



Cisco IOS System Message Guide, 12.2 SY

This publication lists and describes system messages for Cisco IOS Release 12.2 SY. During operation, the system software sends these messages to the console and, optionally, to a logging server on another system. Not all system messages indicate problems with your system. Some messages are purely informational, and others may help diagnose problems with communications lines, internal hardware, or the system software. This guide also includes messages that appear when the system crashes.

This guide contains the following topics:

- [How The Messages Are Organized](#)
- [How to Read System Messages](#)
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- [Message Overrun and Continuation](#)
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How The Messages Are Organized

The system messages provide descriptions of system messages related to the Cisco IOS software. The messages are organized according to the particular system facility that produces the messages. The facility sections appear in alphabetical order, and within each facility section, messages are listed alphabetically by mnemonic. Each message is followed by an explanation and a recommended action.

For alphabetizing purposes, lowercase and uppercase letters are treated the same.

The index of messages is alphabetized as follows:

1. Facility code
2. Mnemonic



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3. Severity level



Note

You can also view online system messages that pertain to Cisco IOS Release 12.2S-based releases. See *System Messages for 12.2S*.

How to Read System Messages

System messages begin with a percent sign (%) and are structured as follows. The text in bold are required elements of the System Message, the text in italics are optional elements of the System Message.

%FACILITY-SUBFACILITY-SEVERITY-MNEMONIC: Message-text

FACILITY is a code consisting of two or more uppercase letters that indicate the facility to which the message refers. A facility can be a hardware device, a protocol, or a module of the system software. [Table 1](#) lists the system facility codes.

SUBFACILITY is used only for Cisco Catalyst 6500 series switches that are operating in a distributed system. The subfacility can consist of one code, or two codes that are divided by a hyphen, and describes the part of the distributed system from where the message is coming. For example, the **%DIAG-SP-STDBY-6-RUN_MINIMUM** system message is the **%DIAG-6-RUN_MINIMUM** message coming from the switch processor (SP) that is in redundant or standby (STDBY) mode.

SEVERITY is a single-digit code from 0 to 7 that reflects the severity of the condition. The lower the number, the more serious the situation. [Table 2](#) lists the severity levels.

MNEMONIC is a code that uniquely identifies the system message.

Message-text is a text string describing the condition. This portion of the message sometimes contains detailed information about the event, including terminal port numbers, network addresses, or addresses that correspond to locations in the system memory address space. Because the information in these variable fields changes from message to message, it is represented here by short strings enclosed in square brackets ([]). A decimal number, for example, is represented as [dec]. [Table 3](#) lists the representations of variable fields and the type of information in them.

The following is a sample system message:

```
%LINK-2-BADVCALL: Interface [chars], undefined entry point
```

Some messages also indicate the card and slot reporting the error. These messages begin with a percent sign (%) and are structured as follows:

%CARD-SEVERITY-MSG:SLOT %FACILITY-SEVERITY-MNEMONIC: Message-text

CARD is a code that describes the type of card reporting the error. CIP, CIP2, ECPA, ECPA4, FEIP, PCPA, and VIP are possible card types.

MSG is a mnemonic that indicates that this is a message. It is always shown as **MSG**.

SLOT indicates the slot number of the card reporting the error. It is shown as **SLOT** followed by a number (for example, **SLOT5**).



Note

The prepended portion of the message (**%CARD-SEVERITY-MSG:SLOT**) is not shown in the system message listings in this manual.

Table 1 **Facility Codes**

Code	Facility
AAA	Authentication, authorization, and accounting
AAA_CACHE	Authentication, authorization, and accounting cache
AAAA	TACACS+ authentication, authorization, and accounting security
AAL5	ATM Adaptation Layer 5
AC	Attachment circuit
ACCESS_IE	Access information element
ACE	Access control encryption
ACL_ASIC	Access control list ASIC
ACLMERGE	Access control list merge
ACLMGR	Access control list manager
ADAPTER	CMCC adapter task
ADJ	Adjacency subsystem
AESOP_AIM	Service engine advanced interface module
AFLSEC	Accelerated Flow Logging Security
AHDLC_TRINIAN	PPP in HDLC-like framing device driver
AICMGMT	Alarm interface controller management
AIM	Advanced Interface Module (AIM)
AIP	ATM Interface Processor
ALARM	Telco chassis alarm related
ALC	ATM line card (ALC)
ALIGN	Memory optimization in Reduced Instruction Set Computer (RISC) processor
ALPS	Airline Protocol Support
AMD79C971_FE	Am79C971 Fast Ethernet device driver
AMDP2_FE	AMDP2 Ethernet and Fast Ethernet
AP	Authentication Proxy (AP)
APPFW	APPFW for HTTP subsystem
APS	Automatic Protection Switching
ARAP	Apple Remote Access Protocol (ARAP)
ARCHIVE_CONFIG	Archive configuration-related
ARCHIVE_DIFF	Archive Diff and Rollback-related
AS5400	Cisco AS5400 platform
AS5400_ENVM	Cisco AS5400 environmental monitor
ASPP	Asynchronous Security Protocol (ASPP)
AT	AppleTalk (AT)
ATM	Asynchronous Transfer Mode

Table 1 Facility Codes (continued)

Code	Facility
ATM_AIM	ATM advanced module
ATMCES	ATM access concentrator PCI port adapter driver
ATMCORE	ATM core
ATMLC	Cisco 7300 ATM line card software
ATMOC3	ATM OC-3 network module
ATMOC3POM	ATM- OC3-POM module
ATMPA	ATM port adapter
ATMSIG	ATM signaling subsystem
ATMSPA	ATM Shared Port Adapter
ATMSSCOP	ATM Service Specific Connection Oriented Protocol (SSCOP)
ATOM_NP_CLIENT	Any Transport over MPLS NP client
ATOM_SEG	Any Transport Over MPLS (AToM) Segment Handler
ATOM_TRANS	Layer 2 Transport over MPLS
AUDIT	Audit feature
AUTORP	PIMv2 AUTORP
AUTOSEC	AutoSecure
AUTOSHUT	Autoshut
AUTOSTATE	Autostate feature
BACKPLANE_BUS_ASIC	Backplane bus ASIC
BAMBAM	One-port Fast Ethernet with coprocessor assist
BAP	PPP Bandwidth Allocation Protocol (BAP)
BAT	Power supply (BAT)
BCM	Broadcom switch controller
BCM3220	Cable modem MAC controller interface
BCM56XX	BCM56XX control layer
BCM_GEWAN	Messages related to the Cisco 3800 system controller
BERT	Bit error rate tester (BERT)
BFD	Bidirectional Forwarding Detection
BFD FSM	BFD finite state machine
BGP	Border Gateway Protocol
BGP_MPLS	BGP MPLS common
BIT	Dynamic bitlist
BOOMERANG	Boomerang distributed reverse proxy server
BRI	ISDN Basic Rate Interface
BRIMUX	Cisco AS5200 BRIMUX board

Table 1 Facility Codes (continued)

Code	Facility
BSC	Binary Synchronous Communications protocol
BSQ	Buffer status queue processing
BSR	Bootstrap router
BSTUN	Block serial tunneling (BSTUN)
BUNDLES	Bundles
C1400	Cisco 1400 platform
C_GIGE	Dual-port Gigabit Ethernet back card subsystem
C10K	Cisco 10000
C10K_APS	NSP APS
C10KATM	Cisco 10000 ATM
C10KCARDISSU	Cisco 10000 Card ISSU
C10KCHE1T1	Cisco 10000 T1 line card
C10KCHKPT	Cisco 10000 Checkpoint Facility
C10KET	Cisco 10000 ET
C10KEVENTMGR	Event Manager subsystem
C10KGE	Gigabit Ethernet subsystem
C10KHHCT3	Cisco 10000 HH Channelized T3
C10KINT	Cisco 10000 interrupt infrastructure
C10KISSU	Cisco 10000 In Service Software Upgrade
C10K_IEDGE	Cisco 10000 iEdge
C10K_LFI_GENERAL	Cisco 10000 Link Fragmentation and Interleaving
C10K_MULTILINK_FRAGSIZE_BELOW_MIN_WARNING	Cisco 10000 PXF Multilink fragment size below minimum warning
C10K_QOS_GENERAL	Cisco 10000 Quality of Service (QoS)
C10K_QUEUE_CFG_GENERAL	Cisco 10000 PXF queuing configuration
C10K_TOASTER	Cisco 10000 toaster
C1400_PCI	Protocol control information (PCI) bus for Cisco 1400 platform
C1600	Cisco 1600 platform
C1700	Cisco 1700 platform
C1700_EM	Cisco 1700 VPN module hardware accelerator for IP security
C1800	Cisco 1800 platform
C1800_HW_CRYPT0	Cisco 1800, Cisco 1810 Motorola SEC 2.0
C2400_DSX1	Cisco 2400 DSX1 subsystem
C2600	Cisco 2600 platform

Table 1 Facility Codes (continued)

Code	Facility
C2600_MAINBOARD_ASYNC_PQUICC	MPC860 quad integrated communications controller for the Cisco 2600 platform
C2950	Catalyst 2950 series switch
C29ATM	Catalyst 2900XL ATM module
C2KATM	Catalyst 2820 ATM module
C3200_FE	Cisco 3200 FEC
C3600	Cisco 3600 platform
C3800	Cisco 3800 platform
C3800_ENVMM	Environmental
C3825	Cisco 3825 platform
C4GWY_DSPRM	DSP Resource Manager
C4K	Catalyst 4000 platform
C542	Voice driver for modular access routers
C5421	Voice over IP
C54x	VoIP DSP driver
C54X	VoIP driver
C5510	Voice Over IP (VoIP) driver
C5RSP	Cisco Catalyst 5000 platform
C6KENV	Cisco Catalyst 6500 environmental system
C6K_MWAM_CENTRALIZED_CONFIG	Multiprocessor WAN Application Module (MWAM) centralized configuration
C6KPWR	Cisco Catalyst 6500 power control system
C6MSFC	C6MSFC (Draco)
C6SUP	C6SUP-specific
C7200	Cisco 7200 platform - deleted for 12.2
C7200_TDM	Cisco 7200 midplane TDM bus
C7600_RSP	Cisco 7600 Route Switch Processor
C7600_SIP200	SPA Interface Processor 200
C7600_SIP200_MP	Cisco 7600, Catalyst 6500 SIP-200 Multiprocessing
C7600_SIP200_SPIRX	Cisco 7600, Catalyst 6500 SIP-200 SPI4.2 bus ingress interface
C7600_SIP200_SPITX	Cisco 7600, Catalyst 6500 SIP-200 SPI4.2 bus egress interface
C7600_SSC600	Services SPA Carrier Card (SSC600)
C830_HW_CRYPT0	C830 Hifn
C870_FE	Cisco 870 Fast Ethernet
C870_HW_CRYPT0	Cisco 850, Cisco 870 Motorola SEC 1.0
C950	Cisco 950

Table 1 Facility Codes (continued)

Code	Facility
CAIM	Compression Advanced Interface Module (CAIM)
CALL_CONTROL	Call control
CALL_HOME	Call Home
CALL_MGMT	Call management subsystem
CALLPROG	Call progress notification subsystem
CALLRECORD	Modem Call Record
CALLTREAT	Call treatment
CALLTREAT_NOSIGNAL	Call Treatment (TREAT)
CALLTRKR	Call Tracker subsystem
CAMP	Cooperative Asymmetric Multiprocessing
CAPI	Card API
CAPI_EC	Card or EtherChannel limitation
CARDMGR	SIP-400 Card Manager (data plane)
CARRIER	DFC carrier
CASA	Cisco Appliance and Services Architecture (CASA)
CBUS	CiscoBus controller
CBUS_ATTEN	CMCC CIP for Cisco bus controller statistics routine
CBUS_WRITE	CMCC CIP for Cisco bus controller write support
CCA	CMCC CIP for channel card adapter
CCH323	Call Control for H.323
CCPROXY	H.323 proxy
CDM	Cable Data Modem subsystem
CDMA_PDSN	CDMA PDSN
CDNLD_CLIENT	Client NRP2 configuration download
CDNLD_SERVER	Server NSP configuration download
CDP	Cisco Discovery Protocol (CDP)
CDSX_MODULE	Network module
CE3	CE3 port adapter (CE3)
CEIPNM	Circuit Emulation over IP Network Module
CERF	Cache Error Recovery Function (CERF)
CES	Circuit Emulation Service (CES)
CES_CLIENT	Client circuit emulation service (CESt
CES_CONN	TDM connection
CFG	Invalid Cisco 1840 configuration
CFGMGR	Configuration Manager

Table 1 **Facility Codes (continued)**

Code	Facility
CFIB	Constellation FIB
CFM	Connectivity Fault Management
CHANNEL_BANK	Channel Bank
CHARLOTTE	Dual OC-3 PoS port adapter
CHKPT	Checkpoint facility
CHOC12	CHOC12 port adapter
CHOPIN	Versatile Interface Processor (VIP) Multi-channel Port Adapter
CHOPIN_ MAINBOARD_ ASYNC_PQII	Chopin Main Board Asynchronous driver
CHSTM1	CHSTM1
CI	Cisco 7500 platform chassis interface
CIOS	CMCC channel adapter Cisco IOS wrapper
CIP and CIP2	Channel Interface Processor (CIP) and enhanced CIP
CIPDUMP	CIP core dump
CIRRUS	CD2430 asynchronous controller
CIRRUS_PM	Slow-speed asynchronous/synchronous port module
CLAW	CMCC CIP for Common Link Access for Workstations (CLAW) facility
CLEAR	Clear facility
CLIENT_CLOCK_SYNC	Clock synchronization server
CLNS	OSI Connectionless Network Service
CLOCK	Clock and calendar
CLOCKSW	Cisco 6400 network clocking
CLS	Cisco link services (CNS)
CLSDR	Cisco link services (CNS) driver
CM622_CM155	ATM OC12 and QOC3 line card driver
CMAPP	Call Manager application
CMBPKM	Multimedia Cable Network System Partners, Ltd. (MNCNS), baseline privacy key management
CMCC	Cisco Mainframe Channel Connection (CMCC)
CM_DSPRM	Digital Signal Processor Resource Manager (DSPRM)
CM_MONITOR	UBR900 Cable Access Router Personal Monitor
CMP	Cluster Membership Protocol
CMPCTG	CMCC Logical Link Control Transmission Group
CNS	Cisco Networking Services (CNS)
CNS_AGENT_CFGCHG	Cisco Network Service (CNS) Configuration Change Agent
CNSAD_IPSEC_AGENT	Cisco Network Service (CNS)/AD IPsec Agent

Table 1 Facility Codes (continued)

Code	Facility
CNSES	Cisco Network Services Event Service client
COBALT	COBALT
COMMON_FIB	CEF address family independent (FIB)
COMP	Point-to-point compression
CONFIG	CMCC Channel Interface Processor (CIP) messages for the configuration processing facility
CONST_BOOT	Constellation boot
CONST_DIAG	On-line diagnostics
CONST_V6	IP version 6
CONTROLLER	Controller
COPTMONMIB	Cisco Optical Monitoring MIB
COT	Continuity test (COT)
COUGAR_EHSA	Pulse amplitude modulation (PAM) port driver
CP	Control plane protection notification
CPAD	Compression service adapter (CSA)
CPE_MMI	Customer Premises Equipment Modem Management Interface
CPM	Combo Port Module (CPM) device driver
CPOS	Packet-over-SONET
CPU_INTF_FPGA	CPU Interface FPGA
CPU_MONITOR	CPU monitor
CRYPTO	Encryption
CRYPTO_HA	Crypto High Availability
CRYPTO_HA_IKE	Crypto High Availability
CRYPTO_HA_IPSEC	Crypto High Availability
CSG	Content Services Gateway
CSM	Call switching module
CSM_TGRM	CSM TGRM interaction
CSM_TRUNK	Call switching trunk manager
CSM_VOICE	Call switching mode (CSM) voice subsystem
CT3	Channelized T3 (CT3) port adapter
CTA	CMCC CIP for the channel transport architecture device task/mapper
CTLPROVIDERSERV	CTL provider service
CTRC	Cisco Transaction Connection
CWAN_ALARM	Constellation WAN alarm
CWAN_ATM	Constellation WAN ATM
CWAN_HA	WAN module High Availability

Table 1 **Facility Codes (continued)**

Code	Facility
CWAN_QINQ	Constellation CWAN-QINQ linecard
CWAN_RP	Constellation WAN ATM Route Processor driver
CWAN_SP	Constellation WAN ATM Switch Processor driver
CWAN_SPA	Shared Port Adapter on OSR
CWANLC	Constellation WAN line card
CWANLC_ATM	Constellation WAN ATM Route Processor driver
CWAN_POSEIDON	Optical Services Module (OSM) GE-WAN Route Processor (RP) driver
CWPA	Route Processor for Constellation Supervisor router module
CWPABRIDGE	CWPA bridging
CWRMP	Wireless radio point-to-multipoint driver
CWRPSPA	Shared Port Adapter on OSR RP
CWRSU	Wireless radio point-to-multipoint subscriber unit (SU)
CWRTEST	Wireless radio point-to-multipoint test driver
CWSLC	Constellation WAN SiByte module
CWTLC	Constellation Supervisor router module line card
CWTLC_ATM	ATM line card for Constellation Supervisor router module
CWTLC_ATOM	Constellation WAN Toaster linecard – AToM
CWTLC_CHOC	Cyclops Channelized OC48/OC12-related
CWTLC_CHOC_DSX	Optical Services Module (OSM) CHOC DSX LC common
CWTLC_CHOCX	Optical Services Module (OSM) Channelized OC12/OC3 Module
CWTLC_GEWAN	Gigabit Ethernet WAN Module
CWTLC_QOS	Optical Services Module (OSM) Supervisor line card QoS
CWTLC_RP	Catalyst 6500 Series Switch and Cisco 7600 Series Router WAN Toaster-based Module Route Processor
DAS_ENV	RSC environmental monitor subsystem
DBCONN	Database Connection
DBUS	Data bus
DCU	ATM access concentrator PCI port adapter
DEBUGGER	Debug mode
DEC21140	DEC21140 Fast Ethernet controller
DFC	Dial feature card
DFC_CARRIER	Dial feature card carrier
DFP	Dynamic Feedback Protocol
DHCP	Dynamic Host Configuration Protocol
DHCP_SNOOPING	DHCP snooping
DHCPD	Dynamic Host Configuration Protocol (DHCP) server

Table 1 Facility Codes (continued)

Code	Facility
DHCPV6C	DHCPv6 client
DHCPV6S	DHCPv6 server
DIAG	CMCC CIP for diagnostic testing
DIALER	Dial-on-demand routing
DIALPEER_DB	Dial peer configuration
DIALSHELF	Dial shelf
DIRECTOR	Director server
DISKMIRROR	NSP disk mirror
DLC	Data-link control
DLSWC	Data-link switching (DLSw)
DLSWMasterSlave	Data-link switching (DLSw) core
DLSWP	Data-link switching (DLSw) peer module
DM	Diagnostic Monitor or Dispatch Manager
DMA	Direct memory access
DMTDSL	Digital/discrete multitone digital subscriber line (DMTDSL)
DNET	DECnet
DNLD	Auto-config/download
DNSSERVER	Domain Name System (DNS) server
DOSFS	DOS file system
DOS_TRACK	IP source tracker
DOT11	802.11 subsystem
DOT1Q	802.1q
DOT1X	802.1X authorization
DOT1X_MOD	Messages encountered in platform dependent code for 802.1x
DP83815	DP83815 10/100 Mbps Integrated PCI Ethernet Media Access Controller
DPM	AS5200 T1 BRIMUX
DRIP	Duplicate Ring Protocol
DRP	Director Response Protocol
DRVGRP	Interface driver
DS3E3SUNI	DS3E3SUNI driver
DS_MODEM	FB modem card
DS_TDM	Dial shelf time-division multiplexing
DS1337	DS1337 RTC
DSA	Delayed stop accounting
DSC	Dial shelf controller (DSC)
DSC_ENV	Cisco AS5800 environment monitor

Table 1 Facility Codes (continued)

Code	Facility
DSC_REDUNDANCY	Cisco AS5800 dial shelf controller (DSC) redundancy
DSCC4	DSCC4 driver
DSCCLOCK	Dial shelf controller (DSC) clock
DSCEXTCLK	Dial shelf controller (DSC) clock
DSCREDCLK	Dial shelf controller (DSC) redundancy clock
DSI	Cisco AS5800 dial shelf interconnect board
DSIP	Distributed system interconnect protocol
DSIP_IOSDIAG	DSIP diagnostic test
DSIPPF	Nitro Interconnect Protocol
DLSAR	DSL segmentation and reassembly
DSM	DSP Stream Manager
DSMP	DSP Stream Manager
DSP_CONN	TDM connection
DSPDD	Digital Signal Processor Device Driver (DSPDD)
DSPDUMP	Digital Signal Processor crash dump facility
DSPFARM	DSP resource management
DSPRM	Digital Signal Processor Device Driver (DSPDD)
DSPU	Downstream physical unit
DSX0	CT1 RBS time slot status
DSX1	Channelized E1 (Europe) and T1(US) telephony standard
DS_TDM	Dial shelf time-division multiplexing (TDM)
DSXPNM	TE3 network module
DTP	Dynamic Trunking Protocol filtering
DUAL	Enhanced Interior Gateway Routing Protocol
DVMRP	Distance Vector Multicast Routing Protocol
E1T1_MODULE	E1T1 module
EAP	Extensible Authentication Protocol
EARL	Enhanced Address Recognition Logic
EARL_ACL_FPGA	Enhanced Address Recognition Logic ACL FPGA
EARL_DRV_API	EARL driver API
EARL_L2_ASIC	Enhanced Address Recognition Logic Layer 2 ASIC
EARL_L3_ASIC	Enhanced Address Recognition Logic Layer 3 ASIC
EARL_NETFLOW	Enhanced Address Recognition Logic NetFlow
EC	EtherChannel, Link Aggregation Control Protocol (LACP), and Port Aggregation Protocol (PAgP)
ECC	Single bit errors in ECC

Table 1 Facility Codes (continued)

Code	Facility
ECPA and ECPA4	Escon Channel Port Adapter and enhanced Escon Channel Port Adapter
EGP	Exterior Gateway Protocol
EHSA	Cisco 6400 Enhanced High System Availability (EHSA)
EM	Event Manager
EM_FPGA	Cisco 1840 FPGA encryption, decryption and hash message authentication codes (HMAC) for IP Security (IPSec)
ENSP	Enhanced Network Services Provider (ENSP)
ENT_API	Entity MIB API
ENT_ALARM	Entity alarm
ENTITY_ALARM	Entity alarm
ENVM	Environmental monitor
ENV_MON	Cisco 12000 environmental monitor
ENVM	Environmental monitor
EOBC	Ethernet out-of-band channel
EOS	Eos ASIC
EOU	Extensible Authentication Protocol (EAP) over User Datagram Protocol (UDP)
EPAD	Encryption port adapter driver (EPAD)
EPLD	EPLD
EPLD_STATUS_OPEN	EPLD Programming Status File Data Processing
EPAMCM	Ethernet Port Adapter Module Configuration Manager
EPIF_PORT	MMC Networks Ethernet Port L3 Processor Port
ESCON	Enterprise Systems Connection
ESF_CRASHINFO	Extended SuperFrame crashinfo
ESF_DRIVER	SIP-400 ESF driver
ESF_IPC	IPX2800 IPC
ESWILP_CFG	Ethernet switch module configuration
ESWILP_FLTMG	ESWILP fault management
ESWITCH	Ethernet switch port adapter
ESWMOD	Ethernet switch module
ESWMRVL_FLTMG	Ethernet switch fault management
ESW_STORM_CONTROL	Storm control
ESW_WIC_FLTMG	Ethernet Switch WIC fault management
ET2_MODULE	Ernest-T2 network module
ETHERNET	Ethernet for the C1000 series
EVENT	Event MIB

Table 1 **Facility Codes (continued)**

Code	Facility
EVENT_TRACE	Event trace subsystem
EXFREE	External memory manager
EXPRESSION	Expression MIB
FABRIC	Fabric Interface ASIC (FIA)
FALLBACK	Voice over IP (VoIP) fallback
FAN	Fan
FARM_DSPRM	Farm DSPRM
FASTBLK	Fast Block
FB	Cisco AS5800 feature board
FB_COREDUMP	Feature board core dump
FBINFO	Cisco AS5800 feature board crash information subsystem
FCIP	FCIP driver
FCL	Forward Control Layer (FCL)
FDDI	Fiber Distributed Data Interface (FDDI)
FDM	Firewall Service Module (FWSM) Device Manager
FDM_HA	High availability FWSM Device Manager
FECPM	Fast Ethernet (FE) Combination Port Module (CPM) device driver
FESMIC_FLTMG	FESMIC fault management-related
FF	FF module-specific
FIB	Forwarding Information Base
FIB_HM	FIB health monitor
FIB_HM_MVL	Platform dependent, FIB Health Monitor
FILESYS	File system
FIO_TDM	Messages related to the Cisco 3700XM TDM device
FLASH	Flash nonvolatile memory
FLEX_DNLD	Voice Over IP (VoIP) driver
FLEXDSPRM	Flex DSPRM operation
FM	Feature Manager (FM)
FM	Forwarding Manager (FM)
FMCORE	Core Feature Manager
FM_EARL6	EARL 6 Feature Manager
FM_EARL7	EARL 7 Feature Manager
FPD_MGMT	FPD Management Subsystem
FPGA	LS1010 chip-specific
FR	Frame Relay
FR_ADJ	Frame Relay Adjacency

Table 1 Facility Codes (continued)

Code	Facility
FR_ELMI	Frame Relay enhanced Local Management Interface
FR_FRAG	Frame Relay Fragmentation
FR_LMI	Frame Relay Local Management Interface
FR_RP	Frame Relay RP
FR_VCB	Frame Relay VC bundle
FRATM	Frame Relay ATM
FREEDM	CT3 trunk card Freedm
FS_IPHC	Fast IP Header Compression
FTC_TRUNK	Cisco 3801 platform
FTPSERVER	FTP server processes
FTSP	Fax Telephony Service Provider subsystem
FTTM	Full Ternary TCAM Manager
FW	Inspection subsystem
FW_HA	Firewall High Availability
FX1000	FX1000 Gigabit Ethernet controller
GBIC_SECURITY	GBIC security check
GBIC_SECURITY_CRYPT	GBIC SECURITY serial EEPROM verification
GBIC_SECURITY_UNIQUE	GBIC security uniqueness verification
GDOI	Group Domain of Interpretation
GE	Gigabit Ethernet subsystem
GENERAL	Zenith route processor
GET_DATA	CMCC CIP for allocating transfer elements
GK	GK-H.323 Gatekeeper
GK_OSP	H.323 Gatekeeper OSP
GLBP	Gateway Load Balancing Protocol
GLCFR	Internet router
GPRSFLTMG	Global Packet Radio Service fault management
GPRSMIB	Global Packet Radio Service MIB
GRIP	Xerox Network Systems (XNS) Routing Protocol
GRP	Gigabit Route Processor
GRP_C10K_CH_DS3	Cisco 10000 CH-DS3 RP driver
GRP_OC12_CH_DS3	Gigabit Route Processor (GRP) driver
GRPGE	Gigabit Ethernet Route Processor (RP)
GRPPOS	POS Route Processor
GSHDSL	G.Symetric High DSL

Table 1 **Facility Codes (continued)**

Code	Facility
GSI	G.Symetric high bit rate DSL
GSR_ENV	Internet router environment monitor
GSRIPC	Internet router IPC service routines
GT64010	GT64010 DMA controller driver
GT64011	GT64011 DMA controller driver
GT64120	GT64120 DMA controller driver
GT96K_FE	Cisco 3700 series and Cisco 3631 systems controller
GT96K_FEWAN	Cisco 3700 series and Cisco 3631 systems controller for WAN
GT96K_TDM	Cisco 37xx, Cisco 2691, and Cisco 3631 TDM subsystem
GTP	GPRS Tunnel Protocol
GUIDO	GUIDO network module
HA	High availability system
HA_CLIENT	High availability client
HA_EM	Embedded Event Manager
HA_IFINDEX	High Availability system
HAL	Halcyon
HARDWARE	Hardware resources
HA_WD	High Availability system
HAWKEYE	Token Ring PCI port adapter
HD	HD64570 serial controller
HDLC	High-Level Data Link Control
HDLC32	PAS HDLC32
HDV	High Density Voice (HDV) driver
HDV2	HDV2 network module
HDX	Half-duplex (HDX) finite state machines (FSM)
HEALTH_MONITOR	Health Monitor
HEARTBEAT	Heartbeat
HHM	Cisco AS5400 health monitor
HIFN79XX	Hifn 79xx
HLFM	Forwarding Manager
HMM_ASYNC	Hex modem network module asynchronous driver
HOOD	LAN controller 100VG-AnyLAN interface
HP100VG	100VG-AnyLAN port adapter driver
HPI	Host Port Interface
HSRP	Hot Standby Router Protocol (HSRP)
HTSP	Analog voice hardware adaptation layer software

Table 1 Facility Codes (continued)

Code	Facility
HTTP	Hypertext Transfer Protocol (HTTP)
HTTPC	HTTP client
HUB	Cisco Ethernet hub
HW	Hardware
HW_API	Hardware API
HW_VPN	Encryption Advanced Interface Module (EAIM)
HWEKAN	HWEKAN echo canceller
HWIC_1GE_SFP	Gigabit Ethernet High-speed WAN Interface Card (HWIC)
HWIC_ADSL	HWIC ADSL
HWIC_ADSL_BRI	HWIC ADSL/BRI
HWIC_BRI	HWIC BRI
HWIC_HOST	High-speed WAN Interface Card (HWIC) Host Driver Library
HWIC_SERIAL	High-speed WAN Interface Card (HWIC) Serial Device Driver
HWIF_QOS	HWIF QoS
HYPERION	Hyperion ASIC
I82541	Intel 82541 Ethernet/Fast Ethernet/Gigabit Ethernet controller
I82543	Intel 82543 Ethernet/Fast Ethernet/Gigabit Ethernet controller
I82544	I82544 Fast Ethernet controller
I82559FE	Intel 82559 Fast Ethernet controller
IAD2420_VOICEPORT	IAD2420 Voice Port
IBM2692	IBM Token Ring chipset
ICC	Inter-Card Communication
IDBINDEX_SYNC	Interface Descriptor Block (IDB) index synchronization
IDBMAN	Interface description block manager
IDCONF	Intrusion Detection Configuration
IDMGR	ID manager
IDNLD	NSP IDNLD
IDS	IP datagram subsystem (IDS)
IDTATM25	IDT ATM25 network module
IEDGE	Intelligent Services Gateway (ISG)
IF	Interface
IFINDEX	SNMP IF_MIB persistence
IFMGR	Interface Manager
IFS	Cisco IOS file system
IGRP	Interior Gateway Routing Protocol
ILACC	ILACC driver

Table 1 Facility Codes (continued)

Code	Facility
ILPM_FAULT	Inline Power Management (ILPM)-related
ILPOWER	Inline power
IMA	Inverse multiplexing over ATM (IMA)
IMAGEMGR	Image manager
IMAGE_SIMFS	In-Memory System Image File System
IMAGE_VFS	Image Virtual File System
INBAND	Inband management
INDXOBJ	Index object
INSTANCE_LOG	Instance log
INT	CIP for the interrupt handler interface
INTERFACE_API	Binary API for the interface descriptor block
INTR_MGR	Interrupt manager
IOCARD	I/O card-specific
IOS_RESILIENCE	Cisco IOS software image and configuration resilience
IP	Internet Protocol
IP_DEVICE_TRACKING	Switch IP Host Tracking
IP_DEVICE_TRACKING_HA	Switch IP Host Tracking HA
IPA	Intelligent port adapter
IPACCESS	IP security
IPC	Interprocess communication
IPC_DRVR	CMCC interprocess communication driver
IPCGRP	Route Processor (RP) interprocess communication (IPC)
IPCOIR	IPC Online Insertion and Removal (OIR)
IPC_RPM	Interprocess communication (IPC)
IPC_RSP_CBUS	Interprocess communication ciscoBus (CBUS)
IPC_URM	Interprocess communication universal router module
IPCLC	Internet router line card interprocess communication
IPDCAPP	Internet Protocol Device Control application
IPFAST	IP fast switching
IPFLOW	IP flow
IPM_C54X	Voice over IP (VoIP) driver
IPM_DSPRM	Digital Signal Processor (DSP) Resource Manager
IPM_NV_EEPROM	Integrated port module NVRAM driver
IPMCAST	Cisco 12000 series Internet router line card IP multicast
IPMCAST_LIB	IP Multicast library

Table 1 Facility Codes (continued)

Code	Facility
IPMOBILE	IP Mobility
IPNAT	IP Network Address Translation
IPP	CMCC encryption feature
IPPHONE	IP Phone register/unregister
IPRT	IP routing
IPS	Intrusion prevention system
IPSECV6	Encryption feature
IP_SNMP	Simple Network Management Protocol specific to IP
IPV6	IP version 6
IPV6FIB	IP version 6 forwarding-based on destination IP addresses
IPV6_FW	IPv6 Inspection subsystem
IPV6_VFR	IPv6 virtual fragment reassembly subsystem
IPV6_VRF	VRF common
IP_VFR	IP Virtual Fragment Reassembly (VFR) subsystem
IP_VRF	IP VPN routing/forwarding instance common
IPX	Novell Internetwork Packet Exchange Protocol (IPX)
IRECAGENTSERVER	IREC agent server
IRONBUS	Iron bus
ISA	Integrated Services Adapter (ISA)
ISDN	Integrated Services Digital Network (ISDN)
ISRHOG	Interrupt Service Routine Hog
ISSU	In Service Software Upgrade
ISSU_CS	ISSU configuration synchronization
IUA	ISDN User Adaptation Layer
IVR	Interactive Voice Response (IVR)
IVR_MSB	Media Stream module
IVR_NOSIGNALING	Interactive Voice Response (IVR) system messages not related to call signaling
IXP1200_CP	One port Fast Ethernet with coprocessor assist
IXP_MAP	ESF Network Processor Client Mapper
JAGGER	Constellation WAN line card
JETFIRE_SM	NAM Sensor network module
KERBEROS	Voice over IP (VoIP) for Cisco AS5800
KEYMAN	Keysting encryption
KINEPAK	Voice over IP (VoIP) for Cisco AS5800
L2	Layer 2

Table 1 Facility Codes (continued)

Code	Facility
L2_AGING	Layer 2 aging
L2_APPL	Layer 2 application
L2_ASIC	Layer 2 forwarding engine
L2CAC	Layer 2 CAC
L2HW_CM	Layer 2 hardware connection manager
L2R	L2RLY
L3_ASIC	Layer 3 CEF engine
L3MM	Layer 3 Mobility Manager
L3_MGR	Layer 3 manager
L3TCAM	Layer 3 TCAM manager
LANCE	Local Area Network Controller Ethernet
LANE	LAN Emulation
LANMGR	IBM LAN Network Manager
LAPB	X.25 Link Access Procedure, Balanced
LAPP_OFF	Fax offramp calls
LAPP_ON_MSGS	Fax onramp calls
LAT	DEC local-area transport
LC	Line card
LC_10G	Hamptons 10G trunk card
LC_2P5G	Hamptons 2.6G trunk card
LCB	Line Control Block (LCB) event process
LCCEF	ATM Cisco Express Forwarding (CEF) adjacency
LCCOREDUMP	Line card core dump subsystems
LCFE	Fast Ethernet line card (LC) driver
LCGE	Gigabit Ethernet line card (LC) driver
LCINFO	Line card crash information subsystem
LCLOG	Internet router line card logger subsystem
LCMDC	ONS 15540 Extended Services Platform
LCOC12_CH_DS3	Internet router OC-12-channelized-to-D3 line card
LCPLIM	Line card physical layer interface module
LCPOS	Packet over SONET (POS) line card driver
LCR	Line card registry
LCRED	LC and Port redundancy
LDP	Label Distribution Protocol (LDP)
LES_FDDI	LAN Emulation Server/Fiber Distributed Data Interface
LEX	LAN extension

Table 1 Facility Codes (continued)

Code	Facility
LFD	Label Forwarding Database
LFD	MFI Label Switching Database (LFD)
LIBT2F	Text to fax library
LIBTIFF	Tagged Image File Format (TIFF) library
LINECARD	Node Route Processor (NRP) line card
LINEPROTO	Line Protocol
LINK	Data link
LLC	Logical Link Control (LLC), type 2
LLDP	Link Layer Discovery Protocol
LLIST	Linked list facility
LNM	Link noise monitor for the E1T1 module
LNMC	LAN network manager
LOADER	CIP for relocating loader facility
LOGIN	Login
LOVE	Statistics from the CIP to the router
LPD	Line printer daemon
LRE	Long Reach Ethernet for the Catalyst 2950 switch
LSD	MPLS Forwarding Infrastructure (MFI) Label Switching Database
LSPV	MPLS Label-Switched Path Verification
LSS	LS switching message definition
M32X	M32X Basic Rate Interface trunk card
MAC_LIMIT	MAC address table entries
MAC_MOVE	Host activity
MAILBOX	ChipCom mailbox support
MARS_NETCLK	Network clock system
MARVEL_HM	Platform-dependent health monitor rules
MASTER_LED	Master LED
MBRI	Multi-BRI port modules
MBUF	CMCC memory buffer
MBUS	CMCC maintenance bus (Mbus)
MBUS_SYS	Maintenance bus (Mbus) system
MC3810_DSX1	MC3810 DSX1 subsystem
MCAST	Layer 2 multicast
MCT1E1	CT1/CE1 shared port adapter
MCX	Voice port adapter
MDEBUG	Memory debug

Table 1 Facility Codes (continued)

Code	Facility
MDR_SM	Minimum Disruption Restart State Machine
MDS	Multicast distributed switching
MDT	PIM MDT
MDX	
MEM_ECC	Memory write parity errors detected by ECC control
MEM_HM	Memory health monitor
MEMD	CMCC CIP related to the memory device facility
MEM_MGR	Memory management
MEMPOOL	Enhanced Memory pool MIB
MEMSCAN	Memory scan
METOPT	ONS 15540 Extended Services Platform
METS	Memory-leak analysis
MFI	MPLS Forwarding Infrastructure
MFIB	Multicast Forwarding Information Base
MFIB_CONST_LC	MFIB-Constellation platform
MFIB_CONST_RP	MFIB Constellation information
MFIB_STATS	MFIB statistics
MGCP	Media Gateway Control Protocol (MGCP)
MGCP_APP	Media Gateway Control Protocol (MGCP) application-specific
MGCP_RF	Media Gateway Control Protocol (MGCP) High Availability
MHA	Marvel high availability
MHA_LINE	Marvel high availability line
MHA_MODE	Marvel high availability
MHA_RF	Marvel high availability redundancy feature
MIC	Port adapter
MICA	Modem ISDN Channel Aggregation (MICA)
MIF68840	PCI MC68840 FDDI port adapter
MIMIC	MCOM integrated modem network modules
MIPC	Marvel IPC
MISA	Multiple Crypto Engine subsystem
MISTRAL	Mistral ASIC
MK5	MK5025 serial controller
MLD_PROT	Multicast Listener Discovery
MLOAD	Module Loader
MLS_ACL_COMMON	Multilayer switching ACL
MLS_RATE	Multilayer Switching Rate Limit

Table 1 Facility Codes (continued)

Code	Facility
MLSCEF	Multilayer Switching Cisco Express Forwarding
MLSM	Multilayer Switching Multicast
MMLS	Multicast Multilayer Switching
MMLS_RATE	Multicast Multilayer Switching Rate Limit
MMODEM	Integrated modem network module
MODEM	Router shelf modem management
MODEM_HIST	Router shelf modem history and tracing
MODEM_NV	Modem NVRAM
MODEM_CALLREC	Modem call record
MODEMCALL RECORD	Modem Call Record
MOHAWK_SM	IDS sensor network module
MONITOR	Cisco IOS software ROM monitor
MOTCR	Hardware accelerator for IPSec
MPA68360	VIP Multi-channel Port Adapter
MPC	Multipath Channel Protocol
MPF	Multi-Processor Forwarding (MPF)
MPLS	Multiprotocol Label Switching
MPLS_ATM_TRANS	ATM Transport over MPLS
MPLS_PACKET	MPLS packet
MPLS_TE	Label Switch Path (LSP) tunnel
MPLS_TE_PCALC	MPLS TE path calculation facility
MPOA	Multiprotocol over ATM (MPOA)
MPLSOAM	MPLS management
MRIB	Multicast Routing Information Base
MRIB_API	MRIB client API
MRIB_PROXY	MRIB proxy
MROUTE	Multicast route
MSACDSPRM	Media Conferencing DSP Resource Manager
MSC100_SPA_CC	Cisco 7304 SPA carrier card
MSDP	Multicast Source Discovery Protocol
MSDSPRM	Media Services DSP Resource Manager
MSFC2	Multilayer Switch Feature Card 2
MSFW	Media Services DSP Firmware Manager
MSG802	CMCC CIP 802 for IEE 802.2cx LLC Protocol
MSPI	Mail Service Provider

Table 1 Facility Codes (continued)

Code	Facility
MTRIE	Mtrie
MUESLIX	Mx serial application-specific integrated circuit (ASIC)
MV64340_ETHERNET	MV64340 Ethernet controller
MVR_RP	Multicast VLAN Registration (MVR) route processor
MWAM	Multiprocessor WAN Application Module (MWAM)
MWAM_FILESYSTEM	Multiprocessor WAN Application Module (MWAM) crashinfo and bootflash file system
MWAM_FLASH	Multiprocessor WAN Application Module (MWAM) flash memory
MWAM_FUR	Multiprocessor WAN Application Module (MWAM) FUR
MWAM_NVRAM	Multiprocessor WAN Application Module (MWAM) NVRAM
MWAM_VRTC	Multiprocessor WAN Application Module (MWAM) VTRC
MWR1900_QOS_GENERAL	MWR1900 Quality of Service (QoS)
MWR1900_CFG_GENERAL	MWR1900 PXF queuing configuration
MWR1900_REDUNDANCY	MWR1900 redundancy
MXT_FREEDM	8PRI/4T board
NATMIB_HELPER	NAT MIB helper
NBAR	Network-based application recognition (NBAR)
NETFLOW_AGGREGATION	NetFlow aggregation
NETGX_CRYPTO	NETGX CRYPTO hardware accelerator module for IPsec
NET_SERV	Networking Services
NETWORK_CLOCK_SYNCHRONIZATION	Network clock synchronization
NETWORK_PORT_SATELLITE	Network port satellite
NETWORK_RF_API	Network redundancy feature API
NEVADA	CMCC CIP interrupt controller
NHRP	Next Hop Resolution Protocol (NHRP)
NIM	Network interface module
NM_8_16AM_V2_MODULE	NM-8/16AM-V2 module
NP	NextPort (NP)
NP_BS	NextPort (NP) Bootstrap and Crash Monitor
NP_CLIENT	NextPort (NP) client
NP_DDSDM	NextPort (NP) Digital Data Services Manager

Table 1 Facility Codes (continued)

Code	Facility
NP_DSPLIB	NextPort (NP) DSPLIB
NP_EST	NextPort (NP) error, status, and trace
NP_MD	NextPort (NP) modem driver
NP_MM	NextPort (NP) module manager
NP_SIGLIB	NextPort (NP) signaling library
NP_SPE_DS	NextPort (NP) Dial Shelf Service Processing Element (SPE) Manager
NP_SSM	NextPort (NP) Session and Service Manager
NP_UCODE	NextPort (NP) microcode
NP_VPD	NextPort (NP) Voice Packet Driver
NP_VSM	NextPort (NP) Voice Service Manager
NRP	Network Routing Processor (NRP)
NRP2	Network Route Processor, type 2
NRP2_NVMANAGE	Network Route Processor, type 2 NVRAM management
NRP2_SE64	SE64 upper and lower layer device driver
NRP2EHSA	NRP2 EHSA
NSE	Network services engine
NSE100	Network services engine NSE100
NSP	Network Switch Processor (NSP)
NSP_APS	Cisco 6400 node switch processor (NSP)
NSP_DISK	NSP disk
NSP_OIR	Cisco 6400 online insertion and removal (OIR)
NSPINT	Network switch processor (NSP) interrupt infrastructure
NTP	Network Time Protocol (NTP)
OBFL	Onboard Failure Logging
OCE	Output chain elements
ODM	Online diagnostics manager
OER_BR	Optimized Edge Routing (OER) border router
OER_MC	Optimized Edge Routing (OER) master controller
OER_TT_FLOW	Optimized Edge Routing (OER) top talkers flow border router
OIR	Online insertion and removal (OIR)
OLM	Optical Link Management
ON_DIAG	Online diagnostics subsystem
ONLINE	SCP (Switch-module Configuration Protocol) download processor
ONS15530	Cisco ONS 15530 trunk card
OOBP	Out-of-band port (OOBP)
OPTICAL_MONITOR	Optical monitoring

Table 1 **Facility Codes (continued)**

Code	Facility
OSM_MULTILINK	Optical Services Module (OSM) distributed multilink
OSPF	Open Shortest Path First (OSPF)
OSPFv3	Open Shortest Path First version 3
P2IPC	Fast IPC event
P2IPC_TRACE	Fast IPC trace
PA	Port adapter
PACC	Cisco 7300 port adapter carrier card (PACC)
PACC_IPC	Port Adapter Carrier Card (PACC) interprocess communication (IPC)
PACKET	Packet
PAD	X.25 packet assembler/disassembler
PAGP_DUAL_ACTIVE	Port aggregation protocol (PAgP)
PAMMBOX	Platform-independent PAM mailbox serial interface
PARSE_RC	Parser return code
PARSER	Parser
PBI_OPEN	Programmable Binary File (PBI) Data Processing
PBR	Policy Based Routing
PCI_FE	PCI Fast Ethernet
PCMCIAFS	PCMCIA disk
PCPA	Parallel Channel Port Adapter
PDSN_CLUSTER	PDSN cluster controller or PDSN cluster member
PERUSER	PPP per-user configuration
PF	Protocol filtering
PFINIT	Platform initialization
PF_OBFL	Platform onboard failure logging
PFREDUN	Policy Feature Card Redundancy
PGM	Pragmatic General Multicast (PGM)
PGMHOST	Pragmatic General Multicast (PGM) host module
PHY	Physical layer
PIF	RSC PIF
PIM	Protocol Independent Multicast
PIMP	Process interrupt mask profiler
PIMSN	Protocol Independent Multicast Snooping
PIM_PROT	Protocol Independent Multicast
PIM_REG_TUN	PIM register tunnel
PIMSN	PIM snooping
PINNACLE	Pinnacle ASIC

Table 1 Facility Codes (continued)

Code	Facility
PKI	PKI feature
PLAT_MP	Platform MP support
PLATFORM	Platform-specific
PLATFORM_IMAGE_PREFIX	Multilayer Switch Feature Card (MSFC)
PM	Port Manager
PM3387	One-port Gigabit Ethernet HWIC-1GE-SFP
PM_DB_HA	Port management database high-availability client
PMIP	WLAN Proxy Mobile IP Subsystem
PM_MODEM_HIST	Modem history and tracing
PM_MODEM_MAINT	Modem maintenance
PM_SCP	Port manager Switch-Module Configuration Protocol
PMSN	Port State Machine
PNNI	Private Network-Network Interface
POLICY_API	Policy API
POLICY_MANAGER	Policy Manager
PORT	Port Management
PORT_SECURITY	Port security
POS	Packet over SONET subsystem
POS_GIGE	Packet over SONET Gigabit Ethernet
POSDW	Packet over SONET double-wide PCI port adapter driver
POSLOC	Packet over SONET line card
POT1E1	Versatile Interface Processor (VIP) multichannel port adapter
POTS	Plain old telephone service (POTS)
PPP	Point-to-Point Protocol (PPP)
PQ3_TSEC	PQ3 TSEC
PQII	MPC860 quad integrated communications controller
PQUICC	MPC860 quad integrated communications controller
PQUICC_ASYNC	Asynchronous MPC860 quad integrated communications controller
PQUICC_ASYNC_NOMEM	Integrated Port Module Asynchronous Driver
PQUICC_ETHER	Ethernet MPC860 quad integrated communications controller
PQUICC_ETHERNET	Ethernet MPC860 quad integrated communications controller
PQUICC_FE	Fast Ethernet MPC860 quad integrated communications controller
PQUICC_SERIAL	Serial MPC860 quad integrated communications controller
PQUICC3	MPC8500 PowerQUICC3

Table 1 **Facility Codes (continued)**

Code	Facility
PRBS	Pseudo-random bit sequence
PROCYON	CPU daughter card for the Supervisor Engine 720
PS	Power supply
PTRANSFORM	Protocol transformation
PT	Protocol Translation
PV	Private VLAN
PVDM2	PVDM2 SIMM
PW_WATCHER	Portware Watcher
PXF	Parallel eXpress Forwarding (PXF)
PXF_ACL	Parallel eXpress Forwarding (PXF) ACL-specific
PXF_API	Parallel eXpress Forwarding (PXF) API-related
PXF_DMA	Parallel eXpress Forwarding (PXF) DMA subsystem
PXF_FIB	Parallel eXpress Forwarding (PXF) FIB select-specific
PXF_FLOW	Parallel eXpress Forwarding (PXF) Netflow-related
PXF_GEC	PXF EtherChannel
PXF_GRE	Parallel eXpress Forwarding (PXF) GRE tunnel-related
PXF_NAT	Parallel eXpress Forwarding (PXF) Network Address Translation (NAT)-related
PXF_QOS	Parallel eXpress Forwarding (PXF) Quality of Service (QoS)-related
PXF_VRFS	Parallel eXpress Forwarding (PXF) VRF selection-specific
QA	Queue and accumulator
QEM	QEM driver
QLLC	Qualified Logical Link Control
QM	Quality of service management
QNQ	Q-in-Q
QOS	Quality of Service
QOSMGR	Quality of Service (QoS) manager
QUICC	MC68360 quad integrated communications controller
QUICC_ASYNC	Asynchronous MC68360 quad integrated communications controller
QUICC_ETHER	Ethernet MC68360 quad integrated communications controller
QUICC_SERIAL	Serial MC68360 quad integrated communications controller
R4K_MP	Central processing unit
RAC	Ring Access Controller
RADIO	Radio driver
RADIO_DRIVER	Radio driver
RADIUS	RADIUS

Table 1 Facility Codes (continued)

Code	Facility
RADIX	Radix
RADSRV	Embedded RADIUS server
RAIKO	RAIKO-based feature board
RANDOM	Random number generator
RASP16	Interface Multiplexer ASIC
RBCP	Router Blade Control Protocol
RCMD	Remote command
RE	RE subsystem
RECONCILIATION_HA	Reconciliation high availability
RED	Redundancy-related
RED_MODE	High-availability redundancy mode
RED_REMOTE	Redundancy remote
REDUNDANCY	High Availability redundancy
REDUNDANCY_UTILS	High Availability redundancy utilities
Regen	Cisco optical regenerator
Regen_MAINBOARD_ASYNC_PQUICC	Asynchronous MPC860 quad integrated communications controller for the Cisco optical regenerator
REGISTRY	Registry
RESOURCE_MGR	Resource manager
RESOURCE_MON	Resource monitor subsystem
RESYNCH	Route Processor Module (RPM) resynchronization process
RF	Redundancy facility
RF_INTERDEV	Redundancy facility (RF) interdevice
RF_ISSU	Redundancy facility (RF) In Service Software Upgrade
RFS	Remote file system
RIM	Redundant Interface Manager (RIM)
RIP	IP Routing Information Protocol (RIP)
RITE	IP traffic export
RLM	Redundant Link Manager (RLM)
RM	Resource Manager
RMON	Remote Monitoring Protocol
ROUTEMAP	Route map
ROUTEMAP_IPC	Route map interprocess communication (IPC)
RPA	Resource Pool Allocation (RPA)
RPC	Remote Procedure Call (RPC)
RPF	Multicast RPF

Table 1 Facility Codes (continued)

Code	Facility
RPM	Route Processor Module (RPM)
RPB_BKCD	RPM back card
RPM_BULK	RPM-specific bulk file
RPM_CONFIG_COPY	RPM config copy feature
RPM_CONN_MGMT	RPM Connection Management-related
RP_MLP	Distributed Point-to-Point Protocol (PPP) Multilink
RPM_RED	RPM redundancy
RPM_TRAP_CLIENT	RPM trap client
RPM_VIRTUAL	Route Processor Module (RPM) virtual port
RPM_VIRTUAL_PORT	RPM virtual port
RPMXF	Route Processor Module, express forwarding (RPM-XF) card level
RPMXF_DMLP	Route Processor Module, express forwarding DMLP configuration
RPMXF_QOS_GENERAL	Route Processor Module, express forwarding (RPM-XF) Quality of Service (QoS)
RPMXF_QUEUE_CFG_GENERAL	Route Processor Module, express forwarding (RPM-XF) queuing configuration
RPMXF_QUEUE_CFG_STR	Route Processor Module, express forwarding (RPM-XF) queuing configuration
RPMXF_TOASTER	Route Processor Module, express forwarding (RPM-XF) Toaster
RPMXFEVENTMGR	Route Processor Module, express forwarding (RPM-XF) event manager subsystem
RPS	Redundant power system
RS_TDM	Router shelf time-division multiplexing
RRR_PCALC	Routing with Resource Reservation (RRR) path calculation
RSC	Route Switch Controller (RSC)
RSC_CF	Compact flash error
RSC_FPFE_IOSDIAGS	RSC front panel Fast Ethernet IOS diagnostics
RSC_MBUS	MBus on RSC
RSC_PIF_IOSDIAGS	Cisco IOS diagnostic test
RSCMSM	Resource Measurement
RSCPB	RSC push button
RSP	Route Switch Processor
RSP_ISSU	Cisco 7500 In Service Software Upgrade system
RSRB	Remote source-route bridging
RSVP	RSVP protocol
RSVP_HA	RSVP protocol high availability

Table 1 Facility Codes (continued)

Code	Facility
RTT	Round-trip time monitor
RUDP	Reliable User Datagram Protocol
RUNCFGSYNC	Auto-Running Configuration Synchronization
RVTCVT_INFO	RVT/CVT Runtime Informational messages
RW_TOO_LONG	Windstar MPLS rewrite
S4T68360	Four-port synchronous serial adapter based on the 68360 processor
SASL	Simple Authentication and Security Layer
SARMGR	Segmentation and reassembly (SARMGR)
SATVS	Satellite Switch Virtual Switch (VS)
SBETH	MAC controller (SBETH)
SBFIFO	Packet first-in, first-out (FIFO) MAC controller
SCCP	Signaling connection control part
SCHED	Scheduler
SCP	Downstream physical unit (DSPU)
SDEE	SDEE subsystem
SDLC	Synchronous Data Link Control
SDLLC	Synchronous Data Logical Link Control (SDLLC) Logical Link Control Type 2 (LLC2) translation
SDP	Session Description Protocol
SDLC	GSHDSL
SDM	Security Device Manager
SDSPFARM	SDSP FARM register and unregister
SEC	IP security
SEC_LOGIN	Secure login
SENSOR	Voltage and temperature sensor
SERIAL	WS SERIAL line card
SERVER_CLOCK_SYNC	Clock synchronization service
SERVICE_MODULE	Service module
SERVICEMODULE	Service module monitor
SFF8472	Floating-point subsystem (SFF8472)
SFP	SFP
SFP_SECURITY	SFP Security
SGBP	Stack Group Bidding Protocol
SGCP	Simple Gateway Control Protocol (SGCP)
SGCP_APP	Simple Gateway Control Protocol (SGCP) application-related
SGPRSWARNING	SGPRS warning

Table 1 Facility Codes (continued)

Code	Facility
SHELF	Router shelf
SHMWIN	Shared memory
SIBYTE	SiByte processor complex
SIGSM	Signaling Service Manager
SIP	Session Initiation Protocol
SIP200	SPA Interface Processor 200
SIP400	SPA Interface Processor 400
SIP600	SPA Interface Processor 600
SIP600_PARSING_ENGINE	SIP-600 parsing engine
SIP600_QOS	SIP-600 QoS
SIPSPA	Shared Port Adapter on GSR line card
SKINNYSECURE_SERVER	Skinny secure server
SKINNYSECURE_SERVICE	Skinny secure service
SKINNYSERVER	Skinny server
SLB	Server load balancing
SLB_DFP	Server Load Balancing Dynamic Feedback Protocol agent
SLICE_TOASTER	Slice
SLIP	Serial Line Internet Protocol
SLOT	AS5850 slot state machine and OIR-related events
SLOT_FPD	Common line card FPD
SLOT_HM	RSC slot health monitor
SLOTDUMP	Slot dump
SM	State machine (SM)
SMC	Services Management Channel
SMF	Software MAC Filter
SMIC	2FE2W, 1FE2W, 1FE1R2W, 2W network module-related
SMRP	Simple Multicast Routing Protocol
SMSC_RP	Short message service center route processor
SNAPSHOT	Snapshot dial-on-demand routing
SNASW	Systems Network Architecture (SNA) Switching Services
SNMP	Simple Network Management Protocol (SNMP)
SNMP_BULKSTAT	SNMP bulk-data collection
SNMP_MGR	Simple Network Management Protocol (SNMP) proxy

Table 1 **Facility Codes (continued)**

Code	Facility
SOI	Simple Network Management Protocol (SNMP) over interprocess communication (IPC)
SONET	Synchronous Optical Network
SONETMIB	Synchronous Optical Network Management Information Base
SONICT	SONIC Ethernet driver
SPA	Shared Port Adapter (SPA)
SPA_CCB	SPA CCB command
SPA_CHOC_DSX	Common Channelized Shared Port Adapter
SPA_CHOCX	Common Channelized Shared Port Adapter
SPA_CHOCX_CWRP	Common Channelized Shared Port Adapter
SPA_CONSOLE	Shared Port Adapter (SPA) virtual console
SPA_CT3	CT3 Shared Port Adapter
SPA_DATABUS	SPA data bus interface
SPA_EEPROM	Shared Port Adapter (SPA) EEPROM
SPA_ETHER	Ethernet Shared Port Adapter
SPA_FPD	Shared Port Adapter (SPA) field-programmable device (FPD)
SPA_HA	SPA High Availability
SPA_IPSEC	IPsec SPA Card (SPA-IPSEC)
SPA_MIB	SPA MIB
SPA_OIR	Shared Port Adapter (SPA) online insertion and removal (OIR)
SPA_PLIM	Shared Port Adapter (SPA) physical layer interface module
SPA_PLUGIN	Shared Port Adapter (SPA) plugin
SPA_PMB	SPA specific power management bus
SPA_T3E3	Shared Port Adapter (SPA) T3E3
SPACP	SPA CP
SPAN	Spanning Tree Protocol
SPANTREE	Spanning Tree
SPANTREE_FAST	Spanning Tree Fast Convergence
SPANTREE_VLAN_SW	Spanning Tree VLAN switch
SPARC	3800 SPARC coprocessor subsystem
SPE	Service Processing Element (SPE)
SRC	Switch Redundancy Controller
SRCP_APP	Simple Resource Coordination Protocol (SRCP) application
SRP	Spatial Reuse Protocol (SRP)
SRPMIB	Spatial Reuse Protocol (SRP) MIB
SSA	Super Santa Ana ASIC

Table 1 **Facility Codes (continued)**

Code	Facility
SSE	Silicon switching engine
SSG	Service Selection Gateway
SSH	Secure Shell (SSH) Protocol
SSI	SSI event
SSLVPN	SSL-based VPN
SSP	State Synchronization Protocol Manager
SSRP	SONET/SDH based SRP Double Wide PCI port adapter driver
SSSMGR	Subscriber Service Switching (SSS) Manager
STACKMGR	Stack manager controller
STAPL_OPEN	Standard Test And Programming Language (STAPL) Processing
STANDBY	Hot Standby Router Protocol (HSRP)
STORM_CONTROL	Storm control
STRING	String database
STUN	Serial tunneling
SUBSYS	Software subsystems
SUPERVISOR	Supervisor
SUPQ	Supervisor queue
SUPW_PROCMIB	Supervisor MIB
SVCLC	Service line card (SVCLC) firewall SP
SW56	Switch 56K
SW_DAI	Dynamic ARP Inspection
SWEPA	Software encryption port adapter and key management
SWITCH	Switch interface
SWITCH_IF	Switch interface subsystem
SWITCHOVER	Line card switchover-related
SWITCH_QOS_TB	Quality of Service trusted boundary
SW_MGR	Segment switch manager
SW_VLAN	Virtual LAN (VLAN) manager
SYS	Operating system
SYSCTLR	System controller subsystem
SYSLOGD	System logging
SYSLOG_SERVER	Syslog-server file system routines
YSMGR	System Manager
YSMGR_PLATFORM	Cisco Catalyst 6500 system manager process
YSMGT_RPC	System management
SYSTEM_BUS_ASIC	System Bus Translator ASIC

Table 1 Facility Codes (continued)

Code	Facility
SYSTEM_CONTROLLER	System controller
SYSTEM_HM	System health monitor
T1E1SUNI	PAM port driver
TAC	Terminal Access Controller Access Control System
TAGCON	Tag distribution and control
TAGCOS	Tag switching class of service
TAR_FS	Tar file system
TBRIDGE	Transparent bridging
TCAM_MGR	TCAM manager
TCAMMGR	TCAM manager
TCATM	ATM tag control
TCMIPC	Toaster-RP IPC-related
TCMSP	Call control for telephony-style hardware interfaces
TCP	Transmission Control Protocol
TDM	Time-division multiplexing (TDM)
TDM_CLOCK_SYNCHRONIZATION	Time-division multiplexing (TDM) frame clock
TDM_CONN	TDM connections
TDP	Tag Distribution Protocol
TENGIGE_LC	10-Gigabit Ethernet line card
TESTPA	TestPA port adapter
TFIB	Tag Forwarding Information Base
TI1570	PCI/TI1570-based ATM port adapter
TIB	Tag Information Base
TID_HA	Table ID High Availability (HA)
TIDP	Threat Information Distribution Protocol
TIGER	Error-correcting code (ECC) and parity-related
TINY_FRAG_POLICER	Tiny frag policer
TLV	EEPROM
TMS	Threat Management Service
TMQ	Inbound terminal port queuing
TN	Telnet
TN3270	TN3270 protocol
TOASTER_CP	Toaster-based coprocessor assist
TOASTER_IPC	Toaster interprocess communication
TOPN_COUNTERS	Switch TopN report counters

Table 1 **Facility Codes (continued)**

Code	Facility
TPLUS	TACACS Protocol
TR	Token Ring
TRANSCEIVER	Transceiver module
TRINITY	Trinity System
TRUNK	E1/T1 trunk card
TRUNK_CLOCK	AS5400 clocking
TRUNK_DFC	Trunk dial feature card
TRUNK_SERIAL	Trunk serial device
TSP	Tag-switched path (TSP)
TTFIB_NP_CLIENT	Toaster Tag FIB (TTFIB) NP client
TTY	Tty-related for all platforms
TTYDRIVER	Router shelf asynchronous driver
TUN	Tunnel
TUNSS	Tunnel security
TURBORSC	Platform-specific RSC
TWOBT	WS 2BT protocol driver
TWO_GIGE	Two Gigabit Ethernet subsystem
TXCONN	Cisco Transaction Connection (CTRC)
UBL	Universal Boot Loader
UBR7200	Cable modem termination system
UBR900	Cisco uBR900 Series Cable Access Routers
UCODE	Microcode
UDLD	UniDirectional Link Detection (UDLD) protocol
UNICAST_FLOOD	Unicast flooding
UNIX	UNIX
UNIXRP	UNIX RP
UPS	Uninterruptible power supply
URLF	URL filtering subsystem
USBFLASH	USB flash device
USB_HOST_STACK	USB host stack
USB_TOKEN	USB security token
USB_TOKEN_FILESYS	USB Token File System
UTIL	Utility
VACL	VLAN ACL
VALENCIA	Valencia ASIC on Services SPA Carrier Card (SSC-600)
VFC	Voice over IP (VoIP)

Table 1 Facility Codes (continued)

Code	Facility
VINES	Banyan VINES
VIP	Versatile Interface Processor
VIP_MDR	Versatile Interface Processor Minimum Disruption Restart system
VIPMLP	Multilink PPP
VOA	Hamptons variable optical attenuator (VOA) card
VOICE_ELOG	Voice event logger
VOICE_FSM	MC3810 voice FSM subsystem
VOICE_IEC	Voice internal error code (IEC)
VOICE_RC	MC3810 voice resource subsystem
VOICE_UTIL	Voice call control utilities
VOIPAAA	VoIP AAA
VOIPFIB	VoIP FIB
VOLANT	Content engine NM
VPA	Voice port adapter
VPD	ATM CES (Voice Processor Deck) driver
VPDN	Virtual Private Dialup Networking
VPLS_NP_CLIENT	Virtual Private LAN Service NP client
VPN_HW	VPN hardware accelerator
VPNSM	VPN Services Module
VPNSMIOS	VPNSM crypto connection
VPNSMIOSSP	VPNSM crypto connection SP
VRM	Voice Resource Management
VRRP	Virtual Router Redundancy Protocol
VSAT	Satellite Module
VSEC	VLAN security violation
VS_GENERIC	Virtual switch
VSL	Virtual switch link
VSI_M	Virtual switch interface (VSI) master
VSL_BRINGUP	Virtual switch link bringup
VSLP	Virtual Switch Link Protocol
VS_MOD	Virtual switch module provisioning
VS_PARSE	Virtual switch
VS_QOS_ACL	Virtual switch QoS ACL
VSTATS	Voice statistics push data
VTSP	Voice telephony security parameter index (SPI)
WA_ENGINE	WA engine network module

Table 1 Facility Codes (continued)

Code	Facility
WARMUPGRADE	Warm upgrade feature
WCCP	Web Cache Communication Protocol (WCCP)
WIC_AM	WIC-AM modem initialization
WiSM	WiFi services module
WLAN_CONTROLLER	WLAN controller network module
WLCCP_WDS	Wireless LAN Context Control Protocol (WLCCP) for WDS
WS_ALARM	Windstar alarm
WSHTF	HT_FPGA data plane driver
WSIPC	Windstar IPC
X25	X.25
XCCTSP_VOICE	External Call Control Telephony Service Provider
XCPA	Mainframe Channel Port Adapter
XCVR	Transponder
XDR	eXternal Data Representation
XDSLWIC	Cisco 2600 series and 3600 series xDSL drivers
XTAGATM	Extended Tag ATM (XTagATM)
Y88E8K	Yukon 88E8000 E/FE/GE controller
ZAM	Zenith Alarm Management

Table 2 System Message Severity Levels

Level	Description
0 – emergency	System unusable
1 – alert	Immediate action needed
2 – critical	Critical condition
3 – error	Error condition
4 – warning	Warning condition
5 – notification	Normal but significant condition
6 – informational	Informational message only
7 – debugging	Appears during debugging only

System message severity levels correspond to the keywords assigned by the **logging console** and **logging monitor** global configuration commands that define where and at what level these messages appear. In general, the default is to log messages from level 0 (emergencies) to level 7 (debugging). However, the default level varies by platform. For more information, see the system configuration chapter and descriptions of the **logging console** and **logging monitor** commands in the appropriate Cisco IOS configuration guide and command reference publications.

Table 3 Representation of Variable Fields in Messages

Representation	Type of Information
[atalk_address]	AppleTalk address
[atalk_net]	AppleTalk network, either 600 or 600-601
[char]	Single character
[chars]	Character string
[dec]	Decimal number
[enet]	Ethernet address (for example, 0000.FEED.00C0)
[hex]	Hexadecimal number
[hex_addr]	Hexadecimal address
[inet]	Internet address (for example, 10.0.2.16)
[int]	Integer
[ipv6_addr]	IP version 6 (IPv6) address
[node]	Address or node name
[p]	IPv6 address
[sci_notation]	Scientific notation
[t-line]	Terminal line number in octal (or decimal if the decimal-TTY service is enabled)
[v-name]	VINES name; or service number (hex or decimal)

System Message Example

The following is an example of a system error message:

```
%LINK-2-BADVCALL: Interface [chars], undefined entry point
```

- LINK is the facility code.
- 2 is the severity level.
- BADVCALL is the mnemonic code.
- “Interface [chars], undefined entry point” is the message text.

Some messages also indicate where the system condition occurred. These messages are structured as follows:

```
%FACILITY-SOURCE-SEVERITY-MNEMONIC: Message-text
```

SOURCE indicates the location of the condition. Examples of SOURCE are SP, which indicates that the condition occurred in the switch processor, or DFC5, which indicates that the condition occurred in the Distributed Forwarding Card on the module in slot 5.

Message Traceback Reports

Some messages describe internal errors and contain traceback information. This information is very important and should be included when you report a problem to your technical support representative.

The following sample message includes traceback information:

```
-Process= "Exec", level= 0, pid= 17
-Traceback= 1A82 1AB4 6378 A072 1054 1860
```

Message Overrun and Continuation

When a system message contains lengthy descriptive information, the message text can sometimes exceed the syslog buffer. In releases earlier than Cisco IOS Release 12.2(33)SXF2, the overrun message is truncated to the buffer size and any additional text is lost. When truncation occurs, the following message is sent after the truncated message:

```
%Log packet overrun, PC [hex], format: [chars]
```

In Cisco IOS Release 12.2(33)SXF2 and later releases, a long message can be split into multiple messages, with truncation and continuation indicators at each section. The end of an incomplete syslog message section will be tagged with the string **"**MSG XXXXX TRUNCATED**"**, where XXXXX is a count of overrun messages since the last system reload. The continuation of the message will begin with **"**MSG XXXXX CONTINUATION #YY"**, where YY represents the part number. A message can be divided into a maximum of 99 parts.

This example shows a message split into three sections:

```
%TEST-5-ANY_ERRMSG: This message should be split into three
0123456789ABCDEFGHIJKLMN0PQRSTUVWXYZabcdefghijklmnopqrstu
vwx0123456789ABCDEFGHIJKLMN0PQRSTUVWXYZabcdefghijklmnopqr
STUVWXYZabcdefghijklmnopqrstu0123456789ABCDEFGHIJKLMN0PQ
RSTUVWXYZabcdefghijklmnopqrstu0123456789ABCDEFGHIJKLMN0P
MNOPQRSTUVWXYZabcdefghijklmnopqrstu0123456789ABCDEFGHIJK
Lmnopqrstuvwxyz0123456789ABCDEFGHIJKLMN0PQRSTUVWXYZabcde
fghijklmnopqrstuvwxyz0123456789ABCDEFGHIJKLMN0PQRSTUUVW
XYabcdefghijklmnopqrstu0123456789ABCDEFGHIJKLMN0PQRSTU
VWXYZabcdefghijklmnopqrstu0123456789ABCDEFGHIJKLMNO**MSG
00001 TRUNCATED**
**MSG 00001 CONTINUATION
#01**PQRSTUVWXYZabcdefghijklmnopqrstu0123456789ABCDEFGHI
JKLMN0PQRSTUVWXYZabcdefghijklmnopqrstu0123456789ABCDEF
GHIJKLMN0PQRSTUVWXYZabcdefghijklmnopqrstu0123456789ABC
DEFGHIJKLMN0PQRSTUVWXYZabcdefghijklmnopqrstu0123456789
ABCDEFGHIJKLMN0PQRSTUVWXYZabcdefghijklmnopqrstu01234567
89ABCDEFGHIJKLMN0PQRSTUVWXYZabcdefghijklmnopqrstu0123456
789ABCDEFGHIJKLMN0PQRSTUVWXYZabcdefghijklmnopqrstu012345
6789ABCDEFGHIJKLMN0PQRSTUVWXYZabcdefghijklmnopqrstu01234
56789ABCDEFGHIJKLMN0PQRSTUVWXYZabcdefghijklmnopqrstu0123
456789ABCDEFGHIJKLMN0PQRSTUVWXYZabcdefghijklmnopqrstu012
3456789ABCDEFGHIJKLMN0PQRSTUVWXYZabcdefghijklmnopqrstu01
23456789ABCDEFGHIJKLMN0PQRSTUVWXYZabcdefghijklmnopqrstu
UVW**MSG 00001 TRUNCATED**
**MSG 00001 CONTINUATION
#02**XYZabcdefghijklmnopqrstu0123456789ABCDEFGHIJKLMN0PQ
RSTUVWXYZabcdefghijklmnopqrstu0123456789ABCDEFGHIJKLMN0P
QRSTUVWXYZ
```


Using the Error Message Decoder to Search for System Messages

The Error Message Decoder (EMD) is a tool that will help you to research and resolve error messages for Cisco software. The EMD helps you to understand the meaning of the error messages that display on the console of Cisco routers, switches, and firewalls.

To use the EMD, copy the message that appears on the console or in the system log, paste it into the window, and press the **Submit** button. You will automatically receive an Explanation, Recommended Action, and, if available, any related documentation for that message.

The EMD is located here:

<http://www.cisco.com/cgi-bin/Support/Errordecoder/index.cgi?locale=en>

Searching for System Messages in Online Documentation

To search for messages in online documentation, use the search function of your browser by copying and pasting the message that appears on the console or in the system log.

Some messages that appear on the console or in the system log indicate where the system condition occurred. These messages are structured as follows:

%FACILITY-SOURCE-SEVERITY-MNEMONIC: Message-text

SOURCE indicates the location of the condition. Examples of SOURCE are SP, which indicates that the condition occurred in the switch processor, or DFC5, which indicates that the condition occurred in the Distributed Forwarding Card on the module in slot 5.

If you search for the explanation and recommended action of a message that contains a SOURCE, remove the SOURCE from the text first, and then search for the message in the documentation.

For example, instead of searching the documentation for the message C6KPWR-SP-4-DISABLED, remove the SOURCE identifier and search for the message C6KPWR-4-DISABLED.

Related Documentation

The following publications are available for the Catalyst 6500 series switches:

- *Catalyst 6500 Series Switch Module Installation Guide*
- *Catalyst 6500 Series Switch Cisco IOS Command Reference*
- Cisco IOS Configuration Guides and Command References

For information about MIBs, refer to:

<http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml>

For Cisco IOS system messages not contained in this publication, refer to the following Cisco IOS documentation:

- *System Messages for IOS:*

http://www.cisco.com/en/US/docs/ios/system/messages/guide/consol_smg.html

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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