

Occasionally, there are situations where it's desirable to make an ``.egg`` file directly executable. You can do this by including an entry point such as the following::

```
setup(  
    # other arguments here...  
    entry_points = {  
        'setuptools.installation': [  
            'eggsecutable = my_package.some_module:main_func',  
        ]  
    }  
)
```

Any eggs built from the above setup script will include a short executable prelude that imports and calls `main_func()` from `my_package.some_module`. The prelude can be run on Unix-like platforms (including Mac and Linux) by invoking the egg with `bin/sh`, or by enabling execute permissions on the ``.egg`` file. For the executable prelude to run, the appropriate version of Python must be available via the `PATH` environment variable, under its "long" name. That is, if the egg is built for Python 2.3, there must be a `python2.3` executable present in a directory on `PATH`.

This feature is primarily intended to support `ez_setup` the installation of `setuptools` itself on non-Windows platforms, but may also be useful for other projects as well.

IMPORTANT NOTE: Eggs with an "eggsecutable" header cannot be renamed, or invoked via symlinks. They *must* be invoked using their original filename, in order to ensure that, once running, `pkg_resources` will know what project and version is in use. The header script will check this and exit with an error if the ``.egg`` file has been renamed or is invoked via a symlink that changes its base name.

Declaring Dependencies

=====

`setuptools` supports automatically installing dependencies when a package is installed, and including information about dependencies in Python Eggs (so that package management tools like EasyInstall can use the information).

`setuptools` and `pkg_resources` use a common syntax for specifying a project's required dependencies. This syntax consists of a project's PyPI

name, optionally followed by a comma-separated list of "extras" in square brackets, optionally followed by a comma-separated list of version specifiers. A version specifier is one of the operators `<`, `>`, `<=`, `>=`, `==` or `!=`, followed by a version identifier. Tokens may be separated by whitespace, but any whitespace or nonstandard characters within a project name or version identifier must be replaced with `-`.

Version specifiers for a given project are internally sorted into ascending version order, and used to establish what ranges of versions are acceptable. Adjacent redundant conditions are also consolidated (e.g. `>1, >2` becomes `>1`, and `<2, <3` becomes `<3`). `!=` versions are excised from the ranges they fall within. A project's version is then checked for membership in the resulting ranges. (Note that providing conflicting conditions for the same version (e.g. `<2, >=2` or `==2, !=2`) is meaningless and may therefore produce bizarre results.)

Here are some example requirement specifiers::

```
docutils >= 0.3
```

```
# comment lines and \ continuations are allowed in requirement strings
BazSpam ==1.1, ==1.2, ==1.3, ==1.4, ==1.5, \
    ==1.6, ==1.7 # and so are line-end comments
```

```
PEAK[FastCGI, reST]>=0.5a4
```

```
setuptools==0.5a7
```

The simplest way to include requirement specifiers is to use the `install_requires` argument to `setup()`. It takes a string or list of strings containing requirement specifiers. If you include more than one requirement in a string, each requirement must begin on a new line.

This has three effects:

1. When your project is installed, either by using EasyInstall, `setup.py install`, or `setup.py develop`, all of the dependencies not already installed will be located (via PyPI), downloaded, built (if necessary), and installed.
2. Any scripts in your project will be installed with wrappers that verify the availability of the specified dependencies at runtime, and ensure that the correct versions are added to `sys.path` (e.g. if multiple versions have been installed).
3. Python Egg distributions will include a metadata file listing the dependencies.

Note, by the way, that if you declare your dependencies in `setup.py`, you do *not* need to use the `require()` function in your scripts or modules, as long as you either install the project or use `setup.py develop` to do development work on it. (See "Development Mode" below for more details on using `setup.py develop`.)

Dependencies that aren't in PyPI

If your project depends on packages that aren't registered in PyPI, you may still be able to depend on them, as long as they are available for download as:

- an egg, in the standard distutils `sdist` format,
- a single `.py` file, or
- a VCS repository (Subversion, Mercurial, or Git).

You just need to add some URLs to the `dependency_links` argument to `setup()`.

The URLs must be either:

1. direct download URLs,
2. the URLs of web pages that contain direct download links, or
3. the repository's URL

In general, it's better to link to web pages, because it is usually less complex to update a web page than to release a new version of your project. You can also use a SourceForge `showfiles.php` link in the case where a package you depend on is distributed via SourceForge.

If you depend on a package that's distributed as a single `.py` file, you must include an `#egg=project-version` suffix to the URL, to give a project name and version number. (Be sure to escape any dashes in the name or version by replacing them with underscores.) EasyInstall will recognize this suffix and automatically create a trivial `setup.py` to wrap the single `.py` file as an egg.

In the case of a VCS checkout, you should also append `#egg=project-version` in order to identify for what package that checkout should be used. You can append `@REV` to the URL's path (before the fragment) to specify a revision. Additionally, you can also force the VCS being used by prepending the URL with a certain prefix. Currently available are:

- `svn+URL` for Subversion,
- `git+URL` for Git, and
- `hg+URL` for Mercurial

A more complete example would be:

```
``vcs+proto://host/path@revision#egg=project-version``
```

Be careful with the version. It should match the one inside the project files.

If you want to disregard the version, you have to omit it both in the ``requires`` and in the URL's fragment.

This will do a checkout (or a clone, in Git and Mercurial parlance) to a temporary folder and run ``setup.py bdist_egg``.

The ``dependency_links`` option takes the form of a list of URL strings. For example, the below will cause EasyInstall to search the specified page for eggs or source distributions, if the package's dependencies aren't already installed::

```
setup(  
    ...  
    dependency_links = [  
        "http://peak.telecommunity.com/snapshots/"  
    ],  
)
```

.. _Declaring Extras:

Declaring "Extras" (optional features with their own dependencies)

Sometimes a project has "recommended" dependencies, that are not required for all uses of the project. For example, a project might offer optional PDF output if ReportLab is installed, and reStructuredText support if docutils is installed. These optional features are called "extras", and setuptools allows you to define their requirements as well. In this way, other projects that require these optional features can force the additional requirements to be installed, by naming the desired extras in their ``install_requires``.

For example, let's say that Project A offers optional PDF and reST support::

```
setup(  
    name="Project-A",  
    ...  
    extras_require = {  
        'PDF': ["ReportLab>=1.2", "RXP"],  
        'reST': ["docutils>=0.3"],  
    }  
)
```

)

As you can see, the ``extras_require`` argument takes a dictionary mapping names of "extra" features, to strings or lists of strings describing those features' requirements. These requirements will *not* be automatically installed unless another package depends on them (directly or indirectly) by including the desired "extras" in square brackets after the associated project name. (Or if the extras were listed in a requirement spec on the EasyInstall command line.)

Extras can be used by a project's `entry points`_ to specify dynamic dependencies. For example, if Project A includes a "rst2pdf" script, it might declare it like this, so that the "PDF" requirements are only resolved if the "rst2pdf" script is run::

```
setup(
    name="Project-A",
    ...
    entry_points = {
        'console_scripts': [
            'rst2pdf = project_a.tools.pdfgen [PDF]',
            'rst2html = project_a.tools.htmlgen',
            # more script entry points ...
        ],
    }
)
```

Projects can also use another project's extras when specifying dependencies. For example, if project B needs "project A" with PDF support installed, it might declare the dependency like this::

```
setup(
    name="Project-B",
    install_requires = ["Project-A[PDF]"],
    ...
)
```

This will cause ReportLab to be installed along with project A, if project B is installed -- even if project A was already installed. In this way, a project can encapsulate groups of optional "downstream dependencies" under a feature name, so that packages that depend on it don't have to know what the downstream dependencies are. If a later version of Project A builds in PDF support and no longer needs ReportLab, or if it ends up needing other dependencies besides ReportLab in order to provide PDF support, Project B's setup information does not need to change, but the right packages will still be installed if needed.

Note, by the way, that if a project ends up not needing any other packages to support a feature, it should keep an empty requirements list for that feature

in its `extras_require` argument, so that packages depending on that feature don't break (due to an invalid feature name). For example, if Project A above builds in PDF support and no longer needs ReportLab, it could change its setup to this::

```
setup(
    name="Project-A",
    ...
    extras_require = {
        'PDF': [],
        'reST': ["docutils>=0.3"],
    }
)
```

so that Package B doesn't have to remove the `[PDF]` from its requirement specifier.

Including Data Files

=====

The distutils have traditionally allowed installation of "data files", which are placed in a platform-specific location. However, the most common use case for data files distributed with a package is for use *by* the package, usually by including the data files in the package directory.

Setuptools offers three ways to specify data files to be included in your packages. First, you can simply use the `include_package_data` keyword, e.g.::

```
from setuptools import setup, find_packages
setup(
    ...
    include_package_data = True
)
```

This tells setuptools to install any data files it finds in your packages. The data files must be specified via the distutils' `MANIFEST.in` file. (They can also be tracked by a revision control system, using an appropriate plugin. See the section below on `Adding Support for Revision Control Systems` for information on how to write such plugins.)

If you want finer-grained control over what files are included (for example, if you have documentation files in your package directories and want to exclude them from installation), then you can also use the `package_data` keyword, e.g.::

```
from setuptools import setup, find_packages
```

```

setup(
    ...
    package_data = {
        # If any package contains *.txt or *.rst files, include them:
        '': ['*.txt', '*.rst'],
        # And include any *.msg files found in the 'hello' package, too:
        'hello': ['*.msg'],
    }
)

```

The ``package_data`` argument is a dictionary that maps from package names to lists of glob patterns. The globs may include subdirectory names, if the data files are contained in a subdirectory of the package. For example, if the package tree looks like this::

```

setup.py
src/
  mypkg/
    __init__.py
    mypkg.txt
  data/
    somefile.dat
    otherdata.dat

```

The setuptools setup file might look like this::

```

from setuptools import setup, find_packages
setup(
    ...
    packages = find_packages('src'), # include all packages under src
    package_dir = {'': 'src'}, # tell distutils packages are under src

    package_data = {
        # If any package contains *.txt files, include them:
        '': ['*.txt'],
        # And include any *.dat files found in the 'data' subdirectory
        # of the 'mypkg' package, also:
        'mypkg': ['data/*.dat'],
    }
)

```

Notice that if you list patterns in ``package_data`` under the empty string, these patterns are used to find files in every package, even ones that also have their own patterns listed. Thus, in the above example, the ``mypkg.txt`` file gets included even though it's not listed in the patterns for ``mypkg``.

Also notice that if you use paths, you *must* use a forward slash (``/``) as the path separator, even if you are on Windows. Setuptools automatically

converts slashes to appropriate platform-specific separators at build time.

(Note: although the `package_data` argument was previously only available in `setuptools`, it was also added to the Python `distutils` package as of Python 2.4; there is some documentation for the feature `__` available on the python.org website. If using the setuptools-specific `include_package_data` argument, files specified by `package_data` will *not* be automatically added to the manifest unless they are listed in the MANIFEST.in file.)

`__` <http://docs.python.org/dist/node11.html>

Sometimes, the `include_package_data` or `package_data` options alone aren't sufficient to precisely define what files you want included. For example, you may want to include package README files in your revision control system and source distributions, but exclude them from being installed. So, setuptools offers an `exclude_package_data` option as well, that allows you to do things like this::

```
from setuptools import setup, find_packages
setup(
    ...
    packages = find_packages('src'), # include all packages under src
    package_dir = {'': 'src'}, # tell distutils packages are under src

    include_package_data = True, # include everything in source control

    # ...but exclude README.txt from all packages
    exclude_package_data = { '': ['README.txt'] },
)
```

The `exclude_package_data` option is a dictionary mapping package names to lists of wildcard patterns, just like the `package_data` option. And, just as with that option, a key of `''` will apply the given pattern(s) to all packages. However, any files that match these patterns will be *excluded* from installation, even if they were listed in `package_data` or were included as a result of using `include_package_data`.

In summary, the three options allow you to:

`include_package_data`

Accept all data files and directories matched by `MANIFEST.in`.

`package_data`

Specify additional patterns to match files and directories that may or may not be matched by `MANIFEST.in` or found in source control.

`exclude_package_data`

Specify patterns for data files and directories that should *not* be

included when a package is installed, even if they would otherwise have been included due to the use of the preceding options.

NOTE: Due to the way the distutils build process works, a data file that you include in your project and then stop including may be "orphaned" in your project's build directories, requiring you to run `setup.py clean --all` to fully remove them. This may also be important for your users and contributors if they track intermediate revisions of your project using Subversion; be sure to let them know when you make changes that remove files from inclusion so they can run `setup.py clean --all`.

Accessing Data Files at Runtime

Typically, existing programs manipulate a package's `__file__` attribute in order to find the location of data files. However, this manipulation isn't compatible with PEP 302-based import hooks, including importing from zip files and Python Eggs. It is strongly recommended that, if you are using data files, you should use the `Resource Management API` of `pkg_resources` to access them. The `pkg_resources` module is distributed as part of `setuptools`, so if you're using `setuptools` to distribute your package, there is no reason not to use its resource management API. See also `Accessing Package Resources` for a quick example of converting code that uses `__file__` to use `pkg_resources` instead.

.. `Resource Management API`: <http://peak.telecommunity.com/DevCenter/PythonEggs#resource-management>
.. `Accessing Package Resources`: <http://peak.telecommunity.com/DevCenter/PythonEggs#accessing-package-resources>

Non-Package Data Files

The `distutils` normally install general "data files" to a platform-specific location (e.g. `/usr/share`). This feature intended to be used for things like documentation, example configuration files, and the like. `setuptools` does not install these data files in a separate location, however. They are bundled inside the egg file or directory, alongside the Python modules and packages. The data files can also be accessed using the `Resource Management API`, by specifying a `Requirement` instead of a package name::

```
from pkg_resources import Requirement, resource_filename
filename = resource_filename(Requirement.parse("MyProject"), "sample.conf")
```

The above code will obtain the filename of the "sample.conf" file in the data root of the "MyProject" distribution.

Note, by the way, that this encapsulation of data files means that you can't actually install data files to some arbitrary location on a user's machine; this is a feature, not a bug. You can always include a script in your distribution that extracts and copies your the documentation or data files to a user-specified location, at their discretion. If you put related data files in a single directory, you can use `resource_filename()` with the directory name to get a filesystem directory that then can be copied with the `shutil` module. (Even if your package is installed as a zipfile, calling `resource_filename()` on a directory will return an actual filesystem directory, whose contents will be that entire subtree of your distribution.)

(Of course, if you're writing a new package, you can just as easily place your data files or directories inside one of your packages, rather than using the distutils' approach. However, if you're updating an existing application, it may be simpler not to change the way it currently specifies these data files.)

Automatic Resource Extraction

If you are using tools that expect your resources to be "real" files, or your project includes non-extension native libraries or other files that your C extensions expect to be able to access, you may need to list those files in the `eager_resources` argument to `setup()`, so that the files will be extracted together, whenever a C extension in the project is imported.

This is especially important if your project includes shared libraries *other* than distutils-built C extensions, and those shared libraries use file extensions other than `.dll`, `.so`, or `.dylib`, which are the extensions that `setuptools 0.6a8` and higher automatically detects as shared libraries and adds to the `native_libs.txt` file for you. Any shared libraries whose names do not end with one of those extensions should be listed as `eager_resources`, because they need to be present in the filesystem when the C extensions that link to them are used.

The `pkg_resources` runtime for compressed packages will automatically extract *all* C extensions and `eager_resources` at the same time, whenever *any* C extension or eager resource is requested via the `resource_filename()` API. (C extensions are imported using `resource_filename()` internally.) This ensures that C extensions will see all of the "real" files that they expect to see.

Note also that you can list directory resource names in `eager_resources` as well, in which case the directory's contents (including subdirectories) will be extracted whenever any C extension or eager resource is requested.

Please note that if you're not sure whether you need to use this argument, you don't! It's really intended to support projects with lots of non-Python

dependencies and as a last resort for crufty projects that can't otherwise handle being compressed. If your package is pure Python, Python plus data files, or Python plus C, you really don't need this. You've got to be using either C or an external program that needs "real" files in your project before there's any possibility of ``eager_resources`` being relevant to your project.

Extensible Applications and Frameworks

=====

.. _Entry Points:

Dynamic Discovery of Services and Plugins

``setuptools`` supports creating libraries that "plug in" to extensible applications and frameworks, by letting you register "entry points" in your project that can be imported by the application or framework.

For example, suppose that a blogging tool wants to support plugins that provide translation for various file types to the blog's output format. The framework might define an "entry point group" called ``blogtool.parsers``, and then allow plugins to register entry points for the file extensions they support.

This would allow people to create distributions that contain one or more parsers for different file types, and then the blogging tool would be able to find the parsers at runtime by looking up an entry point for the file extension (or mime type, or however it wants to).

Note that if the blogging tool includes parsers for certain file formats, it can register these as entry points in its own setup script, which means it doesn't have to special-case its built-in formats. They can just be treated the same as any other plugin's entry points would be.

If you're creating a project that plugs in to an existing application or framework, you'll need to know what entry points or entry point groups are defined by that application or framework. Then, you can register entry points in your setup script. Here are a few examples of ways you might register an ``.rst`` file parser entry point in the ``blogtool.parsers`` entry point group, for our hypothetical blogging tool::

```
setup(
    # ...
    entry_points = {'blogtool.parsers': '.rst = some_module:SomeClass'}
)
```

```

setup(
    # ...
    entry_points = {'blogtool.parsers': ['.rst = some_module:a_func']}
)

```

```

setup(
    # ...
    entry_points = """
        [blogtool.parsers]
        .rst = some.nested.module:SomeClass.some_classmethod [reST]
    """
    extras_require = dict(reST = "Docutils>=0.3.5")
)

```

The `entry_points` argument to `setup()` accepts either a string with `.ini`-style sections, or a dictionary mapping entry point group names to either strings or lists of strings containing entry point specifiers. An entry point specifier consists of a name and value, separated by an `=` sign. The value consists of a dotted module name, optionally followed by a `:` and a dotted identifier naming an object within the module. It can also include a bracketed list of "extras" that are required for the entry point to be used. When the invoking application or framework requests loading of an entry point, any requirements implied by the associated extras will be passed to `pkg_resources.require()`, so that an appropriate error message can be displayed if the needed package(s) are missing. (Of course, the invoking app or framework can ignore such errors if it wants to make an entry point optional if a requirement isn't installed.)

Defining Additional Metadata

Some extensible applications and frameworks may need to define their own kinds of metadata to include in eggs, which they can then access using the `pkg_resources` metadata APIs. Ordinarily, this is done by having plugin developers include additional files in their `ProjectName.egg-info` directory. However, since it can be tedious to create such files by hand, you may want to create a `distutils` extension that will create the necessary files from arguments to `setup()`, in much the same way that `setuptools` does for many of the `setup()` arguments it adds. See the section below on `Creating distutils Extensions` for more details, especially the subsection on `Adding new EGG-INFO Files`.

"Development Mode"

=====

Under normal circumstances, the `distutils` assume that you are going to

build a distribution of your project, not use it in its "raw" or "unbuilt" form. If you were to use the ``distutils`` that way, you would have to rebuild and reinstall your project every time you made a change to it during development.

Another problem that sometimes comes up with the ``distutils`` is that you may need to do development on two related projects at the same time. You may need to put both projects' packages in the same directory to run them, but need to keep them separate for revision control purposes. How can you do this?

Setuptools allows you to deploy your projects for use in a common directory or staging area, but without copying any files. Thus, you can edit each project's code in its checkout directory, and only need to run build commands when you change a project's C extensions or similarly compiled files. You can even deploy a project into another project's checkout directory, if that's your preferred way of working (as opposed to using a common independent staging area or the site-packages directory).

To do this, use the ``setup.py develop`` command. It works very similarly to ``setup.py install`` or the EasyInstall tool, except that it doesn't actually install anything. Instead, it creates a special ``.egg-link`` file in the deployment directory, that links to your project's source code. And, if your deployment directory is Python's ``site-packages`` directory, it will also update the ``easy-install.pth`` file to include your project's source code, thereby making it available on ``sys.path`` for all programs using that Python installation.

If you have enabled the ``use_2to3`` flag, then of course the ``.egg-link`` will not link directly to your source code when run under Python 3, since that source code would be made for Python 2 and not work under Python 3. Instead the ``setup.py develop`` will build Python 3 code under the ``build`` directory, and link there. This means that after doing code changes you will have to run ``setup.py build`` before these changes are picked up by your Python 3 installation.

In addition, the ``develop`` command creates wrapper scripts in the target script directory that will run your in-development scripts after ensuring that all your ``install_requires`` packages are available on ``sys.path``.

You can deploy the same project to multiple staging areas, e.g. if you have multiple projects on the same machine that are sharing the same project you're doing development work.

When you're done with a given development task, you can remove the project source from a staging area using ``setup.py develop --uninstall``, specifying the desired staging area if it's not the default.

There are several options to control the precise behavior of the ``develop``

command; see the section on the ``develop`_` command below for more details.

Note that you can also apply `setuptools` commands to non-`setuptools` projects, using commands like this::

```
python -c "import setuptools; execfile('setup.py')" develop
```

That is, you can simply list the normal `setup` commands and options following the quoted part.

Distributing a ``setuptools``-based project

=====

Using ``setuptools``... Without bundling it!

Your users might not have `setuptools` installed on their machines, or even if they do, it might not be the right version. Fixing this is easy; just download `ez_setup.py`_`, and put it in the same directory as your `setup.py`_` script. (Be sure to add it to your revision control system, too.) Then add these two lines to the very top of your `setup` script, before the script imports anything from `setuptools`:

```
.. code-block:: python
```

```
import ez_setup
ez_setup.use_setuptools()
```

That's it. The `ez_setup`_` module will automatically download a matching version of `setuptools`_` from PyPI, if it isn't present on the target system. Whenever you install an updated version of `setuptools`, you should also update your projects' `ez_setup.py`_` files, so that a matching version gets installed on the target machine(s).

By the way, `setuptools` supports the new PyPI "upload" command, so you can use `setup.py sdist upload`_` or `setup.py bdist_egg upload`_` to upload your source or egg distributions respectively. Your project's current version must be registered with PyPI first, of course; you can use `setup.py register`_` to do that. Or you can do it all in one step, e.g. `setup.py register sdist bdist_egg upload`_` will register the package, build source and egg distributions, and then upload them both to PyPI, where they'll be easily found by other projects that depend on them.

(By the way, if you need to distribute a specific version of `setuptools`_`, you can specify the exact version and base download URL as parameters to the `use_setuptools()`_` function. See the function's docstring for details.)

What Your Users Should Know

In general, a `setuptools`-based project looks just like any `distutils`-based project -- as long as your users have an internet connection and are installing to `site-packages`, that is. But for some users, these conditions don't apply, and they may become frustrated if this is their first encounter with a `setuptools`-based project. To keep these users happy, you should review the following topics in your project's installation instructions, if they are relevant to your project and your target audience isn't already familiar with `setuptools` and `easy_install`.

Network Access

If your project is using `ez_setup`, you should inform users of the need to either have network access, or to preinstall the correct version of `setuptools` using the `EasyInstall installation instructions`. Those instructions also have tips for dealing with firewalls as well as how to manually download and install `setuptools`.

Custom Installation Locations

You should inform your users that if they are installing your project to somewhere other than the main `site-packages` directory, they should first install `setuptools` using the instructions for `Custom Installation Locations`, before installing your project.

Your Project's Dependencies

If your project depends on other projects that may need to be downloaded from PyPI or elsewhere, you should list them in your installation instructions, or tell users how to find out what they are. While most users will not need this information, any users who don't have unrestricted internet access may have to find, download, and install the other projects manually. (Note, however, that they must still install those projects using `easy_install`, or your project will not know they are installed, and your setup script will try to download them again.)

If you want to be especially friendly to users with limited network access, you may wish to build eggs for your project and its dependencies, making them all available for download from your site, or at least create a page with links to all of the needed eggs. In this way, users with limited network access can manually download all the eggs to a single directory, then use the `-f` option of `easy_install` to specify the directory to find eggs in. Users who have full network access can just use `-f` with the URL of your download page, and `easy_install` will find all the needed eggs using your links directly. This is also useful when your target audience isn't able to compile packages (e.g. most Windows users) and your package or some of its dependencies include C code.

Revision Control System Users and Co-Developers

Users and co-developers who are tracking your in-development code using a revision control system should probably read this manual's sections regarding such development. Alternately, you may wish to create a quick-reference guide containing the tips from this manual that apply to your particular situation. For example, if you recommend that people use ```setup.py develop``` when tracking your in-development code, you should let them know that this needs to be run after every update or commit.

Similarly, if you remove modules or data files from your project, you should remind them to run ```setup.py clean --all``` and delete any obsolete ```.pyc``` or ```.pyo```. (This tip applies to the distutils in general, not just setuptools, but not everybody knows about them; be kind to your users by spelling out your project's best practices rather than leaving them guessing.)

Creating System Packages

Some users want to manage all Python packages using a single package manager, and sometimes that package manager isn't ```easy_install```! Setuptools currently supports ```bdist_rpm```, ```bdist_wininst```, and ```bdist_dumb``` formats for system packaging. If a user has a locally-installed "bdist" packaging tool that internally uses the distutils ```install``` command, it should be able to work with ```setuptools```. Some examples of "bdist" formats that this should work with include the ```bdist_nsi``` and ```bdist_msi``` formats for Windows.

However, packaging tools that build binary distributions by running ```setup.py install``` on the command line or as a subprocess will require modification to work with setuptools. They should use the ```--single-version-externally-managed``` option to the ```install``` command, combined with the standard ```--root``` or ```--record``` options. See the ```install``` command's documentation below for more details. The ```bdist_deb``` command is an example of a command that currently requires this kind of patching to work with setuptools.

If you or your users have a problem building a usable system package for your project, please report the problem via the mailing list so that either the "bdist" tool in question or setuptools can be modified to resolve the issue.

Setting the ```zip_safe``` flag

For maximum performance, Python packages are best installed as zip files. Not all packages, however, are capable of running in compressed form, because they may expect to be able to access either source code or data files as normal operating system files. So, ```setuptools``` can install your project

as a zipfile or a directory, and its default choice is determined by the project's `zip_safe` flag.

You can pass a True or False value for the `zip_safe` argument to the `setup()` function, or you can omit it. If you omit it, the `bdist_egg` command will analyze your project's contents to see if it can detect any conditions that would prevent it from working in a zipfile. It will output notices to the console about any such conditions that it finds.

Currently, this analysis is extremely conservative: it will consider the project unsafe if it contains any C extensions or datafiles whatsoever. This does *not* mean that the project can't or won't work as a zipfile! It just means that the `bdist_egg` authors aren't yet comfortable asserting that the project *will* work. If the project contains no C or data files, and does no `__file__` or `__path__` introspection or source code manipulation, then there is an extremely solid chance the project will work when installed as a zipfile. (And if the project uses `pkg_resources` for all its data file access, then C extensions and other data files shouldn't be a problem at all. See the `Accessing Data Files at Runtime` section above for more information.)

However, if `bdist_egg` can't be *sure* that your package will work, but you've checked over all the warnings it issued, and you are either satisfied it *will* work (or if you want to try it for yourself), then you should set `zip_safe` to `True` in your `setup()` call. If it turns out that it doesn't work, you can always change it to `False`, which will force `setuptools` to install your project as a directory rather than as a zipfile.

Of course, the end-user can still override either decision, if they are using EasyInstall to install your package. And, if you want to override for testing purposes, you can just run `setup.py easy_install --zip-ok .` or `setup.py easy_install --always-unzip .` in your project directory. to install the package as a zipfile or directory, respectively.

In the future, as we gain more experience with different packages and become more satisfied with the robustness of the `pkg_resources` runtime, the "zip safety" analysis may become less conservative. However, we strongly recommend that you determine for yourself whether your project functions correctly when installed as a zipfile, correct any problems if you can, and then make an explicit declaration of `True` or `False` for the `zip_safe` flag, so that it will not be necessary for `bdist_egg` or `EasyInstall` to try to guess whether your project can work as a zipfile.

Namespace Packages

Sometimes, a large package is more useful if distributed as a collection of smaller eggs. However, Python does not normally allow the contents of a

package to be retrieved from more than one location. "Namespace packages" are a solution for this problem. When you declare a package to be a namespace package, it means that the package has no meaningful contents in its `__init__.py`, and that it is merely a container for modules and subpackages.

The `pkg_resources` runtime will then automatically ensure that the contents of namespace packages that are spread over multiple eggs or directories are combined into a single "virtual" package.

The `namespace_packages` argument to `setup()` lets you declare your project's namespace packages, so that they will be included in your project's metadata. The argument should list the namespace packages that the egg participates in. For example, the ZopeInterface project might do this::

```
setup(
    # ...
    namespace_packages = ['zope']
)
```

because it contains a `zope.interface` package that lives in the `zope` namespace package. Similarly, a project for a standalone `zope.publisher` would also declare the `zope` namespace package. When these projects are installed and used, Python will see them both as part of a "virtual" `zope` package, even though they will be installed in different locations.

Namespace packages don't have to be top-level packages. For example, Zope 3's `zope.app` package is a namespace package, and in the future PEAK's `peak.util` package will be too.

Note, by the way, that your project's source tree must include the namespace packages' `__init__.py` files (and the `__init__.py` of any parent packages), in a normal Python package layout. These `__init__.py` files *must* contain the line::

```
__import__('pkg_resources').declare_namespace(__name__)
```

This code ensures that the namespace package machinery is operating and that the current package is registered as a namespace package.

You must NOT include any other code and data in a namespace package's `__init__.py`. Even though it may appear to work during development, or when projects are installed as `.egg` files, it will not work when the projects are installed using "system" packaging tools -- in such cases the `__init__.py` files will not be installed, let alone executed.

You must include the `declare_namespace()` line in the `__init__.py` of *every* project that has contents for the namespace package in question, in order to ensure that the namespace will be declared regardless of which

project's copy of `__init__.py` is loaded first. If the first loaded `__init__.py` doesn't declare it, it will never *be* declared, because no other copies will ever be loaded!

TRANSITIONAL NOTE

~~~~~

Setuptools automatically calls `declare_namespace()` for you at runtime, but future versions may *not*. This is because the automatic declaration feature has some negative side effects, such as needing to import all namespace packages during the initialization of the `pkg_resources` runtime, and also the need for `pkg_resources` to be explicitly imported before any namespace packages work at all. In some future releases, you'll be responsible for including your own declaration lines, and the automatic declaration feature will be dropped to get rid of the negative side effects.

During the remainder of the current development cycle, therefore, setuptools will warn you about missing `declare_namespace()` calls in your `__init__.py` files, and you should correct these as soon as possible before the compatibility support is removed.

Namespace packages without declaration lines will not work correctly once a user has upgraded to a later version, so it's important that you make this change now in order to avoid having your code break in the field. Our apologies for the inconvenience, and thank you for your patience.

## Tagging and "Daily Build" or "Snapshot" Releases

-----

When a set of related projects are under development, it may be important to track finer-grained version increments than you would normally use for e.g. "stable" releases. While stable releases might be measured in dotted numbers with alpha/beta/etc. status codes, development versions of a project often need to be tracked by revision or build number or even build date. This is especially true when projects in development need to refer to one another, and therefore may literally need an up-to-the-minute version of something!

To support these scenarios, `setuptools` allows you to "tag" your source and egg distributions by adding one or more of the following to the project's "official" version identifier:

- \* A manually-specified pre-release tag, such as "build" or "dev", or a manually-specified post-release tag, such as a build or revision number (`--tag-build=STRING, -bSTRING`)

- \* A "last-modified revision number" string generated automatically from

Subversion's metadata (assuming your project is being built from a Subversion "working copy") (`--tag-svn-revision, -r`)

\* An 8-character representation of the build date (`--tag-date, -d`), as a postrelease tag

You can add these tags by adding `egg_info` and the desired options to the command line ahead of the `sdist` or `bdist` commands that you want to generate a daily build or snapshot for. See the section below on the `egg_info` command for more details.

(Also, before you release your project, be sure to see the section above on `Specifying Your Project's Version` for more information about how pre- and post-release tags affect how `setuptools` and `EasyInstall` interpret version numbers. This is important in order to make sure that dependency processing tools will know which versions of your project are newer than others.)

Finally, if you are creating builds frequently, and either building them in a downloadable location or are copying them to a distribution server, you should probably also check out the `rotate` command, which lets you automatically delete all but the `N` most-recently-modified distributions matching a glob pattern. So, you can use a command line like::

```
setup.py egg_info -rbDEV bdist_egg rotate -m.egg -k3
```

to build an egg whose version info includes 'DEV-rNNNN' (where NNNN is the most recent Subversion revision that affected the source tree), and then delete any egg files from the distribution directory except for the three that were built most recently.

If you have to manage automated builds for multiple packages, each with different tagging and rotation policies, you may also want to check out the `alias` command, which would let each package define an alias like `daily` that would perform the necessary tag, build, and rotate commands. Then, a simpler script or cron job could just run `setup.py daily` in each project directory. (And, you could also define sitewide or per-user default versions of the `daily` alias, so that projects that didn't define their own would use the appropriate defaults.)

## Generating Source Distributions

`setuptools` enhances the `distutils`' default algorithm for source file selection with pluggable endpoints for looking up files to include. If you are using a revision control system, and your source distributions only need to include files that you're tracking in revision control, use a corresponding plugin instead of writing a `MANIFEST.in` file. See the section below on

`Adding Support for Revision Control Systems`\_ for information on plugins.

If you need to include automatically generated files, or files that are kept in an unsupported revision control system, you'll need to create a ``MANIFEST.in`` file to specify any files that the default file location algorithm doesn't catch. See the distutils documentation for more information on the format of the ``MANIFEST.in`` file.

But, be sure to ignore any part of the distutils documentation that deals with ``MANIFEST`` or how it's generated from ``MANIFEST.in``; setuptools shields you from these issues and doesn't work the same way in any case. Unlike the distutils, setuptools regenerates the source distribution manifest file every time you build a source distribution, and it builds it inside the project's ``.egg-info`` directory, out of the way of your main project directory. You therefore need not worry about whether it is up-to-date or not.

Indeed, because setuptools' approach to determining the contents of a source distribution is so much simpler, its ``sdist`` command omits nearly all of the options that the distutils' more complex ``sdist`` process requires. For all practical purposes, you'll probably use only the ``--formats`` option, if you use any option at all.

#### Making your package available for EasyInstall

-----

If you use the ``register`` command (`setup.py register`) to register your package with PyPI, that's most of the battle right there. (See the `docs` for the register command`\_ for more details.)

.. \_docs for the register command: <http://docs.python.org/dist/package-index.html>

If you also use the `upload`_` command to upload actual distributions of your package, that's even better, because EasyInstall will be able to find and download them directly from your project's PyPI page.

However, there may be reasons why you don't want to upload distributions to PyPI, and just want your existing distributions (or perhaps a Subversion checkout) to be used instead.

So here's what you need to do before running the ``register`` command. There are three `setup()` arguments that affect EasyInstall:

`url`` and download_url```

These become links on your project's PyPI page. EasyInstall will examine them to see if they link to a package ("primary links"), or whether they are HTML pages. If they're HTML pages, EasyInstall scans all HREF's on the page for primary links

```long_description```

EasyInstall will check any URLs contained in this argument to see if they are primary links.

A URL is considered a "primary link" if it is a link to a .tar.gz, .tgz, .zip, .egg, .egg.zip, .tar.bz2, or .exe file, or if it has an ```#egg=project``` or ```#egg=project-version``` fragment identifier attached to it. EasyInstall attempts to determine a project name and optional version number from the text of a primary link \*without\* downloading it. When it has found all the primary links, EasyInstall will select the best match based on requested version, platform compatibility, and other criteria.

So, if your ```url``` or ```download_url``` point either directly to a downloadable source distribution, or to HTML page(s) that have direct links to such, then EasyInstall will be able to locate downloads automatically. If you want to make Subversion checkouts available, then you should create links with either ```#egg=project``` or ```#egg=project-version``` added to the URL. You should replace ```project``` and ```version``` with the values they would have in an egg filename. (Be sure to actually generate an egg and then use the initial part of the filename, rather than trying to guess what the escaped form of the project name and version number will be.)

Note that Subversion checkout links are of lower precedence than other kinds of distributions, so EasyInstall will not select a Subversion checkout for downloading unless it has a version included in the ```#egg=``` suffix, and it's a higher version than EasyInstall has seen in any other links for your project.

As a result, it's a common practice to use mark checkout URLs with a version of "dev" (i.e., ```#egg=projectname-dev```), so that users can do something like this::

```
easy_install --editable projectname==dev
```

in order to check out the in-development version of ```projectname```.

## Managing "Continuous Releases" Using Subversion

-----

If you expect your users to track in-development versions of your project via Subversion, there are a few additional steps you should take to ensure that things work smoothly with EasyInstall. First, you should add the following to your project's ```setup.cfg``` file:

```
.. code-block:: ini
```

```
[egg_info]
tag_build = .dev
tag_svn_revision = 1
```

This will tell `setuptools` to generate package version numbers like `1.0a1.dev-r1263`, which will be considered to be an *older* release than `1.0a1`. Thus, when you actually release `1.0a1`, the entire egg infrastructure (including `setuptools`, `pkg_resources` and `EasyInstall`) will know that `1.0a1` supersedes any interim snapshots from Subversion, and handle upgrades accordingly.

(Note: the project version number you specify in `setup.py` should always be the *next* version of your software, not the last released version.

Alternately, you can leave out the `tag_build=.dev`, and always use the *last* release as a version number, so that your post-1.0 builds are labelled `1.0-r1263`, indicating a post-1.0 patchlevel. Most projects so far, however, seem to prefer to think of their project as being a future version still under development, rather than a past version being patched. It is of course possible for a single project to have both situations, using post-release numbering on release branches, and pre-release numbering on the trunk. But you don't have to make things this complex if you don't want to.)

Commonly, projects releasing code from Subversion will include a PyPI link to their checkout URL (as described in the previous section) with an `#egg=projectname-dev` suffix. This allows users to request `EasyInstall` to download `projectname==dev` in order to get the latest in-development code. Note that if your project depends on such in-progress code, you may wish to specify your `install_requires` (or other requirements) to include `==dev`, e.g.:

```
.. code-block:: python
```

```
install_requires = ["OtherProject>=0.2a1.dev-r143,==dev"]
```

The above example says, "I really want at least this particular development revision number, but feel free to follow and use an `#egg=OtherProject-dev` link if you find one". This avoids the need to have actual source or binary distribution snapshots of in-development code available, just to be able to depend on the latest and greatest a project has to offer.

A final note for Subversion development: if you are using SVN revision tags as described in this section, it's a good idea to run `setup.py develop` after each Subversion checkin or update, because your project's version number will be changing, and your script wrappers need to be updated accordingly.

Also, if the project's requirements have changed, the `develop` command will take care of fetching the updated dependencies, building changed extensions, etc. Be sure to also remind any of your users who check out your project

from Subversion that they need to run ```setup.py develop``` after every update in order to keep their checkout completely in sync.

## Making "Official" (Non-Snapshot) Releases

~~~~~

When you make an official release, creating source or binary distributions, you will need to override the tag settings from ```setup.cfg```, so that you don't end up registering versions like ```foobar-0.7a1.dev-r34832```. This is easy to do if you are developing on the trunk and using tags or branches for your releases - just make the change to ```setup.cfg``` after branching or tagging the release, so the trunk will still produce development snapshots.

Alternately, if you are not branching for releases, you can override the default version options on the command line, using something like::

```
python setup.py egg_info -RDb "" sdist bdist_egg register upload
```

The first part of this command (```egg_info -RDb ""```) will override the configured tag information, before creating source and binary eggs, registering the project with PyPI, and uploading the files. Thus, these commands will use the plain version from your ```setup.py```, without adding the Subversion revision number or build designation string.

Of course, if you will be doing this a lot, you may wish to create a personal alias for this operation, e.g.::

```
python setup.py alias -u release egg_info -RDb ""
```

You can then use it like this::

```
python setup.py release sdist bdist_egg register upload
```

Or of course you can create more elaborate aliases that do all of the above. See the sections below on the ```egg_info``` and ```alias``` commands for more ideas.

Distributing Extensions compiled with Pyrex

```setuptools``` includes transparent support for building Pyrex extensions, as long as you define your extensions using ```setuptools.Extension```, *\*not\** ```distutils.Extension```. You must also not import anything from Pyrex in your setup script.

If you follow these rules, you can safely list ```.pyx``` files as the source

of your ``Extension`` objects in the setup script. ``setuptools`` will detect at build time whether Pyrex is installed or not. If it is, then ``setuptools`` will use it. If not, then ``setuptools`` will silently change the ``Extension`` objects to refer to the ``.c`` counterparts of the ``.pyx`` files, so that the normal distutils C compilation process will occur.

Of course, for this to work, your source distributions must include the C code generated by Pyrex, as well as your original ``.pyx`` files. This means that you will probably want to include current ``.c`` files in your revision control system, rebuilding them whenever you check changes in for the ``.pyx`` source files. This will ensure that people tracking your project in a revision control system will be able to build it even if they don't have Pyrex installed, and that your source releases will be similarly usable with or without Pyrex.

-----  
Command Reference  
-----

.. \_alias:

``alias`` - Define shortcuts for commonly used commands

=====  
Sometimes, you need to use the same commands over and over, but you can't necessarily set them as defaults. For example, if you produce both development snapshot releases and "stable" releases of a project, you may want to put the distributions in different places, or use different ``egg\_info`` tagging options, etc. In these cases, it doesn't make sense to set the options in a distutils configuration file, because the values of the options changed based on what you're trying to do.

Setuptools therefore allows you to define "aliases" - shortcut names for an arbitrary string of commands and options, using ``setup.py alias aliasname expansion``, where aliasname is the name of the new alias, and the remainder of the command line supplies its expansion. For example, this command defines a sitewide alias called "daily", that sets various ``egg\_info`` tagging options::

```
setup.py alias --global-config daily egg_info --tag-svn-revision \
--tag-build=development
```

Once the alias is defined, it can then be used with other setup commands, e.g.::

```
setup.py daily bdist_egg # generate a daily-build .egg file
setup.py daily sdist # generate a daily-build source distro
```

```
setup.py daily sdist bdist_egg # generate both
```

The above commands are interpreted as if the word ``daily`` were replaced with ``egg\_info --tag-svn-revision --tag-build=development``.

Note that `setuptools` will expand each alias \*at most once\* in a given command line. This serves two purposes. First, if you accidentally create an alias loop, it will have no effect; you'll instead get an error message about an unknown command. Second, it allows you to define an alias for a command, that uses that command. For example, this (project-local) alias::

```
setup.py alias bdist_egg bdist_egg rotate -k1 -m.egg
```

redefines the ``bdist\_egg`` command so that it always runs the ``rotate`` command afterwards to delete all but the newest egg file. It doesn't loop indefinitely on ``bdist\_egg`` because the alias is only expanded once when used.

You can remove a defined alias with the ``--remove`` (or ``-r``) option, e.g.::

```
setup.py alias --global-config --remove daily
```

would delete the "daily" alias we defined above.

Aliases can be defined on a project-specific, per-user, or sitewide basis. The default is to define or remove a project-specific alias, but you can use any of the `configuration file options`_` (listed under the saveopts`_` command, below) to determine which distutils configuration file an aliases will be added to (or removed from).`

Note that if you omit the "expansion" argument to the ``alias`` command, you'll get output showing that alias' current definition (and what configuration file it's defined in). If you omit the alias name as well, you'll get a listing of all current aliases along with their configuration file locations.

```
``bdist_egg`` - Create a Python Egg for the project
```

```
=====
```

This command generates a Python Egg (``.egg`` file) for the project. Python Eggs are the preferred binary distribution format for EasyInstall, because they are cross-platform (for "pure" packages), directly importable, and contain project metadata including scripts and information about the project's dependencies. They can be simply downloaded and added to ``sys.path`` directly, or they can be placed in a directory on ``sys.path`` and then automatically discovered by the egg runtime system.



This command runs the `egg_info` command (if it hasn't already run) to update the project's metadata (`egg-info`) directory. If you have added any extra metadata files to the `egg-info` directory, those files will be included in the new egg file's metadata directory, for use by the egg runtime system or by any applications or frameworks that use that metadata.

You won't usually need to specify any special options for this command; just use `bdist_egg` and you're done. But there are a few options that may be occasionally useful:

`--dist-dir=DIR, -d DIR`

Set the directory where the `egg` file will be placed. If you don't supply this, then the `--dist-dir` setting of the `bdist` command will be used, which is usually a directory named `dist` in the project directory.

`--plat-name=PLATFORM, -p PLATFORM`

Set the platform name string that will be embedded in the egg's filename (assuming the egg contains C extensions). This can be used to override the distutils default platform name with something more meaningful. Keep in mind, however, that the egg runtime system expects to see eggs with distutils platform names, so it may ignore or reject eggs with non-standard platform names. Similarly, the EasyInstall program may ignore them when searching web pages for download links. However, if you are cross-compiling or doing some other unusual things, you might find a use for this option.

`--exclude-source-files`

Don't include any modules' `.py` files in the egg, just compiled Python, C, and data files. (Note that this doesn't affect any `.py` files in the EGG-INFO directory or its subdirectories, since for example there may be scripts with a `.py` extension which must still be retained.) We don't recommend that you use this option except for packages that are being bundled for proprietary end-user applications, or for "embedded" scenarios where space is at an absolute premium. On the other hand, if your package is going to be installed and used in compressed form, you might as well exclude the source because Python's `traceback` module doesn't currently understand how to display zipped source code anyway, or how to deal with files that are in a different place from where their code was compiled.

There are also some options you will probably never need, but which are there because they were copied from similar `bdist` commands used as an example for creating this one. They may be useful for testing and debugging, however, which is why we kept them:

`--keep-temp, -k`

Keep the contents of the `--bdist-dir` tree around after creating the `egg` file.

`--bdist-dir=DIR, -b DIR`

Set the temporary directory for creating the distribution. The entire contents of this directory are zipped to create the `.egg` file, after running various installation commands to copy the package's modules, data, and extensions here.

`--skip-build`

Skip doing any "build" commands; just go straight to the install-and-compress phases.

`.. _develop:`

`develop` - Deploy the project source in "Development Mode"

=====

This command allows you to deploy your project's source for use in one or more "staging areas" where it will be available for importing. This deployment is done in such a way that changes to the project source are immediately available in the staging area(s), without needing to run a build or install step after each change.

The `develop` command works by creating an `.egg-link` file (named for the project) in the given staging area. If the staging area is Python's `site-packages` directory, it also updates an `easy-install.pth` file so that the project is on `sys.path` by default for all programs run using that Python installation.

The `develop` command also installs wrapper scripts in the staging area (or a separate directory, as specified) that will ensure the project's dependencies are available on `sys.path` before running the project's source scripts. And, it ensures that any missing project dependencies are available in the staging area, by downloading and installing them if necessary.

Last, but not least, the `develop` command invokes the `build_ext -i` command to ensure any C extensions in the project have been built and are up-to-date, and the `egg_info` command to ensure the project's metadata is updated (so that the runtime and wrappers know what the project's dependencies are). If you make any changes to the project's setup script or C extensions, you should rerun the `develop` command against all relevant staging areas to keep the project's scripts, metadata and extensions up-to-date. Most other kinds of changes to your project should not require any build operations or rerunning `develop`, but keep in mind that even minor changes to the setup script (e.g. changing an entry point definition) require you to re-run the `develop` or `test` commands to keep the distribution updated.

Here are some of the options that the `develop` command accepts. Note that

they affect the project's dependencies as well as the project itself, so if you have dependencies that need to be installed and you use `--exclude-scripts` (for example), the dependencies' scripts will not be installed either! For this reason, you may want to use EasyInstall to install the project's dependencies before using the `develop` command, if you need finer control over the installation options for dependencies.

`--uninstall, -u`

Un-deploy the current project. You may use the `--install-dir` or `-d` option to designate the staging area. The created `.egg-link` file will be removed, if present and it is still pointing to the project directory. The project directory will be removed from `easy-install.pth` if the staging area is Python's `site-packages` directory.

Note that this option currently does *not* uninstall script wrappers! You must uninstall them yourself, or overwrite them by using EasyInstall to activate a different version of the package. You can also avoid installing script wrappers in the first place, if you use the `--exclude-scripts` (aka `-x`) option when you run `develop` to deploy the project.

`--multi-version, -m`

"Multi-version" mode. Specifying this option prevents `develop` from adding an `easy-install.pth` entry for the project(s) being deployed, and if an entry for any version of a project already exists, the entry will be removed upon successful deployment. In multi-version mode, no specific version of the package is available for importing, unless you use `pkg_resources.require()` to put it on `sys.path`, or you are running a wrapper script generated by `setuptools` or EasyInstall. (In which case the wrapper script calls `require()` for you.)

Note that if you install to a directory other than `site-packages`, this option is automatically in effect, because `.pth` files can only be used in `site-packages` (at least in Python 2.3 and 2.4). So, if you use the `--install-dir` or `-d` option (or they are set via configuration file(s)) your project and its dependencies will be deployed in multi-version mode.

`--install-dir=DIR, -d DIR`

Set the installation directory (staging area). If this option is not directly specified on the command line or in a distutils configuration file, the distutils default installation location is used. Normally, this will be the `site-packages` directory, but if you are using distutils configuration files, setting things like `prefix` or `install_lib`, then those settings are taken into account when computing the default staging area.

`--script-dir=DIR, -s DIR`

Set the script installation directory. If you don't supply this option

(via the command line or a configuration file), but you *have* supplied an `--install-dir` (via command line or config file), then this option defaults to the same directory, so that the scripts will be able to find their associated package installation. Otherwise, this setting defaults to the location where the distutils would normally install scripts, taking any distutils configuration file settings into account.

`--exclude-scripts, -x`

Don't deploy script wrappers. This is useful if you don't want to disturb existing versions of the scripts in the staging area.

`--always-copy, -a`

Copy all needed distributions to the staging area, even if they are already present in another directory on `sys.path`. By default, if a requirement can be met using a distribution that is already available in a directory on `sys.path`, it will not be copied to the staging area.

`--egg-path=DIR`

Force the generated `.egg-link` file to use a specified relative path to the source directory. This can be useful in circumstances where your installation directory is being shared by code running under multiple platforms (e.g. Mac and Windows) which have different absolute locations for the code under development, but the same *relative* locations with respect to the installation directory. If you use this option when installing, you must supply the same relative path when uninstalling.

In addition to the above options, the `develop` command also accepts all of the same options accepted by `easy_install`. If you've configured any `easy_install` settings in your `setup.cfg` (or other distutils config files), the `develop` command will use them as defaults, unless you override them in a `[develop]` section or on the command line.

`easy_install` - Find and install packages

=====

This command runs the `EasyInstall` tool `<easy_install.html>` for you. It is exactly equivalent to running the `easy_install` command. All command line arguments following this command are consumed and not processed further by the distutils, so this must be the last command listed on the command line. Please see the `EasyInstall` documentation for the options reference and usage examples. Normally, there is no reason to use this command via the command line, as you can just use `easy_install` directly. It's only listed here so that you know it's a distutils command, which means that you can:

- \* create command aliases that use it,
- \* create distutils extensions that invoke it as a subcommand, and

\* configure options for it in your ``setup.cfg`` or other distutils config files.

.. \_egg\_info:

``egg\_info`` - Create egg metadata and set build tags

=====

This command performs two operations: it updates a project's ``.egg-info`` metadata directory (used by the ``bdist\_egg``, ``develop``, and ``test`` commands), and it allows you to temporarily change a project's version string, to support "daily builds" or "snapshot" releases. It is run automatically by the ``sdist``, ``bdist\_egg``, ``develop``, ``register``, and ``test`` commands in order to update the project's metadata, but you can also specify it explicitly in order to temporarily change the project's version string while executing other commands. (It also generates the ``.egg-info/SOURCES.txt`` manifest file, which is used when you are building source distributions.)

In addition to writing the core egg metadata defined by ``setuptools`` and required by ``pkg\_resources``, this command can be extended to write other metadata files as well, by defining entry points in the ``egg\_info.writers`` group. See the section on `Adding new EGG-INFO Files`\_ below for more details. Note that using additional metadata writers may require you to include a ``setup\_requires`` argument to ``setup()`` in order to ensure that the desired writers are available on ``sys.path``.

### Release Tagging Options

-----

The following options can be used to modify the project's version string for all remaining commands on the setup command line. The options are processed in the order shown, so if you use more than one, the requested tags will be added in the following order:

``--tag-build=NAME, -b NAME``

Append NAME to the project's version string. Due to the way setuptools processes "pre-release" version suffixes beginning with the letters "a" through "e" (like "alpha", "beta", and "candidate"), you will usually want to use a tag like ".build" or ".dev", as this will cause the version number to be considered \*lower\* than the project's default version. (If you want to make the version number \*higher\* than the default version, you can always leave off --tag-build and then use one or both of the following options.)

If you have a default build tag set in your ``setup.cfg``, you can suppress it on the command line using ``-b ""`` or ``--tag-build=""`` as an argument

to the `egg_info` command.

`--tag-svn-revision, -r`

If the current directory is a Subversion checkout (i.e. has a `.svn` subdirectory, this appends a string of the form `"-rNNNN"` to the project's version string, where NNNN is the revision number of the most recent modification to the current directory, as obtained from the `svn info` command.

If the current directory is not a Subversion checkout, the command will look for a `PKG-INFO` file instead, and try to find the revision number from that, by looking for a `"-rNNNN"` string at the end of the version number. (This is so that building a package from a source distribution of a Subversion snapshot will produce a binary with the correct version number.)

If there is no `PKG-INFO` file, or the version number contained therein does not end with `-r` and a number, then `-r0` is used.

`--no-svn-revision, -R`

Don't include the Subversion revision in the version number. This option is included so you can override a default setting put in `setup.cfg`.

`--tag-date, -d`

Add a date stamp of the form `"-YYYYMMDD"` (e.g. `"-20050528"`) to the project's version number.

`--no-date, -D`

Don't include a date stamp in the version number. This option is included so you can override a default setting in `setup.cfg`.

(Note: Because these options modify the version number used for source and binary distributions of your project, you should first make sure that you know how the resulting version numbers will be interpreted by automated tools like EasyInstall. See the section above on `Specifying Your Project's Version` for an explanation of pre- and post-release tags, as well as tips on how to choose and verify a versioning scheme for your project.)

For advanced uses, there is one other option that can be set, to change the location of the project's `egg-info` directory. Commands that need to find the project's source directory or metadata should get it from this setting:

Other `egg_info` Options

-----

`--egg-base=SOURCEDIR, -e SOURCEDIR`

Specify the directory that should contain the .egg-info directory. This should normally be the root of your project's source tree (which is not necessarily the same as your project directory; some projects use a ``src`` or ``lib`` subdirectory as the source root). You should not normally need to specify this directory, as it is normally determined from the ``package\_dir`` argument to the ``setup()`` function, if any. If there is no ``package\_dir`` set, this option defaults to the current directory.

#### ``egg\_info`` Examples

-----

Creating a dated "nightly build" snapshot egg::

```
python setup.py egg_info --tag-date --tag-build=DEV bdist_egg
```

Creating and uploading a release with no version tags, even if some default tags are specified in ``setup.cfg``::

```
python setup.py egg_info -RDb "" sdist bdist_egg register upload
```

(Notice that ``egg\_info`` must always appear on the command line *before* any commands that you want the version changes to apply to.)

.. \_install command:

``install`` - Run ``easy\_install`` or old-style installation

=====

The setuptools ``install`` command is basically a shortcut to run the ``easy\_install`` command on the current project. However, for convenience in creating "system packages" of setuptools-based projects, you can also use this option:

``--single-version-externally-managed``

This boolean option tells the ``install`` command to perform an "old style" installation, with the addition of an ``.egg-info`` directory so that the installed project will still have its metadata available and operate normally. If you use this option, you *must* also specify the ``--root`` or ``--record`` options (or both), because otherwise you will have no way to identify and remove the installed files.

This option is automatically in effect when ``install`` is invoked by another distutils command, so that commands like ``bdist\_wininst`` and ``bdist\_rpm`` will create system packages of eggs. It is also automatically in effect if you specify the ``--root`` option.

```install_egg_info``` - Install an ```.egg-info``` directory in ```site-packages```

Setuptools runs this command as part of ```install``` operations that use the ```--single-version-externally-managed``` options. You should not invoke it directly; it is documented here for completeness and so that distutils extensions such as system package builders can make use of it. This command has only one option:

```--install-dir=DIR, -d DIR```

The parent directory where the ```.egg-info``` directory will be placed. Defaults to the same as the ```--install-dir``` option specified for the ```install_lib``` command, which is usually the system ```site-packages``` directory.

This command assumes that the ```egg_info``` command has been given valid options via the command line or ```setup.cfg```, as it will invoke the ```egg_info``` command and use its options to locate the project's source ```.egg-info``` directory.

.. `_rotate`:

```rotate``` - Delete outdated distribution files

As you develop new versions of your project, your distribution (```dist```) directory will gradually fill up with older source and/or binary distribution files. The ```rotate``` command lets you automatically clean these up, keeping only the N most-recently modified files matching a given pattern.

```--match=PATTERNLIST, -m PATTERNLIST```

Comma-separated list of glob patterns to match. This option is *\*required\**. The project name and ```-*``` is prepended to the supplied patterns, in order to match only distributions belonging to the current project (in case you have a shared distribution directory for multiple projects). Typically, you will use a glob pattern like ```.zip``` or ```.egg``` to match files of the specified type. Note that each supplied pattern is treated as a distinct group of files for purposes of selecting files to delete.

```--keep=COUNT, -k COUNT```

Number of matching distributions to keep. For each group of files identified by a pattern specified with the ```--match``` option, delete all but the COUNT most-recently-modified files in that group. This option is **required**.

```--dist-dir=DIR, -d DIR```



Directory where the distributions are. This defaults to the value of the ``bdist`` command's ``--dist-dir`` option, which will usually be the project's ``dist`` subdirectory.

**Example 1**: Delete all .tar.gz files from the distribution directory, except for the 3 most recently modified ones::

```
setup.py rotate --match=.tar.gz --keep=3
```

**Example 2**: Delete all Python 2.3 or Python 2.4 eggs from the distribution directory, except the most recently modified one for each Python version::

```
setup.py rotate --match=-py2.3*.egg,-py2.4*.egg --keep=1
```

.. \_saveopts:

``saveopts`` - Save used options to a configuration file

=====

Finding and editing ``distutils`` configuration files can be a pain, especially since you also have to translate the configuration options from command-line form to the proper configuration file format. You can avoid these hassles by using the ``saveopts`` command. Just add it to the command line to save the options you used. For example, this command builds the project using the ``mingw32`` C compiler, then saves the ``--compiler`` setting as the default for future builds (even those run implicitly by the ``install`` command)::

```
setup.py build --compiler=mingw32 saveopts
```

The ``saveopts`` command saves all options for every command specified on the command line to the project's local ``setup.cfg`` file, unless you use one of the ``configuration file options``\_ to change where the options are saved. For example, this command does the same as above, but saves the compiler setting to the site-wide (global) distutils configuration::

```
setup.py build --compiler=mingw32 saveopts -g
```

Note that it doesn't matter where you place the ``saveopts`` command on the command line; it will still save all the options specified for all commands. For example, this is another valid way to spell the last example::

```
setup.py saveopts -g build --compiler=mingw32
```

Note, however, that all of the commands specified are always run, regardless of where ``saveopts`` is placed on the command line.

## Configuration File Options

-----

Normally, settings such as options and aliases are saved to the project's local `setup.cfg` file. But you can override this and save them to the global or per-user configuration files, or to a manually-specified filename.

`--global-config, -g`

Save settings to the global `distutils.cfg` file inside the `distutils` package directory. You must have write access to that directory to use this option. You also can't combine this option with `-u` or `-f`.

`--user-config, -u`

Save settings to the current user's `~/pydistutils.cfg` (POSIX) or `~/HOME/pydistutils.cfg` (Windows) file. You can't combine this option with `-g` or `-f`.

`--filename=FILENAME, -f FILENAME`

Save settings to the specified configuration file to use. You can't combine this option with `-g` or `-u`. Note that if you specify a non-standard filename, the `distutils` and `setuptools` will not use the file's contents. This option is mainly included for use in testing.

These options are used by other `setuptools` commands that modify configuration files, such as the `alias_` and `setopt_` commands.

`.. _setopt:`

`setopt` - Set a distutils or setuptools option in a config file

=====

This command is mainly for use by scripts, but it can also be used as a quick and dirty way to change a distutils configuration option without having to remember what file the options are in and then open an editor.

**Example 1**. Set the default C compiler to `mingw32` (using long option names)::

```
setup.py setopt --command=build --option=compiler --set-value=mingw32
```

**Example 2**. Remove any setting for the distutils default package installation directory (short option names)::

```
setup.py setopt -c install -o install_lib -r
```

Options for the `setopt` command:

`--command=COMMAND, -c COMMAND`

Command to set the option for. This option is required.

`--option=OPTION, -o OPTION`

The name of the option to set. This option is required.

`--set-value=VALUE, -s VALUE`

The value to set the option to. Not needed if `-r` or `--remove` is set.

`--remove, -r`

Remove (unset) the option, instead of setting it.

In addition to the above options, you may use any of the `configuration file options` (listed under the `saveopts` command, above) to determine which distutils configuration file the option will be added to (or removed from).

.. `_test`:

`test` - Build package and run a unittest suite

=====

When doing test-driven development, or running automated builds that need testing before they are deployed for downloading or use, it's often useful to be able to run a project's unit tests without actually deploying the project anywhere, even using the `develop` command. The `test` command runs a project's unit tests without actually deploying it, by temporarily putting the project's source on `sys.path`, after first running `build_ext -i` and `egg_info` to ensure that any C extensions and project metadata are up-to-date.

To use this command, your project's tests must be wrapped in a `unittest` test suite by either a function, a `TestCase` class or method, or a module or package containing `TestCase` classes. If the named suite is a module, and the module has an `additional_tests()` function, it is called and the result (which must be a `unittest.TestSuite`) is added to the tests to be run. If the named suite is a package, any submodules and subpackages are recursively added to the overall test suite. (Note: if your project specifies a `test_loader`, the rules for processing the chosen `test_suite` may differ; see the `test_loader` documentation for more details.)

Note that many test systems including `doctest` support wrapping their non-`unittest` tests in `TestSuite` objects. So, if you are using a test package that does not support this, we suggest you encourage its developers to implement test suite support, as this is a convenient and standard way to

aggregate a collection of tests to be run under a common test harness.

By default, tests will be run in the "verbose" mode of the `unittest` package's text test runner, but you can get the "quiet" mode (just dots) if you supply the `-q` or `--quiet` option, either as a global option to the setup script (e.g. `setup.py -q test`) or as an option for the `test` command itself (e.g. `setup.py test -q`). There is one other option available:

```
--test-suite=NAME, -s NAME
```

Specify the test suite (or module, class, or method) to be run (e.g. `some_module.test_suite`). The default for this option can be set by giving a `test_suite` argument to the `setup()` function, e.g.:

```
setup(
 # ...
 test_suite = "my_package.tests.test_all"
)
```

If you did not set a `test_suite` in your `setup()` call, and do not provide a `--test-suite` option, an error will occur.

.. `_upload`:

`_upload` - Upload source and/or egg distributions to PyPI

=====

The `_upload` command is implemented and documented <<https://docs.python.org/3.1/distutils/uploading.html>> in `distutils`.

Setuptools augments the `_upload` command with support for `keyring` <<https://pypi.python.org/pypi/keyring>>, allowing the password to be stored in a secure location and not in plaintext in the `.pyirc` file. To use `keyring`, first install `keyring` and set the password for the relevant repository, e.g.:

```
python -m keyring set <repository> <username>
Password for '<username>' in '<repository>': *****
```

Then, in `.pyirc`, set the repository configuration as normal, but omit the password. Thereafter, uploads will use the password from the `keyring`.

New in 20.1: Added `keyring` support.

.. \_upload\_docs:

`upload_docs` - Upload package documentation to PyPI

PyPI now supports uploading project documentation to the dedicated URL  
<https://pythonhosted.org/<project>/>.

The `upload_docs` command will create the necessary zip file out of a documentation directory and will post to the repository.

Note that to upload the documentation of a project, the corresponding version must already be registered with PyPI, using the distutils `register` command -- just like the `upload` command.

Assuming there is an `Example` project with documentation in the subdirectory `docs`, e.g.:

```
Example/
|-- example.py
|-- setup.cfg
|-- setup.py
|-- docs
| |-- build
| | `-- html
| | | |-- index.html
| | | `-- tips_tricks.html
| |-- conf.py
| |-- index.txt
| `-- tips_tricks.txt
```

You can simply pass the documentation directory path to the `upload_docs` command:

```
python setup.py upload_docs --upload-dir=docs/build/html
```

If no `--upload-dir` is given, `upload_docs` will attempt to run the `build_sphinx` command to generate uploadable documentation.

For the command to become available, `Sphinx` <<http://sphinx.pocoo.org/>> must be installed in the same environment as distribute.

As with other `setuptools`-based commands, you can define useful defaults in the `setup.cfg` of your Python project, e.g.:

.. code-block:: ini

```
[upload_docs]
upload-dir = docs/build/html
```

The `upload_docs` command has the following options:

`--upload-dir`

The directory to be uploaded to the repository.

`--show-response`

Display the full response text from server; this is useful for debugging PyPI problems.

`--repository=URL, -r URL`

The URL of the repository to upload to. Defaults to <https://pypi.python.org/pypi> (i.e., the main PyPI installation).

---

## Extending and Reusing Setuptools

---

### Creating `distutils` Extensions

---

It can be hard to add new commands or setup arguments to the `distutils`. But the `setuptools` package makes it a bit easier, by allowing you to distribute a `distutils` extension as a separate project, and then have projects that need the extension just refer to it in their `setup_requires` argument.

With `setuptools`, your `distutils` extension projects can hook in new commands and `setup()` arguments just by defining "entry points". These are mappings from command or argument names to a specification of where to import a handler from. (See the section on `Dynamic Discovery of Services and Plugins` above for some more background on entry points.)

### Adding Commands

---

You can add new `setup` commands by defining entry points in the `distutils.commands` group. For example, if you wanted to add a `foo` command, you might add something like this to your `distutils` extension project's setup script::

```
setup(
 # ...
 entry_points = {
 "distutils.commands": [
 "foo = mypackage.some_module:foo",
],
 },
)
```

```
 },
)
```

(Assuming, of course, that the `foo` class in `mypackage.some_module` is a `setuptools.Command` subclass.)

Once a project containing such entry points has been activated on `sys.path`, (e.g. by running "install" or "develop" with a site-packages installation directory) the command(s) will be available to any `setuptools`-based setup scripts. It is not necessary to use the `--command-packages` option or to monkeypatch the `distutils.command` package to install your commands; `setuptools` automatically adds a wrapper to the `distutils` to search for entry points in the active distributions on `sys.path`. In fact, this is how `setuptools`' own commands are installed: the `setuptools` project's setup script defines entry points for them!

#### Adding `setup()` Arguments

-----

Sometimes, your commands may need additional arguments to the `setup()` call. You can enable this by defining entry points in the `distutils.setup_keywords` group. For example, if you wanted a `setup()` argument called `bar_baz`, you might add something like this to your `distutils` extension project's setup script::

```
setup(
 # ...
 entry_points = {
 "distutils.commands": [
 "foo = mypackage.some_module:foo",
],
 "distutils.setup_keywords": [
 "bar_baz = mypackage.some_module:validate_bar_baz",
],
 },
)
```

The idea here is that the entry point defines a function that will be called to validate the `setup()` argument, if it's supplied. The `Distribution` object will have the initial value of the attribute set to `None`, and the validation function will only be called if the `setup()` call sets it to a non-None value. Here's an example validation function::

```
def assert_bool(dist, attr, value):
 """Verify that value is True, False, 0, or 1"""
 if bool(value) != value:
 raise DistutilsSetupError(

```

```
"%r must be a boolean value (got %r)" % (attr,value)
)
```

Your function should accept three arguments: the ```Distribution``` object, the attribute name, and the attribute value. It should raise a ```DistutilsSetupError``` (from the ```distutils.errors``` module) if the argument is invalid. Remember, your function will only be called with non-None values, and the default value of arguments defined this way is always None. So, your commands should always be prepared for the possibility that the attribute will be ```None``` when they access it later.

If more than one active distribution defines an entry point for the same ```setup()``` argument, *\*all\** of them will be called. This allows multiple distutils extensions to define a common argument, as long as they agree on what values of that argument are valid.

Also note that as with commands, it is not necessary to subclass or monkeypatch the distutils ```Distribution``` class in order to add your arguments; it is sufficient to define the entry points in your extension, as long as any setup script using your extension lists your project in its ```setup_requires``` argument.

#### Adding new EGG-INFO Files

-----

Some extensible applications or frameworks may want to allow third parties to develop plugins with application or framework-specific metadata included in the plugins' EGG-INFO directory, for easy access via the ```pkg_resources``` metadata API. The easiest way to allow this is to create a distutils extension to be used from the plugin projects' setup scripts (via ```setup_requires```) that defines a new setup keyword, and then uses that data to write an EGG-INFO file when the ```egg_info``` command is run.

The ```egg_info``` command looks for extension points in an ```egg_info.writers``` group, and calls them to write the files. Here's a simple example of a distutils extension defining a setup argument ```foo_bar```, which is a list of lines that will be written to ```foo_bar.txt``` in the EGG-INFO directory of any project that uses the argument::

```
setup(
 # ...
 entry_points = {
 "distutils.setup_keywords": [
 "foo_bar = setuptools.dist:assert_string_list",
],
 "egg_info.writers": [
 "foo_bar.txt = setuptools.command.egg_info:write_arg",
```



```

],
 },
)

```

This simple example makes use of two utility functions defined by `setuptools` for its own use: a routine to validate that a setup keyword is a sequence of strings, and another one that looks up a setup argument and writes it to a file. Here's what the `writer` utility looks like::

```

def write_arg(cmd, basename, filename):
 argname = os.path.splitext(basename)[0]
 value = getattr(cmd.distribution, argname, None)
 if value is not None:
 value = '\n'.join(value)+'\n'
 cmd.write_or_delete_file(argname, filename, value)

```

As you can see, `egg_info.writers` entry points must be a function taking three arguments: a `egg_info` command instance, the basename of the file to write (e.g. `foo_bar.txt`), and the actual full filename that should be written to.

In general, writer functions should honor the command object's `dry_run` setting when writing files, and use the `distutils.log` object to do any console output. The easiest way to conform to this requirement is to use the `cmd` object's `write_file()`, `delete_file()`, and `write_or_delete_file()` methods exclusively for your file operations. See those methods' docstrings for more details.

## Adding Support for Revision Control Systems

-----

If the files you want to include in the source distribution are tracked using Git, Mercurial or SVN, you can use the following packages to achieve that:

- Git and Mercurial: `setuptools_scm` <[https://pypi.python.org/pypi/setuptools\\_scm](https://pypi.python.org/pypi/setuptools_scm)>`\_
- SVN: `setuptools_svn` <[https://pypi.python.org/pypi/setuptools\\_svn](https://pypi.python.org/pypi/setuptools_svn)>`\_

If you would like to create a plugin for `setuptools` to find files tracked by another revision control system, you can do so by adding an entry point to the `setuptools.file_finders` group. The entry point should be a function accepting a single directory name, and should yield all the filenames within that directory (and any subdirectories thereof) that are under revision control.

For example, if you were going to create a plugin for a revision control system called "foobar", you would write a function something like this:

```
.. code-block:: python
```

```
def find_files_for_foobar(dirname):
 # loop to yield paths that start with `dirname`
```

And you would register it in a setup script using something like this::

```
entry_points = {
 "setuptools.file_finders": [
 "foobar = my_foobar_module:find_files_for_foobar"
]
}
```

Then, anyone who wants to use your plugin can simply install it, and their local setuptools installation will be able to find the necessary files.

It is not necessary to distribute source control plugins with projects that simply use the other source control system, or to specify the plugins in ``setup\_requires``. When you create a source distribution with the ``sdist`` command, setuptools automatically records what files were found in the ``SOURCES.txt`` file. That way, recipients of source distributions don't need to have revision control at all. However, if someone is working on a package by checking out with that system, they will need the same plugin(s) that the original author is using.

A few important points for writing revision control file finders:

- \* Your finder function **MUST** return relative paths, created by appending to the passed-in directory name. Absolute paths are **NOT** allowed, nor are relative paths that reference a parent directory of the passed-in directory.
- \* Your finder function **MUST** accept an empty string as the directory name, meaning the current directory. You **MUST NOT** convert this to a dot; just yield relative paths. So, yielding a subdirectory named ``some/dir`` under the current directory should **NOT** be rendered as ``./some/dir`` or ``~/somewhere/some/dir``, but *always* as simply ``some/dir``
- \* Your finder function **SHOULD NOT** raise any errors, and **SHOULD** deal gracefully with the absence of needed programs (i.e., ones belonging to the revision control system itself. It *may*, however, use ``distutils.log.warn()`` to inform the user of the missing program(s).

Subclassing ``Command``

-----

Sorry, this section isn't written yet, and neither is a lot of what's below this point.

XXX

Reusing ``setuptools`` Code

=====

``ez\_setup``

-----

XXX

``setuptools.archive\_util``

-----

XXX

``setuptools.sandbox``

-----

XXX

``setuptools.package\_index``

-----

XXX

Mailing List and Bug Tracker

=====

Please use the `distutils-sig mailing list`\_ for questions and discussion about setuptools, and the `setuptools bug tracker`\_ ONLY for issues you have confirmed via the list are actual bugs, and which you have reduced to a minimal set of steps to reproduce.

.. \_distutils-sig mailing list: <http://mail.python.org/pipermail/distutils-sig/>

.. \_setuptools bug tracker: <https://github.com/pypa/setuptools/>

Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1095240476\_1601388089.08/0/setuptools-20-7-0-1-tar-gz/setuptools-20.7.0/docs/setuptools.txt

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

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Found in path(s):

- \* /opt/ws\_local/PERMITS\_SQL/1095240476\_1601388089.08/0/setuptools-20-7-0-1-tar-gz/setuptools-20.7.0/pkg\_resources/\_vendor/packaging/\_\_about\_\_.py
- \* /opt/ws\_local/PERMITS\_SQL/1095240476\_1601388089.08/0/setuptools-20-7-0-1-tar-gz/setuptools-20.7.0/pkg\_resources/\_vendor/packaging/requirements.py
- \* /opt/ws\_local/PERMITS\_SQL/1095240476\_1601388089.08/0/setuptools-20-7-0-1-tar-gz/setuptools-20.7.0/pkg\_resources/\_vendor/packaging/markers.py
- \* /opt/ws\_local/PERMITS\_SQL/1095240476\_1601388089.08/0/setuptools-20-7-0-1-tar-gz/setuptools-20.7.0/pkg\_resources/\_vendor/packaging/\_\_init\_\_.py
- \* /opt/ws\_local/PERMITS\_SQL/1095240476\_1601388089.08/0/setuptools-20-7-0-1-tar-gz/setuptools-20.7.0/pkg\_resources/\_vendor/packaging/\_structures.py
- \* /opt/ws\_local/PERMITS\_SQL/1095240476\_1601388089.08/0/setuptools-20-7-0-1-tar-gz/setuptools-20.7.0/pkg\_resources/\_vendor/packaging/\_compat.py
- \* /opt/ws\_local/PERMITS\_SQL/1095240476\_1601388089.08/0/setuptools-20-7-0-1-tar-gz/setuptools-20.7.0/pkg\_resources/\_vendor/packaging/version.py
- \* /opt/ws\_local/PERMITS\_SQL/1095240476\_1601388089.08/0/setuptools-20-7-0-1-tar-gz/setuptools-20.7.0/pkg\_resources/\_vendor/packaging/utils.py
- \* /opt/ws\_local/PERMITS\_SQL/1095240476\_1601388089.08/0/setuptools-20-7-0-1-tar-gz/setuptools-20.7.0/pkg\_resources/\_vendor/packaging/specifiers.py

## 1.24 ssh-import-id 5.5

### 1.24.1 Available under license :

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Version 3, 29 June 2007

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# 1.25 itsdangerous 1.1.0

## 1.25.1 Available under license :

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Classifier: License :: OSI Approved :: BSD License

Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1049628799\_1591314841.03/0/itsdangerous-1-1-0-1-tar-gz/itsdangerous-1.1.0/src/itsdangerous.egg-info/PKG-INFO

\* /opt/ws\_local/PERMITS\_SQL/1049628799\_1591314841.03/0/itsdangerous-1-1-0-1-tar-gz/itsdangerous-1.1.0/PKG-INFO

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----

The initial implementation of itsdangerous was inspired by Django's signing module.

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.. rst-class:: hide-header

itsdangerous

=====

```
.. image:: _static/itsdangerous-logo.png
 :align: center
 :target: https://palletsprojects.com/p/itsdangerous/
```

Sometimes you just want to send some data to untrusted environments. But how to do this safely? The trick involves signing. Given a key only you know, you can cryptographically sign your data and hand it over to someone else. When you get the data back you can easily ensure that nobody tampered with it.

Granted, the receiver can decode the contents and look into the package, but they can not modify the contents unless they also have your secret key. So if you keep the key secret and complex, you will be fine.

Internally itsdangerous uses HMAC and SHA-512 for signing by default. The initial implementation was inspired by `Django's signing module` <<https://docs.djangoproject.com/en/dev/topics/signing/>>`. It also supports JSON Web Signatures (JWS). The library is BSD licensed.

## Installing

-----

Install and update using `pip`\_:

```
.. code-block:: text
```

```
pip install -U itsdangerous
```

```
.. _pip: https://pip.pypa.io/en/stable/quickstart/
```

## Example Use Cases

-----

- You can serialize and sign a user ID in a URL and email it to them to unsubscribe from a newsletter. This way you don't need to generate one-time tokens and store them in the database. Same thing with any kind of activation link for accounts and similar things.
- Signed objects can be stored in cookies or other untrusted sources which means you don't need to have sessions stored on the server, which reduces the number of necessary database queries.
- Signed information can safely do a roundtrip between server and client in general which makes them useful for passing server-side state to a client and then back.

## Table of Contents

-----

.. toctree::

- signer
- serializer
- exceptions
- timed
- url\_safe
- jws
- encoding
- license
- changes

Found in path(s):

```
* /opt/ws_local/PERMITS_SQL/1049628799_1591314841.03/itsdangerous-1-1-0-1-tar-gz/itsdangerous-1.1.0/docs/index.rst
```

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

```
import io
```

```
import re
```

```
from setuptools import find_packages
```

```
from setuptools import setup
```

```
with io.open("README.rst", "rt", encoding="utf8") as f:
```

```
 readme = f.read()
```

```
with io.open("src/itsdangerous/__init__.py", "rt", encoding="utf8") as f:
```

```
 version = re.search(r"__version__ = \"(.*)\"", f.read()).group(1)
```

```
setup(
```

```
 name="itsdangerous",
```

```
 version=version,
```

```
 url="https://palletsprojects.com/p/itsdangerous/",
```

```
 project_urls={
```

```
 "Documentation": "https://itsdangerous.palletsprojects.com/",
```

```
 "Code": "https://github.com/pallets/itsdangerous",
```

```
 "Issue tracker": "https://github.com/pallets/itsdangerous/issues",
```

```
 },
```

```
 license="BSD",
```

```
 author="Armin Ronacher",
```

```
 author_email="armin.ronacher@active-4.com",
```

```
 maintainer="Pallets Team",
```

```
 maintainer_email="contact@palletsprojects.com",
```

```

description="Various helpers to pass data to untrusted environments and back.",
long_description=readme,
packages=find_packages("src"),
package_dir={"": "src"},
include_package_data=True,
python_requires=">=2.7, !=3.0.*, !=3.1.*, !=3.2.*, !=3.3.*",
classifiers=[
 "Development Status :: 5 - Production/Stable",
 "Intended Audience :: Developers",
 "License :: OSI Approved :: BSD License",
 "Operating System :: OS Independent",
 "Programming Language :: Python",
 "Programming Language :: Python :: 2",
 "Programming Language :: Python :: 2.7",
 "Programming Language :: Python :: 3",
 "Programming Language :: Python :: 3.4",
 "Programming Language :: Python :: 3.5",
 "Programming Language :: Python :: 3.6",
 "Programming Language :: Python :: 3.7",
],
)

```

Found in path(s):

```
* /opt/ws_local/PERMITS_SQL/1049628799_1591314841.03/0/itsdangerous-1-1-0-1-tar-gz/itsdangerous-1.1.0/setup.py
```

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* License: `BSD <https://github.com/pallets/itsdangerous/blob/master/LICENSE.rst>`_
```

Found in path(s):

```
* /opt/ws_local/PERMITS_SQL/1049628799_1591314841.03/0/itsdangerous-1-1-0-1-tar-gz/itsdangerous-1.1.0/README.rst
```

## 1.26 click-completion 0.2.1

### 1.26.1 Available under license :

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## 1.27 python-certifi 2020.6.20

### 1.27.1 Available under license :

This package contains a modified version of ca-bundle.crt:

ca-bundle.crt -- Bundle of CA Root Certificates

Certificate data from Mozilla as of: Thu Nov 3 19:04:19 2011#

This is a bundle of X.509 certificates of public Certificate Authorities (CA). These were automatically extracted from Mozilla's root certificates file (certdata.txt). This file can be found in the mozilla source tree:

<http://mxr.mozilla.org/mozilla/source/security/nss/lib/ckfw/builtins/certdata.txt?raw=1#>

It contains the certificates in PEM format and therefore can be directly used with curl / libcurl / php\_curl, or with an Apache+mod\_ssl webserver for SSL client authentication. Just configure this file as the SSLCACertificateFile.#

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@(#) \$RCSfile: certdata.txt,v \$ \$Revision: 1.80 \$ \$Date: 2011/11/03 15:11:58 \$

## 1.28 cffi 1.14.3

### 1.28.1 Available under license :

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## 1.29 language-selector 0.1

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It was downloaded via baz from  
<http://people.ubuntu.com/~mvo/arch/ubuntu>  
as  
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Upstream Author: Michael Vogt <michael.vogt@ubuntu.com>

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## 1.30 click 6.6

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## 1.31 urllib3 1.25.10

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# Contributions to the urllib3 project

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\* NTLM-authenticated HTTPSConnectionPool

\* Basic-authenticated HTTPSConnectionPool (merged into make\_headers)

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\* Client-verified SSL certificates for HTTPSConnectionPool

\* Response gzip and deflate encoding support

\* Better unicode support for filepost using StringIO buffers

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\* Non-multipart encoding for POST requests

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\* Code review, PEP8 compliance, benchmark fix

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\* Design review, bugfixes, test coverage.

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- \* Support for explicitly closing pooled connections
  
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- \* Support for TLS SNI
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- \* SSL fingerprint and alternative hostname verification
- \* Bugfixes in testsuite
  
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- \* Various bugfixes and test improvements.
  
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- \* Correct six.moves conflict
- \* Fixed pickle support of some exceptions
  
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- \* Allowed to skip SSL hostname verification
  
- \* Cory Benfield <<https://lukasa.co.uk/about/>>
- \* Stream method for Response objects.
- \* Return native strings in header values.
- \* Generate 'Host' header when using proxies.
  
- \* Jason Robinson <jaywink@basshero.org>
- \* Add missing WrappedSocket.fileno method in PyOpenSSL
  
- \* Audrius Butkevicius <audrius.butkevicius@elastichosts.com>
- \* Fixed a race condition
  
- \* Stanislav Vitkovskiy <stas.vitkovsky@gmail.com>
- \* Added HTTPS (CONNECT) proxy support
  
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- \* Added abstraction for granular control of request fields
  
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- \* Support for non-ASCII header parameters

- \* Kevin Burke <kev@inburke.com> and Pavel Kirichenko <juanych@yandex-team.ru>
- \* Support for separate connect and request timeouts
  
- \* Peter Waller <p@pwaller.net>
- \* HTTPResponse.tell() for determining amount received over the wire
  
- \* Nipunn Koorapati <nipunn1313@gmail.com>
- \* Ignore default ports when comparing hosts for equality
  
- \* Danilo @dbrgn <https://dbrgn.ch/>
- \* Disabled TLS compression by default on Python 3.2+
- \* Disabled TLS compression in pyopenssl contrib module
- \* Configurable cipher suites in pyopenssl contrib module
  
- \* Roman Bogorodskiy <roman.bogorodskiy@ericsson.com>
- \* Account retries on proxy errors
  
- \* Nicolas Delaby <nicolas.delaby@ezeep.com>
- \* Use the platform-specific CA certificate locations
  
- \* Josh Schneier <https://github.com/jschneier>
- \* HTTPHeaderDict and associated tests and docs
- \* Bugfixes, docs, test coverage
  
- \* Tahia Khan <http://tahia.tk/>
- \* Added Timeout examples in docs
  
- \* Arthur Grunseid <https://grunseid.com>
- \* source\_address support and tests (with https://github.com/bui)
  
- \* Ian Cordasco <graffatcolmingov@gmail.com>
- \* PEP8 Compliance and Linting
- \* Add ability to pass socket options to an HTTP Connection
  
- \* Erik Tollerud <erik.tollerud@gmail.com>
- \* Support for standard library io module.
  
- \* Krishna Prasad <kprasad.iitd@gmail.com>
- \* Google App Engine documentation
  
- \* Aaron Meurer <asmeurer@gmail.com>
- \* Added Url.url, which unparses a Url
  
- \* Evgeny Kapun <abacabadabacaba@gmail.com>
- \* Bugfixes
  
- \* Benjamin Meyer <bm\_witness@yahoo.com>
- \* Security Warning Documentation update for proper capture

- \* Shivan Sornarajah <github@sornars.com>
- \* Support for using ConnectionPool and PoolManager as context managers.
  
- \* Alex Gaynor <alex.gaynor@gmail.com>
- \* Updates to the default SSL configuration
  
- \* Tomas Tomecek <ttomecek@redhat.com>
- \* Implemented generator for getting chunks from chunked responses.
  
- \* tlynn <https://github.com/tlynn>
- \* Respect the warning preferences at import.
  
- \* David D. Riddle <ddriddle@illinois.edu>
- \* IPv6 bugfixes in testsuite
  
- \* Thea Flowers <magicalgirl@google.com>
- \* App Engine environment tests.
- \* Documentation re-write.
  
- \* John Krauss <https://github.com/talos>
- \* Clues to debugging problems with `cryptography` dependency in docs
  
- \* Disassem <https://github.com/Disassem>
- \* Fix pool-default headers not applying for url-encoded requests like GET.
  
- \* James Atherfold <jlatherfold@hotmail.com>
- \* Bugfixes relating to cleanup of connections during errors.
  
- \* Christian Pedersen <https://github.com/chripede>
- \* IPv6 HTTPS proxy bugfix
  
- \* Jordan Moldow <https://github.com/jmoldow>
- \* Fix low-level exceptions leaking from ``HTTPResponse.stream()``.
- \* Bugfix for ``ConnectionPool.urlopen(release\_conn=False)``.
- \* Creation of ``HTTPConnectionPool.ResponseCls``.
  
- \* Predrag Gruevski <https://github.com/obi1kenobi>
- \* Made cert digest comparison use a constant-time algorithm.
  
- \* Adam Talsma <https://github.com/a-tal>
- \* Bugfix to ca\_cert file paths.
  
- \* Evan Meagher <https://evanmeagher.net>
- \* Bugfix related to `memoryview` usage in PyOpenSSL adapter
  
- \* John Vandenberg <jayvdb@gmail.com>
- \* Python 2.6 fixes; pyflakes and pep8 compliance

- \* Andy Caldwell <andy.m.caldwell@googlemail.com>
- \* Bugfix related to reusing connections in indeterminate states.
  
- \* Ville Skytt <ville.skytta@iki.fi>
- \* Logging efficiency improvements, spelling fixes, Travis config.
  
- \* Shige Takeda <smtakeda@gmail.com>
- \* Started Recipes documentation and added a recipe about handling concatenated gzip data in HTTP response
  
- \* Jess Shapiro <jesse@jesseshapiro.net>
- \* Various character-encoding fixes/tweaks
- \* Disabling IPv6 DNS when IPv6 connections not supported
  
- \* David Foster <http://dafoster.net/>
- \* Ensure order of request and response headers are preserved.
  
- \* Jeremy Cline <jeremy@jcline.org>
- \* Added connection pool keys by scheme
  
- \* Aviv Palivoda <palaviv@gmail.com>
- \* History list to Retry object.
- \* HTTPResponse contains the last Retry object.
  
- \* Nate Prewitt <nate.prewitt@gmail.com>
- \* Ensure timeouts are not booleans and greater than zero.
- \* Fixed infinite loop in ``stream`` when amt=None.
- \* Added length\_remaining to determine remaining data to be read.
- \* Added enforce\_content\_length to raise exception when incorrect content-length received.
  
- \* Seth Michael Larson <sethmichaellarson@protonmail.com>
- \* Created selectors backport that supports PEP 475.
  
- \* Alexandre Dias <alex.dias@smarkets.com>
- \* Don't retry on timeout if method not in whitelist
  
- \* Moinuddin Quadri <moin18@gmail.com>
- \* Lazily load idna package
  
- \* Tom White <s6yg1ez3@mail2tor.com>
- \* Made SOCKS handler differentiate socks5h from socks5 and socks4a from socks4.
  
- \* Tim Burke <tim.burke@gmail.com>
- \* Stop buffering entire deflate-encoded responses.
  
- \* Tuukka Mustonen <tuukka.mustonen@gmail.com>
- \* Add counter for status\_forcelist retries.

- \* Erik Rose <erik@mozilla.com>
- \* Bugfix to pyopenssl vendoring
  
- \* Wolfgang Richter <wolfgang.richter@gmail.com>
- \* Bugfix related to loading full certificate chains with PyOpenSSL backend.
  
- \* Mike Miller <github@mikeage.net>
- \* Logging improvements to include the HTTP(S) port when opening a new connection
  
- \* Ioannis Tziakos <mail@itziakos.gr>
- \* Fix ``util.selectors.\_fileobj\_to\_fd`` to accept ``long``.
- \* Update appveyor tox setup to use the 64bit python.
  
- \* Akamai (through Jess Shapiro) <jshapiro@akamai.com>
- \* Ongoing maintenance; 2017-2018
  
- \* Dominique Leuenberger <dimstar@opensuse.org>
- \* Minor fixes in the test suite
  
- \* Will Bond <will@wbond.net>
- \* Add Python 2.6 support to ``contrib.securetransport``
  
- \* Aleksei Alekseev <alekseev.yeskela@gmail.com>
- \* using auth info for socks proxy
  
- \* Chris Wilcox <git@crwilcox.com>
- \* Improve contribution guide
- \* Add ``HTTPResponse.geturl`` method to provide ``urllib2.urlopen().geturl()`` behavior
  
- \* Bruce Merry <https://www.brucemerry.org.za>
- \* Fix leaking exceptions when system calls are interrupted with zero timeout
  
- \* Hugo van Kemenade <https://github.com/hugovk>
- \* Drop support for EOL Python 2.6
  
- \* Tim Bell <https://github.com/timb07>
- \* Bugfix for responses with Content-Type: message/\* logging warnings
  
- \* Justin Bramley <https://github.com/jbramleycl>
- \* Add ability to handle multiple Content-Encodings
  
- \* Katsuhiko YOSHIDA <https://github.com/kyoshidajp>
- \* Remove Authorization header regardless of case when redirecting to cross-site
  
- \* James Meickle <https://permadeath.com/>
- \* Improve handling of Retry-After header
  
- \* Chris Jerdonek <chris.jerdonek@gmail.com>

- \* Remove a spurious TypeError from the exception chain inside HTTPConnectionPool.\_make\_request(), also for BaseExceptions.
- \* Jorge Lopez Silva <<https://github.com/jalopezsilva>>
- \* Added support for forwarding requests through HTTPS proxies.
- \* Benno Rice <[benno@jeamland.net](mailto:benno@jeamland.net)>
- \* Allow cadata parameter to be passed to underlying ``SSLContext.load\_verify\_locations()``.
- \* Keiichi Kobayashi <[abok.1k@gmail.com](mailto:abok.1k@gmail.com)>
- \* Rename VerifiedHTTPSConnection to HTTPSConnection
- \* Himanshu Garg <[garg\\_himanshu@outlook.com](mailto:garg_himanshu@outlook.com)>
- \* DOC & LICENSE Update
- \* Hod Bin Noon <[bin.noon.hod@gmail.com](mailto:bin.noon.hod@gmail.com)>
- \* Test improvements
- \* Chris Olufson <[tycarac@gmail.com](mailto:tycarac@gmail.com)>
- \* Fix for connection not being released on HTTP redirect and response not preloaded
- \* [Bastiaan Bakker] <<https://github.com/bastiaanb>>
- \* Support for logging session keys via environment variable ``SSLKEYLOGFILE`` (Python 3.8+)
- \* [Your name or handle] <[email or website]>
- \* [Brief summary of your changes]

## 1.32 pycurl 7.43.0

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Version 2.1, February 1999

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Name: NetworkManager-strongswan

Source: <http://download.strongswan.org/NetworkManager>

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Found in path(s):

```
* /opt/ws_local/PERMITS_SQL/1095233177_1601387260.59/0/pallets-click-7-1-2-0-g1784558-1-tar-gz/pallets-click-1784558/src/click/parser.py
```

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```
import io
import re
```

```
from setuptools import find_packages
from setuptools import setup
```

```
with io.open("README.rst", "rt", encoding="utf8") as f:
 readme = f.read()
```

```
with io.open("src/click/__init__.py", "rt", encoding="utf8") as f:
 version = re.search(r'__version__ = "(.*?)"', f.read()).group(1)
```

```
setup(
 name="click",
 version=version,
 url="https://palletsprojects.com/p/click/",
 project_urls={
 "Documentation": "https://click.palletsprojects.com/",
 "Code": "https://github.com/pallets/click",
```

```

 "Issue tracker": "https://github.com/pallets/click/issues",
 },
 license="BSD-3-Clause",
 maintainer="Pallets",
 maintainer_email="contact@palletsprojects.com",
 description="Composable command line interface toolkit",
 long_description=readme,
 packages=find_packages("src"),
 package_dir={"": "src"},
 include_package_data=True,
 python_requires=">=2.7, !=3.0.*, !=3.1.*, !=3.2.*, !=3.3.*, !=3.4.*",
 classifiers=[
 "Development Status :: 5 - Production/Stable",
 "Intended Audience :: Developers",
 "License :: OSI Approved :: BSD License",
 "Operating System :: OS Independent",
 "Programming Language :: Python",
 "Programming Language :: Python :: 2",
 "Programming Language :: Python :: 3",
],
)

```

Found in path(s):

```
* /opt/ws_local/PERMITS_SQL/1095233177_1601387260.59/0/pallets-click-7-1-2-0-g1784558-1-tar-gz/pallets-click-1784558/setup.py
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```
* /opt/ws_local/PERMITS_SQL/1095233177_1601387260.59/0/pallets-click-7-1-2-0-g1784558-1-tar-gz/pallets-click-1784558/tests/test_formatting.py
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Found in path(s):

```
* /opt/ws_local/PERMITS_SQL/1095233177_1601387260.59/0/pallets-click-7-1-2-0-g1784558-1-tar-gz/pallets-click-1784558/LICENSE.rst
```

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

# binary only, patch it back to the system, and then use a wrapper

Found in path(s):

```
* /opt/ws_local/PERMITS_SQL/1095233177_1601387260.59/0/pallets-click-7-1-2-0-g1784558-1-tar-gz/pallets-click-1784558/src/click/_compat.py
```

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

.. \_contrib:

```
=====
click-contrib
=====
```

As the userbase of Click grows, more and more major feature requests pop up in Click's bugtracker. As reasonable as it may be for those features to be bundled with Click instead of being a standalone project, many of those requested features are either highly experimental or have unproven practical use, while potentially being a burden to maintain.

This is why `click-contrib_` exists. The GitHub organization is a collection of possibly experimental third-party packages whose featureset does not belong into Click, but also a playground for major features that may be added to Click in the future. It is also meant to coordinate and concentrate effort on writing third-party extensions for Click, and to ease the effort of searching for such extensions. In that sense it could be described as a low-maintenance alternative to extension repositories of other frameworks.

Please note that the quality and stability of those packages may be different

than what you expect from Click itself. While published under a common organization, they are still projects separate from Click.

.. \_click-contrib: <https://github.com/click-contrib/>

Found in path(s):

\* /opt/ws\_local/PERMITS\_SQL/1095233177\_1601387260.59/0/pallets-click-7-1-2-0-g1784558-1-tar-gz/pallets-click-1784558/docs/contrib.rst

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