

## System Message Overview

This publication lists and describes the Cisco IOS system error messages for the Catalyst 6500 series switches. The system software sends these error messages to the console (and, optionally, to a logging server on another system) during operation. Not all system error messages indicate problems with your system. Some messages are purely informational, while others may help diagnose problems with communications lines, internal hardware, or the system software.

This publication also includes error messages that appear when the system fails.

This chapter contains the following sections:

- [System Message Structure, page 1-1](#)
- [System Message Example, page 1-5](#)
- [Using the Error Message Decoder to Search for System Messages, page 1-5](#)
- [Searching for System Messages in Online Documentation, page 1-5](#)
- [Error Message Traceback Reports, page 1-6](#)

## System Message Structure

System error messages are structured as follows:

FACILITY-SEVERITY-MNEMONIC: Message-text

- FACILITY code

The facility code consists 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 1-1](#) lists the system facility codes.

**Table 1-1 Facility Codes**

Code	Facility
ACL_ASIC	Access Control List ASIC
ACLMERGE	Access Control List Merge
C6KENV	Environmental
C6KERRDETECT	Error Detection
C6K_PLATFORM	General Platform
C6K_POWER	Power

**REVIEW DRAFT – CISCO CONFIDENTIAL****Table 1-1 Facility Codes (continued)**

<b>Code</b>	<b>Facility</b>
C6KPWR	Power
C6MSFC	Multilayer Switching Feature Card
C6SUP_SP	Switch Processor
CNS	Cisco Networking Services
CONST_DIAG	Online Diagnostics
CPU_MONITOR	CPU Monitor
CWAN_ATM	WAN ATM Port
CWAN_CHOC_DS0	OSR Channelized OC12/OC3 RP Driver
CWAN_CHOC_DSX	WAN CHOC DSX LC Common Messages
CWAN_CT3	OSR CT3 RP Driver
CWAN_POS	POS OSM RP Driver
CWAN_RP	WAN Route Processor Module
CWPA	WAN Port Adapter Module
CWTLC	WAN Optical Services Module
DBUS	Data Bus
DIAG	Online Diagnostics
DOT1X	IEEE 802.1x
DOT1X_MOD	IEEE 802.1x Module
DOT1XREGISTORS	IEEE 802.1x Registers
DTP	Dynamic Trunk Protocol
EARL	Enhanced Address Recognition Logic
EARL_BUS_INTERFACE_ASIC	EARL Switching Bus Interface ASIC
EARL_L2_ASIC	EARL Layer 2 ASIC
EARL_L3_ASIC	EARL Layer 3 ASIC
EC	EtherChannel
EHSA	Enhanced High System Availability
ENVM	Environmental Monitor
EOBC	Ethernet Out-of-Band Channel
FABRIC-SP	Switching Mode
FM	Feature Manager
GBIC	Gigabit Interface Converter
GBIC_SECURITY	Gigabit Interface Converter Security
GBIC_SECURITY_CRYPT	Gigabit Interface Converter Cryptographic Security
GBIC_SECURITY_UNIQUE	Gigabit Interface Converter Unique Security

**REVIEW DRAFT – CISCO CONFIDENTIAL****Table 1-1 Facility Codes (continued)**

<b>Code</b>	<b>Facility</b>
ICC	InterCard Communication
IDBMAN	Interface Descriptor Block Manager
IPC	InterProcessor Communication
IPNAT	IP Network Address Translation
IP_VRF	IP VPN Routing/Forwarding Instance Common Errors
L2_APPL	Layer 2 Application
L3_ASIC	Layer 3 ASIC
L3_MGR	Layer 3 Manager System Log
LYRA	Layer 2 Forwarding Engine
MCAST	Layer 2 Multicast Log
MISTRAL	Mistral ASIC
MLS_STAT	EARL Multilayer Switching Statistics Log
MLSCEF	Multilayer Switching Cisco Express Forwarding
MLSM	Multilayer Switching Multicast
MROUTE	Multicast Route
MSFC2	Multilayer Switch Feature Card 2
NAM	Network Analysis Module
NBAR	Network Based Application Recognition
OIR	Online Insertion and Removal
ONLINE	Switch-module Configuration Protocol Download Processor
PF	Protocol Filtering
PFREDUN	Policy Feature Card Redundancy
PM	Port Manager
PM_SCP	Port Manager Switch-Module Configuration Protocol
POLARIS	Layer 3 CEF Engine
PORT_ASIC	Port ASIC
QM	QoS Management
RPC	Remote Procedure Call
RUNCFGSYNC	Auto-Running Configuration Synchronization
SBETH	MAC Controller
SCP	Switch-Module Configuration Protocol
SPAN	Switched Port Analyzer
SPANTREE	Spanning Tree
SPANTREE-FAST	Spanning Tree Fast Convergence Extensions

**REVIEW DRAFT – CISCO CONFIDENTIAL****Table 1-1 Facility Codes (continued)**

Code	Facility
SPANTREE-SP	Spanning Tree Extended System ID
SREC	Statistics Record
STORM_CONTROL	Storm Control
SW_VLAN	VLAN Manager
SYSTEM_CONTROLLER	System Controller
UFAST_MCAST_SW	UplinkFast Multicasting
UNICAST_FLOOD	Unicast Flooding
VELA	Catalyst 6500/Cisco 7600 Bus Interface
VSEC	VACL Logging

- SEVERITY level

The severity level 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 1-2](#) lists the message severity levels.

**Table 1-2 Message Severity Levels**

Severity Level	Description
0 – emergency	System is unusable
1 – alert	Immediate action required
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	Message that appears during debugging only

- MNEMONIC code

The MNEMONIC code uniquely identifies the error message.

- Message-text

Message-text is a text string that describes the condition. The text string 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 variable fields change from message to message, they are represented here by short strings enclosed in square brackets ([ ]). A decimal number, for example, is represented as [dec]. [Table 1-3](#) lists the variable fields in messages.

**Table 1-3 Representation of Variable Fields in Messages**

Representation	Type of Information
[chars] or [char]	Character string
[dec]	Decimal

**REVIEW DRAFT – CISCO CONFIDENTIAL****Table 1-3 Representation of Variable Fields in Messages (continued)**

Representation	Type of Information
[hex]	Hexadecimal integer
[int]	Integer
[num]	Number

## 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.

## 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. 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

## ***REVIEW DRAFT – CISCO CONFIDENTIAL***

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.

## **Error 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