



## System Error Messages

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This chapter describes the IOS system error messages for the Catalyst 2950 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 might help diagnose problems with communications lines, internal hardware, or the system software.

This chapter contains the following sections:

- [How to Read System Error Messages, page A-1](#)
- [Error Message Traceback Reports, page A-4](#)

## How to Read System Error Messages

System error messages begin with a percent sign (%) and are structured as follows:

`%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 A-1](#) lists the system facility codes.

**Table A-1 Facility Codes**

Code	Facility
CMP	Cluster Membership Protocol
ENVIRONMENT	Environment
LINK	Link
PORT SECURITY	Port Security
RTD	Runtime Diagnostic
STORM CONTROL	Storm Control

- 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 A-2](#) lists the message severity levels.
- MNEMONIC is a code that uniquely identifies the error message.

**Table A-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.

- 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 A-3](#) lists the variable fields in messages.

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

Representation	Type of Information
[dec]	Decimal
[char]	Single character
[chars]	Character string
[hex]	Hexadecimal integer
[inet]	Internet address

The following is a sample system error message:

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

Some error messages also indicate the card and slot reporting the error. These error 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.

MSG is a mnemonic that indicates 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.)

# 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
```

# Error Message and Recovery Procedures

This section lists the switch system messages by facility. Within each facility, the messages are listed by severity levels 0 to 7: 0 is the highest severity level, and 7 is the lowest severity level. Each message is followed by an explanation and a recommended action.

## CMP Messages

This section contains the Cluster Membership Protocol (CMP) error messages.

```
CMP-5-ADD: The Device is added to the cluster (Cluster  
Name:[chars], CMDR IP Address [inet])
```

**Explanation** The message indicates the device is added to the cluster: [chars] is the cluster name, and [inet] is the internet address of the command switch.

**Action** No action is required.

CMP-5-MEMBER\_CONFIG\_UPDATE: Received member configuration from member [dec]

**Explanation** This message indicates that the command switch received a member configuration: [dec] is the member number.

**Action** No action is required.

CMP-5-REMOVE The Device is removed from the cluster (Cluster Name:[chars])

**Explanation** The message indicates the device is removed from the cluster: [chars] is the cluster name.

**Action** No action is required.

## Environment Messages

This section contains the Environment error messages.

ENVIRONMENT-2-FAN\_FAULT

**Explanation** This message indicates that an internal fan fault is detected.

**Action** Either check the switch itself or use the **show env** command to determine if a fan on the switch has failed. The Catalyst 2950 switch can operate normally with one failed fan. Replace the switch at your convenience.

ENVIRONMENT-2-OVER\_TEMP

**Explanation** This message indicates that an overtemperature condition is detected.

**Action** Use the **show env** command to check if an overtemperature condition exists. If it does:

- Place the switch in an environment that is within 32 to 113°F (0 to 45°C).
- Make sure fan intake and exhaust areas are clear.

- If a multiple-fan failure is causing the switch to overheat, replace the switch.

## Link Messages

This section contains the Link error message.

```
LINK-4-ERROR [chars] is experiencing errors.
```

**Explanation** This messages indicates that excessive errors have occurred on this interface: [char] is the interface.

**Action** Check for duplex mismatches between both ends of the link.

## Port Security Messages

This section contains the Port Security error message.

```
PORT_SECURITY-2-SECURITYREJECT
```

**Explanation** This message indicates that a packet with an unexpected MAC source address is received on a secure port.

**Action** Remove the station with the unexpected MAC address from the secure port, or add the MAC address to the secure address table of the secure port.

## RTD Messages

This section contains the Runtime Diagnostic (RTD) error messages.

```
RTD-1-ADDR_FLAP [chars] relearning [dec] addrs per min
```

**Explanation** Normally, MAC addresses are learned once on a port. Occasionally, when a switched network reconfigures, due to either manual or STP reconfiguration, addresses learned on one port are relearned on a different

port. However, if there is a port anywhere in the switched domain that is looped back to itself, addresses will jump back and forth between the real port and the port that is in the path to the looped back port. In this message, [chars] is the interface, and [dec] is the number of addresses being learnt.

**Action** Determine the real path (port) to the MAC address. Use **debug ethernet-controller addr** to see the alternate path-port on which the address is being learned. Go to the switch attached to that port. Note that **show cdp neighbors** is useful in determining the next switch. Repeat this procedure until the port is found that is receiving what it is transmitting, and remove that port from the network.

```
RTD-1-LINK_FLAP [chars] link down/up [dec] times per min
```

**Explanation** This message indicates that an excessive number of link down-up events has been noticed on this interface: [chars] is the interface, and [dec] is the number of times the link goes up and down. This might be the result of reconfiguring the port, or it might indicate a faulty device at the other end of the connection.

**Action** If someone is reconfiguring the interface or device at the other side of the interface, ignore this message. However, if no one is manipulating the interface or device at the other end of the interface, it is likely that the Ethernet transceiver at one end of the link is faulty and should be replaced.

## Storm Control Messages

This section contains the Storm Control error message.

```
STORM_CONTROL-2-SHUTDOWN
```

**Explanation** This messages indicates that excessive traffic has been detected on a port that has been configured to be shut down if a storm event is detected.

**Action** Once the source of the packet storm has been fixed, re-enable the port by using port-configuration commands.

■ Error Message and Recovery Procedures