



System Messages

This appendix describes the IOS system messages for the switch. The system software sends these error 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 messages are purely informational, and others can help diagnose problems with communications lines, internal hardware, or the system software.

This appendix contains these sections:

- [How to Read System Messages, page B-1](#)
- [Error Message Traceback Reports, page B-3](#)
- [Error Messages and Recovery Procedures, page B-3](#)

How to Read System Messages

System 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 show the facility to which the message refers. A facility can be a hardware device, a protocol, or a module of the system software. [Table B-1](#) lists the system facility codes.

Table B-1 Facility Codes

Code	Facility
CHASSIS	Chassis
CMP	Cluster Membership Protocol
ENVIRONMENT	Environment
GIGASTACK	GigaStack GBIC
LINK	Link
LRE_LINK	LRE Link
MODULE	Module
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 B-2](#) lists the message severity levels.
- MNEMONIC is a code that uniquely identifies the message.

Table B-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 only during debugging.

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

Table B-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

This is a sample system message:

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

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

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

- CARD is a code that describes the type of card reporting the error.
- MSG is a mnemonic that means that this is a message. It is always shown as MSG.
- SLOT means that 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.

This is a sample message includes traceback information:

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

Error Messages 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.

Chassis Message

This section contains the Chassis error message.

Error Message CHASSIS-5-BLADE_EXTRACT

Explanation The message means that the hot-swap switch has been pressed.

Recommended Action Extract the module.

CMP Messages

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

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

Explanation The message means that the device is added to the cluster: [chars] is the cluster name, and [inet] is the Internet address of the command switch.

Recommended Action No action is required.

Error Message CMP-5-MEMBER_CONFIG_UPDATE: Received member configuration from member
[dec]

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

Recommended Action No action is required.

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

Explanation The message means that the device is removed from the cluster: [chars] is the cluster name.

Recommended Action No action is required.

Environment Messages

This section contains the Environment error messages.

Error Message ENVIRONMENT-2-FAN_FAULT

Explanation This message means that an internal fan fault is detected.

Action Either check the switch itself, or use the **show env** privileged EXEC 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.

GigaStack Messages

This section contains the GigaStack error messages.

Error Message GIGASTACK-3-INIT_FAILURE

Explanation This message means that the Gigastack GBIC failed POST.

Recommended Action Remove the Gigastack GBIC and re-insert it into the GBIC slot.

Error Message GIGASTACK-6-LOOP_BROKEN

Explanation This message means that a loop formed by GigaStack modules is broken because of link loss. Link 2 of the Master Loop Breaker is re-enabled to replace the broken line.

Recommended Action No action is required.

Error Message GIGASTACK-6-LOOP_DETECTED

Explanation This message means that a loop has been detected in the GigaStack, and that this GigaStack GBIC is selected as the Master Loop Breaker. Link 2 of this GigaStack GBIC is disabled to break the loop.

Recommended Action No action is required.

Error Message GIGASTACK-6-NO_LOOP_DETECT

Explanation This message means that no acknowledgement for a GigaStack loop detection request has been received from one of the links on a GigaStack GBIC. Either the neighboring switch does not support the GigaStack Loop breaking algorithm or that the link between the two GigaStack GBICs is broken. Under this condition, a GigaStack loop topology is not automatically detected, and the connectivity between switches in the stack could be lost.

Recommended Action If loop topology is used in the GigaStack, make sure that the latest software is running on all switches in the stack. Check the GigaStack GBICs involved to make sure that they are functioning.

Link Message

This section contains the Link error message.

Error Message LINK-4-ERROR [chars] is experiencing errors.

Explanation This message means that excessive errors have occurred on this interface: [char] is the interface.

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

**Note**

The previous error is a LINK-4-ERROR message, which is logged at the Warning level. LINK-3-ERROR messages are more severe and are logged at the Error level.

RTD Messages

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

Error Message 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.

Recommended Action Determine the real path (port) to the MAC address. Use the **debug ethernet-controller addr** privileged EXEC command to see the alternate path-port on which the address is being learned. Go to the switch attached to that port. Note that the **show cdp neighbors** command 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.

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

Explanation This message means 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 mean a faulty device at the other end of the connection.

Recommended 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.

Error Message STORM_CONTROL-2-SHUTDOWN

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

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