



System Messages Overview

This publication lists and describes Cisco IOS system messages. The system software sends these messages to the console (and, optionally, to a logging server on another system) during operation. Not all system messages indicate problems with your system. Some are purely informational, and others may help diagnose problems with communications lines, internal hardware, or the system software.

This manual also includes messages that appear when the system crashes.

Obtaining Technical Assistance

When the recommended action of an error message advises that you contact Cisco technical support, open a case with the Cisco Technical Assistance Center (TAC). Please see the section “Contacting TAC by Using the Cisco TAC Website” in the preface “About Cisco IOS Software.”

Additional Resources

The Cisco Technical Assistance Center (TAC) offers all registered users an online tool, the Cisco IOS Error Message Decoder, for researching and resolving messages.

All you have to do is copy an error message or a command output from your screen and paste it into the appropriate text fields of the tool. Within moments, the tool responds with an interpretation of your text. The Cisco IOS Error Message Decoder makes it easy for you to distinguish between messages that are purely informational and those that alert you to potential problems. This tool provides you with an explanation of the error message, a recommended action, and links to suggested online Cisco technical support resources. For help with researching and resolving your Cisco IOS messages, consult the new Cisco IOS Error Message Decoder tool at

<http://www.cisco.com/cgi-bin/Support/Errordecoder/index.cgi>.

How This Manual Is Organized

The “[System Messages](#)” chapters provide descriptions of system messages related to 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
3. Severity level

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 6000 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 error 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 error 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 error message (`%CARD-SEVERITY-MSG:SLOT`) is not shown in the error 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
AC	Attachment circuit
ACCESS_IE	Access information element
ACLMERGE	Access control list merge
ADAPTER	CMCC adapter task
ADJ	Adjacency subsystem
AESOP_AIM	Service engine advanced interface module
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)
ARAP	Apple Remote Access Protocol (ARAP)
AS5400	Cisco AS5400 platform
AS5400_ENVM	Cisco AS5400 environmental monitor
ASPP	Asynchronous Security Protocol (ASPP)
AT	AppleTalk (AT)
ATM	Asynchronous Transfer Mode
ATM_AIM	ATM advanced module
ATMCES	ATM access concentrator PCI port adapter driver
ATMCORE	ATM core
ATMOC3	ATM OC-3 network module
ATMPA	ATM port adapter
ATMSIG	ATM signaling subsystem
ATMSSCOP	ATM Service Specific Connection Oriented Protocol (SSCOP)
ATOM_TRANS	Layer 2 Transport over MPLS
ATUC	ATUC
AUDIT	Audit feature
AUTORP	PIMv2 AUTORP
AUTOSEC	AutoSecure
AUTOSTATE	Autostate feature
BAP	PPP Bandwidth Allocation Protocol (BAP)
BCM3220	Cable modem MAC controller interface
BCM56XX	BCM56XX control layer
BERT	Bit Error Rate Tester (BERT)
BGP	Border Gateway Protocol
BIT	Dynamic bitlist

Table 1 Facility Codes (continued)

Code	Facility
BOOMERANG	Boomerang distributed reverse proxy server
BRI	ISDN Basic Rate Interface
BRIMUX	Cisco AS5200 BRIMUX board
BSC	Binary Synchronous Communications protocol
BSQ	Buffer status queue processing
BSTUN	Block serial tunneling (BSTUN)
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
C2600	Cisco 2600 platform
C2600_MAINBOARD_ASYNC_PQUICC	MPC860 quad integrated communications controller for the Cisco 2600 platform
C29ATM	Catalyst 2900XL ATM module
C2KATM	Catalyst 2820 ATM module
C3600	Cisco 3600 platform
C4GWY_DSPRM	DSP Resource Manager
C542	Voice driver for modular access routers
C5421	Voice over IP
C54x	VoIP DSP driver
C54X	VoIP driver
C5RSP	Cisco Catalyst 5000 platform
C6KENV	Cisco Catalyst 6000 environmental system
C6KPWR	Cisco Catalyst 6000 power control system
C6MSFC	C6MSFC (Draco)
C6SUP	C6SUP-specific
C7200_TDM	Cisco 7200 midplane TDM bus
C950	Cisco 950
CAIM	Compression Advanced Interface Module (CAIM)
CALL_CONTROL	Call control
CALL_MGMT	Call management subsystem
CALLPROG	Call progress notification subsystem
CALLRECORD	Modem Call Record
CALLTREAT	Call treatment
CALLTRKR	Call Tracker subsystem
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 H323
CCPROXY	H323 proxy
CDM	Cable Data Modem subsystem

Table 1 Facility Codes (continued)

Code	Facility
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)
CERF	Cache Error Recovery Function (CERF)
CES	Circuit Emulation Service (CES)
CES_CLIENT	Client circuit emulation service (CES)
CES_CONN	TDM connection
CHARLOTTE	Dual OC-3 POS port adapter
CHOPIN	Cisco Chopin
CHOPIN_MAINBOARD_ASYNC_PQII	Chopin Main Board Asynchronous driver
CI	Cisco 7500 platform chassis interface
CIOS	CMCC channel adapter Cisco IOS wrapper
CIP	Channel Interface Processor (CIP)
CIP2	Enhanced Channel Interface Processor
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
CM_DSPRM	Digital Signal Processor Resource Manager (DSPRM)
CM_MONITOR	UBR900 Cable Access Router Personal Monitor
CMAPP	Call Manager application
CMCC	Cisco Mainframe Channel Connection (CMCC) interface
CMEXML	CME XML Client Request
CMPTG	CMCC Logical Link Control Transmission Group
CNS	Cisco Networking Services (CNS)
CNS_AGENT_CFGCHG	Cisco Network Service (CNS) Configuration Change Agent
CNSES	Cisco Network Services Event Service client
COBALT	COBALT
COMP	Point-to-point compression
CONFIG	CMCC Channel Interface Processor (CIP) messages for the configuration processing facility
CONTROLLER	Controller
COT	Continuity test (COT)

Table 1 Facility Codes (continued)

Code	Facility
CPAD	Compression service adapter (CSA)
CPE_MMI	Customer Premises Equipment Modem Management Interface
CPM	Combo Port Module (CPM) device driver
CRYPTO	Encryption
CSM	Call switching module
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	Certificate server
CTRC	Cisco Transaction Connection
CWAN_ATM	Constellation WAN ATM
CWAN_RP	Constellation WAN ATM Route Processor driver
CWANLC	Constellation WAN line card
CWANLC_ATM	Constellation WAN ATM Route Processor driver
CWPA	Route Processor for Constellation Supervisor router module
CWRMP	Wireless radio point-to-multipoint driver
CWRSU	Wireless radio point-to-multipoint subscriber unit (SU)
CWRTEST	Wireless radio point-to-multipoint test driver
CWTLC	Constellation Supervisor router module line card
CWTLC_ATM	ATM line card for Constellation Supervisor router module
DAS_ENV	RSC environmental monitor subsystem
DATACORRUPTION	Data Corruption
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
DHCPD	Dynamic Host Configuration Protocol (DHCP) server
DIAG	CMCC CIP for diagnostic testing
DIALER	Dial-on-demand routing
DIALPEER_DB	Dial peer configuration
DIALSHELF	Dial shelf messages
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
DMA	Direct memory access
DMTDSL	Digital/discrete multitone digital subscriber line (DMTDSL)
DNET	DECnet
DNSSERVER	Domain Name System (DNS) server

Table 1 Facility Codes (continued)

Code	Facility
DPM	AS5200 T1 BRIMUX
DRIP	Duplicate Ring Protocol
DRP	Director Response Protocol
DRVGRP	Interface driver
DS_MODEM	FB modem card
DS_TDM	Dial shelf time-division multiplexing
DSA	Delayed stop accounting
DSC	Dial shelf controller (DSC)
DSC_ENV	Cisco AS5800 environment monitor
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
DSIPPF	Nitro Interconnect Protocol
DSLARS	DSL segmentation and reassembly
DSM	DSP Stream Manager
DSP_CONN	TDM connections
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
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
EC	Port Aggregation Protocol
ECC	Single bit errors in ECC
ECPA	Escon Channel Port Adapter
ECPA4	Enhanced Escon Channel Port Adapter
EGP	Exterior Gateway Protocol
EHSA	Cisco 6400 Enhanced High System Availability (EHSA)
ENSP	Enhanced Network Services Provider (ENSP)
ENT_API	Entity MIB API
ENV_MON	Cisco 12000 environmental monitor
ENVM	Environmental monitor
EPAD	Encryption port adapter driver (EPAD)

Table 1 Facility Codes (continued)

Code	Facility
ESWILP_FLTMG	ESWILP fault management
ESWITCH	Ethernet switch port adapter
ET2_MODULE	Ernest-T2 network module
ETHERNET	Ethernet for the C1000 series
EVENT	Event MIB
EVENT_TRACE	Event trace subsystem
EXFREE	External memory manager
EXPRESSION	Expression MIB
EXTASSIGNER	Extension Assigner
FABRIC	Fabric Interface ASIC (FIA)
FALLBACK	VoIP fallback
FAN	Fan
FASTBLK	Fast Block
FB	Cisco AS5800 feature board
FB_COREDUMP	Feature board core dump
FBINFO	Cisco AS5800 feature board crash information subsystem
FCL	Forward Control Layer (FCL)
FDDI	Fiber Distributed Data Interface (FDDI)
FECPM	Fast Ethernet (FE) Combination Port Module (CPM) device driver
FIB	IP Cisco Express Forwarding (CEF) radix trie
FILESYS	File system
FLASH	Flash nonvolatile memory
FM	Feature Manager (FM)
FM	Forwarding Manager (FM)
FPGA	LS1010 chip-specific
FR	Frame Relay
FR_ADJ	Frame Relay Adjacency
FR_ELMI	Frame Relay enhanced Local Management Interface
FR_FRAG	Frame Relay Fragmentation
FR_LMI	Frame Relay Local Management Interface
FR_VCB	Frame Relay VC
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
FW	Inspection subsystem
FX1000	FX1000 Gigabit Ethernet controller
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

Table 1 Facility Codes (continued)

Code	Facility
GLBP	Gateway Load Balancing Protocol
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_OC12_CH_DS3	Gigabit Route Processor (GRP) driver
GRPGE	Gigabit Ethernet Route Processor (RP)
GRPOS	POS Route Processor
GSHDSL	G.Symetric High DSL
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	CMCC channel port adapter GT64011
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
HAL	Halcyon
HAWKEYE	Token Ring PCI port adapter
HD	HD64570 serial controller
HDV	High Density Voice (HDV) driver
HDX	Half-duplex (HDX) finite state machines (FSM)
HEARTBEAT	Heartbeat
HIFN79XX	Hifn 79xx
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
HTTP	Hypertext Transfer Protocol (HTTP)
HTTPC	HTTP client
HUB	Cisco Ethernet hub
HW_VPN	Encryption Advanced Interface Module (EAIM)
HWCONF	New HW Conference register/unregister
HWIC_1GE_SFP	Gigabit Ethernet High-speed WAN Interface Card (HWIC)
HWIC_CELL	Cellular HWIC
HWIC_HOST	HWIC host
HWIC_SERIAL	HWIC serial
I82543	Intel 82543 Ethernet/Fast Ethernet/Gigabit Ethernet controller
I82559FE	Intel 82559 Fast Ethernet Controller
IAD2420_VOICEPORT	IAD2420 Voice Port
IBM2692	IBM Token Ring chipset

Table 1 Facility Codes (continued)

Code	Facility
ICC	Inter-Card Communication
IDMGR	ID manager
IDNLD	NSP IDNLD
IDS	IP datagram subsystem (IDS)
IDTATM25	IDT ATM25 network module
IF	Interface
IFINDEX	SNMP IF_MIB persistence
IFS	Cisco IOS file system
IGRP	Interior Gateway Routing Protocol
ILACC	ILACC driver
IMA	Inverse multiplexing over ATM (IMA)
IMA_LINK	IMA link
INDXOBJ	Index object
INT	CIP for the interrupt handler interface
INTERFACE_API	Binary API for the interface descriptor block
IOCARD	I/O card-specific
IP	Internet Protocol
IP_SNMP	Simple Network Management Protocol specific to IP
IPA	Intelligent port adapter
IPACCESS	IP security
IPC	Interprocess communication
IPC_DRVR	CMCC interprocess communication driver
IPCGRP	Route Processor (RP) interprocess communication (IPC)
IPCOIR	Interprocess communication (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
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
IPMOBILE	IP Mobility
IPNAT	IP Network Address Translation
IPP	CMCC encryption feature
IPPHONE	IP Phone register/unregister
IPRT	IP routing
IPS	Intrusion Prevention System
IPV6	IP Version 6
IPV6FIB	IP Version 6 forwarding-based on destination IP addresses
IPX	Novelle Internetwork Packet Exchange Protocol (IPX)
IRONBUS	Iron bus
ISA	Integrated Services Adapter (ISA)

Table 1 Facility Codes (continued)

Code	Facility
ISDN	Integrated Services Digital Network (ISDN)
ISRHOG	Interrupt Service Routine Hog
IUA	ISDN User Adaptation Layer
IVR	Interactive Voice Response (IVR)
IVR_MSB	Media Stream module
KERBEROS	Voice over IP (VoIP) for Cisco AS5800
KEYMAN	Keystring encryption
KINEPAK	Voice over IP (VoIP) for Cisco AS5800
L2CAC	Layer 2 CAC
L2R	L2RLY
L3_MGR	Layer 3 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 off-ramp calls
LAPP_ON_MSGS	Fax on-ramp calls
LAT	DEC local-area transport
LCB	Line Control Block (LCB) event process
LCCEF	ATM Cisco Express Forwarding (CEF) adjacency
LCCOREDUMP	Line card core dump subsystems
LCINFO	Line card crash information subsystem
LCLOG	Internet router line card logger subsystem
LDP	Label Distribution Protocol (LDP)
LES_FDDI	LAN Emulation Server/Fiber Distributed Data Interface
LEX	LAN extension
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
LLIST	Linked list facility
LNMC	LAN network manager
LOADER	CIP for relocating loader facility
LOGIN	Login
LOVE	Statistics from the CIP to the router
LPD	Line printer daemon
LSS	LightStream switching
M32X	M32X Basic Rate Interface trunk card
MAILBOX	ChipCom mailbox support
MARS_NETCLK	Network clock system
MBRI	Multi-BRI port modules
MBUF	CMCC memory buffer

Table 1 Facility Codes (continued)

Code	Facility
MBUS	CMCC maintenance bus (Mbus)
MBUS_SYS	Maintenance bus (Mbus) system
MC3810_DSX1	MC3810 DSX1 subsystem
MCAST	Layer 2 multicast
MCX	Voice port adapter
MDS	Multicast distributed switching
MDT	PIM MDT
MEMD	CMCC CIP related to the memory device facility
MEMSCAN	Memory scan
MGCP	Media Gateway Control Protocol
MGCP_APP	Media Gateway Control Protocol application-specific
MHA_MODE	Marvel high availability
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
MMODEM	Integrated modem network module
MODEM	Router shelf modem management
MODEM_HIST	Router shelf modem history and tracing
MODEM_NV	Modem NVRAM
MODEMCALL RECORD	Modem Call Record
MONITOR	Cisco IOS software ROM monitor
MPA68360	VIP Multi-channel Port Adapter
MPC	Multipath Channel Protocol
MPLS_ATM_TRANS	ATM Transport over MPLS
MPLS_TE	Label Switch Path (LSP) tunnel
MPLS_TE_PCALC	MPLS TE path calculation facility
MPOA	Multiprotocol over ATM (MPOA)
MROUTE	Multicast route
MSDP	Multicast Source Discovery Protocol
MSG802	CMCC CIP 802 for IEE 802.2cx LLC Protocol
MSPI	Mail Service Provider
MUESLIX	Mx serial application-specific integrated circuit (ASIC)
MXT_FREEDM	8PRI/4T board
NATMIB_HELPER	NAT MIB helper
NBAR	Network-based application recognition (NBAR)
NET_SERV	Networking Services
NETWORK_CLOCK_ SYNCHRONIZATION	Network clock synchronization
NEVADA	CMCC CIP interrupt controller
NHRP	Next Hop Resolution Protocol

Table 1 Facility Codes (continued)

Code	Facility
NI2	NI2
NIM	Network interface module
NP	NextPort (NP)
NP_BS	NextPort (NP) Bootstrap and Crash Monitor
NP_DDSTM	NextPort (NP) Digital Data Services Manager
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_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
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
OFFL	Offload protocol
OIR	Online insertion and removal (OIR)
ON_DIAG	Online diagnostics subsystem
OOBP	Out-of-band port (OOBP)
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
PACK	Packed extension to the CLAW facility
PAD	X.25 packet assembler/disassembler
PAMMBOX	Platform-independent PAM mailbox serial interface
PAR	Parity
PARSE_RC	Parser return code
PARSER	Parser
PCMCIAFS	PCMCIA disk
PCPA	Parallel Channel Port Adapter
PERUSER	PPP per-user configuration
PF	Protocol filtering

Table 1 Facility Codes (continued)

Code	Facility
PGM	Pragmatic General Multicast (PGM)
PGMHOST	Pragmatic General Multicast (PGM) host module
PIF	RSC PIF
PIM	Protocol Independent Multicast
PKTS	Packet switching API
PLATFORM	Platform-specific
PM	Port Manager
PM_MODEM_HIST	Modem history and tracing
PM_MODEM_MAINT	Modem maintenance
PMSN	Port State Machine
PNNI	Private Network-Network Interface
PORT	Port Management
POS	Packet over SONET subsystem
POSDW	Packet over SONET double-wide PCI port adapter driver
POSLC	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)
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
PS	Power supply
PV	Private VLAN
PW_WATCHER	Portware Watcher
PXF	Parallel eXpress Forwarding
PXF_DMA	PXF DMA subsystem
QA	Queue and accumulator
QEM	QEM driver
QLLC	Qualified Logical Link Control
QM	Quality of service
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
RAC	Ring Access Controller
RADIO	Radio driver
RADIO_DRIVER	Radio driver
RADIUS	RADIUS

Table 1 Facility Codes (continued)

Code	Facility
RADIX	Radix
RAIKO	RAIKO-based feature board
RBCP	Router Blade Control Protocol
RCMD	Remote command
Regen	Cisco optical regenerator
Regen_MAINBOARD_ASYNC_PQUICC	Asynchronous MPC860 quad integrated communications controller for the Cisco optical regenerator
REGISTRY	Registry
RESOURCE_MON	Resource monitor subsystem
RESYNCH	Route Processor Module (RPM) resynchronization process
RIP	IP Routing Information Protocol (RIP)
RLM	Redundant Link Manager (RLM)
RM	Resource Manager
RMON	Remote Monitoring Protocol
ROUTEMAP_IPC	Route map interprocess communication (IPC)
RP_MLP	Distributed Point-to-Point Protocol (PPP) Multilink
RPA	Resource Pool Allocation (RPA)
RPC	Remote Procedure Call
RPM	Route Processor Module (RPM)
RPM_BULK	RPM-specific bulk file
RPM_CONFIG_COPY	RPM config copy feature
RPM_RED	RPM redundancy
RPM_VIRTUAL_PORT	RPM virtual port
RPMXF	RPMXF card level
RPMXF_QOS_GENERAL	RPMXF Quality of Service
RPMXF_QUEUE_CFG_GENERAL	RPMXF queuing configuration
RPMXF_TOASTER	RPMXF Toaster
RPMXFEVENTMGR	RPMXF event manager subsystem
RPS	Redundant power system
RS_TDM	Router shelf time-division multiplexing
RSC	Route Switch Controller (RSC)
RSC_CF	Compact flash error
RSCPB	RSC push button
RSP	Route Switch Processor
RSRB	Remote source-route bridging
RSVP	RSVP protocol
RTT	Round trip time monitor
RUDP	Reliable User Datagram Protocol
S4T68360	Four-port synchronous serial adapter based on the 68360 processor
SARMGR	Segmentation and reassembly (SARMGR)
SBETH	MAC controller
SCB	Storage control block
SCCP	Signaling connection control part

Table 1 Facility Codes (continued)

Code	Facility
SCHED	Scheduler
SCP	Downstream physical unit (DSPU)
SDLC	Synchronous Data Link Control
SDLLC	Synchronous Data Logical Link Control (SDLLC) Logical Link Control, Type 2 (LLC2) translation
SDP	Session Description Protocol
SDSL	GSHDSL
SDSPFARM	New SDSPFARM register/unregister
SEC	IP security
SERVER_CLOCK_SYNC	Clock synchronization service
SERVICE_MODULE	Service module
SERVICEMODULE	Service module monitor
SGBP	Stack Group Bidding Protocol
SGCP	Simple Gateway Control Protocol (SGCP)
SGCP_APP	Simple Gateway Control Protocol (SGCP) application-related
SHELF	Router shelf
SIGSM	Signaling Service Manager
SIP	Session Initiation Protocol
SKINNYSECURESERVICE	Skinny secure server
SKINNYSERVER	Skinny server
SLB	Server load balancing
SLB_DFP	Server Load Balancing Dynamic Feedback Protocol agent
SLC	Serial link controller
SLCI	Signaling link code interface
SLIP	Serial Line Internet Protocol
SLOT	Cisco 6100 alarm subsystem slot-related
SLOTDUMP	Slot dump
SM	State machine (SM)
SMB	SMB
SMF	Software MAC Filter
SMRP	Simple Multicast Routing Protocol
SNAPSHOT	Snapshot dial-on-demand routing
SNASW	Systems Network Architecture (SNA) Switching Services
SNMP	Simple Network Management Protocol (SNMP)
SNMP_MGR	Simple Network Management Protocol (SNMP) proxy
SOI	Simple Network Management Protocol (SNMP) over interprocess communication (IPC)
SONET	Synchronous Optical Network
SONETMIB	Synchronous Optical Network Management Information Base
SONICT	SONIC Ethernet interface-related
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

Table 1 Facility Codes (continued)

Code	Facility
SPE	Service Processing Element (SPE)
SRCP_APP	Simple Resource Coordination Protocol (SRCP) application
SRP	Spatial Reuse Protocol (SRP)
SSE	Silicon switching engine
SSG	Service Selection Gateway
SSH	Secure Shell (SSH) Protocol
SSI	SSI event
SSI802	Common system service interface (SSI) facility
SSRP	SONET/SDH based SRP Double Wide PCI port adapter driver
SSSMGR	Subscriber Service Switching
STANDBY	Hot Standby Router Protocol (HSRP)
STRING	String database
STUN	Serial tunneling
SUBSYS	Software subsystems
SUNI_DUAL	Cisco 6100
SW_VLAN	Virtual LAN (VLAN) manager
SW56	Switch 56K
SWITCH	Switch interface
SWITCH_IF	Switch interface subsystem
SWEPA	Software encryption and key management
SYS	Operating system
SYSCTLR	System controller subsystem
SYSLOG_SERVER	Syslog-server file system routines
SYSMGT_RPC	System management
T1E1SUNI	PAM port driver
TAC	Terminal Access Controller Access Control System
TAGCON	Tag distribution and control
TAGCOS	Tag switching class of service
TBRIDGE	Transparent bridging
TCATM	ATM TAG control
TCP	Transmission Control Protocol
TCPIP	TCP/IP protocol
TDM	Time-division multiplexing (TDM)
TDM_CLOCK_ SYNCHRONIZATION	Time-division multiplexing (TDM) frame clock
TDM_CONN	TDM connections
TDP	Tag Distribution Protocol
TESTPA	TestPA port adapter
TFIB	Tag Forwarding Information Base
TI1570	PCI/TI1570-based ATM port adapter
TIB	Tag Information Base
TIGER	Error-correcting code (ECC) and parity-related
TLV	EEPROM
TMQ	Inbound terminal port queuing

Table 1 Facility Codes (continued)

Code	Facility
TN	Telnet
TN3270	TN3270 protocol
TN3270S	TN3270 server terminal emulation feature
TOASTER_IPC	Toaster interprocess communications
TPLUS	TACACS Protocol
TR	Token Ring
TRANGE	Time-range
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)
TTY	Tty-related for all platforms
TTYDRIVER	Router shelf asynchronous driver
TUN	Tunnel
TUNSS	Tunnel security
TXCONN	Cisco Transaction Connection (CTRC)
UBR7200	Cable modem termination system
UCODE	Microcode
UDLD	UniDirectional Link Detection (UDLD) protocol
UNIX	UNIX
UPS	Uninterruptible power supply
URLF	URL filtering subsystem
UTIL	Utility
VFC	Voice over IP (VoIP)
VINES	Banyan VINES
VIP	Versatile Interface Processor
VIPMLP	Multilink PPP
VOICE_CODEC	Voice Codec
VOICE_FSM	MC3810 voice FSM subsystem
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
VPN_HW	VPN hardware accelerator
VRM	Voice Resource Management
VRRP	Virtual Router Redundancy Protocol
VSI_M	Virtual Switch Interface (VSI) master
VTSP	Voice Telephony security parameter index (SPI)
WCCP	Web Cache Communication Protocol (WCCP)

Table 1 Facility Codes (continued)

Code	Facility
X25	X.25
XCCTSP_VOICE	External Call Control Telephony Service Provider
XCPA	Mainframe Channel Port Adapter
XTAGATM	Extended Tag ATM (XTagATM)

Table 2 Error 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

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
[inet]	Internet address (for example, 10.0.2.16)
[int]	Integer
[ipv6_addr]	IP version 6 (IPv6) address
[node]	Address or node name
[p]	Packet
[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 number (hex or decimal)

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
```