

Reference  
Guide

# hp StorageWorks Diagnostic and System Error Messages 4.2.x

First Edition (April 2004)

**Part Number:** AA-RV2FA-TE

This reference document lists Fabric OS diagnostic and system error messages. The probable cause and recommended course of action are provided for each message.



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## about this guide

This document provides comprehensive information to help you administer, operate, maintain, and troubleshoot your HP StorageWorks switches within your SAN.

This preface discusses the following major topics:

- [Audience](#), page 27
- [Related Documentation](#), page 27
- [Conventions](#), page 28
- [Getting Help](#), page 29

## Audience

This reference manual is intended for use by systems administrators and technicians experienced with networking, Fibre Channel, and SAN technologies.

## Related Documentation

For the latest information, documentation, and firmware releases, visit the HP StorageWorks web site at:

<http://www.hp.com/country/us/eng/prodserv/storage.html>.

To access the technical documentation:

1. Locate the **Networked storage** section of the Web page.
2. Under **Networked storage**, go to the **By type** subsection.
3. Click **SAN infrastructure**. The **SAN infrastructure** page opens.
4. Locate the **Fibre Channel Switches** section.
5. Locate the **B-Series Fabric** subsection, then go to the **Entry-level** subsection.

6. Click the appropriate product name. The product overview page opens. Go to the **product information** section on the right side of the page.
7. Click **technical documents**.
8. Follow the onscreen instructions to download the applicable documents.

For information about Fibre Channel standards, visit the Fibre Channel Industry Association web site at: <http://www.fibrechannel.org>.

## Conventions

Conventions consist of typographical elements and text symbols.

## Typographical Elements

This document follows the conventions in [Table 1](#).

**Table 1: Typography**

Convention	Element
Blue text: <a href="#">Figure 1</a>	Cross-reference links
<b>Bold</b>	Menu items, buttons; key, tab, and box names
<i>Italics</i>	Text emphasis and document titles in body text
Monospace font	User input and commands; code, file, and directory names; and system responses (output and messages)
<Monospace in angle brackets>	Command-line and code variables
Blue underlined sans serif font text ( <a href="http://www.hp.com">http://www.hp.com</a> )	Web site addresses

## Text Symbols

The following symbols may be found in the text of this guide. They have the following meanings:



**WARNING:** Text set off in this manner indicates that failure to follow directions in the warning could result in bodily harm or death.

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**Caution:** Text set off in this manner indicates that failure to follow directions could result in damage to equipment or data.

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**Tip:** Text in a tip provides additional help to readers by providing nonessential or optional techniques, procedures, or shortcuts.

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**Note:** Text set off in this manner presents commentary, sidelights, or interesting points of information.

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## Getting Help

If you have any questions associated with the information in this document, contact an HP authorized service provider or access our web site at: <http://www.hp.com>.

## HP Technical Support

Telephone numbers for worldwide technical support are listed on the HP web site at: <http://www.hp.com/support/>. From this web site, select the country of origin.

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**Note:** For continuous quality improvement, calls may be recorded or monitored.

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Be sure to have the following information available before calling:

- Technical support registration number (if applicable)
- Product serial numbers
- Product model names and numbers
- Applicable error messages
- Operating system type and revision level
- Detailed, specific questions

## HP Storage Web Site

The HP web site has the latest information on this product, as well as the latest drivers. Access storage at: <http://www.hp.com/country/us/eng/prodserv/storage.html>. From this web site, select the appropriate product or solution.

## HP Authorized Reseller

For the name of your nearest HP authorized reseller:

- In the United States, call 1-800-345-1518
- In Canada, call 1-800-263-5868
- Elsewhere, refer to the HP web site for locations and telephone numbers: <http://www.hp.com>.

# Introduction to System Error Messages



This guide supports HP StorageWorks Fabric OS 4.2.x, and contains system error messages with recommended actions. The error messages are organized alphabetically. Typically, each module contains multiple error messages and each error message contains message text, probable cause, recommended action, and severity level. There can be more than one cause and more than one recommended course of action for any given message. This guide discusses the most probable cause and typical action recommended.

This chapter provides an introduction to the Error Log system. The following topics are discussed:

- [Error Message Severity Levels](#), page 32
- [Overview of the System Logs](#), page 33
- [View or Configure System Logs](#), page 36
- [Reading a System Error Message](#), page 38
- [Responding to a System Error Message](#), page 43

## Error Message Severity Levels

There are six levels of severity messages, ranging from 0 (Panic) to 5 (Debug). In general, the definitions are broad and are intended as general guidelines for troubleshooting. For all cases, you should look at each specific error message description thoroughly before taking action. Error messages have the severity levels described in [Table 2](#).

**Table 2: Message Severity Levels**

Level	Description
0 = Panic	Panic-level messages indicate that a specific software subsystem has detected a fatal or unrecoverable error condition: for example, memory allocation failures, system call failures, and software detection of misbehaving ASIC or hardware subsystems. Such errors indicate either partial or complete failure of a subsystem. A panic situation may initiate a recovery procedure causing a switch to reboot or failover for the Core Switch 2/64 or SAN Director 2/128 with dual CPs.
1 = Critical	Critical-level messages indicate that the software has detected serious problems that will eventually cause a partial or complete failure of a subsystem if not corrected immediately; for example, a power supply failure or rise in temperature must receive immediate attention. Some of the critical errors might overlap in severity with the panic-level messages.
2 = Error	Error-level messages represent error conditions that do not affect overall system functionality significantly. For example, error-level messages might indicate time-outs on certain operations, failures of certain operations after retries, invalid parameters, or failure to perform a requested operation.
3 = Warning	Warning-level messages highlight a current operating condition that should be checked or it may lead to a failure in the future. For example, A power supply failure in a redundant system relays a warning that the system is no longer operating in redundant mode unless the failed power supply is replaced or fixed.
4 = Information	Information-level messages report the current status of the system components other than error status. For example, detecting on and off line status of a fabric port.
5 = Debug	Debug-level messages are for debugging purposes. They are produced by code inserted by the vendor to inform the user that a suspected problem has occurred.



## Overview of the System Logs

This section provides information on the various logs saved by the system, the types of messages saved, and how to view the information in the log files.

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**Note:** The contents of the Port Logs and setting up `syslogd` are discussed in the *HP StorageWorks Fabric OS 4.2.x Procedures User Guide*. The contents of the Panic Trace Logs are intended for support use only.

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## System Error Log

The Fabric OS maintains an internal system error log of all diagnostic and system error messages. Features of the system error log are:

- The system error log, by default, saves messages of Panic and Critical level to nonvolatile storage (using the persistent error log feature; see “[Persistent Error Log](#)” on page 33) and all other messages are volatile. Messages not saved to nonvolatile memory, are lost on a switch reboot or power cycle.
- The system error log can save a maximum of 1536 messages in RAM.
- The system error log is implemented as a circular buffer. When more than the maximum number of entries are added to the log file, old entries are overwritten by new entries.
- By default, the `errdump` and `errorshow` commands display all of the system error messages saved in volatile or nonvolatile memory. Operands for these commands enable you to display either messages saved in volatile or nonvolatile memory.

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**Note:** You should use the `syslogd` facility as a management tool for error logs. See “[System Logging Daemon](#)” on page 34 for more information.

---

## Persistent Error Log

The persistent error log feature enables messages to be saved across power cycles and reboots. It also preserves the most important critical and fatal messages from being overwritten by less severe message in case the buffer is full. For example, warning messages cannot overwrite error, critical, or panic messages. Features of the persistent error log include the following:

- Messages in the persistent error log are preserved across power cycles and system reboots.
- The persistent error log is saved to the current active CP and is not carried over to the new active CP in the event of a failover. Each CP on a Core Switch 2/64 or SAN Director 2/128 has a unique persistent error log, depending on the messages saved when that CP was active.
- The persistent error log has a default capacity of 1024 error log entries.
- The persistent error log can be resized (between 1024 and 2048 entries) at runtime without having to reboot the switch or the system. Use the `errnvlogsize` command to set the size of the persistent error log and the `errnvlogsize` command to view the current configuration.
- The persistent error log is implemented as a circular buffer. When more than the maximum number of entries are added to the log file, old entries are overwritten by new entries.
- All error messages of levels panic and critical are, by default, saved in the persistent error log. This guarantees that critical- or panic-level messages are not lost in the event of unexpected system reboot or failover.
- The threshold level of messages saved to the persistent error log can be modified. Use the `errsavelvl` command to set the threshold level of messages saved to the persistent error log and the `errsavelvl` command to view the current threshold configuration.
- Use the `errclear -p` command to clear the persistent error log.
- Only the persistent error log can be resized.

## System Logging Daemon

Syslogd is a process that runs on UNIX® or Linux systems that reads and logs messages to the system console, to the log files, forwards messages to other machines and users as specified by its configuration file. Refer to the manual pages and related documentation for your UNIX or Linux host system for more information on the syslogd process and its capabilities.

The Fabric OS can be configured to use a UNIX-style syslogd process to read system events and error messages, forward the messages to users, and write the events to log files on a remote UNIX host system.

HP StorageWorks switches can be configured to send error log messages to a UNIX host system that supports syslogd. This host system can be configured to receive error messages from the switch and store them in files on the computer

hard drive. This enables the storage of system error log messages on a host system and overcomes the size limitations of the internal log buffers on the HP StorageWorks switch.

The host system can be running UNIX, Linux, or any other operating system as long as it supports standard syslogd functionality. HP StorageWorks switches do not assume any particular operating system is running on the host system. The only requirement is that the host system must support standard syslogd to receive error log messages from the HP StorageWorks SAN Switch 2/8V, 2/16V, 2/16N, 2/32, Core Switch 2/64, or SAN Director 2/128.

For information on configuring syslogd functionality, refer to the *HP StorageWorks Fabric OS 4.2.x Procedures User Guide*.

## Port Logs

The Fabric OS maintains an internal Port Log of all port activity. Each switch or logical switch maintains a log file for each port. Port Logs are circular buffers that can save up to 8000 entries per logical switch. Once the log is full, the newest log entries overwrite the oldest log entries. Port Logs capture switch-to-device, device-to-switch, switch-to-switch, some device A-to-device B, and control information. Port Logs are not persistent and are lost over power-cycles and reboots.

Use the `portlogshow` command to display the Port Logs for a particular port. Use the `portlogeventsshow` command to display the specific events reported for each port. Refer to the *HP StorageWorks Fabric OS 4.2.x Procedures User Guide* for information on interpreting the `portlogdump` command.

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**Note:** Port log functionality is completely separate from the system error log. Port logs are typically used to troubleshoot device connections.

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## Panic Trace Log (Fabric OS V4.x only)

The Software Watchdog Process (SWD) creates panic trace logs when there are problems in the Fabric OS kernel. Panic trace files can build up in the kernel partition (typically because of failovers) and may need to be periodically deleted or downloaded using the `savecore` command. In case of a kernel panic, panic trace files are created that can be viewed with the `pdshow` command.

The SWD is responsible for monitoring daemons critical to the function of a healthy switch. The SWD holds a list of critical daemons and it expects them to ping periodically at a predetermined interval defined for each daemon.

If a daemon fails to ping the SWD within the defined interval, or if the daemon terminates unexpectedly, then the SWD dumps information to the panic trace log that provides assistance to diagnose the root cause of the unexpected failure.

Use the `pdshow` command to view these files or the `savecore` command to FTP them to a host workstation. The panic trace log files are intended for use only by support personnel.

## System Console

The system console displays messages through the serial port. If you log in to a switch through the Ethernet port, you will not receive console messages. The system console displays both system error messages and panic trace messages. These messages are mirrored to the system console and are saved in one of the system logs.

## View or Configure System Logs

The commands in [Table 3](#) are used to view or configure the error logs. Many of these commands require Admin login privileges.

**Table 3: Commands To View and Configure System Logs**

Command	Description
<code>agtcfgdefault</code>	Reset the SNMP recipients to default values.
<code>agtcfgset</code>	Configure the SNMP recipients.
<code>agtcfgshow</code>	Display the current configuration of the SNMP recipients.
<code>errclear</code>	Clear the error log.
<code>errdump</code>	Display the entire error log, without page breaks.
<code>errnvlogsize</code>	Set the size of the persistent error log.
<code>errnvlogsize</code>	Display the size of the persistent error log.
<code>errsavel</code>	Set the level threshold for messages saved to the error log.
<code>errsavel</code>	Show the level threshold of messages saved to the error log.
<code>errshow</code>	Display the entire error log, with page breaks.

**Table 3: Commands To View and Configure System Logs (Continued)**

Command	Description
memshow	Display the current memory usage of the switch.
pdshow	Display the contents of the Panic Trace Log.
porterrshow	Display the port error summary.
portflagsshow	Display the port status bitmaps for all ports in a switch.
portlogclear	Clear the port log. (If the port log is disabled, this commands enables it.)
portlogdisable	Disable the port log facility.
portlogdump	Display the port log without page breaks.
portlogdumpport	Display the port log of specified port without page breaks.
portlogeventshow	Display which port log events are currently being reported.
portloginshow	Display port logins.
portlogpdisc	Set or clear the debug pdisc_flag.
portlogreset	Enable the port log facility.
portlogresize	Resize the port log to the specified number of entries.
portlogshow	Display the port log, with page breaks.
portlogshowport	Display the port log of a port, with page breaks.
portlogtypedisable	Disable an event from reporting to the port log. Port log events are described by the portlogeventshow command.
portlogtypeenable	Enable an event to report to the port log. Port log events are described by the portlogeventshow command.
savecore	Save or remove core files created by the kernel.
setdbg	Set the level of debug messages reported by a particular module.
seterrlvl	Set the level of errors reported by a particular module.
setverbose	Set the verbose level of a particular module within the Fabric OS.
supportshow	Execute a list of diagnostic and error display commands. This output is used by your switch service provider to diagnose and correct problems with the switch. The output from this command is very long.
syslogdipadd	Add an IP address as a recipient of error messages.
syslogdipremove	Remove an IP address as a recipient of error messages.
syslogdipshow	View the currently configured IP addresses that are recipients of error messages.

## Reading a System Error Message

Typically, system error messages are generated by the various modules in the Fabric OS. They are written in the system error log in volatile or nonvolatile memory, depending on the message severity.

## Viewing System Error Messages from Advanced Web Tools

To view the system error log for a switch from Advanced Web Tools:

1. Launch Advanced Web Tools.
2. Select the desired switch from the Fabric Tree. The Switch View displays.
3. Click the **Switch Events** button. A Switch Events Report appears.
4. View the switch events and messages.

## Displaying the System Error Log Without Page Breaks (CLI)

To display the system error log all at once:

1. Log in to the switch as admin.
2. Enter the `errdump` command at the command line.

```
switch:admin> errdump

Error 04
-----
0x576 (fabos): Mar 25 08:26:44 (1)
Switch: 1, Info TRACK-LOGIN, 4, Successful login

Error 03
-----
0x576 (fabos): Mar 24 16:01:44 (12)
Switch: 1, Info TRACK-CONFIG_CHANGE, 4, Config file change from task:ZNIPC

Error 02
-----
0x2f0 (fabos): Mar 24 15:07:01
Switch: 1, Warning FW-STATUS_SWITCH, 3, Switch status changed from HEALTHY/OK to
Marginal/Warning

Error 01
-----
0x271 (fabos): Mar 24 15:04:06
Switch: 1, Info EM-BOOT, 4, Restart reason: Failover

switch:admin>
```

## Displaying the System Error Log with Page Breaks (CLI)

To display the system error log with page breaks:

1. Log in to the switch as the Admin user.
2. At the command line, enter the `errshow` command.

```
switch:admin> errshow

Error 497
-----
0x4a5 (fabos): Oct 03 04:40:14
Switch: 0, Info TRACK-LOGIN, 4, Successful login

Type <CR> to continue, Q<CR> to stop:
```

## Clearing the System Error Log

To clear the system error log for a particular switch instance:

1. Log in to the switch as the Admin user.
2. Either enter the `errclear -p` command to clear only the persistent errors, or enter the `errclear` command (with no operands) to clear the RAM memory and remove persistent messages from the default `errshow` display.

If no operand is specified, this command changes the way the error log appears in subsequent sessions. By default, the `errshow` command displays both the persistent and active log sessions. However, in future sessions you would have to use the `errshow -p` command to view persistent error messages.

The following example shows how to clear the volatile error log.

```
switch:admin> errclear
switch:admin>
```

The next example shows how to clear the persistent error log.

```
switch:admin> errclear -p
switch:admin>
```

## Setting the Persistent Error Log Threshold

To control the types of messages that are saved in the persistent error log:

1. Log in to the switch as admin.
2. At the command line, enter the `errsavelvlset` command. Enter the numerical value of the persistent error log threshold. Whatever level you select, those messages and all messages of greater severity are saved to the persistent error log. Valid values are:
  - 0 = Panic
  - 1 = Critical
  - 2 = Error
  - 3 = Warning
  - 4 = Information
  - 5 = Debug



The following example shows how to save Warning, Error, Critical, and Panic messages in the persistent error log. By default, Panic and Critical messages are saved in the persistent log.

```
switch:admin> errsavelvlset 3
switch:admin>
```

## Displaying the Current Switch Error Save Level

To view the current value of the persistent error log save level for a given switch instance:

1. Log in to the switch as the Admin user.
2. Enter the `errsavelvlshow` command at the command line.

The following is an example that displays the current error log save level.

```
switch:admin> errsavelvlshow

Current message save level is = 3

switch:admin>
```

The next example shows how to display the current error log save level on the standby CP for switch 0. The value `-s` is added to save the standby CP. This procedure is relevant only for Core Switch 2/64, SAN Director 2/128, or blade products.

```
switch:admin> errsavelvlshow -s 0

Current message save level is = 3

switch:admin>
```

## Resizing the Persistent Error Log

To resize the persistent error log of a switch:

1. Log in to the switch as admin.
2. At the command line, issue the `errnvlogsizeset` command.

The following example shows how to resize the persistent error log to 1500 entries.

```
switch:admin> errnvlogsize set 1500

Persistent error log is resized to store 1500 entries

switch:admin>
```

## Example Error Log Message

The following example shows a sample message from the error log.

```
Error 1001
-----
0x253 (fabos): Nov 03 14:11:53
Switch: 1, Error EM-CP_ERR, 2, CP in slot 5 set to faulty because of CP
ERROR
```

The fields in the error message are described in [Table 4](#).

**Table 4: Error Message Field Descriptions**

Example	Variable Name	Description
Error 1001	Error Log Buffer Number	Displays a rotating number that describes the position the message holds in your buffer. This number is not permanently affiliated with the error itself and should not be used when contacting your switch service provider.
Nov 03 14:11:53	Date and Time	Displays the date and time the error message occurred.
Switch: 1	Switch: <number>	Displays the logical switch that was affected (is 0 or 1). This example is relevant only for Core Switch 2/64, SAN Director 2/128, or blade products.
Error	Severity Level	Displays the severity of the message: Panic, Critical, Error, Warning, Information, or Debug.

**Table 4: Error Message Field Descriptions (Continued)**

Example	Variable Name	Description
EM-CP_ERR	Error Module - Error Code	Displays the name of the module that generated the error and the code name for the error.
2	Severity Level	Displays the severity of the error, in a numbered format: 0 = Panic 1 = Critical 2 = Error 3 = Warning 4 = Information 5 = Debug
CP in slot 5 set to faulty because of CP ERROR	Error Description	Displays error-specific data, such as the error reason.

## Responding to a System Error Message

This section provides information on responding to System Error messages.

### Looking Up a System Error Message

Error messages are arranged in this manual alphabetically. To look up an error message, determine the module and the error code and compare these with the Table of Contents to determine the location of the information for that error message. The following information is provided for each message:

- Module and code name for the error
- Message text
- Probable cause
- Recommended action
- Message severity

## Gathering Information About the Problem

The following are common steps and questions to help troubleshoot a system error message:

1. What is the current OS level?
2. What is the current hardware level?
3. Is the switch operational? (successful failover)
4. What is the impact assessment and urgency:
  - Is the switch down?
  - Is it a standalone switch?
  - How large is the fabric?
  - Is the fabric redundant?
5. Issue `supportshow` and `pdshow` and save the output.
6. Document the sequence of events by answering the following questions:
  - What happened just prior to the problem?
  - Is the problem repeatable?
  - If so, what are the steps to produce the problem?
  - What configuration was in place when the problem occurred?
7. Did a successful failover occur?
8. Was security enabled?
9. Was POST enabled?
10. Are serial port (console) logs available?
11. Which CP was master? (applicable only to the Core Switch 2/64 or SAN Director 2/128)
12. What and when were the last actions or changes made to the system?

# Fabric OS System Descriptions

## 2

Table 5 provides a summary of the systems for which messages are documented in this manual; the systems are listed alphabetically.

**Table 5: System Descriptions**

System	Description
AS	Alias Server provides a multicasting capability: a single frame can be delivered to multiple ports. The user defines a group of ports identified by the Alias ID and delivers a frame to that group using the Alias ID. The Alias Server daemon tracks the Alias ID.
BLADE	Blade error messages are a result of faulty hardware, transient out-of-memory conditions, ASIC errors, or inconsistencies in the software state between a blade and the Environment Monitor (EM) module.
BLOOM	Bloom is the name of the ASIC used as the building block for HP third-generation hardware platforms.
CFGLOADER	The Configuration Loader is the first daemon to run on the system. Its primary responsibility is to determine the system platform and obtain the appropriate configuration data for other daemons. After completion, CFGLOADER exits and does not run again until the next reboot.
CFMON	The CFMON module monitors the compact flash usage. This module automatically deletes the temp files when the compact flash usage rises above 80%.
CHIPS	The CHIPS error messages coming from the blade driver for the ASIC chip.
DIAG	The DIAG error message module provides error messages that indicate hardware failures. Each error message string provides the switch number, the severity level, and the name of the error message.

**Table 5: System Descriptions (Continued)**

System	Description
EM	<p>The Environmental Monitor manages and monitors the various field replaceable units (FRUs), including the port cards, CP cards, blower assemblies, power supplies, and World Wide Name (WWN) cards. EM controls the state of the FRUs during system startup, hot-plug sequences, and fault recovery.</p> <p>EM provides access to and monitors the sensor and status data from the FRUs and maintains the integrity of the system using the environmental and power policies. EM reflects system status by way of Telnet commands, system LEDs, and status and alarm messages. EM also manages some component-related data.</p>
ERRLOG	<p>The Error Log subsystem collects information concerning system health from various subsystems. The Error Log subsystem stores required error messages in nonvolatile storage so the information can be retrieved and displayed on system console.</p>
FABRIC	<p>FABRIC refers to a network of Fibre Channel switches. The FABRIC error messages come from the fabric daemon. The fabric daemon follows the FCSF standard for the fabric initialization process such as determining the E_ports, assigning unique domain ID to switches, creating a spanning tree, throttling the trunking process, and distributing the domain and alias list to all switches in the fabric.</p>
FCMISC	<p>Fibre Channel Physical Layer is used to send Fibre Channel traffic to and from the switch.</p>
FCPD	<p>The Fibre Channel Protocol daemon is responsible for probing the devices attached to the loop port. Probing is a process the switch uses to find the devices attached to the loop ports and to update the Name Server with the information.</p>
FCPH	<p>Fibre Channel Physical Layer is used to send Fibre Channel traffic to and from the switch.</p>
FLOOD	<p>FLOOD is a part of the Fabric Shortest Path First (FSPF) protocol that handles synchronization of the Link State Database (LSDB) and propagation of the Link State Records (LSRs).</p>
FSPF	<p>Fabric Shortest Path First is a link state routing protocol that is used to determine how frames should be routed. These messages cover protocol errors.</p>

Table 5: System Descriptions (Continued)

System	Description
FSS	<p>The Fabric OS State Synchronization framework provides facilities by which the active control processor (CP) can synchronize with the standby CP, enabling the standby CP to take control of the switch nondisruptively during failures and software upgrades. These facilities include version negotiation, state information transfer, and internal synchronization functions, enabling the transition from standby to active operation.</p> <p>FSS is defined both as a <i>component</i> and a <i>service</i>. A component is a module in the Fabric OS implementing a related set of functionality. A service is a collection of components grouped together to achieve a modular software architecture.</p>
FSSME	<p>FSSME is a management module for FSS. FSSME is defined both as a <i>component</i> and a <i>service</i>. A component is a module in Fabric OS implementing a related set of functionality. A service is a collection of components grouped together to achieve a modular software architecture.</p>
FW	<p>The Fabric Watch module monitors thresholds for many switch subsystems, for example, temperature, voltage, fan speed, and switch status. Any changes that cross a specified threshold, are reported to the system error log. The severity of an FW message is listed at the end of the message in parenthesis. Messages labeled (Info) and (Normal) are severity level 4, Information. Messages labeled (faulty) are severity level 3, Warning.</p>
HAM	<p>A user space daemon responsible for High Availability Management.</p>
HAMKERNEL	<p>The kernel module for the HAM daemon.</p>
HLO	<p>HLO is a part of FSPF protocol that handles the HELLO protocol between adjacent switches. The HELLO protocol is used to establish connectivity with a neighbor switch, to establish the identity of the neighbor switch, and to exchange FSPF parameters and capabilities.</p>

**Table 5: System Descriptions (Continued)**

System	Description
KSWD	<p>The Kernel Software Watchdog monitors daemons for unexpected terminations and hang conditions and informs the HAM module to take corrective actions, such as failover or reboot.</p> <p>The following daemons are monitored by KSWD:</p> <ul style="list-style-type: none"> <li>• Name Server Daemon (NSD)</li> <li>• Environment Monitor (EMD)</li> <li>• Fabric Daemon (FABRICD)</li> <li>• FCPD Daemon (FCPD)</li> <li>• SNMP Daemon (SNMPD)</li> <li>• Zone Daemon (ZONED)</li> <li>• Management Server Daemon (MSD)</li> <li>• FSPF Daemon (FSPFD)</li> <li>• Diagnostics Daemon (DIAGD)</li> <li>• Track Changes Daemon (TRACK_CHANGES)</li> <li>• FA-API RPC Daemon (RPCD)</li> <li>• PS Daemon (PSD)</li> <li>• Security Daemon (SECD)</li> <li>• EVM Daemon (EVMD)</li> <li>• Reliable Commit Service Daemon (RCSD)</li> <li>• Slap Daemon (SLAPD)</li> <li>• Fabric Watch Daemon (FWD)</li> <li>• Web Tools Daemon (WEBD)</li> <li>• FDMI Daemon (FDMID)</li> <li>• Time Service Daemon (TSD)</li> <li>• PDM Daemon (PDMD)</li> </ul>
LSDB	Link State Database is a part of the FSPF protocol that manages the Link State Database.
MPATH	Multicast Path uses the Shortest Path First (SPF) algorithm to dynamically compute a broadcast tree.



**Table 5: System Descriptions (Continued)**

System	Description
MQ	Message Queues are used for interprocess communication. They allow many messages, each of variable length, to be queued. Any process or Interrupt Service Routine (ISR) can write messages to a message queue. Any process can read messages from a message queue.
MS	<p>The Management Service enables the user to obtain information about the Fibre Channel fabric topology and attributes by providing a single management access point. MS provides for both monitoring and control of the following areas:</p> <ul style="list-style-type: none"> <li>• Fabric Configuration Server provides for the configuration management of the fabric.</li> <li>• Unzoned Name Server provides access to Name Server information that is not subject to Zone constraints.</li> <li>• Fabric Zone Server provides access to and control of zone information.</li> </ul>
NBFSM	<p>NBFSM is a part of the Fabric Shortest Path First (FSPF) protocol that handles a neighboring or adjacent switch's Finite State Machine.</p> <p>Input to the FSM is an event used to move a switch directly connected to the local switch from one state to another, based on specific events. For example, when two switches are connected to each other using an ISL (inter-switch link) cable, they are in Init State. After both switches receive HELLO messages, they move to the Database Exchange State, and so on.</p> <p>NBFSM states are Down (0), Init (1), Database Exchange (2), Database Acknowledge Wait (3), Database Wait (4), and Full (5).</p>
PANIC	Panic errors are a result of unexpected software-related conditions.
PDM	Parity Data Manager is a user space daemon responsible for the replication of persistent configuration files from the primary partition to the secondary partition and from the active CP card to the standby CP card.
PLATFORM	Platform (Service) Errors come from the port blade and CP blade. These error messages indicate any problems for each of these two hardware components, including problems coming from the PCI buses, i2c bus, Field Programmable Gate Array (FPGA), and power.
PORT	PORT error messages deal with the front-end user ports on the switch. Front-end user ports are directly accessible by users, to connect end devices or to connect to other switches.
PS	The Performance Server daemon measures the amount of traffic between end points or traffic with particular frame formats, such as SCSI frames, IP frames, and customer-defined frames.

**Table 5: System Descriptions (Continued)**

System	Description
RCS	Reliable Commit Service error messages get a request from the Zoning, Security, or Management Server for passing data messages to switches in the fabric. RCS then asks RTWR to deliver the message. RCS also acts as a gatekeeper, limiting the number of outstanding requests for the Zoning, Security, or Management Server modules.
RPCD	The Remote Procedure Call Daemon is used by Fabric Access for API-related tasks.
RTWR	Reliable Transport Write and Read helps deliver data messages either to specific switches in the fabric or to all of the switches in the fabric. For example, if some of the switches are not reachable or are offline, RTWR returns an <code>unreachable</code> message to the caller, allowing the caller to take the appropriate action. If a switch is not responding, RTWR retries 100 times.
SCN	The internal State Change Notification is used for state change notifications from the kernel to the daemons within Fabric OS.
SEC	This section describes security errors, warnings, or information generated during security-related data management or fabric merge operations. Administrators should pay more attention to a secure fabric to distinguish between internal switch and fabric operation errors, or external attack.
SECLIB	Security Library is a facility used by Fabric OS modules. SECLIB provides functionality for enforcement of policies, identification of the switch's role in the fabric, and other tasks. Switch Connection Control (SCC), Device Connection Control (DCC), Management Server (MS), and Internet Protocol (IP) policies are enforced and Fibre Channel Switch (FCS) and non-FCS roles are identified using the SECLIB functions.
SEMA	Semaphore controls the flow of data traffic, so that traffic flow does not overlap and crash the software.
SLAP	Switch Link Authentication Protocol error messages are generated during failed authentication processes. In secure mode, every E_Port goes through mutual authentication before the E_Port formation is completed. The security administrator should pay close attention as these messages have serious security implications to the SAN.
SULIB	Software Upgrade Library provides <code>firmwaredownload</code> command capability, which enables firmware upgrades to both CP cards with a single command, as well as nondisruptive code load to all 4.x switches. These messages may display if there are any problems during the <code>firmwaredownload</code> procedure. Most messages are informational only and are generated even during successful firmware download. For additional information, refer to the <i>HP StorageWorks Fabric OS 4.2.x Procedures User Guide</i> .

**Table 5: System Descriptions (Continued)**

System	Description
SWITCH	These messages are generated by the switch driver module that manages a Fibre Channel Switch instance.
SYSC	System Controller is a daemon that starts up and shuts down all Fabric OS modules in the proper sequence.
TRACK	<p>The Track Change feature tracks the following events:</p> <ul style="list-style-type: none"> <li>• Turning on or off the Track Change feature</li> <li>• CONFIG_CHANGE</li> <li>• LOGIN</li> <li>• LOGOUT</li> <li>• FAILED_LOGIN</li> </ul> <p>If any of these events occur, a message is sent to the system error log. If the SNMP Trap option is enabled, an SNMP Trap is also sent (for more information on the Track Change feature and SNMP traps, refer to the <i>HP StorageWorks OS 4.2.x Command Reference Guide</i>).</p> <p>For information on configuring the Track Change feature, refer to the <i>HP StorageWorks OS 4.2.x Command Reference Guide</i> or the <i>HP StorageWorks Fabric OS 4.2.x Procedures User Guide</i>.</p>
TS	Time Service provides fabric time-synchronization by synchronizing all clocks in the fabric to the clock time on the principal switch.
UCAST	UCAST is a part of the Fabric Shortest Path First (FSPF) protocol that manages the Unicast routing table.
UPATH	UPATH is a part of the Fabric Shortest Path First (FSPF) protocol that uses the SPF algorithm to dynamically compute a Unicast tree.
USWD	The User Space Software Watchdog daemon informs KSWD about which daemons the watchdog subsystem will monitor. The USWD daemon also helps the KSWD daemon to print debug information if a Critical daemon has an unexpected termination.
ZONE	These system error messages indicate any problems associated with zoning.



# Messages



## BLADE-BLD\_EM\_INCNSSTNT

### Message

```
Switch: <number>, Warning, BLADE-BLD_EM_INCNSSTNT, 3, blade <blade number>: blade state is inconsistent with EM.
```

### Probable Cause

Indicates a failover occurred while a blade was initializing on the previously active CP. This message occurs only on the Core Switch 2/64 and SAN Director 2/128.

### Recommended Action

No action is required. The blade is reinitialized. Since reinitializing a blade is a disruptive operation and can stop I/O traffic, you may have to stop and restart the traffic during this process. There are third party tools which run on devices that can be used to stop and start traffic.

### Severity

Warning

## BLADE-CHIP\_INIT\_FAIL

### Message

```
Switch: <number>, Critical, BLADE-CHIP_INIT_FAIL, 1, Blade in slot <slot number>  
timed out initializing the chips.
```

### Probable Cause

Indicates that the blade has failed to initialize the ASIC chips. This message occurs only on the Core Switch 2/64 and SAN Director 2/128.

### Recommended Action

Make sure the blade is seated correctly.

If the blade is seated correctly, reboot or power cycle the blade.

Issue the `systemverification` command to verify the blade does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the problem persists, replace the blade.

### Severity

Critical

## BLADE-FAULT

### Message

```
Switch: <number>, Critical BLADE-FAULT, 1, Faulting blade in slot <slot number>
```

### Probable Cause

Indicates a faulty blade specified in `<slot number>`. This message occurs only on the Core Switch 2/64 and SAN Director 2/128.

### Recommended Action

Make sure the blade is seated correctly. If the blade is seated correctly, reboot or power cycle the blade.

Issue the `systemverification` command to verify the blade does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the problem persists, replace the blade.

## Severity

Critical

## BLADE-INCONSISTENT

## Message

```
Switch: <number>, Warning, BLADE-INCONSISTENT, 3, Blade in slot <slot number>  
inconsistent with the hardware settings.
```

## Probable Cause

A failover occurred while some hardware changes are being made on the previously active CP (such as changing the domain ID). This message occurs only on the Core Switch 2/64 and SAN Director 2/128.

## Recommended Action

No action is required. This blade has been reinitialized. Since reinitializing a blade is a disruptive operation and can stop I/O traffic, you may have to stop and restart the traffic during this process. There are third party tools which run on devices that can be used to stop and start the traffic.

## Severity

Warning

## BLADE-INIT\_FAIL

### Message

```
Switch: <number>, Critical BLADE-INIT_FAIL, 1, Init Failed: Disabled because  
internal ports were not ONLINE, Slot: <slot number>
```

### Probable Cause

The blade initiation failed because one or more of the internal ports were not online. The blade is faulted. This message occurs only on the Core Switch 2/64 and SAN Director 2/128.

### Recommended Action

Make sure the blade is seated correctly. If the blade is seated correctly, reboot or power cycle the blade.

Issue the `systemverification` command to verify the blade does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

Additional blade fault messages precede and follow this error, providing more information. See other error messages for recommended action. If the problem persists, replace the blade.

### Severity

Critical



## BLADE-NOT\_ACCESSIBLE

### Message

```
Switch: <number>, Critical, BLADE-NOT_ACCESSIBLE, 1, Slot <slot number>  
control-plane failure. Expected value: <value 1>, Actual: <value 2>.
```

### Probable Cause

Possibly the blade has experienced a hardware failure or was removed without following the recommended removal procedure. This message occurs only on the Core Switch 2/64 and SAN Director 2/128.

### Recommended Action

Make sure the blade is seated correctly.

If the blade is seated correctly, reboot or power cycle the blade.

Issue the `systemverification` command to verify the blade does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the problem persists, replace the blade.

### Severity

Critical

## BLADE-NOT\_FAULT

### Message

```
Switch: <number>, Info, BLADE-NOT_FAULT, 4, Blade <slot number> NOT faulted. Peer  
blade <slot number> experienced abrupt failure.
```

### Probable Cause

Indicates the errors (mostly sync errors) on this blade are harmless. Probably another blade connected to the current blade has experienced transitory problems. This message occurs only on the Core Switch 2/64 and SAN Director 2/128.

### Recommended Action

Check the other slot indicated in the peer blade above. No action is required if the other blade is already removed or faulted.

### Severity

Information

## BLADE-OUT\_OF\_MEMORY

### Message

```
Switch: <number>, Critical BLADE-OUT_OF_MEMORY, 1, <function> : <failed function call>, out of memory condition
```

### Probable Cause

The switch is low on memory and failed to allocate new memory for an Information Unit.

The <function> variable is `minis_rx_tasklet`.

The <failed function call> variable is `iu_alloc failed`. This function call is for memory allocation for information units.

This message occurs only on the Core Switch 2/64 and SAN Director 2/128.

### Recommended Action

This usually signifies a transient memory shortage. A nonbladed switch will automatically reboot. For a bladed switch, the active CP performs an automatic failover, and the standby CP becomes the active CP.

### Severity

Critical

## BLADE-REG\_FAULT

### Message

```
Switch: <number>, Critical BLADE-REG_FAULT, 1, ASIC driver detected Slot <slot number> port <port number> as faulty (reason: <reason>)
```

### Probable Cause

A blade regulation problem was reported on the specified <slot number>. The blade is faulted. All blade register fault codes are associated with BLOOM error messages. This message is always paired with a BLOOM message that provides more information on the specific error. This message occurs only on the Core Switch 2/64 and SAN Director 2/128.

The reason codes are as follows:

- 1 = Available buffer overflow
- 2 = Backend port buffer timeout
- 3 = Backend port got shut down
- 4 = Embedded port buffer timeout
- 5 = Excessive busy mini buffer
- 6 = Excessive RCC VC on E\_Port
- 7 = Excessive RCC VC on FL\_Port
- 8 = Fail detection buffer tag error
- 9 = Fail detection TX parity error
- 10 = EPI CMEM interrupt error
- 11 = CMI interrupt error
- 12 = interrupt overrun
- 13 = FDET interrupt
- 14 = Interrupt suspended
- 15 = filter LISTD error
- 16 = unknown filter LIST error
- 17 = Wait for LPC open state
- 18 = Wait for Old port state

- 19 = Wait for Open init state
- 20 = TX parity error
- 21 = RAM parity error
- 22 = BISR or RAMINIT error

### Recommended Action

Make sure the blade is seated correctly.

If the blade is seated correctly, reboot or power cycle the blade.

Issue the `systemverification` command to verify the blade does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the problem persists, replace the blade.

### Severity

Critical

## BLADE-SUPPRESS\_FAULT

### Message

```
Switch: <number>, Critical, BLADE-SUPPRESS_FAULT, 1, Suppressing blade fault in slot  
<slot number>
```

### Probable Cause

Indicates the specified 16-port card experienced a failure but was not faulted due to a user setting. This message occurs only on the Core Switch 2/64 and SAN Director 2/128.

### Recommended Action

Power off the specified blade using the `slotpoweroff` command.

Issue the `systemverification` command to verify the blade does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the problem persists, replace the blade.

**Severity**

Critical

**BLOOM-AVAILABLE\_BUF\_OVERFLOW****Message**

```
Switch: <number>, Panic BLOOM-AVAILABLE_BUF_OVERFLOW, 0, S<slot number>, P<port number><blade port number>: quadpt <quad number> available buffer overflow: avail <available buffers>
```

**Probable Cause**

Buffers requested exceeds maximum available buffer number for the specified port. The specified slot is faulted. This message usually indicates a hardware problem with the PCI subsystem.

**Recommended Action**

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the blade or motherboard FRU.

**Severity**

Panic

## BLOOM-BAD\_ID

### Message

```
Switch: <number>, Warning BLOOM-BAD_ID, 3, S<slot number>, P<port number>(<blade  
port number>): IU in <message string> has bad ID (S_ID = <SID number>, D_ID = <DID  
number>)
```

### Probable Cause

A bad source ID or destination ID was reported on the specified port number. This message usually indicates a problem external to the switch, such as a malfunctioning device.

### Recommended Action

Verify the connected device is healthy.

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

Issue the `filterportshow` command to obtain more information.

Issue the `systemverification` command to verify the blade or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the blade or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Warning

## BLOOM-BE\_PORT\_BUF\_TO

### Message

```
Switch: <number>, Panic BLOOM-BE_PORT_BUF_TO, 0, S<slot number>, P<port number><blade port number>: no buffers for the backend port, bufs_rdy=<buffer number>
```

### Probable Cause

No buffers are available for the backend port of the specified port number. The specified slot is disabled. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-BE\_SYNC

### Message

```
Switch: <number>, Panic BLOOM-BE_SYNC, 0, S<slot number>, P<port number>(<blade port number>): Backend port disabled due to sync problem, lli: status=<lli status>(orig:<original lli status>), ctl=<lli control value>, config=<port configured value>, cflag=<port control value>
```

### Probable Cause

The backend port could not reach the sync state for the specified port. The specified port is faulted. LLI control values are listed in [Table 6](#). This message usually indicates the ASIC hardware may be faulty on one or more of the 16-port cards.

### Recommended Action

Issue the `systemverification` command to verify the blade does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the blade or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic



## BLOOM-BE\_SYNC\_C

### Message

```
Switch: <number>, Panic BLOOM-BE_SYNC, 0, S<slot number>, P<port number>(blade port number): lli: def=<lli defied value>, mask=<lli mask value>, flag=<lli signal value>, port: type=<port type>, flags=<port status flags>, bc<blade control value> mc<ASIC-pair control value> cc<chip control value>
```

### Probable Cause

This is the continuous message of BLOOM-BE\_SYNC. The backend port could not reach the sync state for the specified port. The specified port is faulted. LLI control values are listed in [Table 6](#). This message usually indicates the ASIC hardware may be faulty on one or more of the 16-port cards.

### Recommended Action

Issue the `systemverification` command to verify the blade does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the blade or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-BE\_TRUNK

### Message

```
Switch: <number>, Panic BLOOM-BE_TRUNK, 0, S<slot number>, P<port number>(<blade
port number>):Trunk group is down -- this blade is fault, lli_status=<LLI status
number>
```

### Probable Cause

The trunk group is down for the specified port. The specified slot is faulted. The Low Level Interface (LLI) status provides additional error information. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems). [Table 6](#) on page 66 shows the LLI status codes.

**Table 6: LLI Status Codes**

Bits	Value	Function
31-30		Reserved
29		RX FIFO overflow
28		RX FIFO underflow
27-26		Reserved
25		Loop port bypassed
24		Internal receive buffer overflow
23		MARK primitive received
22-20		Module type (from optical-to-electrical module)
19		Laser fault (from optical-to-electrical module)
18		RX loss-of-signal (from optical-to-electrical module)- active low
17		Loss of sync timer expired
16		Loss of sync
15		Loop Port Enable primitive received
14		Reserved
13		Loop Port Bypass primitive received

**Table 6: LLI Status Codes (Continued)**

Bits	Value	Function
12		ARB(f0) primitive received
11-10		Reserved
9		Link Round Trip Timer running
8-6		Reserved
5		LIP primitive received
4-3		Reserved
2-0		
	7	None of the primitives below are being detected
	4	Not Operational (NOS) primitive sequence
2-0 (cont)	3	Offline (OLS) primitive sequence
	2	Link Reset (LR) primitive sequence
	1	Link Reset Response (LRR) primitive sequence
	0	Idle received

**Recommended Action**

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

**Severity**

Panic

## BLOOM-BISR\_FAILED

### Message

```
Switch: <number>, Panic BLOOM-BISR_FAILED, 0, S<slot number>, P<port number>(<blade  
port number>):cmBisr failed in slot <slot number> chip <chip number> fail <failure  
value> done <done value> mask <expected value> (state <bisr processing state>)
```

### Probable Cause

A failure of the Central Memory built-in self-repair was reported for the specified port. The specified slot is faulted. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-BIST\_FAILED

### Message

```
Switch: <number>, Panic BLOOM-BIST_FAILED, 0, S<slot number>, P<port number>( <blade port number>):cmBist failed in slot <slot number> chip <chip number> fail <failure value> done <done value> mask <expected value> (state <bist processing state>)
```

### Probable Cause

A failure of the Central Memory built in self test (BIST) was reported for the specified port. The specified slot is faulted. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-CMEM\_ERR

### Message

```
Switch: <number>, Warning BLOOM-CMEM_ERR, 3, S<slot number>, P<port number>(<blade  
port number>):cmem error, buf_error: <buffer error number>
```

### Probable Cause

A port Central Memory buffer error was reported for the specified port. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Warning

## BLOOM-CMI\_ERR

### Message

```
Switch: <number>, Panic BLOOM-CMI_ERR, 0, S<slot number>, P<port number>(<blade port number>):cmi error, err_status <CMI error number> (addr:<error status h/w address>), cmi_st <cmi status number>
```

### Probable Cause

A CMI (Central Memory Interface) bus error was reported for the specified port. The specified slot is disabled. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-DISABLE\_MINIS

### Message

```
Switch: <number>, Warning BLOOM-DISABLE_MINIS, 3, S<slot number>, P<port number><blade port number>:port fault reason = <reason number>, disable the mini-switch.
```

### Probable Cause

A fault was reported for the specified port and slot during a diagnostic test. The ASIC-pair is disabled for the specified port number.

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Warning



## BLOOM-EMB\_PORT\_BUF\_TO

### Message

```
Switch: <number>, Panic BLOOM-EMB_PORT_BUF_TO, 0, S<slot number>, P<port number><blade port number>: no buffers for the embedded port <quad number>
```

### Probable Cause

The embedded processor port could not get the requested buffer for the specified port. The specified slot is faulted. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-EXCESSIVE\_BUSY\_MINI

### Message

```
Switch: <number>, Panic BLOOM-EXCESSIVE_BUSY_MINI, 0, S<slot number>, P<port number><blade port number>:quadpt <quad number> excessive busy_mini for ep: <embedded port buffer value>
```

### Probable Cause

The ASIC mini buffer requested from the embedded processor port exceeds maximum available buffer number for the specified port. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-EXCESSIVE\_RCC\_VC

### Message

```
Switch: <number>, Panic BLOOM-EXCESSIVE_RCC_VC, 0, S<slot number>, P<port number><blade port number>:excessive rcc_vc: current = <current RCC VC number>, default = <default RCC VC number>
```

### Probable Cause

The Receive Credit Counter (RCC) credits for receiving frames has exceeded the default buffers granted on the specified virtual channel. The specified slot is faulted. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-FDET\_BUFTAG

### Message

```
Switch: <number>, Panic BLOOM-FDET_BUFTAG, 0, S<slot number>, P<port number>: SOF  
<start of Frame/Buffer Tag> or EOF <end of Frame/Buffer Tag> buftag !=<Expected  
Buffer Tag>
```

### Probable Cause

A mismatched frame buffer number identifier (buffer tag) was received on the specified port. The specified slot is faulted. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-FDET\_ERR

### Message

```
Switch: <number>, Panic BLOOM-FDET_ERR, 0, S<slot number>, P<port number> (<blade  
port number>): fdet(<error message string>)
```

### Probable Cause

A hardware internal failure detection error was reported for the specified port. The specified slot is faulted. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-FDET\_ERR\_X

### Message

```
Switch: <number>, Panic BLOOM-FDET_ERR_X, 0, S<slot number>, P<port number>:  
fdet(<identification message string>)
```

### Probable Cause

This hardware internal failure detect supplemental message (see BLOOM-FDET\_ERR) is used to trigger additional data for debugging. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-INCONSISTENT

### Message

```
Switch: <number>, Panic BLOOM-INCONSISTENT, 0, inconsistent in <message string>
```

### Probable Cause

Inconsistency reported in the bloom driver. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

One of the following inconsistent scenarios was reported:

- <List D trigger>  
**Probable Cause:** Unexpected filter LISTD frame received.
- <Mix ASIC revs>  
**Probable Cause:** Mixed BLOOM ASIC chip versions.
- <Virtual pool usage>  
**Probable Cause:** Mismatch between allocated and expected virtual memory locations.
- <Missing sorted cam>  
**Probable Cause:** Missing CAM entry from the sorted CAM table.

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-INCONSISTENT\_EXT

### Message

```
Switch: <number>, Panic BLOOM-INCONSISTENT_EXT, 0, S<slot number>, P<port
number><blade port number>: inconsistent in <message>
```

### Probable Cause

Inconsistency was reported in the bloom driver. The specific port number is reported in this error, and the `<message>` provides additional information for troubleshooting. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

One of the following inconsistent scenarios was reported:

- `<Process require list is empty2>`  
**Probable Cause:** An unexpected processing-required interrupt was reported for the specified port. The specified port is faulted.
- `<BloompollLism odd_buf <buffer number>`  
**Probable Cause:** An invalid buffer number was obtained for LISM frame transmission. The buffer allocation is retried.
- `<Bloomwrrxbdesc odd_buf <buffer number> to blm <address>`  
**Probable Cause:** An invalid buffer number for frame transmission was obtained.
- `<RX overflow/TX FIFO under/overflow. buf_err=<buffer error>`  
**Probable Cause:** An unexpected central memory buffer error was reported for the specified port.
- `<Detect error port stuck INT_CMEM_ERR @ 2GPS>`  
**Probable Cause:** An unexpected central memory buffer error was reported for the specified slot and 2G port.
- `<Error: unknown CMEM error type <error type>`  
**Probable Cause:** An unknown central memory error was reported for the specified port.
- `<No filter port>`  
**Probable Cause:** No matching filter port was reported for the specified port.
- `<BloomBXOnline>`  
**Probable Cause:** No user port was found in the ASIC-pair or on the specified port.
- `<RX Overflow on 1G =>CMEM Error buf_error=<buffer error>`  
**Probable Cause:** An unexpected central memory error was reported for the specified slot and 1G port. The specified slot is faulted.
- `<LISM no nuffer>`  
**Probable Cause:** No buffers are available for sending LISM frame on the specified port.
- `<Sticky secondary Tx parity error>`  
**Probable Cause:** A central memory error was reported and forced a TX parity error for the specified port. The specified slot is faulted.
- `<Bad LoadBuf state <state>>`  
**Probable Cause:** An unexpected state was reported while obtaining buffers for the specified port.



## Recommended Action

Verify that the device connected to this port is healthy.

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

## Severity

Panic

## BLOOM-LIST\_TRIGGER

## Message

```
Switch: <number>, Panic BLOOM-LIST_TRIGGER, 0, S<slot number>, P<port number>(<blade
port number>): <filter interrupt trigged type>: bufno=<frame buffer number>, epil
stat=<interrupt status value>, mask=<interrupt mask value>(status=<original status>)
```

## Probable Cause

An unknown filter list interrupt or an unexpected filter interrupt was reported for the specified port. The specified slot is faulted. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

## Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` and the `filterportshow` commands, and contact your switch service provider.

## Severity

Panic

## BLOOM-MALLOC

## Message

```
Switch: <number>, Panic BLOOM-MALLOC, 0, malloc failed in <message string>
```

## Probable Cause

This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

One of the following memory allocation failures was reported:

- `<bloomPortInstantiate>`  
**Probable Cause:** Failed to initialize bloom port data structure.
- `<filterQuadAlloc>`  
**Probable Cause:** Failed to allocate filter zone group data structure.
- `<zone group buffer>`  
**Probable Cause:** Failed to allocate zone group data structure.
- `<cam zone buffer>`  
**Probable Cause:** Failed to allocate cam zone buffer structure.
- `<vital hardware>`  
**Probable Cause:** Failed to allocate memory for virtual pool structure.
- `<real cam next>`  
**Probable Cause:** Failed to allocate memory for real cam next-array structure.
- `<real to virtual cam table>`  
**Probable Cause:** Failed to allocate memory for real-to-virtual translation array.
- `<real zone group next>`  
**Probable Cause:** Failed to allocate memory for dedicated real zone group-next index.
- `<real to virtual>`  
**Probable Cause:** Failed to allocate memory for dedicated real-to-virtual translation structure.

- <Not enough memory for virtual>  
**Probable Cause:** Not enough memory for virtual hardware function.
- <bloomChipInstantiate>  
**Probable Cause:** Failed to initialize chip data structure.

### Recommended Action

Reboot the switch.

Issue the memshow command, to view your memory usage.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the supportshow command, and contact your switch service provider.

### Severity

Panic

## BLOOM-MALLOC\_EXT

### Message

```
Switch: <number>, Panic BLOOM-MALLOC_EXT, 0, S<slot number>, P<port number>(<blade
port number>):: malloc failed in <message string>
```

### Probable Cause

This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

One of the following memory allocation failures was reported for the specified port:

- <bloomPortInstantiate>  
**Probable Cause:** Failed initializing data structure in bloomPortInstantiate.
- <bloomFAN - 1>  
**Probable Cause:** Failed to allocate Fabric Address Notification IU location 1.
- <bloomFAN - 2>  
**Probable Cause:** Failed to allocate Fabric Address Notification IU location 2.

- `<bloomWrRetTxBuffer>`  
**Probable Cause:** Failed to allocate IU in `bloomWrRetTxBuffer()`.
- `<bloomBufAllocIU>`  
**Probable Cause:** Failed to allocate IU in `bloomBufAllocIU()`.

### Recommended Action

Reboot the switch.

Issue the `memshow` command, to view your memory usage.

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-NO\_BUFFERS

### Message

```
Switch: <number>, Warning BLOOM-NO_BUFFERS, 3, S<slot number>, P<port number>(<area number>): port <port number> disabled due to lack of buffers
```

### Probable Cause

The specified port was disabled due to lack of available buffers. This usually happens when one or more ports in the same quad are configured for long distance. Long distance links require more buffers, the rest of the ports in the quad with a long distance link may have insufficient buffers.

### Recommended Action

If the buffers are required for a long distance connection, you may have to leave this port disabled.

Disable the long distance connection to free up buffers for the other ports within the quad.

Disable one or more ports in the same quad to enable more buffers for the specified port.

## Severity

Warning

## BLOOM-NULL\_PTR

## Message

```
Switch: <number>, Panic BLOOM-NULL_PTR, 0, NULL ptr in <message string>
```

## Probable Cause

This message usually indicates a problem with the Fabric OS. One of the following NULL pointer scenarios was reported:

- `<bloomPortAttach: p>`  
**Probable Cause:** NULL pointer detected in `bloomPortAttach()`.
- `<bloomPortAttach: qdpblm>`  
**Probable Cause:** NULL quad pointer detected in `bloomPortAttach()`.
- `<bloomChipAttach: chblm>`  
**Probable Cause:** NULL `chblm` pointer detected in `bloomChipAttach()`.
- `<bloomChipAttach: c>`  
**Probable Cause:** NULL virtual chip pointer detected in `bloomChipAttach()`.
- `<bloomChipAttach>`  
**Probable Cause:** NULL memory map pointer detected in `bloomChipAttach()`.

## Recommended Action

Reboot the switch.

If the message persists, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

## Severity

Panic

## BLOOM-NULL\_PTR\_EXT

## Message

```
Switch: <number>, Panic BLOOM-NULL_PTR_EXT, 0, S<slot number>, P<port number>(<blade port number>):: NULL ptr in <message string>
```

## Probable Cause

This message usually indicates a problem with the Fabric OS. One of the following NULL pointer scenarios was reported:

- <bloomPortInstantiate>  
**Probable Cause:** NULL pointer detected in bloomPortInstantiate().
- <bloomPortInit>  
**Probable Cause:** NULL pointer detected in bloomPortInit().
- <bloomSendLinitFrame>  
**Probable Cause:** NULL pointer detected in bloomSendLinitFrame().

## Recommended Action

Reboot the switch.

If the message persists, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

## Severity

Panic

## BLOOM-OVERRUN\_INT\_RCVD

### Message

```
Switch: <number>, Panic BLOOM-OVERRUN_INT_RCVD, 0, S<slot number>, P<port
number><blade port number>:mem overrun, quad: <quad number>
```

### Probable Cause

A central memory buffer could not be allocated for the specified port. The specified slot is faulted.

### Recommended Action

Reboot the switch.

If the message persists, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-PORT\_INIT\_STUCK

### Message

```
Switch: <number>, Panic BLOOM-PORT_INIT_STUCK, 0, S<slot number>, P<port
number><blade port number>:port init stuck in <messages string> loop <loop status>
<TX from RX status> busy_buf[4] <busy buffer>
```

### Probable Cause

This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems). One of the following scenarios was busy changing to the next state on the specified port:

- <bloomLismCleanup: LIP received>

**Probable Cause:** Loop initialization frames could not be flushed after receiving LIP on the specified port.

- `<bloomLismCleanup: become Master>`  
**Probable Cause:** Loop initialization frames could not be flushed after becoming loop master on the specified port.
- `<bloomLismCleanup: Not Master>`  
**Probable Cause:** Loop initialization frames could not be flushed after the specified port determined it was not the loop master.
- `<going to the OLD_PORT state>`  
**Probable Cause:** The specified port could not transition to the OLD\_PORT state.
- `<waiting for LPC OPEN state>`  
**Probable Cause:** The specified port (loop port control) could not transition to the OPEN state.
- `<entering OPEN_INIT ALPA>`  
**Probable Cause:** The specified port could not transition to the OPEN\_INIT\_ALPA state.

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic



## BLOOM-RAM\_PAR\_ERR

### Message

```
Switch: <number>, Panic BLOOM-RAM_PAR_ERR, 0, S<slot number>, P<port number>(<blade  
port number>): epil_status: <embedded port status> R2T: <RX to TX ram parity> TFR:  
<TX to RX ram parity> STATS: <statistics> SMI: <SMI> FLT: <filter> PHAN: <phantom>  
EFD: <failure detect>
```

### Probable Cause

RAM parity error was reported for the specified port. The specified slot is faulted. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-RAMINIT\_TO

### Message

```
Switch: <number>, Critical BLOOM-RAMINIT_TO, 1, S<slot number>, P<port
number><blade port number>:port <port number> failed to init RAM @ <offset>, busy
status=<busy index>
```

### Probable Cause

RAM initialization cannot be completed within the expected time for the specified port number. This error causes the 16-port card to be faulted. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Critical

## BLOOM-SMI\_STUCK\_WR

### Message

```
Switch: <number>, Warning BLOOM-SMI_STUCK_RD, 3, S<slot number>, P<port number><blade port number>: read mini port <ASIC-pair port> stuck at SMI op=<memory control>(prev=<direction>)
```

### Probable Cause

The specified port was unable to write into central memory. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Warning

## BLOOM-SPEED\_TO

### Message

```
Switch: <number>, Info BLOOM-SPEED_TO, 4, S<slot number>, P<port number><blade port number>: Speed negotiation failed: Faulting port <port>
```

### Probable Cause

The specified port was unable to negotiate speed. The specified port is faulted and speed negotiation is restarted. This message usually indicates the connected device is rebooting, or the device is malfunctioning.

**Recommended Action**

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

Check the device to verify it is healthy.

Set the port speed to the same speed as the device so the speed negotiation does not take place.

**Severity**

Information

**BLOOM-SUSPENDED\_INT\_RCVD****Message**

```
Switch: <number>, Panic BLOOM-SUSPENDED_INT_RCVD, 0, S<slot number>, P<port number><blade port number>:int suspended (status=<interrupt status>, mask=<interrupt mask>)
```

**Probable Cause**

An unexpected interrupt was reported for the specified port. This error causes the 16-port card to be faulted. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

**Recommended Action**

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

**Severity**

Panic

**BLOOM-TRNK\_MSTR\_DWN****Message**

```
Switch: <number>, Warning BLOOM-TRNK_MSTR_DWN, 3, S<slot number>, P<port number>(<blade port number>): Trunk master port <trunk master port> goes OFFLINE in trunk group [trunk group range]
```

**Probable Cause**

The master trunk port is offline in the specified trunk group. The master trunk port has been physically disconnected or has failed.

**Recommended Action**

Verify that the cable is connected to the port.

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

Issue the `trunkshow` and `trunkdebug` commands for more information.

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

**Severity**

Warning

## BLOOM-TRNK\_SLV\_DWN

### Message

```
Switch: <number>, Warning BLOOM-TRNK_SLV_DWN, 3, S<slot number>, P<port number>(<blade port number>): Trunk slave port <trunk slaveport> goes OFFLINE in trunk group [trunk group]
```

### Probable Cause

The slave trunk port is offline in the specified trunk group. A slave trunk port has been physically disconnected or has failed.

### Recommended Action

Verify that the cable is connected to the port.

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

Issue the `trunkshow` and `trunkdebug` commands for more information.

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Warning

## BLOOM-TX\_PAR\_FDET\_ERR

### Message

```
Switch: <number>, Panic BLOOM-TX_PAR_FDET_ERR, 0, S<slot number>, P<port number><blade port number>:fdet<error message string>
```

### Probable Cause

A hardware transmit failure-detection error was reported for the specified port. This error causes the 16-port card to be faulted. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Panic

## BLOOM-TX\_PARITY\_ERR

### Message

```
Switch: <number>, Warning BLOOM-TX_PARITY_ERR, 3, S<slot number>, P<port number><blade port number>:tx parity error, int_status=<interrupt status>
```

### Probable Cause

The indicated port detected a parity error in the transmit data stream. This error causes the 16-port card to be faulted. This message usually indicates the ASIC hardware may be faulty on the 16-port card (for bladed systems) or motherboard (fixed port count systems).

### Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

Issue the `systemverification` command to verify the 16-port card or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the test finds problems, replace the 16-port card or motherboard FRU.

If no hardware problems are found, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Warning



## CFGLOADER-HIL\_FAIL

### Message

```
Switch: <number>, Critical, CFGLOADER-HIL_FAIL, 1, Config Loader failed: <failure description> (err= error number)
```

### Probable Cause

The configuration loader cannot read the specified data *<failure description>*. The error number provides debugging information.

The following might be displayed in the variable *<failure description>*:

- For bladed and nonbladed switches:
  - hilGetIOXinfo: get extSysID
  - hilGetIOXinfo: get SysID
  - hilGetIPAddr: get default IP address
  - hilGetSwName: get default switch name
  - hilGetWWNNum
- For bladed switches only:
  - hilGetNumSwitch: get default
  - hilGetChassisHA: get default
  - hilGetFruHder: WWN card has bad FRU: get default
  - hil\_get\_chassis\_cfg: status failed
  - no CP found with valid FRU header

### Recommended Action

If the rest of the system initialization continues to run without error, reconfigure the default values for the following configuration variables;

- Set the IP addresses using the `ipaddrset` command.
- Set the switch name using the `switchname` command.
- Set the WWN using the `wwn` command.

If the rest of the system initialization has errors, reboot or power-cycle the CP card. Verify that the CP cards and WWN cards are seated correctly.

## Severity

Critical

## CFGLOADER-IOCTL\_FAIL

## Message

```
Switch: <number>, Critical, CFGLOADER-IOCTL_FAIL, 1, Config Loader failed: <failure type> <failure description>
```

## Probable Cause

The configuration loader cannot communicate with the system driver to download the system configuration. The firmware might be corrupted. The following descriptions might be displayed:

- IOC\_M\_CLEAR\_ERR - Can't drop House-Keeping Self-Fence
- IOC\_M\_SET\_NUMCP - Can't set up CP hot-plug support
- sysCrtlGetCpSlot - Can't locate CP slot
- IOC\_SM\_SET\_MODEL - Can't set Platform Model information
- IOC\_SM\_SET\_CONFIG - Can't set generic configuration

## Recommended Action

Download new firmware and reboot. Make sure to capture the console output when reinstalling the firmware.

## Severity

Critical

## CFGLOADER-LOADER\_FAIL

### Message

```
Switch: <number>, Critical, CFGLOADER-LOADER_FAIL, 1, Config Loader failed: <failure description>
```

### Probable Cause

The configuration loader failed to open the system driver for communication. The failure might be due to a bad CP card FRU; the FRU header might be corrupted or there might be i2c bus access problems resulting from a data corruption or an unsuccessful read.

The following <failure description> might be displayed:

- sysModInit
- Config loader failed, also failed to assert CP error
- Config loader failed, assert CP error
- This CP has bad FRU (<slot number = 5 or 6>)

### Recommended Action

Make sure to capture the console output during this process.

Try reseating the CP card.

If the problem persists, reboot or power-cycle the switch.

If problem persists, replace the CP card and reboot or power-cycle again.

### Severity

Critical

## CFGLOADER-MALLOC

### Message

```
Switch: <number>, Critical, CFGLOADER-MALLOC, 1, Config Loader failed: <failure description>
```

### Probable Cause

Configuration loader cannot allocate any memory for its operation. The system might have a memory leak or corrupted firmware. The <failure description> is No memory for config loader data (InitData).

### Recommended Action

Make sure to capture the console output during this process.  
Download new firmware and reboot.

### Severity

Critical

## CFGLOADER-UNEXPECTED\_VAL

### Message

```
Switch: <number>, Critical, CFGLOADER-UNEXPECTED_VAL, 1, <failure description>  
(val=0x<value>)
```

### Probable Cause

Neither HIL (the Hardware Independent Layer application) nor configuration loader could detect any CP card or WWN card in the system.

The following <failure description> might be displayed on both bladed and nonbladed systems:

- Wrong Extended SystemID
- Wrong SystemID

The following *<failure description>* might be displayed for bladed systems only:

- HIL detects no CP exists in the system
- Invalid number of switches - get default
- There is no WWN card in the system - no response from WWN card
- WWN card has no power, consider device absent - HIL and CFGLOADER read something from the WWN card, but detect WWN card does not have adequate power.
- Invalid platform option found.
- SysCtrlSetPlatform function failed.

### Recommended Action

For Wrong Extended System ID and Wrong System ID, verify that the SystemID is valid.

For all other *<failure description>*, verify that the CP cards or WWN card, as indicated in description, are seated correctly. Power-cycle the switch.

If the problem persists, replace the CP card or WWN card, as appropriate.

### Severity

Critical

## CFMON-CRIT

### Message

```
Switch: <number>, Critical, CFMON-CRIT, 1, The Compact Flash usage for root partition is Y percent. Please contact your service provider.
```

### Probable Cause

The compact flash usage for the root partition is approaching a critical value and the switch might become faulty or hang. If this switch is configured to generate SNMP traps when this message is issued, an SNMP trap is sent.

### Recommended Action

Gather switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Critical

## CFMON-INFO

### Message

```
Switch: <number>, Info CFMON-INFO, 4, Truncated /var/log/wtmp. The /var/log/wtmp size is now x bytes. The Compact Flash usage for root partition is now Y percent.
```

### Probable Cause

This message is written to the persistent error log after your compact flash usage has reached above 80% and the Fabric OS has issued the CFMON-WARN message. This message displays the new utilization percentage as well as the size of the wtmp file (which should now be 0).

### Recommended Action

Verify that the new root partition usage level is below 80%.

### Severity

Information

## CFMON-WARN

### Message

```
Switch: <number>, Warning CFMON-WARN, 3, The Compact Flash usage for root partition is X percent. The /var/log/wtmp size is y bytes.
```

### Probable Cause

The compact flash usage for the root partition has reached above 80% usage. The Fabric OS truncates the wtmp file in the root partition down to 0 bytes. A second CFMON-INFO message is written to the persistent error log, with the new utilization percentage as well as the size of the wtmp file (which should now be 0).

### Recommended Action

Verify that the new root partition usage level is below 80%.

### Severity

Warning

## CHIPS-EXCESSIVE\_CHIP\_INT

### Message

```
Switch: <number>, Panic, CHIPS-EXCESSIVE_CHIP_INT, 1, Busy with emb-port int. for chip <chip number> in minis <minis number> on blade <slot number>, chip int. id disabled.
```

### Probable Cause

Too many interrupts in the embedded port caused the specified chip to be disabled. The probable cause is too many abnormal frames; the chip is disabled to prevent the CP from becoming too busy.

### Recommended Action

Make sure to capture the console output during this process.

Check for a faulty cable, SFP, or device attached to the specified port.

Issue the `systemverification` command to verify the blade or switch does not have hardware problems.

On a bladed switch, perform the following commands: `slotpoweroff` and then `slotpoweron`.

On a nonbladed switch, reboot or power-cycle the switch.

## Severity

Panic

## CHIPS-EXCESSIVE\_PORT\_INT

## Message

```
Switch: <number>, Info, CHIPS-EXCESSIVE_PORT_INT, 4, bport <bport_number> port is faulted.
```

## Probable Cause

Indicates the port generated excessive number of interrupts that may prove fatal to the switch operation. The port is disabled to prevent the CP from becoming too busy. The bport is the back end ASIC port.

## Recommended Action

Make sure to capture the console output during this process.

Check for a faulty cable, SFP, or device attached to the specified port.

On a bladed switch, perform the following commands: `slotpoweroff` and then `slotpoweron`.

On a nonbladed switch, reboot or power-cycle the switch.

## Severity

Information



## CONFIG-PIDCHANGE\_EXTENDED\_EDGE

### Message

```
Switch: <number>, Warning CONFIG-PIDCHANGE_EXTENDED_EDGE, 3, Switch PID format
changed to Format 2 ('Extended Edge PID Format').
```

### Probable Cause

The PID format for the fabric has been changed to format 2, Extended Edge. For more information on PID format, refer to the *HP StorageWorks Fabric OS 4.2.x Procedures User Guide*.

### Recommended Action

This message is for information purposes only. The entire fabric must be configured with the same PID format or the fabric will segment.

### Severity

Warning

## DIAG-ACTTEST

### Message

```
Switch: <number>, Critical DIAG-ACTTEST, 1, <test name>, pass <number>, <port ID>
Failed filter test <test number>: action type sb: <action name> act:<action name>
```

### Probable Cause

During filter test, the action type of the received frame is not the same action type as the sent frame. This usually indicates an ASIC failure.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card.  
For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and SAN Switch 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-BADINT

### Message

```
Switch: <number>, Critical DIAG-BADINT, 1, <test name>, pass <number>,  
<port ID> <subtest name> got interrupt,int_status=<interrupt number> when not  
expecting one
```

### Probable Cause

While running *<test name>*, the switch experienced an unexpected interrupt on pass *<number>* at the specified *<port ID>*, running *<subtest name>*. The interrupt status is defined by *<interrupt number>*. Probable cause is an ASIC failure.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-BUS\_TIMEOUT

### Message

```
Switch: <number>, Critical DIAG-BUS_TIMEOUT, 1, <test name>,  
<port ID> BTO accessing <register name> Register at Address <register address>,
```

### Probable Cause

The ASIC register or the ASIC SRAM did not respond to an ASIC data access. The probable cause is an ASIC failure.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-CAMINIT

### Message

```
Switch: <number>, Critical DIAG-CAMINIT, 1, <test name>, pass <number>,  
<port ID> Failed to Init: <reason>
```

### Probable Cause

The specified port failed to initialize due to one of the following reasons:

- The switch is not disabled.
- The diagnostic queue is absent.
- The memory allocation (MALLOC) failed.

- A chip is not present.
- The port is not in loopback mode.
- The port is not active.

### Recommended Action

Reboot (or failover) if necessary.

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-CAMSID

### Message

```
Switch: <number>, Critical DIAG-CAMSID, 1, <test name>, pass <number>,
<port ID> <no> translation test, received <source ID>, transmitted <expected source
ID>
```

### Probable Cause

The ASIC failed the source ID nontranslation test or the translation test. The *<source ID>* in the received frame must match the *<expected source ID>* in the transmitted data. This usually indicates an ASIC failure.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-CANTRCV****Message**

```
Switch: <number>, Critical DIAG-CANTRCV, 1, <test name>, pass <number>,  
<port ID> Cannot Receive Frame: portReceive status: <receiver status code>  
iu_status: <IU status code>
```

**Probable Cause**

The port timed out; either it did not receive a message in the port receiving message queue or it returned a bad receive buffer status. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

## DIAG-CANTXMIT

### Message

```
Switch: <number>, Critical DIAG-CAMINIT, 1, <test name>, pass <number>,  
<port ID> Cannot Transmit Frame: portTransmit returns <transmitter status>
```

### Probable Cause

The specified port failed to transmit frames. This usually indicates an ASIC failure.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-CLEARERR

### Message

```
Switch: <number>, Warning DIAG-CLEARERR, 3, <port ID> Diagnostics Error Cleared
```

### Probable Cause

The diagnostic error flag (OK or BAD) for the specified port is cleared.

### Recommended Action

No action is required.

**Severity**

Warning

**DIAG-CMBISRF****Message**

```
Switch: <number>, Critical DIAG-CMBISRF, 1, <test name>, pass <number>, <port ID>  
<internal port number>, Ch <slot number/chip number> BISR,BIST Self-Test Fail,  
RAMs fail bitmap: is <actual bitmap> sb <expected bitmap> er <error bitmap>
```

**Probable Cause**

The ASIC central memory failed to complete the built-in self-repair (BISR) within the timeout period. As a result, any bad memory cells in the central memory are not repaired. When the BISR fails, the built-in self-test (BIST) runs automatically and will fail also. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-CMBISRTO****Message**

```
Switch: <number>, Critical DIAG-CMBISRTO, 1, <test name>, pass <number>  
<port ID> <internal port number>, Ch <slot number/chip number> BISR,BIST Timed  
Out,RAMs done bitmap: Err Bits <four digit bitmap>
```

**Probable Cause**

The ASIC central memory failed to complete the built-in self-repair (BISR) within the timeout period. When the BISR fails, the built-in self-test (BIST) runs automatically and will fail also. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-CMERRPTN****Message**

```
Switch: <number>, Critical DIAG-CMERRPTN, 1, <test name>, pass <number>,  
<port ID> Offs <line offset> <CMEM error type> at wrong port, <actual port number> sb  
<expected port number>
```

**Probable Cause**

The *<central memory error type>* detected at the wrong port *<actual port number>* should be at the *<expected port number>*. This usually indicates an ASIC failure.



## Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

## Severity

Critical

## DIAG-CMERRTYPE

## Message

```
Switch: <number>, Critical DIAG-CMERRTYPE, 1, <test name>, pass <number>,  
Pt <source slot/ chip (blade port) -> dest slot/chip (blade port)> Offs <line offset>  
Wrong error type. Pt <port number> is <actual error> sb <expected error>,
```

## Probable Cause

The destination port received the wrong central memory (CMEM) *<actual error>*; should be *<expected error>*. This usually indicates an ASIC failure.

## Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

## Severity

Critical

**DIAG-CMICKSUM****Message**

```
Switch: <number>, Critical DIAG-CMICKSUM, 1, <test name>, pass <number>,  
<port ID> (bad | good | NOT TARGET) Cksum Test,  
bit6 is <actual bit state> sb <expected bit state>, Pt<CMI error chip number>
```

**Probable Cause**

The CMI (Central Memory Interface) test detected a checksum failure. An ASIC failure was reported. Depending on the test involved, this could happen during a bad checksum test, good checksum test, or NOT TARGET checksum test:

- Bad checksum test: CMI error bit <bit6> should be set in CMI error state register.
- Good checksum test: CMI error bit <bit6> should not be set in CMI error state register.
- NOT TARGET checksum test: CMI error bit <bit6> should not be set in CMI error state register.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified <port ID>.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

## DIAG-CMIDATA

### Message

```
Switch: <number>, Critical DIAG-CMIDATA, 1, <test name>, pass <number>,  
<port ID pair> RX Data is <actual data> sb <expected data> er <error bits>
```

### Probable Cause

The CMI (Central Memory Interface) test received unexpected CMI test data <bit 0-15> from CMI self-test register.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified <port ID>.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-CMIINVCAP

### Message

```
Switch: <number>, Critical DIAG-CMIINVCAP, 1, <test name>, pass <number>,  
<port ID pair>: <port ID> erroneous CMI Capture Flag (bit31-1),
```

### Probable Cause

Erroneous CMI (Central Memory Interface) capture flag was detected. The CMI capture flag was set on the incorrect port. The CMI capture flag located in bit 31 of a CMI self-test register indicates that a CMI self-test message was received from the CMI bus.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-CMINCBISR****Message**

```
Switch: <number>, Critical DIAG-CMINCBISR, 1, <test name>, pass <number>,  
<port ID> inconsistent BISR result RAM# <RAM number> previous repair <previous  
solution> current repair <current solution>
```

**Probable Cause**

The test *<test name>* attempted to verify that the repair solution from BISR (built-in self-repair) is consistent but the test detected an inconsistent result. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

## DIAG-CMINOCAP

### Message

```
Switch: <number>, Critical DIAG-CMINOCAP, 1, <test name>, pass <number>,  
<port ID pair>: RX Pt <port ID> No CMI Capture Flag (bit31-0)
```

### Probable Cause

There is no CMI (Central Memory Interface) capture flag. This usually indicates an ASIC failure. The CMI flag indicates that a CMI self-test message was received from the CMI bus.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-CMISA1

### Message

```
Switch: <number>, Critical DIAG-CMISA1, 1, <test name>, pass <number>,  
<port ID> TX Pt CMI Self-Test Start bit30 s-a-1,
```

### Probable Cause

The CMI (Central Memory Interface) self-test started, but Self -Test Start flag *<bit30>* has never been cleared. This usually indicates an ASIC failure. The Self-Test Start bit is expected to be cleared automatically after the self-test message is sent.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-CMNOBUF

### Message

```
Switch: <number>, Critical DIAG-CMNOBUF, 1, <test name>, pass <number>,  
<port ID> No more buffers
```

### Probable Cause

The specified port could not find an available buffer for testing. This usually indicates an ASIC failure.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-CMNONPRIME

### Message

```
Switch: <number>, Critical DIAG-CMNONPRIME, 1, <test name>, pass <number>,
<port ID> BISR non-prime part
RAM# <ram number>: <repair solution> (<num> bad rows, <num> redundant rows)
```

### Probable Cause

The test *<test name>* expected to find prime ASIC parts (without any bad rows of cells in central memory). However, it detected a number of bad rows of cells in the specified ASIC.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-CMRWPERR

### Message

```
Switch: <number>, Critical DIAG-CMRWPERR, 1, <test name>, pass <number>,
<port ID> RW parity error,
IntStatReg <register value> BufMemErrReg <register value>
```

### Probable Cause

The test *<test name>* detects a parity error in the interrupt status register when it is testing the central memory. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified `<port ID>`.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-CMTO****Message**

```
Switch: <number>, Critical DIAG-CMTO, 1, <test name>, pass <number>,  
<port ID> timeout,  
MEM_RUNNING bit 0 Stuck High
```

**Probable Cause**

A central memory timeout occurred during write access. The initiated data transfer did not complete within the timeout period. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified `<port ID>`.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical



## DIAG-DATA

### Message

```
Switch: <number>, Critical DIAG-DATA, 1, <test name>, pass <number>,
<port ID pair> Payld Byte <index> is <actual iu data> sb <expected iu data>
```

### Probable Cause

The payload received by the specified *<port ID>* did not match the transmitted payload. A fiber cable, media, or ASIC failure is the probable cause.

### Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-DEC\_RWTEST

### Message

```
Switch: <number>, Critical DIAG-DEC_RWTEST, 1, <test name>, pass <number>,
<port ID> Failed: <register name> <prerequisite flags>
r=<pattern number> c=<result flags>
```

### Probable Cause

The ASIC internal registers failed the read-modify-write operation. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-EPI1\_STATUS\_ERR****Message**

```
Switch: <number>, Critical DIAG-EPI1_STATUS_ERR, 1, <test name>, pass <number>,
<port ID> <port speed> Embedded Port Interrupt 1 Status Error: <status>
```

**Probable Cause**

When the port is in force-failure mode, the receiving (RX) port interrupt is in *bad finish message* error status. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

## DIAG-ERRSTAT

### Message

```
Switch: <number>, Critical DIAG-ERRSTAT, 1, <command>, pass <number>,
Pt<slot/port>(<area>) <counter name> Error Counter is <count> sb 0
```

### Probable Cause

One of the ASIC internal counters, *<counter name>*, detected an error. A fiber cable, media, or ASIC failure is the probable cause.

### Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-ERRSTATS

### Message

```
Switch: <number>, Error DIAG-ERRSTATS, 2, <command>, pass <number>,
<port ID> <counter name> Error Counter is <count> sb 0
```

### Probable Cause

An ASIC internal error counter detected an error condition. A fiber cable, SFP, or ASIC failure is the probable cause.

## Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

## Severity

Error

## DIAG-FDET\_PERR

## Message

```
Switch: <number>, Critical DIAG-FDET_PERR, 1, <test name>, pass <number>,  
<port ID> <port speed> Failure Detection RAM Parity Error: <status>
```

## Probable Cause

An ASIC internal failure detect memory found a parity error. This usually indicates an ASIC failure.

## Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-FINISH\_MSG\_ERR****Message**

```
Switch: <number>, Critical DIAG-FINISH_MSG_ERR, 1, <test name>, pass <number>,  
<port ID> <port speed> Finish Msg Error: <status>
```

**Probable Cause**

An error was detected by the ASIC frame finish message handling logic. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-FLTINIT****Message**

```
Switch: <number>, Critical DIAG-FLTINIT, 1, <test name>, pass <number>,  
<port ID> Failed to Init: <reason>
```

**Probable Cause**

The specified port failed to initialize during filter test due to one of the following reasons:

- The switch is not disabled.
- The diagnostic queue is absent.
- The memory allocation (MALLOC) failed.
- A chip is not present.
- The port is not in loopback mode.

### Recommended Action

Reboot (or failover) if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified `<port ID>`.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-FLTRCV

### Message

```
Switch: <number>, Critical DIAG-FLTRCV, 1, <test name>, pass <number>,
<port ID> Failed to receive frame: status: <status>
```

### Probable Cause

An error was detected by the ASIC internal CAM (Content Addressable Memory) filtering logic.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified `<port ID>`.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-FLTXMIT****Message**

```
Switch: <number>, Critical DIAG-FLTXMIT, 1, <test name>, pass <number>,
<port ID> Cannot Transmit Frame: portTransmit returns <status>
```

**Probable Cause**

The specified port failed to transmit frames. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-FORCEERR****Message**

```
Switch: <number>, Critical DIAG-FORCEERR, 1, <port ID> Forced error
```

**Probable Cause**

The port has been forced to an error state.

### Recommended Action

Issue the command `diagclearerror` to clear the error condition.

### Severity

Critical

## DIAG-FTPRT\_STATUS\_ERR

### Message

```
Switch: <number>, Critical DIAG-FTPRT_STATUS_ERR, 1, <test name>, pass <number>,
<port ID> <port speed> Frame Tracking Port Status Error,
Exp: <port status> Act: <port status>,
<frame tracking> <frame tracking>
```

### Probable Cause

If the port is in force-failure mode, this message indicates that incorrect frame-tracking port status was found.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical



## DIAG-INC\_RWTEST

### Message

```
Switch: <number>, Critical DIAG-INC_RWTEST, 1, <test name>, pass <number>,  
<port ID> Failed: <register name> <prerequisite flags>  
r=<pattern number> c=<result flags>
```

### Probable Cause

ASIC internal registers failed the read-modify-write operation. This usually indicates an ASIC failure.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-INIT

### Message

```
Switch: <number>, Critical DIAG-INIT, 1, <test name>, <subtest name> pass <number>,  
<port ID> <port speed> Failed to go active after initialization
```

### Probable Cause

The port failed to go active in the loopback mode requested. Fiber cable, media, or ASIC failure is the probable cause.

## Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

## Severity

Critical

## DIAG-INTNIL

## Message

```
Switch: <number>, Critical DIAG-INTNIL, 1, <test name>, pass <number>,  
<port ID> Failed to get CMI Error (interrupt)
```

## Probable Cause

The port failed to go active in the loopback mode requested. Fiber cable, media, or ASIC failure is the probable cause.

## Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-INTNOTCLR****Message**

```
Switch: <number>, Critical DIAG-INTNOTCLR, 1, <test name>, pass <number>, <port ID> Offs <ram offset> CMEM_ERR int bit could not be cleared
```

**Probable Cause**

The interrupt bit could not be cleared. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-LCMEM****Message**

```
Switch: <number>, Critical DIAG-LCMEM, 1, <test name>, pass <number>, <port ID> Wr/Rd, bNum <bad buffer> bLine <bad line> Offs <offset> error bits <bit mask>
```

**Probable Cause**

The data read from the central memory location did not match data previously written into the same location. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

**DIAG-LCMEMTX****Message**

```
Switch: <number>, Critical DIAG-LCMEMTX, 1, <test name>, pass <number>,
<port ID pair> Tx Rd, Wd <bad word> error bits <bit mask>
```

**Probable Cause**

A central memory transmit path failure was detected. The first ASIC in *<port ID pair>* failed to read the second ASIC in *<port ID pair>* using the transmit path. This usually indicates an ASIC failure.

**Recommended Action**

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

**Severity**

Critical

## DIAG-LCMTO

### Message

```
Switch: <number>, Critical DIAG-LCMTO, 1, <test name>, pass <number>,
<port ID> timeout, MEM_RUNNING bit 0 Stuck High
```

### Probable Cause

A central memory timeout was reported. The initiated data transfer did not complete within the timeout period. This usually indicates an ASIC failure.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-LESSN\_STATUS\_ERR

### Message

```
Switch: <number>, Critical DIAG-LESSN_STATUS_ERR, 1, <test name>, pass <number>,
<port ID> <port speed> Buffer Tags Status Error,
Exp: <expected status> Act: <actual status>
```

### Probable Cause

If the switch is in force-failure mode, the less\_n register has bad buffer tags error status. This usually indicates an ASIC failure.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-MBUF\_STATE\_ERR

### Message

```
Switch: <number>, Critical DIAG-MBUF_STATE_ERR, 1, <test name>, pass <number>,  
<port ID> <speed> Minibuffer State Checking Error: <value>
```

### Probable Cause

An ASIC pair buffer state checking error was reported. This usually indicates an ASIC failure.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-MBUF\_STATUS\_ERR

### Message

```
Switch: <number>, Critical DIAG-MBUF_STATUS_ERR, 1, <test name>, pass <number>,
<port ID> <speed> Minibuffer State Checking Status Error, Exp: <expected value> Act:
<actual value>
```

### Probable Cause

If the switch is in force-failure mode, a bad minibuffer state checking status found.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-NOSEGMENT

### Message

```
Switch: <number>, Critical DIAG-NOSEGMENT, 1, <test name> <subtest name>,
<port ID> <speed> Failed to segment, Please check cables.
```

### Probable Cause

The specified port failed to go into loopback mode. An improper media or cable connection is the likely cause.

### Recommended Action

Reseat the specified media and cables and then reexecute test.

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

**Severity**

Critical

**DIAG-NUMTEST**

**Message**

```
Switch: <number>, Critical DIAG-NUMTEST, 1, <test name>, pass <number>,  
<port ID> Failed filter test #<test number>: filter number sb: <expected number>  
act: <actual number>
```

**Probable Cause**

The wrong filter number changed states during the filter test. An improper media or cable connection is the likely cause.

**Recommended Action**

Reseat the specified media and cables and then reexecute test.

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

**Severity**

Critical



## DIAG-PORTDIED

### Message

```
Switch: <number>, Critical DIAG-PORTDIED, 1, <test name> <subtest name>, pass  
<number>, <port ID> <speed> Was Active but Went Inactive (Offline)
```

### Probable Cause

The specified port was in loopback mode and then went inactive. A fiber cable, media, or ASIC failure is the probable cause.

### Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-PORTENABLE

### Message

```
Switch: <number>, Critical DIAG-PORTENABLE, 1, <test name> <subtest name>, pass  
<number>, <port ID> <speed> Failed enable.
```

### Probable Cause

An ASIC driver detected an error when attempting to bring the port online. A fiber cable, media, or ASIC failure is the probable cause.

### Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-PORTM2M

### Message

```
Switch: <number>, Critical DIAG-PORTM2M, 1, <test name>,  
<port ID> Port M->M Connection not allowed
```

### Probable Cause

The specified port is found to be connected to itself (self loopback). The Port M to Port M connection is not allowed by the test. An improper cable connection is the likely cause.

### Recommended Action

Reconnect port (M) to another port (N) and reexecute the test.

### Severity

Critical

## DIAG-PORTSTOPPED

### Message

```
Switch: <number>, Critical DIAG-PORTSTOPPED, 1, <test name>, <number> nMega,  
<port ID> No Longer Transmitting, FTX Counter Stuck at <counter value>
```

### Probable Cause

The specified port is no longer transmitting frames. The Number Of Frames Transmitted counter is stuck at *<counter value>*. A fiber cable, media, or ASIC failure is the probable cause.

### Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-PORTWRONG

### Message

```
Switch: <number>, Critical DIAG-PORTWRONG, 1, <test name>, pass <number>,  
Frame Received at Wrong Port: is <port ID> sb <port ID>
```

### Probable Cause

A frame was erroneously received by port M instead of the intended port N. This usually indicates an ASIC failure.

## Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

## Severity

Critical

## DIAG-REGERR\_UNRST

## Message

```
Switch: <number>, Critical DIAG-REGERR_UNRST, 1, <test name>,  
<port ID> 3 retries,  
lli_ctl <actual value> sb 90000, port_config <actual value> sb <expected value>
```

## Probable Cause

The specified port failed to reset despite three retries. This usually indicates an ASIC failure. This message is generated by the `portregtest` or the `sramretentiontest` command, if problems are found.

## Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.
- For the SAN Switch 2/32, replace the motherboard FRU.

- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

## Severity

Critical

## DIAG-RXQ\_FRAME\_ERR

## Message

```
Switch: <number>, Critical DIAG-RXQ_FRAME_ERR, 1, <test name>, pass <number>,  
<port ID> <speed> RX Queuing Frame Tracking Number Error: <value>
```

## Probable Cause

A data error was detected in the receiving (RX) port queuing memory.

## Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

## Severity

Critical

## DIAG-RXQ\_RAM\_PERR

### Message

```
Switch: <number>, Critical DIAG-RXQ_RAM_PERR, 1, <test name>, pass <number>,  
<port ID> <speed> RX Queuing RAM Parity Error: <value>
```

### Probable Cause

A parity error was detected in the receiving (RX) queuing RAM of the ASIC.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-SMI\_STUCK

### Message

```
Switch: <number>, Warning DIAG-SMI_STUCK, 3, <port ID> stuck at SMI OP still running
```

### Probable Cause

The status indicator of the ASIC Special Memory Interface (SMI) is stuck on the specified port.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

## Severity

Warning

## DIAG-STATS

## Message

```
Switch: <number>, Critical DIAG-STATS, 1, <test name>, pass <number>,  
<port ID> <counter name> Counter Wrong, is <actual value> sb <expected value>
```

## Probable Cause

The ASIC internal error counters detected an error condition. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the mainboard or ASIC. This message is generated by the `portloopbacktest` command, if problems are found.

## Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified `<port ID>`.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

## Severity

Critical

## DIAG-STSPACNT

### Message

```
Switch: <number>, Critical DIAG-STSPACNT, 1, <test name>, pass <number>,  
<port ID> Failed ALPA stat counter test:  
alpa(<address>) status count exp:<expected value> act:<actual value>
```

### Probable Cause

An incorrect ALPA count was found. This usually indicates an ASIC failure.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-STSPINIT

### Message

```
Switch: <number>, Critical DIAG-STSPINIT, 1, <test name>, pass <number>,  
<port ID> Failed to Init: <reason>
```

### Probable Cause

One of two problems might have caused the reported error:

- The space for frames could not be allocated.
- The port failed to initialize.

The problem might be due to an ASIC failure.



## Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

## Severity

Critical

## DIAG-STSNUL

## Message

```
Switch: <number>, Critical DIAG-STSNUL, 1, <test name>, pass <number>, <port ID>  
ptRegs(pt): Null pointer detected
```

## Probable Cause

An error occurred while sending data or a bad port number was detected.

## Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

## Severity

Critical

## DIAG-TIMEOUT

### Message

```
Switch: <number>, Critical DIAG-TIMEOUT, 1, <test name>, pass <number>,  
<port ID> Receive Error | Timeout  
status rx: <value>, iu: <value>
```

### Probable Cause

For `portloopbacktest` and `crossporttest`:

Port failed to receive frame within time-out period

For `centralmemorytest`:

Port failed to detect an interrupt within the time-out period

This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the mainboard or ASIC.

### Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

If the error message persists:

- For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified `<port ID>`.
- For the SAN Switch 2/32, replace the motherboard FRU.
- For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-WTEST

### Message

```
Switch: <number>, Critical DIAG-WTEST, 1, <test name>, pass <number>,  
<port ID> Failed: <register name>  
w=<write pattern> c=<control value>
```

### Probable Cause

The ASIC internal registers failed the write operation. This usually indicates an ASIC failure.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified *<port ID>*.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## DIAG-XMIT

### Message

```
Switch: <number>, Critical DIAG-WTEST, 1, <test name>, pass <number>,  
<port ID> Cannot Transmit Frame: diagPtRegister returns <return value>
```

### Probable Cause

The specified port failed to transmit frame. This usually indicates an ASIC failure. This message is generated by the `camtest`, `portloopbacktest`, and `spinsilk` command, if problems are found.

### Recommended Action

For the Core Switch 2/64 and SAN Director 2/128, replace the 16-port card containing the specified `<port ID>`.

For the SAN Switch 2/32, replace the motherboard FRU.

For the SAN Switch 2/16V and 2/8V, replace the switch, as the entire switch is a FRU.

### Severity

Critical

## EM-BLADE\_ERROR

### Message

```
Switch: <number>, Warning EM-BLADE_ERROR, 3, Sysctrl reports error status for blade ID <id value> for the blade <slot number>
```

### Probable Cause

The system controller has encountered a blade with an unknown ID in the slot specified.

### Recommended Action

If the blade ID listed is not correct, then the FRU header for the blade is corrupted and the blade must be replaced. For the Core Switch 2/64, the blade ID should be 1 for a CP blade, and 2 for a port blade. For the HP StorageWorks SAN Director 2/128, the blade ID should be 5 for a CP blade, and 4 for a port blade.

### Severity

Warning

## EM-CHASSIS\_NULL

### Message

```
Switch: <number>, Critical EM-CHASSIS_NULL, 1, NULL Main Object: <function> failed
```

### Probable Cause

The root object data base pointer was found not to be set in the *function* specified. There are serious Fabric OS data problems on the switch. Sometimes this error can happen when the switch is shutting down for a reboot.

### Recommended Action

If this message occurs during a normal shut down, no action is required. If this message occurs any other time, copy the message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Critical

## EM-CP\_ERR

### Message

```
Switch: <number>, Error EM-CP_ERR, 2, CP in slot <slot number> set to faulty because CP ERROR asserted.
```

### Probable Cause

On a dual-CP system, the standby CP has been detected as faulty. The High Availability feature will not be available. This message occurs every time the other CP reboots even as part of a clean warm failover. In most situations this is followed by the EM-CP\_OK message, and no action is required for the CP. However, you may want to find why the failover occurred.

### Recommended Action

If the inactive CP was just rebooted, wait for the error to clear (run `slotshow` to determine if it has cleared). Watch for the EM-CP\_OK message to verify this error cleared.

If the standby CP continues to be faulty, or if it was not intentionally rebooted, check the error logs on the other CP (using the `errdump` command) to determine the cause of the error state.

If the state persists, try reseating the CP.

If the message persists, replace the unit.

### Severity

Error

## EM-CP\_OK

### Message

```
Switch: <number>, Info EM-CP_OK, 4, CP in slot <slot number> not faulty CP ERROR deasserted.
```

### Probable Cause

This message is associated with EM-CP\_ERR. The new standby CP is in the process of rebooting and has de-asserted the CP\_ERR signal.

### Recommended Action

No action is required.

### Severity

Information

## EM-EM\_UPDATE

### Message

```
Switch: <number>, Error EM-EM_UPDATE, 2, EM failed to update FRU information for  
<fru type> <unit number>
```

### Probable Cause

The environmental monitor was unable to update the time alive or OEM data to the SEEPROM on a FRU.

The *<fru type>* and *<unit number>* are as follows:

- Slot: 1 through 10 for the Core Switch 2/64 and SAN Director 2/128, and 0 for fixed port count switches.
- Power Supply: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 or 2 for the SAN Switch 2/32.
- Fan: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 through 6 the SAN Switch 2/32.
- WWN: 1 or 2 (available only on the Core Switch 2/64 and SAN Director 2/128)

The SAN Switch 2/8V has 1 power supply and 3 fans, and the SAN Switch 2/16V has 2 power supplies and 4 fans. These FRU values may display in this message for these switches, but these parts cannot be replaced. The entire switch is a FRU.

### Recommended Action

If command `fruinfo set` was being run, try the command again; otherwise, the update is automatically reattempted. If it continues to fail, try reseating the FRU.

If the message persists, replace the unit.

### Severity

Error

## EM-FAN\_ABSENT

### Message

```
Switch: <number>, Warning EM-FAN_ABSENT, 3, Fan #<number> not present
```

### Probable Cause

Indicates that the specified fan is missing. This message occurs when the system becomes active and detects that the fan is not present.

### Recommended Action

If the fan unit is present, try reseating the specified fan.

If the fan unit is missing, replace the fan unit.

### Severity

Warning

## EM-FAN\_POLICY

---

**Note:** There are several different EM-FAN\_POLICY error messages that can be generated. The general format is displayed. Each EM-FAN\_POLICY message is also listed as reference.

---

### Message

```
Switch: <number>, <Severity Level> EM-FAN_POLICY, <severity number>, <error-related information> <Recommended action or system action>
```

**Message:** EM-FAN\_POLICY (One fan FRU missing. Install fan FRU immediately.)

**Probable Cause:** One fan FRU has been removed.

**Recommended Action:** Install the missing fan FRU.

**Severity:** Warning



**Message:** EM-FAN\_POLICY (Two fan FRUs missing. Install fan FRUs immediately.)

**Probable Cause:** Two fan FRUs have been removed.

**Recommended Action:** Install the missing fan FRUs.

**Severity:** Warning

**Message:** EM-FAN\_POLICY (All fan FRUs missing. Install fan FRUs immediately.)

**Probable Cause:** All fan FRUs have been removed.

**Recommended Action:** Install the missing fan FRUs.

**Severity:** Warning

**Message:** EM-FAN\_POLICY (One or two fan(s) failed. Replace failed fan FRU(s) immediately.)

**Probable Cause:** The RPM on the fan or fans has fallen below the minimum threshold. This message is often preceded by a low RPM error message.

**Recommended Action:** Replace the failed fan FRU.

**Severity:** Error

**Message:** EM-FAN\_POLICY (Three fans failed. Replace failed fan FRUs immediately.)

**Probable Cause:** The RPM on these fans have fallen below the minimum threshold. This message is often preceded by a low RPM error message.

**Recommended Action:** Replace the failed fan FRUs.

**Severity:** Error

**Message:** EM-FAN\_POLICY (Four or five fans failed. Replace failed fan FRUs immediately.)

**Probable Cause:** The RPM on these fans have fallen below the minimum threshold. This message is often preceded by a low RPM error message.

**Recommended Action:** Replace the failed fan FRUs.

**Severity:** Error

**Message:** EM-FAN\_POLICY (All fans failed. Replace failed fan FRUs immediately.)

**Probable Cause:** The RPM on all fans have fallen below the minimum threshold. This message is often preceded by a low RPM error message.

**Recommended Action:** Replace the failed fan FRUs.

**Severity:** Error

**Message:** EM-FAN\_POLICY (High temperature (value). Exceeded environmental spec.)

**Probable Cause:** Temperature in the system has risen above the warning threshold.

**Recommended Action:** Make sure the area is well ventilated and that all the fans are working properly. Be sure the room temperature is within reasonable range.

**Severity:** Warning

**Message:** EM-FAN\_POLICY (High temperature (value). Exceeding system temperature limit. System will shutdown within 2 minutes.)

**Probable Cause:** Temperature in the system has risen above the critical threshold.

**Recommended Action:** Make sure the area is well ventilated, and that all the fans are working properly. Be sure the room temperature is within reasonable range.

**Severity:** Critical

**Message:** EM-FAN\_POLICY (High temperature warning time expired. System preparing for shutdown... )

**Probable Cause:** Temperature in the system has risen above the panic threshold.

**Recommended Action:** Too late for any action at this point. To help prevent future problems, make sure the area is well ventilated, and that all the fans are working properly. Be sure the room temperature is within reasonable range.

**Severity:** Panic

**Message:** EM-FAN\_POLICY (Using backup temperature sensor, service immediately.)

**Probable Cause:** Temperature readings from U90 are out of range.

**Recommended Action:** Use the `tempshow` command to verify temperature values. If one sensor is out of range (too high), monitor the switch. Try rebooting the switch or power cycling the switch.

**Severity:** Error

**Message:** EM-FAN\_POLICY (All temperature sensors failed, service immediately.)

**Probable Cause:** Temperature readings from all temperature sensors are out of range.

**Recommended Action:** Use the `tempshow` command to verify temperature values. If one sensor is out of range (too high), monitor the switch. Try rebooting the switch or power cycling the switch.

**Severity:** Critical

## EM-FAN\_STATUS

### Message

```
Switch: <number>, Critical EM-FAN_STATUS, 1, System fan(s) status <fan fru>
```

### Probable Cause

A nonbladed system has overheated and is going to shut down. Before doing so, all fan speeds are dumped.

### Recommended Action

If any fans are missing or are not performing at high enough speed, they should be replaced. Healthy fan speeds are as follows:

- SAN Director 2/128 fans run at approximately 2500 RPM.
- Core Switch 2/64 fans run at approximately 2500 RPM.
- SAN Switch 2/32 fans run at approximately 3500 RPM.

- SAN Switch 2/16V fans run at approximately 9000 RPM.
- SAN Switch 2/8V fans run at approximately 5500 RPM.

### Severity

Critical

## EM-FAN\_UNKNOWN

### Message

```
Switch: <number>, Critical EM-FAN_UNKNOWN, 1, Unknown fan <fan FRU> is being  
faulted, try reseating it
```

### Probable Cause

A fan's FRU header could not be read or is not valid; it will not be included in any power computations.

### Recommended Action

Try reseating the specified fan.  
If the problem persists, replace the fan unit.

### Severity

Critical

## EM-FRU\_ABSENT

### Message

```
Switch: <number>, Critical EM-FRU_ABSENT, 1, Failed to read slot <FRU number> FRU header
```

### Probable Cause

The specified FRU header could not be read or is not valid; it will not be included in any computations.

### Recommended Action

Try reseating the specified fan.  
If the problem persists, replace the fan unit.

### Severity

Critical

## EM-FRU\_FAULTY

### Message

```
Switch: <number>, Error EM-FRU_FAULTY, 2, <fru type> <unit number> set to faulty, rc=<return code>
```

### Probable Cause

The specified FRU has been marked as faulty for the specified reason. Other messages should be more explicit about the reason for the faulted FRU.

The *<fru type>* and *<unit number>* are as follows:

- Slot: 1 through 10 for the Core Switch 2/64 and SAN Director 2/128, and 0 for fixed port count switches.
- Power Supply: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 or 2 for the SAN Switch 2/32.

- Fan: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 through 6 the SAN Switch 2/32.
- WWN: 1 or 2 (available only on the Core Switch 2/64 and SAN Director 2/128)

The SAN Switch 2/8V has 1 power supply and 3 fans, and the SAN Switch 2/16V has 2 power supplies and 4 fans. These FRU values may display in this message for these switches, but these parts cannot be replaced. The entire switch is a FRU.

### Recommended Action

If the error reason stated in the other messages is correctable, correct it; if not, try reseating the FRU. If the fault persists, replace the FRU.

### Severity

Error

## EM-FRUHEADER\_NULL

### Message

```
Switch: <number>, Critical EM-FRUHEADER_NULL, 1, NULL FRU header: <specified function> pObjHandle=0x
```

### Probable Cause

A FRU header pointer in the Object Data Base, which represents the components of the switch, was found to be null in the function specified. There are serious internal Fabric OS data problems on the switch.

### Recommended Action

If the fabric has failed, failover or reboot the switch; otherwise, do so at the earliest time possible.

### Severity

Critical

## EM-FRUINFO\_NULL

### Message

```
Switch: <number>, Critical EM-FRUINFO_NULL, 1, NULL FRU info: <function> failed
```

### Probable Cause

The FRU information data cannot be accessed in the function specified. There are serious internal Fabric OS data problems on the switch.

### Recommended Action

If the fabric has failed, failover or reboot the switch; otherwise, do so at the earliest time possible.

### Severity

Critical

## EM-FRU\_INS

### Message

```
Switch: <number>, Info EM-FRU_INS, 4, FRU <fru type> <unit number> insertion detected.
```

### Probable Cause

A FRU of the specified type at the location specified by its number was detected as having been inserted into the chassis.

The *<fru type>* and *<unit number>* are as follows:

- Slot: 1 through 10 for the Core Switch 2/64 and SAN Director 2/128, and 0 for fixed port count switches.
- Power Supply: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 or 2 for the SAN Switch 2/32.
- Fan: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 through 6 the SAN Switch 2/32.

- WWN: 1 or 2 (available only on the Core Switch 2/64 and SAN Director 2/128)

The SAN Switch 2/8V has 1 power supply and 3 fans, and the SAN Switch 2/16V has 2 power supplies and 4 fans. These FRU values may display in this message for these switches, but these parts cannot be replaced. The entire switch is a FRU.

### Recommended Action

Verify that the unit is in service.

### Severity

Information

## EM-FRU\_REM

### Message

```
Switch: <number>, Info EM-FRU_REM, 4, <fru type> <unit number> removal detected.
```

### Probable Cause

A FRU of the specified type at the location specified by its number was detected as having been removed from the chassis.

The *<fru type>* and *<unit number>* are as follows:

- Slot: 1 through 10 for the Core Switch 2/64 and SAN Director 2/128, and 0 for fixed port count switches.
- Power Supply: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 or 2 for the SAN Switch 2/32.
- Fan: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 through 6 the SAN Switch 2/32.
- WWN: 1 or 2 (available only on the Core Switch 2/64 and SAN Director 2/128)

The SAN Switch 2/8V has 1 power supply and 3 fans, and the SAN Switch 2/16V has 2 power supplies and 4 fans. These FRU values may display in this message for these switches, but these parts cannot be replaced. The entire switch is a FRU.



## Recommended Action

Verify that the unit was intended to be removed. Replace the unit as soon as possible.

## Severity

Information

## EM-HIL\_FAIL

## Message

```
Switch: <number>, Error EM-HIL_FAIL, 2, HIL Error: <function> failed, rc=<return code> for <fru type> <unit number>
```

## Probable Cause

Problems were encountered when the software attempted to write to the SEEPROM or the CPLD of the device specified in the error message. The return code is the error number. This is a serious hardware problem.

The *<fru type>* and *<unit number>* are as follows:

- Slot: 1 through 10 for the Core Switch 2/64 and SAN Director 2/128, and 0 for fixed port count switches.
- Power Supply: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 or 2 for the SAN Switch 2/32.
- Fan: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 through 6 the SAN Switch 2/32.
- WWN: 1 or 2 (available only on the Core Switch 2/64 and SAN Director 2/128)

The SAN Switch 2/8V has 1 power supply and 3 fans, and the SAN Switch 2/16V has 2 power supplies and 4 fans. These FRU values may display in this message for these switches, but these parts cannot be replaced. The entire switch is a FRU.

## Recommended Action

Try reseating the FRU, if possible. If this fails to correct the error, replace the specified unit.

**Severity**

Error

**EM-I2C\_TIMEOUT****Message**

```
Switch: <number>, Error EM-I2C_TIMEOUT, 2, <fru type> <unit number> I2C access  
problems (<error code>): state <current state>
```

**Probable Cause**

The I2C bus had problems, and a timeout occurred. This can be a transitory error. Watch for the EM-I2C\_RECOV message, which indicates the problem has been resolved.

The *<fru type>* and *<unit number>* are as follows:

- Slot: 1 through 10 for the Core Switch 2/64 and SAN Director 2/128, and 0 for fixed port count switches.
- Power Supply: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 or 2 for the SAN Switch 2/32.
- Fan: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 through 6 the SAN Switch 2/32.
- WWN: 1 or 2 (available only on the Core Switch 2/64 and SAN Director 2/128)

The SAN Switch 2/8V has 1 power supply and 3 fans, and the SAN Switch 2/16V has 2 power supplies and 4 fans. These FRU values may display in this message for these switches, but these parts cannot be replaced. The entire switch is a FRU.

**Recommended Action**

This is often a transient error. If it recurs, check for loose or dirty connections. Remove all dust and debris prior to reseating the FRU. If it continues to fail, replace the unit.

**Severity**

Error

## EM-I2C\_RECOV

### Message

```
Switch: <number>, Info EM-I2C_RECOV, 4, <fru type> <unit number> I2C access  
recovered: state <current state>
```

### Probable Cause

This message indicates that the I2C bus problems have been resolved and I2C access to the FRU has become available again.

The *<fru type>* and *<unit number>* are as follows:

- Slot: 1 through 10 for the Core Switch 2/64 and SAN Director 2/128, and 0 for fixed port count switches.
- Power Supply: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 or 2 for the SAN Switch 2/32.
- Fan: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 through 6 the SAN Switch 2/32.
- WWN: 1 or 2 (available only on the Core Switch 2/64 and SAN Director 2/128)

The SAN Switch 2/8V has 1 power supply and 3 fans, and the SAN Switch 2/16V has 2 power supplies and 4 fans. These FRU values may display in this message for these switches, but these parts cannot be replaced. The entire switch is a FRU.

### Recommended Action

The EM-I2C\_TIMEOUT error can be a transitory error, if the problem resolves, the EM-I2C\_REVOV message is displayed.

### Severity

Information

## EM-INIT\_FAIL

### Message

```
Switch: <number>, Error EM-INIT_FAIL, 2, EM Init Error: <function> failed,  
err=<error code>
```

### Probable Cause

An error was encountered in the function specified, when initializing the em daemon (EMD) and configuration data. There are serious internal Fabric OS configuration or hardware problems on the switch.

### Recommended Action

If the fabric has failed, failover or reboot the switch; otherwise, do so at the earliest time possible.

### Severity

Error

## EM-MAINOBJ\_NULL

### Message

```
Switch: <number>, Critical EM-MAINOBJ_NULL, 1, NULL Main Object: <function> failed
```

### Probable Cause

The root object data base pointer was found to not be set in the *function* specified. There are serious internal Fabric OS data problems on the switch.

### Recommended Action

If the fabric has failed, failover or reboot the switch; otherwise, do so at the earliest time possible.

**Severity**

Critical

**EM-NOMEM****Message**

```
Switch: <number>, Critical EM-NOMEM, 1, Insufficient resources: <function> failed
```

**Probable Cause**

Could not obtain memory needed to perform the function specified. There are serious Fabric OS data problems on the switch.

**Recommended Action**

If the fabric has failed, failover or reboot the switch; otherwise, do so at the earliest time possible.

**Severity**

Critical

**EM-OBJECT\_UNKNOWN****Message**

```
Switch: <number>, Warning EM-OBJECT_UNKNOWN, 3, A unknown <fru type> <unit number>  
SCN was received
```

**Probable Cause**

A State Change Notification (SCN) was received by the em daemon (EMD); the state is not recognized. This could mean there are serious Fabric OS data problems on the switch.

The *<fru type>* and *<unit number>* are as follows:

- Slot: 1 through 10 for the Core Switch 2/64 and SAN Director 2/128, and 0 for fixed port count switches.

- Power Supply: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 or 2 for the SAN Switch 2/32.
- Fan: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 through 6 the SAN Switch 2/32.
- WWN: 1 or 2 (available only on the Core Switch 2/64 and SAN Director 2/128)

The SAN Switch 2/8V has 1 power supply and 3 fans, and the SAN Switch 2/16V has 2 power supplies and 4 fans. These FRU values may display in this message for these switches, but these parts cannot be replaced. The entire switch is a FRU.

### Recommended Action

If the message is isolated, monitor the error messages on the switch. If the error is repetitive, try reseating the FRU. If the fabric has failed, failover or reboot the switch.

### Severity

Warning

## EM-OBJ\_NULL

### Message

```
Switch: <number>, Critical EM-OBJ_NULL, 1, NULL Object: <function> failed
```

### Probable Cause

An object pointer in the Object Data Base, which represents the components of the switch, was found to be null in the function specified. There are serious Fabric OS data problems on the switch.

### Recommended Action

If the fabric has failed, failover or reboot the switch; otherwise do so at the earliest time possible.

### Severity

Critical

## EM-POWER\_DOWN

### Message

```
Switch: <number>, Critical EM-POWER_DOWN, 1, <slot number> is shutting down
```

### Probable Cause

A blade in the specified slot is being shut down for environmental reasons; its temperature or voltage is out of range.

### Recommended Action

Additional messages will help determine what was out of range. Either replace the unit or correct the thermal problem.

### Severity

Critical

## EM-POWER\_FAIL

### Message

```
Switch: <number>, Critical EM-POWER_FAIL, 1, <fru type> <unit number> failed to power on
```

### Probable Cause

A hot-pluggable Field Replaceable Unit (FRU) failed to power on and will not be used. The type of FRU is specified in the message.

The *<fru type>* and *<unit number>* are as follows:

- Slot: 1 through 10 for the Core Switch 2/64 and SAN Director 2/128, and 0 for fixed port count switches.
- Power Supply: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 or 2 for the SAN Switch 2/32.
- Fan: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 through 6 the SAN Switch 2/32.

- WWN: 1 or 2 (available only on the Core Switch 2/64 and SAN Director 2/128)

The SAN Switch 2/8V has 1 power supply and 3 fans, and the SAN Switch 2/16V has 2 power supplies and 4 fans. These FRU values may display in this message for these switches, but these parts cannot be replaced. The entire switch is a FRU.

### Recommended Action

Try reseating the FRU. If this fails to correct the error, replace the unit.

### Severity

Critical

## EM-POWER\_MONITOR

### Message

```
Switch: <number>, Warning EM-POWER_MONITOR, 3, Slot <slot number> is being powered  
<new state>
```

### Probable Cause

An automatic power adjustment is being made because of the (predicted) failure of a power supply or the insertion or removal of a port blade. If *<new state>* is ON, a port blade is being powered on because more power is available (a power supply was inserted, or a port blade was removed or powered down). If *<new state>* is OFF, a port blade has been powered down because a power supply has been faulted because it is indicating a predicted failure. If *<new state>* is DOWN (not enough power), a newly inserted port blade was not powered on because there was not enough power available to power it up.

### Recommended Action

The Core Switch 2/64 requires two power supplies for a fully populated chassis. You should always operate the system with four operating power supplies for redundancy.

The SAN Director 2/128 requires only a single power supply for a fully populated chassis. You should always operate the system with at least two power supplies for redundancy.



**Severity**

Warning

**EM-PS\_UNKNOWN****Message**

```
Switch: <number>, Critical EM-PS_UNKNOWN, 1, Unknown power supply <unit number> is  
being faulted, try reseating it
```

**Probable Cause**

The FRU header of the specified power supply could not be read or is not valid. It will not be included in any power computations. The unit number possibilities are 1 through 4.

**Recommended Action**

Try reseating the power supply. If this fails to correct the error, replace the unit.

**Severity**

Critical

**EM-SENSOR**

---

**Note:** There are several different EM-SENSOR error messages that can be generated. The general format is displayed below.

---

**Message**

```
Switch: <number>, <severity> EM-SENSOR, <severity>, <error-related information>  
<Recommended action or system action>
```

**Message:** EM-SENSOR (1 blower failed. Replace failed blower assembly immediately).

**Probable Cause:** The RPM on this fan has fallen below the minimum threshold. This message is often preceded by a low RPM error message.

**Recommended Action:** Replace the fan FRU.

**Severity:** Error

**Message:** EM-SENSOR (x blowers failed. Replace failed blower assemblies immediately).

**Probable Cause:** The RPM on these fans have fallen below the minimum threshold. This message is often preceded by a low RPM error message.

**Recommended Action:** Replace the fan FRU.

**Severity:** Error

**Message:** EM-SENSOR (Blower x, high RPM (value)).

**Probable Cause:** The RPM on this blower has risen above the maximum threshold. Note that a high RPM value does not cause the fan to be faulty.

**Recommended Action:** If the RPMs of the fan are too high, replace the fan FRU.

**Severity:** Warning

**Message:** EM-SENSOR (Blower x faulted, low RPM (value)).

**Probable Cause:** The RPM on this fan has fallen below the minimum threshold.

**Recommended Action:** Replace the fan FRU.

**Severity:** Error

**Message:** EM-SENSOR (Slot x, unit shutting down).

**Probable Cause:** Usually this message follows the high temperature warning message. The temperature of the blade in this slot has risen above the maximum threshold for at least two minutes. The blade is shut down to prevent further damage.

---

**Recommended Action:** Make sure the area is well ventilated, and that all the fans are working properly. Be sure the room temperature is within reasonable range. Replace the blade if necessary.

**Severity:** Panic

**Message:** EM-SENSOR (Slot x, high temp (value). Unit is shutdown in 2 minutes if temp remains high).

**Probable Cause:** Temperature of this blade has risen above the critical threshold. This usually follows a high temperature warning message.

**Recommended Action:** Make sure the area is well ventilated, and that all the fans are working properly. Be sure the room temperature is within reasonable range.

**Severity:** Critical

**Message:** EM-SENSOR (Slot x, high temp (value)).

**Probable Cause:** Temperature of this blade has risen above the warning threshold.

**Recommended Action:** Make sure the area is well ventilated, and that all the fans are working properly. Be sure the room temperature is within reasonable range.

**Severity:** Warning

**Message:** EM-SENSOR (Blower x faulted, 48V (value) is above threshold).

**Probable Cause:** The 48V line of the fan is above threshold.

**Recommended Action:** Check the power supplies along with the faulty fan. Replace them as necessary.

**Severity:** Error

**Message:** EM-SENSOR (Blower x faulted, 48V (value) is below threshold).

**Probable Cause:** The 48V line of the fan is below threshold.

**Recommended Action:** Check the power supplies along with the faulty fan. Replace them as necessary.

**Severity:** Error

**Message:** EM-SENSOR (Blower x faulted, 53V (value) is above threshold).

**Probable Cause:** The 53V line of the blower is above threshold.

**Recommended Action:** Check the power supplies along with the faulty fan. Replace them as necessary.

**Severity:** Error

**Message:** EM-SENSOR (Blower x faulted, 53V (value) is below threshold).

**Probable Cause:** The 53V line of the blower is below threshold.

**Recommended Action:** Check the power supplies along with the faulty fan. Replace them as necessary.

**Severity:** Error

**Message:** EM-SENSOR (Fan x faulted, low RPM (value)).

**Probable Cause:** The RPM on this fan has fallen below the minimum threshold.

**Recommended Action:** Replace the failed fan FRU.

**Severity:** Error

**Message:** EM-SENSOR (Fan x, high RPM (value)).

**Probable Cause:** The RPM on this fan has risen above the maximum threshold. Note that a high RPM value does not cause the fan to be faulty. This message is for nonbladed switches.

**Recommended Action:** If high RPM prolong over a period of time, replace the fan FRU.

**Severity:** Warning

**Message:** EM-SENSOR (Switch faulted, 1.8V (value) below threshold. System preparing for reset...)

**Probable Cause:** The 1.8V line is below panic threshold. This message is for nonbladed switches. The switch is faulty due to the voltage regulator.

---

**Recommended Action:** Replace the motherboard FRU for the SAN Switch 2/32. The SAN Switch 2/16V and 2/8V do not have FRUs, so the entire switch must be replaced.

**Severity:** Panic

**Message:** EM-SENSOR (Switch faulted, 2.5V (value) below threshold. System preparing for reset... )

**Probable Cause:** The 2.5V line is below panic threshold. This message is for nonbladed switches. The switch is faulty due to the voltage regulator.

**Recommended Action:** Replace the motherboard FRU for the SAN Switch 2/32. The SAN Switch 2/16V and 2/8V do not have FRUs, so the entire switch must be replaced.

**Severity:** Panic

**Message:** EM-SENSOR (switch faulted, 3.3V (value) below threshold. System preparing for reset... )

**Probable Cause:** The 3.3V line is below panic threshold. This message is for nonbladed switches. The switch is faulty due to the voltage regulator.

**Recommended Action:** Replace the motherboard FRU for the SAN Switch 2/32. The SAN Switch 2/16V and 2/8V do not have FRUs, so the entire switch must be replaced.

**Severity:** Panic

**Message:** EM-SENSOR (switch faulted, 5.0V (value) below threshold. System preparing for reset... )

**Probable Cause:** The 5.0V line is below panic threshold. This message is for nonbladed switches. The switch is faulty due to the voltage regulator.

**Recommended Action:** Replace the motherboard FRU for the SAN Switch 2/32. The SAN Switch 2/16V and 2/8V do not have FRUs, so the entire switch must be replaced.

**Severity:** Panic

**Message:** EM-SENSOR (switch faulted, 12V (value) below threshold. System preparing for reset... )

**Probable Cause:** The 12V line is below panic threshold. This message is for nonbladed switches. The switch is faulty due to the voltage regulator.

**Recommended Action:** Replace the motherboard FRU for the SAN Switch 2/32. The SAN Switch 2/16V and 2/8V do not have FRUs, so the entire switch must be replaced.

**Severity:** Panic

**Message:** EM-SENSOR (Slot <slot number> faulted, 1.8V (<value>) is below threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 1.8V (<value>) is above threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 1.8V Blade (<value>) is below threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 1.8V Blade (<value>) is above threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 1.8V CP (<value>) is below threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 1.8V CP (<value>) is above threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 2.5V (<value>) is below threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 2.5V (<value>) is above threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 2.5V CP (<value>) is below threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 2.5V CP (<value>) is above threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 3.3V (<value>) is below threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 3.3V (<value>) is above threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 3.3V Blade (<value>) is below threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 3.3V Blade (<value>) is above threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 3.3V IIC (<value>) is below threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.



---

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 3.3V IIC (<value>) is above threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 3.3V CP (<value>) is below threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 3.3V CP (<value>) is above threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 3.3V Flash (<value>) is below threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 3.3V Flash (<value>) is above threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 5V (<value>) is below threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 5V (<value>) is above threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 12V (<value>) is below threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (Slot <slot number> faulted, 12V (<value>) is above threshold.)

**Probable Cause:** The blade is faulty due to the voltage regulator.

**Recommended Action:** Replace the 16-port card.

**Severity:** Error

**Message:** EM-SENSOR (HIL\_VOLT\_480\_HIGH\_MSG: HIL\_ERROR; Blower <s> faulted, 48V (<v>) is above threshold.)

**Probable Cause:** Blower is faulty due to voltage regulator.

**Recommended Action:** Replace the Fan FRU unit.

**Severity:** Error

**Message:** EM-SENSOR (HIL\_VOLT\_480\_LOW\_MSG: HIL\_ERROR;  
Blower <s> faulted, 48V (<v>) is below threshold.)

**Probable Cause:** Blower is faulty due to voltage regulator.

**Recommended Action:** Replace the Fan FRU unit.

**Severity:** Error

**Message:** EM-SENSOR (HIL\_VOLT\_530\_HIGH\_MSG: HIL\_ERROR;  
Blower <s> faulted, 53V (<v>) is above threshold.)

**Probable Cause:** Blower is faulty due to voltage regulator.

**Recommended Action:** Replace the Fan FRU unit.

**Severity:** Error

**Message:** EM-SENSOR (HIL\_VOLT\_530\_LOW\_MSG: HIL\_ERROR;  
Blower <s> faulted, 53V (<v>) is below threshold.)

**Probable Cause:** Blower is faulty due to voltage regulator.

**Recommended Action:** Replace the Fan FRU unit.

**Severity:** Error

**EM-SENSOR\_EXC****Message**

```
Switch: <number>, Warning EM-SENSOR_EXC, 3, <fru type> <unit number> exceeded max  
number of allowed sensors
```

**Probable Cause**

The indicated FRU has an incorrect number of sensors in its FRU header-derived information. This could mean that the FRU header was corrupted or read incorrectly or corrupted in the Object Data Base, which contains information about all FRUs.

The *<fru type>* and *<unit number>* are as follows:

- Slot: 1 through 10 for the Core Switch 2/64 and SAN Director 2/128, and 0 for fixed port count switches.
- Power Supply: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 or 2 for the SAN Switch 2/32.
- Fan: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 through 6 the SAN Switch 2/32.
- WWN: 1 or 2 (available only on the Core Switch 2/64 and SAN Director 2/128)

The SAN Switch 2/8V has 1 power supply and 3 fans, and the SAN Switch 2/16V has 2 power supplies and 4 fans. These FRU values may display in this message for these switches, but these parts cannot be replaced. The entire switch is a FRU.

**Recommended Action**

Try reseating the FRU

If the condition persists, replace the FRU unit.

**Severity**

Warning

## EM-SENSOR\_MAX

### Message

```
Switch: <number>, Critical EM-SENSOR_MAX, 1, <fru type> <unit number> has faulted.  
Sensor(s) above maximum limits
```

### Probable Cause

The blade in the specified slot is being shut down for environmental reasons; its temperature or voltage is too high.

The *<fru type>* and *<unit number>* are as follows:

- Slot: 1 through 10 for the Core Switch 2/64 and SAN Director 2/128, and 0 for fixed port count switches.
- Power Supply: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 or 2 for the SAN Switch 2/32.
- Fan: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 through 6 the SAN Switch 2/32.
- WWN: 1 or 2 (available only on the Core Switch 2/64 and SAN Director 2/128)

The SAN Switch 2/8V has 1 power supply and 3 fans, and the SAN Switch 2/16V has 2 power supplies and 4 fans. These FRU values may display in this message for these switches, but these parts cannot be replaced. The entire switch is a FRU.

### Recommended Action

Additional messages are generated; use the other messages to determine which unit had a high temperature. Either replace the unit or correct the thermal problem.

### Severity

Critical

## EM-SENSOR\_MIN

### Message

```
Switch: <number>, Critical EM-SENSOR_MIN, 1, <slot number> has faulted.  
Sensor(s) below minimum limits
```

### Probable Cause

Sensors indicate below minimum limits. The blade in the specified slot is being shut down for environmental reasons; the voltage is too low.

### Recommended Action

Additional messages are generated; use the other messages to determine which voltage was out of range and replace the unit.

### Severity

Critical

## EM-SENSOR\_NULL

### Message

```
Switch: <number>, Critical EM-SENSOR_NULL, 1, NULL pointer: <function> failed
```

### Probable Cause

The sensor data pointer for a Field Replaceable Unit (FRU) was not set in the Object Data Base, which represents the components of the switch. The failed function area is specified in the error message. There are serious internal Fabric OS data problems on the switch.

### Recommended Action

If the fabric has failed, failover or reboot the switch.

**Severity**

Critical

**EM-SENSOR\_RESET****Message**

```
Switch: <number>, Critical EM-SENSOR_RESET, 1, slot 0 is being reset  
Sensor(s) has exceeded max limits
```

**Probable Cause**

The voltage on a nonbladed switch has dropped below specified limits. Additional messages will identify the exact nature of the problem. The switch is reset.

**Recommended Action**

See the additional SENSOR messages for suggested action.

**Severity**

Critical

**EM-SENSORS****Message**

```
Switch: <number>, Warning EM-SENSORS, 3, Sensor values for <FRU type> <unit number>  
<list of applicable sensors and values>
```

**Probable Cause**

This message is usually associated with another, more severe message. All significant sensors for the FRU are displayed; each contains a header.

The *<fru type>* and *<unit number>* are as follows:

- Slot: 1 through 10 for the Core Switch 2/64 and SAN Director 2/128, and 0 for fixed port count switches.

- Power Supply: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 or 2 for the SAN Switch 2/32.
- Fan: 1 through 3 for the Core Switch 2/64 and SAN Director 2/128, and 1 through 6 the SAN Switch 2/32.
- WWN: 1 or 2 (available only on the Core Switch 2/64 and SAN Director 2/128)

The SAN Switch 2/8V has 1 power supply and 3 fans, and the SAN Switch 2/16V has 2 power supplies and 4 fans. These FRU values may display in this message for these switches, but these parts cannot be replaced. The entire switch is a FRU.

This message can display:

- Voltages in volts.
- Temps in Celsius.
- Fan speeds in RPM.

This message can also display a single out of range sensor.

### Recommended Action

If the message is isolated, monitor the error messages on the switch. If the message is associated with other messages, follow the recommended action for those messages.

### Severity

Warning

## EM-SLOT\_INCOMPAT

### Message

```
Switch: <number>, Critical EM-SLOT_INCOMPAT, 1, Incompatible unit in slot <slot number> is being faulted
```

### Probable Cause

A blade inserted in the specified slot is not compatible with the switch software. The blade will not be used.



**Recommended Action**

Try reseating the blade. If this fails to correct the error, replace the unit.

**Severity**

Critical

**EM-SLOT\_NOT\_SEATED****Message**

```
Switch: <number>, Error EM-SLOT_NOT_SEATED, 2, Slot <slot number> ejector not closed
```

**Probable Cause**

The environmental monitor (EM) has found a switch blade that is inserted, but at least one ejector switch is not latched. The blade in the specified slot is treated as not inserted.

**Recommended Action**

Close the ejector switch if the blade is intended to be used.

**Severity**

Error

**EM-SLOT\_PWR\_DOWN****Message**

```
Switch: <number>, Critical EM-SLOT_PWR_DOWN, 1, Slot <slot number> powered down unexpectedly
```

**Probable Cause**

The environmental monitor (EM) received an unexpected power down notification from the specified switch blade. This may indicate a hardware malfunction in the card.

### Recommended Action

Try reseating the blade. If this fails to correct the error, replace the unit.

### Severity

Critical

## EM-SLOT\_PWR\_DOWN\_FLT

### Message

```
Switch: <number>, Critical EM-SLOT_PWR_DOWN_FLT, 1, Received unexpected power down  
for slot <slot number> But slot <slot number> still has power
```

### Probable Cause

The environmental monitor (EM) received an unexpected power down notification from the specified switch blade. However, the specified slot still appears to be powered up after four seconds.

### Recommended Action

Try reseating the blade. If this fails to correct the error, replace the unit.

### Severity

Critical

## EM-SLOT\_PWR\_DOWN\_UNK

### Message

```
Switch: <number>, Critical EM-SLOT_PWR_DOWN_UNK, 1, Can not determine if slot <slot  
number> has powered down
```

### Probable Cause

The environmental monitor (EM) received an unexpected power down notification from the switch blade specified. But, after four seconds it cannot be determined if it has powered down or not.

**Recommended Action**

Try reseating the blade. If this fails to correct the error, replace the unit.

**Severity**

Critical

**EM-SLOT\_UNKNOWN****Message**

```
Switch: <number>, Critical EM-SLOT_UNKNOWN, 1, Unknown unit in slot <slot number> is  
being faulted
```

**Probable Cause**

A switch blade was inserted or present at bootup but the FRU header could not be read or is not valid. The blade is not used.

**Recommended Action**

Try reseating the blade. If this fails to correct the error, replace the unit.

**Severity**

Critical

**EM-SWITCH\_DOWN****Message**

```
Switch: <number>, Warning EM-SWITCH_DOWN, 3, Can't power on slot <slot number>, its  
switch is shutdown
```

**Probable Cause**

The specified slot cannot be powered on because the associated logical switch is shut down.

### Recommended Action

Issue the `switchstart` command on the associated logical switch.

### Severity

Warning

## EM-SWITCH\_FAN\_FAIL

### Message

```
Switch: <number>, Panic EM-SWITCH_FAN_FAIL, 0, Shutting down switch
```

### Probable Cause

A nonbladed switch is shutting down due to overheating. This is typically due to a faulty fan but can also be caused by the switch environment.

### Recommended Action

Verify the switch environment has not become too hot.

Issue the `fanshow` command to verify all fans are running at normal speeds. If the fan is not working properly, replace the fan unit.

### Severity

Panic

## EM-SWITCH\_FAULTY

### Message

```
Switch: <number>, Error EM-SWITCH_FAULTY, 2, Switch set to faulty, rc=<return code>
```

### Probable Cause

The specified switch has been marked as faulty for the specified reason. Additional messages will be more explicit about the reason for the faulted switch.

## Recommended Action

If the reason specified in the other messages is correctable, correct it.  
Issue the `systemverification` command to verify the blade or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

## Severity

Error

## EM-SWITCH\_SENSOR\_EXC

## Message

```
Switch: <number>, Warning EM-SWITCH_SENSOR_EXC, 3, SWITCH exceeded max number of  
allowed sensors
```

## Probable Cause

The indicated switch has an incorrect number of sensors in its FRU header derived information. This could mean that the FRU header was corrupted or read incorrectly, or corrupted in the Object Data Base which contains information about all FRUs. This usually indicates a Fabric OS problem.

## Recommended Action

Reboot or power cycle the switch.

Issue the `systemverification` command to verify the blade or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

## Severity

Warning

## EM-SWITCH\_TRAN\_FAIL

### Message

```
Switch: <number>, Critical EM-SWITCH_TRAN_FAIL, 1, Switch failed <state> transition
```

### Probable Cause

A switch blade failed to transition from one state to another. It is faulted. The specific target state that failed is displayed in the message. There are serious internal Fabric OS configuration or hardware problems on the switch.

### Recommended Action

Reboot or power cycle the switch.

Issue the `systemverification` command to verify the blade or switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

### Severity

Critical

## EM-SWITCH\_UNKNOWN

### Message

```
Switch: <number>, Critical EM-SWITCH_UNKNOWN, 1, Unknown switch is being faulted
```

### Probable Cause

This message usually indicates a corrupted main FRU header. This message is for for nonbladed systems.

### Recommended Action

Reboot or power cycle the switch.

Issue the `systemverification` command to verify the switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the problem persists, replace the motherboard FRU (SAN Switch 2/32) or the switch (SAN Switch 2/16V and 2/8V).

## Severity

Critical

## EM-SYSMOD\_FAIL

## Message

```
Switch: <number>, Error EM-SYSMOD_FAIL, 2, System Module Error: <function> failed,  
err=<error code>
```

## Probable Cause

An error was encountered in the specified function when initializing the em daemon (EMD) and configuration data. There are serious internal Fabric OS configuration or hardware problems on the switch.

## Recommended Action

Reboot or power cycle the switch.

Issue the `systemverification` command to verify the switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

## Severity

Error

## EM-TRAN\_FAIL

### Message

```
Switch: <number>, Critical EM-TRAN_FAIL, 1, <fru type> <unit number> failed <state>
transition
```

### Probable Cause

A switch blade failed to transition from one state to another. It is faulted. The specific failed target state is displayed in the message. There are serious internal Fabric OS configuration or hardware problems on the switch.

The *<fru type>* and *<unit number>* may occupy slots 1 through 10.

### Recommended Action

Try reseating the blade.

If the problem persists, reboot or power cycle the switch.

Issue the `systemverification` command to verify the switch and blade do not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the problem persists, replace the 16-port card or CP card.

### Severity

Critical

## EM-WWN\_ABSENT

### Message

```
Switch: <number>, Error EM-WWN_ABSENT, 2, WWN <unit number> not present
```

### Probable Cause

The specified WWN FRU does not seem to be present on the switch. The default WWN and IP addresses are used for the switch.



## Recommended Action

Reseat the WWN card.

If the problem persists, reboot or power cycle the switch.

Issue the `systemverification` command to verify the switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the problem persists, replace the WWN card.

## Severity

Error

## EM-WWN\_UNKNOWN

## Message

```
Switch: <number>, Critical EM-WWN_UNKNOWN, 1, Unknown WWN <unit number> is being faulted
```

## Probable Cause

The WWN card cannot be accessed or is not valid. The default WWN and IP addresses are used for the switch.

## Recommended Action

Reseat the WWN card.

If the problem persists, reboot or power cycle the switch.

Issue the `systemverification` command to verify the switch does not have hardware problems. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the problem persists, replace the WWN card.

## Severity

Critical

## ERRLOG-LOGCLR

### Message

```
Switch: <number>, Info ERRLOG-LOGCLR, 4, Error log cleared
```

### Probable Cause

Indicates that the error log was cleared using the Telnet command `errclear`.

### Recommended Action

No action is required. Information only.

### Severity

Information

## ERRLOG-NV\_LOG\_CLR

### Message

```
Switch: <number>, Info ERRLOG-NV_LOG_CLR, 4, Persistent error log cleared
```

### Probable Cause

Indicates that the persistent error log (nonvolatile) has been cleared with the `errclear -p` command.

### Recommended Action

No action is required. Information only.

### Severity

Information

## ERRLOG-NV\_LOG\_RESIZE

### Message

```
Switch: <number>, Info ERRLOG-NV_LOG_RESIZE, 4, Persistent error log is resized to  
<number of errors in log> entries
```

### Probable Cause

Indicates that the number of errors in the persistent error log (nonvolatile) has been changed and can now store *<number of errors in log>* entries. The default size is 1024; it can be resized to any value between 1024 and 2068.

### Recommended Action

No action is required. Information only.

### Severity

Information

## ERRLOG-SET\_MSG\_SAVE\_LVL

### Message

```
Switch: <number>, Info ERRLOG-SET_MSG_SAVE_LVL, 4, Error Log message save level is  
set to <error level>
```

### Probable Cause

Indicates the level of error that is set to be saved in the persistent error log (nonvolatile). For example, if the level is set to 3, then 0-, 1-, 2-, and 3-level error messages are stored.

The maximum number of persistent messages is 2048; therefore, you should set the number to record lower (or more critical) errors such as 0 and 1. However, if the log fills up, more critical messages will always take precedence over less critical messages in the log.

The levels of error messages are:

- 0 Panic
- 1 Critical
- 2 Error
- 3 Warning
- 4 Information
- 5 Debug

### Recommended Action

No action is required. Information only.

### Severity

Information

## FABRIC-ASYNC

### Message

```
Switch: <number>, Warning FABRIC-ASYNC, 3, port: <port number>, req iu: <IU sent>,
state: <command sent>, resp iu: <response IU>, state <response IU state> "unexpected
resp async state"
```

### Probable Cause

The information unit (IU) response was invalid for the specified command sent. The fabric received an unknown response. This message is rare and usually indicates a problem with the Fabric OS.

### Recommended Action

Copy the error message, collect switch information using the supportshow command, and contact your switch service provider.

### Severity

Warning

## FABRIC-ASYNC\_COMMAND

### Message

```
Switch: <number>, Warning FABRIC-ASYNC_COMMAND, 3, Command: port <port number>:  
status <reason for failure> (Reason for failure) xid = <exchange ID of command>
```

### Probable Cause

The application failed to send an async command for the specified port. The message provides additional details regarding the reason for failure and exchange ID of the command. This could happen if a port is about to go down.

### Recommended Action

This message is often transitory. No action is required.

If the message persists, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Warning

## FABRIC-BADILS

### Message

```
Switch: <number>, Warning FABRIC-BADILS, 3, port <port number>: ILS <command> bad  
size <payload size>, wanted <expected payload size>
```

### Probable Cause

A Switch Fabric Internal Link Service (ILS) IU of invalid size has been received. The neighbor switch has sent an invalid sized payload.

### Recommended Action

Investigate the neighbor switch for problems.

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

Issue the `portlogdumpport` command on the receiving and transmitting port.

Issue the `fabstataeshow` command on both the receiving and transmitting switch.

If the message persists, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Warning

## FABRIC-DOMAIN\_INFO

### Message

```
Switch: <number>, Info FABRIC-DOMAIN_INFO, 4, Domain <number>
```

### Probable Cause

This switch has joined the fabric and been assigned a domain number.

### Recommended Action

No action is required.

### Severity

Information

## FABRIC-DOMAIN\_INFO\_WAS

### Message

```
Switch: <number>, Info FABRIC-DOMAIN_INFO_WAS, 4, Domain <number> (was <number>)
```

### Probable Cause

The principal switch has changed the domain ID for this switch.

### Recommended Action

No action is required.

### Severity

Information

## FABRIC-FAB\_BF

### Message

```
Switch: <number>, Info FABRIC-FAB_BF, 4, <reconfiguration description>
```

### Probable Cause

The fabric reconfiguration during “build fabric” transitions to the “F0: nondisruptive state” (F0 state details provided in the Fibre Channel Switch Fabric specification). This message appears in Fabric OS V4.0 through V4.1.2. It has been replaced in V4.2.x by the FABRIC-FAB\_RECONFIG message.

### Recommended Action

No action is required.

### Severity

Information

## FABRIC-FAB\_EFP\_ERROR

### Message

```
Switch: <number>, Warning FABRIC-FAB_EFP_ERROR, 3, <error description>
```

### Probable Cause

Errors were reported during the Exchange Fabric Parameter state; cannot allocate domain list due to a bad EFP type. This message is rare and usually indicates a problem with the Fabric OS.

### Recommended Action

Issue the `memshow` to view memory usage.

Issue the `fabstataeshow` on the switch. This shows the fabric history log.

Copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Warning

## FABRIC-FAB\_FWD\_ERROR

### Message

```
Switch: <number>, Warning FABRIC-FAB_FWD_ERROR, 3, <error description>
```

### Probable Cause

Errors occurred while cleaning up the RDI (request domain ID). Error description provides further details. This message is rare and usually indicates a problem with the Fabric OS.

### Recommended Action

Copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.



**Severity**

Warning

**FABRIC-FAB\_INSISTENT\_DID\_FAIL****Message**

```
Switch: <number>, Error FABRIC-FAB_INSISTENT_DID_FAIL, 2, Port <port number>  
Disabled: Persistent Domain ID <Domain ID> could not be obtained.  
Principal Assigned Domain ID = <Domain ID>
```

**Probable Cause**

The specified port received an RDI (request domain ID) accept message containing the principal assigned domain ID that is different from the Insistent domain ID (IDID).

**Recommended Action**

Issue the `configshow` command to view the `fabric.ididmode`. A 0 means IDID mode is disabled, a 1 means it is enabled.

Set the switch in insistent domain ID mode. This mode is set under the `configure` command or in Web Tools on the Switch Admin > configure window.

**Severity**

Error

## FABRIC-FAB\_INSISTENT\_ISOLATE

### Message

```
Switch: <number>, Error FABRIC-FAB_INSISTENT_ISOLATE, 2, Insistent DID max retry
exceeded: All E-Ports will be disabled.
Switch is isolated.
```

### Probable Cause

The application exceeded RDI (request domain ID) requests for the insistent domain ID. All E\_ports are disabled, thereby isolating the specified switch from the fabric.

### Recommended Action

Verify that the insistent domain ID is unique in the fabric and then reenble the E\_Ports. Use the `fabricshow` command to view the domain IDs across the fabric, and the `configure` command to change the insistent domain ID mode. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on these commands.

### Severity

Error

## FABRIC-FAB\_IU\_FREE

### Message

```
Switch: <number>, Warning FABRIC-FAB_IU_FREE, 3, IU free error, caller: <function
attempting to de-allocate IU>
```

### Probable Cause

A failure occurred when freeing or deallocating an IU. This message is rare and usually indicates a problem with the Fabric OS.

**Recommended Action**

Copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

**Severity**

Warning

**FABRIC-FAB\_LIMIT\_TIMER\_INIT****Message**

```
Switch: <number>, Info FABRIC-FAB_LIMIT_TIMER_INIT, 4, Initializing fabric size  
limit timer <grace period>.
```

**Probable Cause**

The value line switches have a limited fabric size, that is, a specified limit to the number of domains. This value is defined by your specific value line license key. The fabric size has exceeded this specified limit. The grace period timer has been initialized. If the grace period is complete and the size of the fabric is still outside the specified limit, Web Tools is disabled.

**Recommended Action**

Bring the fabric size within the specified limits. Either a full fabric license must be added, or the size of the fabric must be changed to within allowable limit. Contact your switch provider to obtain a full fabric license.

**Severity**

Information

## FABRIC-FAB\_ME\_ERROR

### Message

```
Switch: <number>, Error FABRIC-FAB_ME_ERROR, 2, <error description>
```

### Probable Cause

Unable to inform FSSME (Fabric OS State Synchronization Management Module) that the fabric is stable or unstable. This message is rare and usually indicates a problem with the Fabric OS.

### Recommended Action

Copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Error

## FABRIC-FAB\_NODE\_FREE

### Message

```
Switch: <number>, Warning FABRIC-FAB_NODE_FREE, 3, Node free error, caller: <error description>
```

### Probable Cause

This message occurs when the application tries to free or deallocate memory space that has already been deallocated. This message is rare and usually indicates a problem with the Fabric OS.

### Recommended Action

Copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

**Severity**

Warning

**FABRIC-FAB\_PSS\_PRINCIPAL\_FAIL****Message**

```
Switch: <number>, Warning FABRIC-FAB_PSS_PRINCIPAL_FAIL, 3, PSS principal failed  
(reason for failure): <WWN of new principal switch>
```

**Probable Cause**

This message is displayed only when trying to set the principal switch using the `fabricprincipal` command. The message notifies the user that the switch failed to become the principal switch because:

- the switch either joined an existing fabric and bypassed the F0 State,
- or the fabric already contains a principal switch which has a lower WWN.

**Recommended Action**

Make sure no other switches are configured as the principal switch. Force a fabric rebuild by using the `switchdisable` and `switchenable` commands.

Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information the `fabricprincipal` command.

**Severity**

Warning

## FABRIC-FAB\_RDI\_ERROR

### Message

```
Switch: <number>, Warning FABRIC-FAB_RDI_ERROR, 3, <error description>
```

### Probable Cause

Errors occurred during the request domain ID state; IU cannot be allocated or sent. If this message occurs with the FABRIC-FAB\_ASYNC\_COMMAND, the problem is usually transitory. Otherwise, this message is rare and usually indicates a problem with the Fabric OS. The error descriptions are as follows:

- FAB RDI: cannot allocate IU
- FAB RDI: cannot send IU

### Recommended Action

No action required if the message appears with the FABRIC-FAB\_ASYNC\_COMMAND message.

If not accompanied by FABRIC-FAB\_ASYNC\_COMMAND, copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Warning

## FABRIC-FAB\_SIZE\_LIMIT\_OFF

### Message

```
Switch: <number>, Info FABRIC-FAB_SIZE_LIMIT_OFF, 4, Fabric size is within supported configuration <supporteddomains>.  
Fabric limit timer <type> stopped at <grace period in seconds>.
```

### Probable Cause

The fabric size is within specified limits. Either a full fabric license was added, or the size of the fabric was changed to within allowable limit.

**Recommended Action**

No action is required.

**Severity**

Information

**FABRIC-FAB\_SIZE\_LIMIT\_ON****Message**

```
Switch: <number>, Critical FABRIC-FAB_SIZE_LIMIT_ON, 1, Fabric size <actual domains>  
exceeds supported configurations <supported domains>.  
Fabric limit timer <type> started from <grace period in seconds>.
```

**Probable Cause**

The value line switches have a limited fabric size, that is, a specified limit to the number of domains. This limit is defined by your specific value line license key. The fabric size has exceeded this specified limit. If the grace period is complete and the size of the fabric is still outside the specified limit, Web Tools is disabled.

**Recommended Action**

Bring the fabric size within the allowable limits. Either a full fabric license must be added, or the size of the fabric must be changed to within the allowable limit. Contact your switch provider to obtain a full fabric license.

**Severity**

Critical

## FABRIC-FAB\_TYPE\_ERROR

### Message

```
Switch: <number>, Warning FABRIC-FAB_TYPE_ERROR, 3, <function stream>: no such type,  
<invalid type>
```

### Probable Cause

The fabric is not in the appropriate state for the specified process. This message is rare and usually indicates a problem with the Fabric OS.

### Recommended Action

Copy the error message, collect switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Warning

## FABRIC-FAB\_VAL\_DOM

### Message

```
Switch: <number>, Info FABRIC-FAB_VAL_DOM, 4, <valid domain>
```

### Probable Cause

The fabric domain ID is found to be valid. This message appears in Fabric OS V4.0 through V4.1.2. It has been replaced in V4.2.x by the FABRIC-DOMAIN\_INFO message.

### Recommended Action

No action is required.

### Severity

Information



## FABRIC-NO\_ALIASID

### Message

```
Switch: <number>, Warning FABRIC-NO_ALIASID, 3, fabGaid: no free multicast alias IDs
```

### Probable Cause

The fabric does not have available multicast alias IDs to assign to the alias server.

### Recommended Action

Verify alias IDs using the `fabricshow` command on the principal switch.

### Severity

Warning

## FABRIC-RECONFIG

### Message

```
Switch: <number>, Info FABRIC-RECONFIG, 4, fabric: <reason>
```

### Probable Cause

The fabric has reconfigured due to an offline port. The *<reason>* can be one of the following:

- **Fabric Merge:** Merging two fabrics.
- **Own ID Rcvd:** A subordinate switch with a non-empty domain list receives an EFP or EFP ACC that has the EFP or EFP ACC's payload as this subordinate switch being the principal switch.
- **Fabric Segment:** Principal port became segmented.
- **Offline:** Principal port went offline.
- **Unconfirmed domain:** Switch was not able to get a domain ID. RDI ACC was never received.
- **Rcv BF:** Received Build Fabric (BF) fabric command.

- **HA: At F2 State:** At switch F2 state. According to the spec, F2 is during principal switch selection. At failover, the switch was still in the process of principal switch selection; therefore rebuild fabric to restart principal switch selection.
- **HA: No Upstream:** After failover, the newly active fabric thinks it's subordinate, but there is no upstream.
- **HA: bad EFP resp:** An invalid EFP response.
- **HA: RJT EFP resp:** Received an EFP reject response where this EFP was used for verifying the neighbor's domain list as part of fabric warm start recovery. A reject occurs if the neighbor is reconfiguring or the neighbor's port is in a bad state.
- **HA: DLST EFP resp:** Received an EFP accept with a different domain list.
- **HA: PPRI EFP resp:** Received an EFP accept response where the response has a different Principal Switch Priority number.
- **HA: PWWN EFP resp:** Received an EFP accept response where the response has a different Principal Switch World Wide Name.
- **HA: MAX EFP resp:** An EFP to a neighbor failed to respond, and fabric reached its max retry count for this neighboring switch.
- **HA: Can't Snd EFP:** Was not able to send an EFP.
- **HA: Offline:** A principal port went offline during fabric daemon's warm start recovery.
- **Principal Selection Mode:** Occurs only when user issues the `fabricprincipal` command and forces a fabric rebuild.
- **D-list conflict:** When the principal switch received a domain list with additional domains than what the principal switch has already assigned and the payload has the Principal WWN and Principal Priority number as the principal switch.

## Recommended Action

If the reconfiguration was unplanned, check for problems with the specified port.

Verify the port was not disabled. Reenable the port.

Verify the port is cabled correctly.

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

## Severity

Information

### FABRIC-SEGMENTED

## Message

```
Switch: <number>, Warning FABRIC-SEGMENTED, 3, port <port number>, <reason>
```

## Probable Cause

The port is segmented from the neighboring switch. The Error message provides additional information regarding the segmentation. The detail reasons for a fabric segmentation are shown only on the switch with the lower WWN. The other switch only lists *incompatible*.

The *<reason>* variable can be one of the following:

- LD incompat
- loopback
- incompatible
  - Unknown incompat
  - FCSW version incompat
  - Flow ctl length incompat
  - Incorrect struct size
  - BB credit incompat
  - Recv data field size incompat
  - RA TOV incompat
  - ED TOV incompat
  - Op Mode incompat
  - Link Control incompat
  - VC Class2 incompat
  - VC Class3 incompat
  - VC multicast incompat

- VC config incompat
- VC PID map incompat
- Class1 data size incompat
- Class1 options incompat
- Class2 data size incompat
- Class2 options incompat
- Class3 data size incompat
- Class3 options incompat
- ClassF options incompat
- ClassF init ctl incompat
- ClassF receipient ctl incompat
- ClassF data size incompat
- ClassF concurrent seqs incompat
- ClassF EE credit incompat
- ClassF open sequences incompat
- ClassF reserved incompat
- Flow ctrl mode incompat
- domain overlap
- zone conflict
- no license
  - no license
  - No Fabric License
- disabled E\_Port
- Platform Database
- Security Incompatibility
  - Security Incompatibility - Unknown incompat
  - Security Incompatibility - Security parameters incompat
  - Security Incompatibility - Exchange FCS failed
  - Security Incompatibility - Data incompat

- Security Incompatibility - MS Platform config incompat
- Security Violation

### Recommended Action

Verify if the specified port is segmented using the command `switchshow`. Using information provided in *<description of segmentation>*, resolve the reason for segmentation.

Issue the `portdisable` and `portenable` commands the port.

### Severity

Warning

## FABRIC-SIZE\_EXCEEDED

### Message

```
Switch: <number>, Critical FABRIC-SIZE_EXCEEDED, 1, Critical fabric size <current domains> exceeds supported configurations <supported domains>.
```

### Probable Cause

The value line switches have a limited fabric size, that is, a specified limit to the number of domains. This limit is defined by your specific value line license key. The fabric size has exceeded this specified limit. If the grace period is complete and the size of the fabric is still outside the specified limit, Web Tools is disabled.

### Recommended Action

Bring the fabric size within the allowable limits. Either a full fabric license must be added, or the size of the fabric must be changed to within the allowable limit. Contact your switch provider to obtain a full fabric license.

### Severity

Critical

## FABRIC-SWITCH\_ROLE

### Message

```
Switch: <number>, Info FABRIC-SWITCH_ROLE, 4, <role> switch
```

### Probable Cause

This switch has joined the fabric with the defined role. The defined role can either be subordinate switch or principal switch.

### Recommended Action

No action is required. If you want to make this switch the principal switch, use the `fabricprincipal` command. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

### Severity

Information

## FABRIC-WEBTOOL\_DISABLE

### Message

```
Switch: <number>, Critical FABRIC-WEBTOOL_DISABLE, 1, Webtool is disabled
```

### Probable Cause

This switch has a value line license and has a limit number of domains. If more than the specified number of domains are in the fabric, a counter is started to disable Web Tools. This grace period has expired and Web Tools has been disabled.

### Recommended Action

Bring the fabric size within the allowable limits. Either a full fabric license must be added, or the size of the fabric must be changed to within the allowable limit. Contact your switch provider to obtain a full fabric license.

**Severity**

Critical

**FABRIC-WEBTOOL\_LIFE****Message**

```
Switch: <number>, Critical FABRIC-WEBTOOL_LIFE, 1, Webtool will be disabled in <days  
hours and minutes>
```

**Probable Cause**

This switch has a value line license and has a limit number of domains. If more than specified number of domains are in the fabric, a counter is started to disable Web Tools. This message displays the number of days left in the grace period. After this time, Web Tools is disabled.

**Recommended Action**

Bring the fabric size within the allowable limits. Either a full fabric license must be added, or the size of the fabric must be changed to within the allowable limit. Contact your switch provider to obtain a full fabric license.

**Severity**

Critical

**FABSYS-SERVICE, setSoftState Invalid****Message**

```
Switch: <number>, Warning FABSYS-SERVICE, 3, setSoftState Invalid number of HW unit
```

**Probable Cause**

EM passes the wrong number of devices on the chassis to the system module. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

If the fabric failed, failover or reboot the switch.

### Severity

Warning

## FABSYS-SERVICE, setSoftState verify

### Message

```
Switch: <number>, Warning FABSYS-SERVICE, 3, setSoftState verify_area failed
```

### Probable Cause

EM passes the wrong argument and fails the kernel area check. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

If the fabric failed, failover or reboot the switch.

### Severity

Warning

## FABSYS-SERVICE, setSoftState Sysmod

### Message

```
Switch: <number>, Warning FABSYS-SERVICE, 3, setSoftState Sysmod has no HW info
```

### Probable Cause

EM passes in a slot in which the system module keeps no device record. This could indicate a serious Fabric OS data problem on the switch.



**Recommended Action**

If the fabric failed, failover or reboot the switch.

**Severity**

Warning

**FABSYS-SERVICE, IOC\_M\_GETSWIP****Message**

```
Switch: <number>, Warning FABSYS-SERVICE, 3, IOC_M_GETSWIP System has no switch  
config info
```

**Probable Cause**

System module keeps no switch property information. This could indicate a serious Fabric OS data problem on the switch.

**Recommended Action**

If the fabric failed, failover or reboot the switch.

**Severity**

Warning

**FABSYS-INVAL\_OBJ****Message**

```
Switch: <number>, Warning FABSYS-INVAL_OBJ, 3, object <object id> unit <slot>
```

**Probable Cause**

There is no device in the slot with the specified object type ID in the system module record. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

If the message is isolated, monitor the error messages on the switch. If the error is repetitive or if the fabric failed, failover or reboot the switch.

### Severity

Warning

## FABSYS-MALLOC, fabsys\_open

### Message

```
Switch: <number>, Critical FABSYS-MALLOC, 1, fabsys_open No memory for generic module
```

### Probable Cause

System module runs out of memory when it is opened. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

If the fabric failed, failover or reboot the switch.

### Severity

Critical

## FABSYS-MALLOC, fabsys\_init

### Message

```
Switch: <number>, Critical FABSYS-MALLOC, 1, fabsys_init: No memory for device fabsys
```

### Probable Cause

System module runs out of memory when it is loaded. This could indicate a serious Fabric OS data problem on the switch.

**Recommended Action**

Reboot the system.

**Severity**

Critical

**FABSYS-SCN\_TBL\_FUNC, UnitOut****Message**

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, UnitOut: cannot fence slot object  
<object id> unit <slot>
```

**Probable Cause**

System module fails to fence off the blade from PCI bus at unitOut state. This could indicate a serious Fabric OS data problem on the switch.

**Recommended Action**

If this error is reported for a port blade, issue the `slotpoweroff` and the `slotpoweron` commands to reinitialize the blade. If the problem persists or occurs on a CP blade, failover or reboot the switch.

**Severity**

Warning

**FABSYS-SCN\_TBL\_FUNC, UnitIn****Message**

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, UnitIn: cannot set interrupt  
object <object id> unit <slot>
```

**Probable Cause**

System module fails to enable interrupt for CP blade.

### Recommended Action

If this error is reported for a port blade, issue the `slotpoweroff` and the `slotpoweron` commands to reinitialize the blade. If the problem persists or occurs on a CP blade, failover or reboot the switch.

### Severity

Warning

### FABSYS-SCN\_TBL\_FUNC, UnitIn

### Message

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, UnitIn: cannot fence slot object  
<object id> unit <slot>
```

### Probable Cause

System module fails to fence out the blade from PCI bus at unitIn state.

### Recommended Action

If this error is reported for a port blade, issue the `slotpoweroff` and the `slotpoweron` commands to reinitialize the blade. If the problem persists or occurs on a CP blade, failover or reboot the switch.

### Severity

Warning

**FABSYS-SCN\_TBL\_FUNC, UnitReady****Message**

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, UnitReady: can't config slot  
object <object id> unit <slot>
```

**Probable Cause**

System module fails to reset and initialize the blade.

**Recommended Action**

If this error is reported for a port blade, issue the `slotpoweroff` and the `slotpoweron` commands to reinitialize the blade. If the problem persists or occurs on a CP blade, failover or reboot the switch.

**Severity**

Warning

**FABSYS-SCN\_TBL\_FUNC, UnitReady****Message**

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, UnitReady: object instantiate  
failed object <object id> unit <slot>
```

**Probable Cause**

System module fails to initialize the blade data structure.

**Recommended Action**

If this error is reported for a port blade, issue the `slotpoweroff` and the `slotpoweron` commands to reinitialize the blade. If the problem persists or occurs on a CP blade, failover or reboot the switch.

If the problem persists, it could be caused by bad blade hardware. Replace the blade.

## Severity

Warning

### FABSYS-SCN\_TBL\_FUNC, UnitReady

## Message

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, UnitReady: cannot set interrupt  
object <object id> unit <slot>
```

## Probable Cause

System module fails to set up the blade interrupt.

## Recommended Action

If this error is reported for a port blade, issue the `slotpoweroff` and the `slotpoweron` commands to reinitialize the blade. If the problem persists or occurs on a CP blade, failover or reboot the switch.

## Severity

Warning

### FABSYS-SCN\_TBL\_FUNC, unitOn

## Message

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, unitOn: Failed in chip_init object  
<object id> unit <slot>
```

## Probable Cause

System module fails to finish chip initialization on the blade.

## Recommended Action

If this error is reported for a port blade, issue the `slotpoweroff` and the `slotpoweron` commands to reinitialize the blade. If the problem persists or occurs on a CP blade, failover or reboot the switch.

If the problem persists, it could be caused by bad blade hardware. Replace the blade.

## Severity

Warning

### FABSYS-SCN\_TBL\_FUNC, unitOn

## Message

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, unitOn: Failed in blade enable  
object <object id> unit <slot>
```

## Probable Cause

System module fails to enable the blade.

## Recommended Action

If this error is reported for a port blade, issue the `slotpoweroff` and the `slotpoweron` commands to reinitialize the blade. If the problem persists or occurs on a CP blade, failover or reboot the switch.

If the problem persists, it could be caused by bad blade hardware. Replace the blade.

## Severity

Warning

## FABSYS-SCN\_TBL\_FUNC, ProcState

### Message

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, ProcState: state out of order  
object <object id> unit <slot>
```

### Probable Cause

System module notices state transition of the blade is out of order.

### Recommended Action

If this happens to a port blade, issue the `slotpoweroff` and the `slotpoweron` commands to reinitialize the blade. If it persists or problem happens on CP blade, failover or reboot the switch.

### Severity

Warning

## FABSYS-SCN\_TBL\_FUNC, ProcState

### Message

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, ProcState: function in scn table  
failed object <object id> unit <slot>
```

### Probable Cause

A state transition for the blade fails in the middle of the process.

### Recommended Action

If this error is reported for a port blade, issue the `slotpoweroff` and the `slotpoweron` commands to reinitialize the blade. If the problem persists or occurs on a CP blade, failover or reboot the switch.



**Severity**

Warning

**FABSYS-SCN\_TBL\_FUNC, fabsys\_slot\_off****Message**

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, fabsys_slot_off: invalid unit
object <object id> unit <slot>
```

**Probable Cause**

Invalid unit in slot.

**Recommended Action**

Disable the blade with the invalid slot number using the `bladedisable` command. Check the argument of the `slotoff` command and retry.

**Severity**

Warning

**FABSYS-SCN\_TBL\_FUNC, fabsys\_slot\_off****Message**

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, fabsys_slot_off: can't get HW unit
state object <object id> unit <slot>
```

**Probable Cause**

System module does not have the record for the requested blade.

**Recommended Action**

Check the argument of the `slotoff` command and retry.

If the problem persists, open and close the latch of the blade to reinitialize it.

## Severity

Warning

### FABSYS-SCN\_TBL\_FUNC, fabsys\_slot\_on

## Message

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, fabsys_slot_on: invalid unit  
object <object id> unit <slot>
```

## Probable Cause

An attempt was made to enable a blade with an invalid slot number.

## Recommended Action

Check the argument of the `sloton` command and retry.

If the problem persists, open and close the latch of the blade to reinitialize it.

## Severity

Warning

### FABSYS-SCN\_TBL\_FUNC, fabsys\_slot\_on

## Message

```
Switch: <number>, Warning FABSYS-SCN_TBL_FUNC, 3, fabsys_slot_on: can't get HW unit  
state object <object id> unit <slot>
```

## Probable Cause

System module does not have the record for the requested blade.

## Recommended Action

Check the argument of the `slotoff` command and retry. If the problem persists, open and close the latch of the blade to reinitialize it.

**Severity**

Warning

**FCMISC-OUT\_OF\_MEMORY****Message**

```
Switch: <number>, Critical FCMISC-OUT_OF_MEMORY, 1, <function>:<failed function call> out of memory condition
```

**Probable Cause**

The switch is low on memory and failed to allocate new memory for an Information Unit.

*<function>* is `misc_tx_lb`.

*<failed function call>* is `iu_alloc` failed. This function call is for memory allocation for information units.

**Recommended Action**

A nonbladed switch will automatically reboot. For a bladed switch, the active CP card will automatically failover and the standby CP will become the active CP.

**Severity**

Critical

**FCPD-PROBING\_FAIL****Message**

```
Switch: <number>, Warning FCPD-PROBING_FAIL, 3, Probing failed on <L-port or F-port> <port number> [ALPA <alpa address>]
```

**Probable Cause**

FCP switch probed devices on loop port, and probing failed on either the L\_Port or ALPA address or the F\_Port. For ALPA arbitrated loop physical address, the valid range is 00 through FF.

### Recommended Action

This can happen when the firmware on the device controller on the specified port has a defect. Check with the device vendor for a firmware upgrade containing a defect fix.

### Severity

Warning

## FCPD-PORT\_BAD\_RCTL

### Message

```
Switch: <number>, Warning FCPD-PORT_BAD_RCTL, 3, PORT <port number>, bad R_CTL for  
fcp probing: <R_CTL value>
```

### Probable Cause

The response frame received on the specified port for a inquiry request contains an invalid value in the routing control field.

### Recommended Action

This can happen only if the firmware on the device controller on the specified port has a defect. Check with the device vendor for a firmware upgrade containing a defect fix.

### Severity

Warning

## FCPH-OUT\_OF\_MEMORY

### Message

```
Switch: <number>, Critical FCPH-OUT_OF_MEMORY, 1, <function>:<failed function call>  
out of memory condition
```

### Probable Cause

The switch is low on memory and failed to allocate new memory for a Fibre Channel Driver instance.

*<function>* is `fc_create`. This function creates a Fibre Channel driver instance.

*<failed function call>* is `kmalloc_wrapper failed`. This function call is for kernel memory allocation.

### Recommended Action

A nonbladed switch will automatically reboot. For a bladed switch, the active CP card will automatically failover, and the standby CP will become the active CP.

### Severity

Critical

## FLOOD-INVLSR

### Message

```
Switch: <number>, Warning FLOOD-INVLSR, 3, Unknown LSR type: port <port number>,  
type <LSR header type>
```

### Probable Cause

The link state record (LSR) type is unknown. The following two LSR header types are the only known types: 1 - Unicast and 3 - Multicast.

### Recommended Action

No action is required. The record is discarded.

### Severity

Warning

## FLOOD-LINKCNT

### Message

```
Switch: <number>, Warning FLOOD-LINKCNT, 3, Link count exceeded in received LSR, value = <link count number>
```

### Probable Cause

The acceptable link count received was exceeded in the Link State Record.

### Recommended Action

No action is required. The record is discarded.

### Severity

Warning

## FKIO\_LIB-FKIO\_LIB\_EXCH\_OVERLAP

### Message

```
Switch: <number>, Warning FKIO_LIB-FKIO_LIB_EXCH_OVERLAP, 3, exchange <xid> overlapped, pid=<pid>
```

### Probable Cause

FC kernel driver has timed out the exchange, while the application is still active. When the FC kernel driver reuses the exchange the application will overlap. This happens on a timed out exchange, and automatically recovers once the application times the exchange out.

**Recommended Action**

No action is required.

**Severity**

Warning

**FSPF-INPORT****Message**

```
Switch: <number>, Error FSPF-INPORT, 2, Input Port <port number> out of range
```

**Probable Cause**

The specified input port number is out of range. The specified input port number does not exist on the switch.

**Recommended Action**

Frame is discarded and no user action is required.

**Severity**

Error

**FSPF-NBRCHANGE****Message**

```
Switch: <number>, Info FSPF-NBRCHANGE, 4, Wrong neighbor ID <port number> in Hello
```

**Probable Cause**

Wrong domain ID from neighbor (adjacent) switch in Hello message from specified port. This might happen when a domain ID for a switch has been changed.

### Recommended Action

No action is required.

### Severity

Information

## FSPF-REMDOMAIN

### Message

```
Switch: <number>, Error FSPF-REMDOMAIN, 2, Remote Domain ID <domain number> out of range, input port = <port number>
```

### Probable Cause

The specified remote domain ID is out of range.

### Recommended Action

No action is required. The frame is discarded.

### Severity

Error

## FSPF-SECTION

### Message

```
Switch: <number>, Error FSPF-SECTION, 2, Wrong Section Id <section number>, should be 0, input port = <port number>
```

### Probable Cause

An incorrect section ID was reported from the specified input port. Section ID is used to identify a set of switches that share an identical topology database. The section ID is implemented inside the protocol. The error message itself will indicate the mismatch section ID. It should be set to 0 for a non-hierarchical fabric. HP StorageWorks switches only support section ID 0.



**Recommended Action**

Use a frame analyzer to verify the reported section ID is 0. Any connected (other manufacturer) switch with a section ID other than 0 is incompatible in a fabric of HP StorageWorks switches. Disconnect the offending switch.

**Severity**

Error

**FSPF-VERSION****Message**

```
Switch: <number>, Error FSPF-VERSION, 2, FSPF Version <FSFP version> not supported,  
input port = <port number>
```

**Probable Cause**

The FSPF version is not supported on the specified input port.

**Recommended Action**

Update the FSPF version by loading the correct version of firmware.

**Severity**

Error

**FSS-NOMEMORY****Message**

```
Switch: <number>, Warning FSS-NOMEMORY, 3, Memory shortage
```

**Probable Cause**

System ran out of memory.

### Recommended Action

Reboot the switch. Use the memshow command to view memory usage.

### Severity

Warning

## FSS-NOTXBEGIN

### Message

```
Switch: <number>, Warning FSS-NOTXBEGIN, 3, <component name>: Missing first TX  
update <transaction id>
```

### Probable Cause

FSS dropped this transaction state update because the transaction flag was not set up.

### Recommended Action

Issue the command hasyncstart on the active CP.

### Severity

Warning

## FSS-TXTOOMANY

### Message

```
Switch: <number>, Warning FSS-TXTOOMANY, 3, <component name>: Too many concurrent TX  
<transaction id>
```

### Probable Cause

The specified component sent too many transactions at the same time.

**Recommended Action**

No action is required. System will continue to function normally.

**Severity**

Warning

**FSSME-HA\_IN\_SYNC****Message**

```
Switch: <number>, Info FSSME-HA_IN_SYNC, 4, HA State is in sync!
```

**Probable Cause**

This message is logged when the HA state for the active CP is in synchronization with the HA state of the peer CP. If the standby CP is healthy, then a failover is nondisruptive. For details on nondisruptive failover, see the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual*.

**Recommended Action**

No action is required.

**Severity**

Information

**FSSME-HA\_OUTOF\_SYNC****Message**

```
Switch: <number>, Info FSSME-HA_OUTOF_SYNC, 4, HA State out of sync!
```

**Probable Cause**

This message is logged when the HA state for the active CP is out of synchronization with the HA state of the peer CP. If the active CP failover occurs when the HA state is out of sync, the failover is disruptive.

## Recommended Action

If this message was logged as a result of a user-initiated action (such as issuing `switchreboot` or `hareboot` commands), then no action is required.

Otherwise, issue the `hasyncstart` command on the active CP and try resynchronizing the HA state.

If the HA state does not become synchronized, issue the `hadump` command to diagnose the problem.

## Severity

Information

## FSSME-IMAGE\_MISMATCH

## Message

```
Switch: <number>, Critical FSSME-IMAGE_MISMATCH, 1, One or more components on the  
standby and active are incompatible
```

## Probable Cause

This message is logged when there is a version mismatch between the active and standby peer components. This message provides details for technical assessment.

## Recommended Action

Issue the `hasyncstart` command on the active CP. Issue the `hadump` command and contact your switch service provider.

## Severity

Critical

## FSSME-LOCAL\_COMP\_SYNCFAIL

### Message

```
Switch: <number>, Critical FSSME-LOCAL_COMP_SYNCFAIL, 1, Local Component failed to  
sync <service name>:<service instance>
```

### Probable Cause

This message is logged when the local component failed to synchronize; it means that nondisruptive HA failover is not possible. This message provides details for technical assessment.

### Recommended Action

Issue the `hasyncstart` command on the active CP. If this message appears again, issue the `hadump` command and contact your switch service provider.

### Severity

Critical

## FSSME-PEER\_COMP\_NOT\_IN\_OPR

### Message

```
Switch: <number>, Critical FSSME-PEER_COMP_NOT_IN_OPR, 1, Peer component not in  
operation: <service name>:<service instance>
```

### Probable Cause

This message is logged when the peer component is not in operation; it means that nondisruptive HA failover is not possible. This message provides details for technical assessment.

### Recommended Action

Collect switch information using the `supportshow` command and contact your switch service provider.

## Severity

Critical

### FSSME-PEER\_COMP\_SYNCFAIL

## Message

```
Switch: <number>, Info FSSME-PEER_COMP_SYNCFAIL, 4, Peer Component failed to sync  
<service name>:<service instance>
```

## Probable Cause

This message is logged when the peer service failed to synchronize; it means that nondisruptive HA failover is not possible. This message provides details for technical assessment.

## Recommended Action

Issue the `hasyncstart` command on the active CP. If this message appears again, issue the `hadump` command and contact your switch service provider.

## Severity

Information

### FSSME-PEER\_SVC\_NOT\_IN\_OPR

## Message

```
Switch: <number>, Info FSSME-PEER_SVC_NOT_IN_OPR, 4, Peer service not in operation:  
<service name>:<service instance>
```

## Probable Cause

This message is logged when the peer service is not in operation. When a CP is rebooted, the peer CP will print this message. This message provides details for technical assessment.

## Recommended Action

If this message is logged as a result of user action (such as a `reboot` command on the peer CP), then no action is required.

If this message is logged without any intentional actions as mentioned above, issue the `hadump` command and contact your switch service provider.

## Severity

Information

## FSSME-WARNING

## Message

```
Switch: <number>, Info FSSME-WARNING, 4, No action taken for chassis:0, Event:  
FSS_EVT_RECOVER_FAIL  
Cur State = FSS_ACTIVE_READY Local Event
```

## Probable Cause

FSSME got an invalid event. This event is valid only when FSSME has commanded FSS to synchronize the state.

For a given service, FSSME will command FSS to start the synchronization process. In this case, before FSSME commands FSS to start synchronization, FSS returns with `RECOVER_FAIL`. This is due to strict enforcement of event transition in FSSME.

A component failed to recover. You can see the component info in the `/proc/fss` directory on the target switch.

## Recommended Action

Issue the following commands: `hasyncstop` and `hasyncstart` to try to resync the CPs.

Issue the `hadump` command to capture information.

View the `/proc/fss` files to see which component failed to recover.

## Severity

Information

## FW-ABOVE, alpaPerfCRC

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, alpaPerfCRC<element index> (ALPA Invalid CRCs  
<element index>) is above high boundary. current value : <value> Error(s)/minute.  
(faulty)
```

### Probable Cause

Indicates that the cumulative number of Invalid CRC errors has risen above the high boundary and provides the current value. These messages indicate errors have been detected in the FC frame. Invalid CRC messages occur when the number of CRC errors in Fibre Channel frames for specific source ID (SID) and destination ID (DID) pairs change. These messages may also be caused by dirty equipment, temperature fluctuations, and aging equipment.

You should set your high boundaries to five- or six-digit figures; only large numbers of messages indicate a problem in this area.

### Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

Clean connectors. Check for damage from heat or age.

### Severity

Warning



**FW-ABOVE, eePerfCR**

```
Switch: <number>, Warning FW-ABOVE, 3, eePerfCR<element index> (EE Invalid CRCs
<element index>) is above high boundary. current value : <value> Change(s). (faulty)
```

**Probable Cause**

Indicates that the cumulative number of CRC errors has risen above the high boundary and provides the current value. Invalid CRC messages occur when the number of CRC errors in Fibre Channel frames for specific source ID (SID) and destination ID (DID) pairs change. These messages may also be caused by dirty equipment, temperature fluctuations, and aging equipment.

**Recommended Action**

The CRC error area of the End-to-End Performance Monitor class helps you tune your fabric. To reduce CRC messages, experiment with alternative topologies and cabling schemes. Clean equipment, check temperatures, and replace old hardware.

**Severity**

Warning

**FW-ABOVE, eePerfRx****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, eePerfRx<element index> (EE RX Performance
<element index>) is above high boundary. current value : <value> KB/s. (info)
```

**Probable Cause**

Indicates that the cumulative number of word frames that the switch receives has risen above the high boundary and provides the current value. Receive performance messages appear due to the number of word frames that travel from the configured SID to the DID pair.

### Recommended Action

All receive count area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-ABOVE, eePerfTx

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, eePerfTx<element index> (EE TX Performance <element index>) is above high boundary. current value : <value> KB/s. (info)
```

### Probable Cause

Indicates that the cumulative number of word frames that the switch transmits has risen above the high boundary and provides the current value. Transmit performance messages appear due to the number of word frames that travel from the configured SID to the DID pair.

### Recommended Action

All transmit count area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

**FW-ABOVE, envFan****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, envFan<element index> (Env Fan <element index>) is above high boundary, current value: <value> RPM. (faulty)
```

**Probable Cause**

Indicates that the speed of the fan has risen to a value above the high boundary and provides the new fan RPM value. Fan problems typically contribute to temperature problems.

**Recommended Action**

Consistently abnormal fan speeds generally indicate that the fan is malfunctioning. Replace the fan.

**Severity**

Warning

**FW-ABOVE, envPS****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, envPS<element index> (Env Power Supply <element index>) is above high boundary, current value: 0 (1 OK/0 Faulty). (normal)
```

**Probable Cause**

Indicates that the power supply is functioning.

**Recommended Action**

This is an informational message. Respond to this message based on the policy of the end-user installation.

## Severity

Information

### FW-ABOVE, envTemp

## Message

```
Switch: <number>, Warning FW-ABOVE, 3, envTemp<element index> (Env Temperature <element index>) is above high boundary, current value: <value> C. (faulty)
```

## Probable Cause

Indicates that the internal temperature of the switch has risen to a value that might damage the switch, and provides the current value.

## Recommended Action

If you receive a temperature-related message, check for an accompanying fan-related message and check fan performance. If all fans are functioning normally, check the climate control in your lab.

## Severity

Warning

### FW-ABOVE, fabricDI000

## Message

```
Switch: <number>, Warning FW-ABOVE, 3, fabricDI000 (Fabric Domain ID) is above high boundary. current value : <value> DID Change(s). (info)
```

## Probable Cause

Indicates that the total number of domain ID changes has risen above the high boundary and provides the current value. Domain ID changes occur when there is a conflict of domain IDs in a single fabric and the principal switch has to assign another domain ID to the switch.

## Recommended Action

All domain ID messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

## FW-ABOVE, fabricED

## Message

```
Switch: <number>, Warning FW-ABOVE, 3, fabricED<element index> (Fabric E-port down <element index>) is above high boundary. current value : <value> Down(s). (info)
```

## Probable Cause

Indicates that the number of times that the E\_Port has gone down has risen above the high boundary and provides the current value. E\_Ports go down each time you remove a cable or SFP. SFP failures also cause E\_Ports to go down. E\_Port downs may also be caused by transient errors.

## Recommended Action

Check both ends of the physical connection and verify that the SFPs and cable are functioning properly.

## Severity

Information

## FW-ABOVE, fabricFL000

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, fabricFL000 (Fabric Fabric login) is above high boundary. current value : <value> Login(s). (info)
```

### Probable Cause

Indicates that the number of fabric logins has exceeded the high boundary and provides the current value. Fabric login messages occur when a port or device initializes with the fabric. The event is called a fabric login or FLOGI.

### Recommended Action

All fabric login messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-ABOVE, fabricFR000

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, fabricFR000 (Fabric Reconfigure) is above high boundary. current value : <value> Reconfig(s). (info)
```

### Probable Cause

Indicates that the total number of fabric reconfigurations has risen above the high boundary and provides the current value. The following occurrences can cause a fabric reconfiguration:

- Two switches with the same domain ID have connected to one another.
- Two fabrics have joined.
- An E\_Port has gone offline.
- A principal link has segmented from the fabric.

## Recommended Action

Verify that the cable is properly connected at both ends. Verify that the SFPs have not become faulty.

An inexplicable fabric reconfiguration might be a transient error and might not require any action.

## Severity

Information

### FW-ABOVE, fabricSC000

## Message

```
Switch: <number>, Warning FW-ABOVE, 3, fabricSC000 (Fabric Segmentation) is above  
high boundary. current value : <value> Segmentation(s). (info)
```

## Probable Cause

Indicates that the total number of times that the fabric segmented has risen above the high boundary and provides the current value. Segmentation changes may occur due to:

- Zone conflicts.
- Incompatible link parameters. During E\_Port initialization, ports exchange link parameters. Rarely, incompatible parameters result in segmentation.
- Domain conflicts.
- Segmentation of the principal link between two switches.

## Recommended Action

All fabric segmentation messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

## FW-ABOVE, fabricSS

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, fabricSS<element index> (Fabric SFP change <element index>) is above high boundary. current value : <value> Change(s). (info)
```

### Probable Cause

Indicates that the number of SFP state changes has risen above the high boundary and provides the current value. These messages occur when an SFP state changes, such as when the SFP is inserted or removed.

### Recommended Action

All SFP state changes area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-ABOVE, fabricZC000

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, fabricZC000 (Fabric Zoning change) is above high boundary. current value : <value> Zone Change(s). (info)
```

### Probable Cause

Indicates that the total number of times that zone configurations on the fabric have changed has risen above the high boundary and provides the current value. Zone change messages occur when there is a change to the effective zone configuration.

### Recommended Action

All zoning messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.



## Severity

Information

### FW-ABOVE, filterPerfPT

## Message

```
Switch: <number>, Warning FW-ABOVE, 3, filterPerfPT<element index> (FILTER Filter Counter <element index>) is above high boundary. current value : <value> Frame(s). (info)
```

## Probable Cause

Indicates that the number of frame types or commands that the port receives has risen above the high boundary and provides the current value. The port has received SCSI Read, SCSI Write, SCSI Read and Write, SCSI Traffic, or IP commands in a frame.

## Recommended Action

All filter area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

### FW-ABOVE, portCRCs

## Message

```
Switch: <number>, Warning FW-ABOVE, 3, portCRCs<element index> (Port Invalid CRCs <element index>) is above high boundary. current value : <value> Error(s)/minute. (faulty)
```

## Probable Cause

Indicates that the number of invalid CRC errors per minute has risen above the high boundary and provides the current value.

### Recommended Action

This error generally indicates an aging fabric. Check your SFPs, cables, and connections for faulty hardware. Verify that all optical hardware is clean.

### Severity

Warning

### FW-ABOVE, portLink

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, portLink<element index> (Port Link Failures <element index>) is above high boundary. current value : <value> Error(s)/minute. (faulty)
```

### Probable Cause

Indicates that the number of link losses per minute that the port experiences has risen above the high boundary and provides the current value.

Link loss errors occur when a link experiences a loss of signal and fails. Both physical and hardware problems can cause link loss errors. Link loss errors frequently occur due to a loss of synchronization. Check for concurrent loss of synchronization errors and, if applicable, troubleshoot them. Link losses also occur due to hardware failures.

### Recommended Action

Troubleshoot transmitters, receivers, and fibers, and verify that all cables connect properly. Losses of synchronization commonly cause link failures. If you receive concurrent loss of synchronization errors, troubleshoot the loss of synchronization.

### Severity

Warning

**FW-ABOVE, portProtoErr****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, portProtoErr<element index> (Port Protocol Errors <element index>) is above high boundary. current value : <value> Error(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of protocol errors per minute has risen to a value above the high boundary and provides the current value.

**Recommended Action**

Occasional protocol errors occur due to software glitches. Persistent protocol errors occur due to hardware problems. Check both ends of your connection and verify that your cable and SFP are not faulty.

**Severity**

Warning

**FW-ABOVE, portRXPerf****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, portRXPerf<element index> (Port RX Performance<element index>) is above high boundary. current value : <value> KB/s. (info)
```

**Probable Cause**

Indicates that the amount of incoming traffic to a port (in kilobytes per second) has risen above the high boundary and provides the current value.

**Recommended Action**

All receive-performance messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

### FW-ABOVE, portSignal

#### Message

```
Switch: <number>, Warning FW-ABOVE, 3, portSignal<element index> (Port Loss of Signal <element index>) is above high boundary. current value : <value> Error(s)/minute. (faulty)
```

#### Probable Cause

Indicates that the number of signal losses per minute has risen to a value above the high boundary and provides the current value.

#### Recommended Action

Loss of signal generally indicates a physical problem. Check both ends of your cable connection. Verify that the cable is not faulty.

## Severity

Warning

### FW-ABOVE, portState

#### Message

```
Switch: <number>, Warning FW-ABOVE, 3, portState<element index> (Port State Changes<element index>) is above high boundary. current value : <value> Change(s)/minute. (faulty)
```

#### Probable Cause

Indicates that the number of times per minute that the port has switched to a different port type has risen above the high boundary and provides the current value. The state of the port has changed for one of the following reasons:

- The port has gone offline.

- The port has come online.
- The port is testing.
- The port is faulty.
- The port has become an E\_Port.
- The port has become an F\_Port.
- The port has segmented.
- The port has become a trunk port.

### Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Warning

## FW-ABOVE, portSync

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, portSync<element index> (Port Loss of Sync
<element index>)is above high boundary. current value : <value> Error(s)/minute.
(faulty)
```

### Probable Cause

Indicates that the number of synchronization losses per minute has risen above the high boundary and provides the current value.

Loss of synchronization errors frequently occur due to a faulty SFP or cable. Signal losses often create synchronization losses.

### Recommended Action

Check for problems with the appropriate SFP and cable. Check both ends of your cable connection. Verify that your SFP functions properly. Verify that your cable is not faulty. If you continue to experience sync loss errors, troubleshoot your HBA and contact your switch service provider.

## Severity

Warning

### FW-ABOVE, portTXPerf

## Message

```
Switch: <number>, Warning FW-ABOVE, 3, portTXPerf<element index> (Port TX  
Performance<element index>) is above high boundary. current value : <value> KB/s.  
(info)
```

## Probable Cause

Indicates that the amount of traffic that the switch transmits from the port (in kilobytes per second) has risen above the high boundary and provides the current value.

## Recommended Action

All transmit-performance messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

### FW-ABOVE, portWords

## Message

```
Switch: <number>, Warning FW-ABOVE, 3, portWords<element index> (Port Invalid Words  
<element index>) is above high boundary. current value : <value> Error(s)/minute.  
(faulty)
```

## Probable Cause

Indicates that the number of invalid words per minute has risen to a value above the high boundary and provides the current value. Invalid Words messages usually indicate a hardware problem with an SFP or cable.

**Recommended Action**

Check both ends of your connections, your SFP, and your cable to verify that none are faulty.

**Severity**

Warning

**FW-ABOVE, samAvgOcc****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, samAvgOcc <element index> (Sam Avg Duration <element index>) is above high boundary, current value: <value> Hours. (faulty)
```

**Probable Cause**

Indicates that the average duration of the downtime occurrences of the port has risen above the high boundary and provides the current value.

**Recommended Action**

If your port experiences problematic durations of downtime, use the `portshow` command to investigate the performance of your port. Check the SFPs for deterioration. If the problem continues replace the SFPs.

**Severity**

Warning

## FW-ABOVE, samDownTime

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, samDownTime <element index> (Sam DownTime <element index>) is above high boundary, current value: <value> %. (faulty)
```

### Probable Cause

Indicates that the total amount of port downtime since the switch came online has risen above the high boundary and provides the current value. This counter tracks the time a port is in faulty status. This does not include periods when the port has been disabled or is off-line.

### Recommended Action

If you experience problematic amounts of downtime, troubleshoot your port with the `portshow` command. If the problem continues replace the SFP.

### Severity

Warning

## FW-ABOVE, samFreq

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, samFreq <element index> (Sam Frequency <element index>) is above high boundary, current value: <value> Hours. (faulty)
```

### Probable Cause

Indicates that the number of times per hour that the port goes down has risen above the high boundary and provides the current value.

### Recommended Action

If your port experiences problematic durations of downtime, use the `portshow` command to investigate the performance of your port. Check the SFPs for deterioration. If the problem continues replace the SFPs.



**Severity**

Warning

**FW-ABOVE, samUpTime****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, samUpTime <element index> (Sam UpTime  
<element index>) is above high boundary, current value: <value> . (normal)
```

**Probable Cause**

Indicates that the total amount of port uptime since the switch came online has risen above the high boundary and provides the current value.

**Recommended Action**

This message is for information purposes only and requires no action. A large value for port uptime means the switch is working correctly.

**Severity**

Information

**FW-ABOVE, secAPI000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secAPI000 (Sec API Violation) is above high  
boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of API violations per minute has risen above the high boundary and provides the current value. API violations indicate that an API connection request has been received from an unauthorized IP address.

The SNMP\_POLICY contains a list of TCP/IP addresses that are authorized to establish API connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

### Recommended Action

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning

**FW-ABOVE, secDCC000**

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, secDCC000 (Sec DCC Violation) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

### Probable Cause

Indicates that the number of DCC violations per minute has risen above the high boundary and provides the current value. DCC violations indicate that an unauthorized device tried to join the fabric.

The DCC\_POLICY allows for the specification of rules for binding device ports (typically HBA ports) to specific switch ports. DCC policies ensure that whenever a device performs an FLOGI request that the WWN specified in the FLOGI is validated to be connected to the authorized port. Enforcement for private loop devices not performing FLOGI is done through the name server.

### Recommended Action

Refer to the ERRORLOG to find out the device WWN, switch WWN, and switch port. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning

**FW-ABOVE, secHTTP000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secHTTP000 (Sec HTTP Violation) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of HTTP violations per minute has risen above the high boundary and provides the current value. HTTP violations indicate that a browser connection request has been received from an unauthorized IP address.

The HTTP\_POLICY contains a list of TCP/IP addresses that are authorized to establish browser connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

**Recommended Action**

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Warning

**FW-ABOVE, secIllCmd000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secIllCmd000 (Sec Illegal Commands) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of illegal commands per minute has risen above the high boundary and provides the current value. This counter tracks how many times commands allowed only on the primary FCS switch have been executed on a non-primary FCS switch.

There are many commands that can be executed only on the primary FCS switch as well as one security command that can be executed only on a backup FCS switch. The counter increments every time someone issues one of these commands on a switch where it is not allowed.

### Recommended Action

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning

## FW-ABOVE, secIncDB000

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, secIncDB000 (Sec Incompatible DB) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

### Probable Cause

Indicates that the number of incompatible security DB violations has risen above the high boundary and provides the current value. This violation indicates the number of secure switches with different version stamps have been detected.

When a switch is in secure mode, it connects only to another switch that is in secure mode and has a compatible security database. A compatible security database means the version stamp and FCS policy matches exactly.

### Recommended Action

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning

**FW-ABOVE, secInvCert000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secInvCert000 (Sec Invalid Certificate) is
above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of invalid certificates per minute has risen above the high boundary and provides the current value. This violation indicates that a packet with an invalid certificate has been received from the primary FCS.

Before a new primary FCS switch sends any configuration data to any switch in the fabric, it first sends its certificate to all the switches in the fabric. The receiving switch has to verify that the sender is the primary FCS switch and its certificate is signed by the Root CA recognized by the receiving switch. This counter keeps track of the number of packets received with invalid certificates.

**Recommended Action**

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Warning

**FW-ABOVE, secInvSign000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secInvSign000 (Sec Invalid Signature) is
above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of invalid signatures per minute has risen above the high boundary and provides the current value. Invalid signature violations indicate a packet with an invalid signature has been received from the primary FCS.

When the primary fabric configuration server (FCS) downloads a new configuration to other switches in the fabric, the packet is signed using the private key of the primary FCS. The receiving switch has to verify this signature with the public key of the primary FCS switch. If the difference is too great, it rejects the packet. This counter keeps track of the number of packets received with invalid signatures.

### Recommended Action

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning

## FW-ABOVE, secInvTS000

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, secInvTS000 (Sec Invalid Timestamp) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

### Probable Cause

Indicates that the number of invalid timestamps per minute has risen above the high boundary and provides the current value. Invalid timestamp violations indicate a packet with an invalid timestamp has been received from the primary FCS.

When the primary fabric configuration server (FCS) downloads a new configuration to other switches in the fabric, the packet is tagged with a timestamp. The receiving switch compares this timestamp to its current time. If the difference is too great, it rejects the packet. This counter keeps track of packets rejected due to invalid timestamps.

### Recommended Action

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Warning

**FW-ABOVE, secLogin000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secLogin000 (Sec Login Violation) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of login violations per minute has risen above the high boundary and provides the current value. Login violations indicate that a login failure has been detected.

**Recommended Action**

Refer to the ERRORLOG to find out the IP location of the login attempt. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Warning

**FW-ABOVE, secMS000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secMS000 (Sec MS Violation) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of MS violations per minute has risen above the high boundary and provides the current value. MS violations indicate that a Management Server (MS) access request has been received from an unauthorized WWN.

The MS\_POLICY contains a list of WWNs of device ports that are allowed to access the Management Server functionality.

### Recommended Action

Refer to the ERRORLOG to determine from which WWN the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning

## FW-ABOVE, secNoFCS000

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, secNoFCS000 (Sec No FCS) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

### Probable Cause

Indicates that the number of no-FCS violations per minute has risen above the high boundary and provides the current value. This counter records how often the switch loses contact with the primary FCS switch.

When the primary FCS switch in the fabric sends its certificate to a switch, the receiving switch saves the WWN of that primary FCS switch. If a secure switch finds that there are no FCSs in the fabric, but it still has the WWN of the last primary FCS switch, it increments this counter and resets the WWN of the primary FCS to all zeros.

### Recommended Action

Refer to the ERRORLOG for more information. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning



**FW-ABOVE, secPanel000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secPanel000 (Sec FrontPanel Violation) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of front panel violations per minute has risen above the high boundary and provides the current value. Front Panel violations indicate that an unauthorized front panel request has been received. The SAN Switch 16 is the only switch with front panel admin access.

The FRONTPANEL\_POLICY contains a list of switch WWNs for which front panel access is enabled.

**Recommended Action**

Refer to the ERRORLOG to find out from which switch WWN the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Warning

**FW-ABOVE, secRSNMP000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secRSNMP000 (Sec RSNMP Violation) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Description**

Indicates that the number of RSNMP violations per minute has risen above the high boundary, and provides the current value. RSNMP violations indicate that an SNMP “get” operation request has been received from an unauthorized IP address.

### Recommended Action

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning

### FW-ABOVE, secSCC000

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, secSCC000 (Sec SCC Violation) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

### Probable Cause

Indicates that the number of switch connection control (SCC) violations per minute has risen above the high boundary and provides the current value. SCC violations indicate that an unauthorized switch tried to join the fabric.

The SCC\_POLICY contains a list of switches (by WWN) that are allowed to be members of a fabric.

### Recommended Action

Refer to the ERRORLOG to find out the switch WWN. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning

**FW-ABOVE, secSerial000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secSerial000 (Sec Serial Violation) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of serial violations per minute has risen above the high boundary and provides the current value. Serial violations indicate that an unauthorized serial port request has been received.

The SERIAL\_POLICY contains a list of switch WWNs for which serial port access is enabled.

**Recommended Action**

Refer to the ERRORLOG to find out from which switch WWN the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Warning

**FW-ABOVE, secSES000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secSES000 (Sec SES Violation) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of SES violations per minute has risen above the high boundary and provides the current value. SES violations indicate that a SCSI Enclosure Services (SES) request has been received from an unauthorized IP address.

The MS\_POLICY contains a list of WWNs of device ports that are allowed to access the Management Server functionality.

### Recommended Action

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning

### FW-ABOVE, secSlapBP000

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, secSlapBP000 (Sec SLAP Bad Packets) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

### Probable Cause

Indicates that the number of SLAP bad packets per minute has risen above the high boundary and provides the current value. This counter keeps track of the number of unexpected SLAP packets and SLAP packets with bad transmission IDs.

### Recommended Action

Refer to the ERRLOG for more information. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning

**FW-ABOVE, secSlapFail000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secSlapFail000 (Sec SLAP Failures) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of SLAP failures per minute has risen above the high boundary and provides the current value. This violation indicates a Switch Link Authentication Protocol (SLAP) error has been detected.

SLAP may fail for a number of reasons. The switch on the other side may not support SLAP, may have an invalid certificate, may not be signed properly, or may send unexpected packets. The port where SLAP fails is segmented. This counter keeps track of the number of SLAP failures.

**Recommended Action**

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Warning

**FW-ABOVE, secTelnet000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secTelnet000 (Sec Telnet Violation) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of Telnet violations per minute has risen above the high boundary. Telnet violations indicate that a Telnet connection request has been received from an unauthorized IP address.

The TELNET\_POLICY contains a list of TCP/IP addresses that are authorized to establish Telnet connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

### Recommended Action

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning

**FW-ABOVE, secTSSync000**

### Message

```
Switch: <number>, Warning FW-ABOVE, 3, secTSSync000 (Sec TS Out of Sync) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

### Probable Cause

Indicates that the number of TS out-of-sync violations per minute has risen above the high boundary and provides the current value.

### Recommended Action

Refer to the ERRLOG for more information. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Warning

**FW-ABOVE, secWSNMP000****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, secWSNMP000 (Sec WSNMP Violation) is above high boundary. current value : 10 Violation(s)/minute. (faulty)
```

**Probable Cause**

Indicates that the number of WSNMP violations per minute has risen above the high boundary and provides the current value. WSNMP violations indicate that an SNMP “get/set” operation request has been received from an unauthorized IP address.

**Recommended Action**

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Warning

**FW-ABOVE, sfpCrnt****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, sfpCrnt<element index> (Sfp Current <element index>) is above high boundary, current value: <value> mA. (faulty)
```

**Probable Cause**

Indicates that the value of SFP current has risen above the high boundary and provides the current value.

## Recommended Action

The supplied current of the SFP transceiver is outside of the normal range, indicating a possible hardware failure. If the current rises above the high boundary, you must replace the SFP.

## Severity

Warning

## FW-ABOVE, sfpRX

## Message

```
Switch: <number>, Warning FW-ABOVE, 3, sfpRX<element index> (Sfp RX power <element index>) is above high boundary, current value: <value> uWatts. (info)
```

## Probable Cause

Indicates that the receive power value has risen above the high boundary and provides the current value.

The received optical power of the SFP transceiver is outside of the factory-set normal range. The receive performance area measures the amount of incoming laser (in Mamp) to help you determine if the SFP is in good working condition or not. If the counter often exceeds the threshold, the SFP is deteriorating.

## Recommended Action

This error indicates that you must replace the SFP before it causes a malfunction.

## Severity

Information



**FW-ABOVE, sfpTemp****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, sfpTemp<element index> (Sfp temperature <element index>) is above high boundary, current value: <value> C. (faulty)
```

**Probable Cause**

Indicates that the temperature of the SFP has risen to a value above the high boundary and provides the current value.

**Recommended Action**

Excessively high temperatures generally indicate a hardware problem. Temperature related messages usually indicate that you must replace the SFP.

**Severity**

Warning

**FW-ABOVE, sfpTX****Message**

```
Switch: <number>, Warning FW-ABOVE, 3, sfpTX<element index> (Sfp TX power <element index>) is above high boundary, current value: <value> uWatts. (info)
```

**Probable Cause**

Indicates that the transmit power value has risen above the high boundary and provides the current value.

The transmitted optical power of the SFP transceiver is outside of the normal range. The transmit performance area measures the amount of outgoing laser (in Mamp) to help you determine if the SFP is in good working condition or not. If the counter often exceeds the threshold, then the SFP is deteriorating.

**Recommended Action**

This error indicates that you must replace the SFP before it deteriorates.

## Severity

Information

### FW-ABOVE, sfpVolt

## Message

```
Switch: <number>, Warning FW-ABOVE, 3, sfpVolt<element index> (Sfp Voltage <element index>) is above high boundary, current value: <value> mV. (faulty)
```

## Probable Cause

Indicates that the supplied voltage of the SFP transceiver is outside of the factory-set normal range, indicating a possible hardware failure, and provides the current value.

## Recommended Action

Frequent voltage fluctuations are an indication that the SFP is deteriorating. Replace the SFP.

## Severity

Warning

### FW-BELOW, alpaPerfCRC

## Message

```
Switch: <number>, Warning FW-BELOW, 3, alpaPerfCRC<element index> (ALPA Invalid CRCs <element index>) is below low boundary. current value : <value> Error(s)/minute. (normal)
```

## Probable Cause

Indicates that the cumulative number of Invalid CRC errors has fallen below the low boundary and provides the current value.

You should set your high boundaries to five- or six-digit figures; only large numbers of messages indicate a problem in this area.

### Recommended Action

No action is required. A low level of Invalid CRC errors means the switch is functioning normally.

### Severity

Information

## FW-BELOW, eePerfCR

### Message

```
Switch: <number>, Warning FW-BELOW, 3, eePerfCR<element index> (EE Invalid CRCs  
<element index>) is below low boundary. current value : <value> Change(s). (normal)
```

### Probable Cause

Indicates that the cumulative number of CRC errors has fallen below the low boundary and provides the current value. Invalid CRC messages occur when the number of CRC errors in Fibre Channel frames for specific source ID (SID) and destination ID (DID) pairs change. These messages may also be caused by dirty equipment, temperature fluctuations, and aging equipment.

### Recommended Action

No action is required. A low level of CRC errors means the fabric is functioning normally.

The CRC error area of the End-to-End Performance Monitor class helps you tune your fabric. To reduce CRC messages, experiment with alternative topologies and cabling schemes.

### Severity

Information

## FW-BELOW, eePerfRx

### Message

```
Switch: <number>, Warning FW-BELOW, 3, eePerfRx<element index> (EE RX Performance <element index>) is below low boundary. current value : <value> KB/s. (info)
```

### Probable Cause

Indicates that the cumulative number of word frames that the switch receives has fallen below the low boundary and provides the current value. Receive performance messages appear due to the number of word frames that travel from the configured SID to the DID pair.

### Recommended Action

All receive count area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-BELOW, eePerfTx

### Message

```
Switch: <number>, Warning FW-BELOW, 3, eePerfTx<element index> (EE TX Performance <element index>) is below low boundary. current value : <value> KB/s. (info)
```

### Probable Cause

Indicates that the cumulative number of word frames that the switch transmits has fallen below the low boundary and provides the current value. Transmit performance messages appear due to the number of word frames that travel from the configured SID to the DID pair.

## Recommended Action

All transmit count area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

### FW-BELOW, envFan

## Message

```
Switch: <number>, Warning FW-BELOW, 3, envFan<element index> (Env Fan <element index>) is below high boundary, current value: <value> RPM. (faulty)
```

## Probable Cause

Indicates that the speed of the fan has fallen to a value below the low boundary and provides the new fan RPM value. Fan problems typically contribute to temperature problems.

## Recommended Action

Abnormal fan speeds indicate that the fan is malfunctioning. Replace the fan.

## Severity

Warning

### FW-BELOW, envPS

## Message

```
Switch: <number>, Warning FW-BELOW, 3, envPS<element index> (Env Power Supply <element index>) is below low boundary, current value: 0 (1 OK/0 Faulty). (faulty)
```

## Probable Cause

Indicates that the power supply is not producing enough power.

### Recommended Action

Verify you have installed the power supply correctly and that it is correctly seated in the chassis. If the problem persists, replace the power supply.

### Severity

Warning

## FW-BELOW, envTemp

### Message

```
Switch: <number>, Warning FW-BELOW, 3, envTemp<element index> (Env Temperature <element index>) is below low boundary, current value: <value> C. (faulty)
```

### Probable Cause

Indicates that the internal temperature of the switch has fallen below the low boundary and provides the current value.

### Recommended Action

No action is required. Typically, low temperatures mean that the fans and airflow of a switch are functioning normally.

Verify that the switch environment is within the switch operational limits.

### Severity

Warning

**FW-BELOW, fabricDI000****Message**

```
Switch: <number>, Warning FW-BELOW, 3, fabricDI000 (Fabric Domain ID) is below low boundary. current value : <value> DID Change(s). (info)
```

**Probable Cause**

Indicates that the total number of domain ID changes has fallen below the low boundary and provides the current value. Domain ID changes occur when there is a conflict of domain IDs in a single fabric and the principal switch has to assign another domain ID to the switch.

**Recommended Action**

No action is required. A low level of domain ID changes means the fabric is functioning normally.

**Severity**

Information

**FW-BELOW, fabricED****Message**

```
Switch: <number>, Warning FW-BELOW, 3, fabricED<element index> (Fabric E-port down <element index>) is below low boundary. current value : <value> Down(s). (info)
```

**Probable Cause**

Indicates that the number of times that the E\_Port has gone down has fallen below the low boundary and provides the current value. E\_Ports go down each time you remove a cable or SFP. SFP failures also cause E\_Ports to go down. E\_Port downs may also be caused by transient errors.

### Recommended Action

No action is required. A low level of E\_Port failures means the switch is functioning normally.

### Severity

Information

## FW-BELOW, fabricFL000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, fabricFL000 (Fabric Fabric login) is below  
low boundary. current value : <value> Login(s). (info)
```

### Probable Cause

Indicates that the number of fabric logins has fallen below the low boundary and provides the current value. Fabric login messages occur when a port or device initializes with the fabric. The event is called a fabric login or FLOGI.

### Recommended Action

No action is required. A low level of fabric logins means the fabric is functioning normally.

### Severity

Information



**FW-BELOW, fabricFR000****Message**

```
Switch: <number>, Warning FW-BELOW, 3, fabricFR000 (Fabric Reconfigure) is below low boundary. current value : <value> Reconfig(s). (info)
```

**Probable Cause**

Indicates that the total number of fabric reconfigurations has fallen below the low boundary and provides the current value. The following occurrences can cause a fabric reconfiguration:

- Two switches with the same domain ID have connected to one another.
- Two fabrics have joined.
- An E\_Port has gone offline.
- A principal link has segmented from the fabric.

**Recommended Action**

No action is required. A low level of fabric reconfigurations means the fabric is functioning normally.

**Severity**

Information

**FW-BELOW, fabricSC000****Message**

```
Switch: <number>, Warning FW-BELOW, 3, fabricSC000 (Fabric Segmentation) is below low boundary. current value : <value> Segmentation(s). (info)
```

**Probable Cause**

Indicates that the total number of times that the fabric segmented has fallen below the low boundary and provides the current value. Segmentation changes may occur due to:

- Zone conflicts.
- Incompatible link parameters. During E\_Port initialization, ports exchange link parameters. Rarely, incompatible parameters result in segmentation.
- Domain conflicts.
- Segmentation of the principal link between two switches.

### Recommended Action

No action is required. A low level of fabric segmentation errors means the fabric is functioning normally.

### Severity

Information

## FW-BELOW, fabricSS

### Message

```
Switch: <number>, Warning FW-BELOW, 3, fabricSS<element index>) (Fabric SFP change <element index>) is below low boundary. current value : <value> Change(s). (info)
```

### Probable Cause

Indicates that the number of SFP state changes has fallen below the low boundary and provides the current value. These messages occur when an SFP state changes, such as when the SFP is inserted or removed.

### Recommended Action

No action is required. A low level of SFP state changes means the switch is functioning normally.

### Severity

Information

**FW-BELOW, fabricZC000****Message**

```
Switch: <number>, Warning FW-BELOW, 3, fabricZC000 (Fabric Zoning change) is below low boundary. current value : <value> Zone Change(s). (info)
```

**Probable Cause**

Indicates that the total number of times that zone configurations on the fabric have changed has fallen below the low boundary and provides the current value. Zone change messages occur when there is a change to the effective zone configuration.

**Recommended Action**

No action is required. A low level of zone configuration changes means the fabric is functioning normally.

**Severity**

Information

**FW-BELOW, filterPerfPT****Message**

```
Switch: <number>, Warning FW-BELOW, 3, filterPerfPT<element index> (FILTER Filter Counter <element index>) is below low boundary. current value : <value> Frame(s). (info)
```

**Probable Cause**

Indicates that the number of frame types or commands that the port receives has fallen below the low boundary and provides the current value. The port has received SCSI Read, SCSI Write, SCSI Read and Write, SCSI Traffic, or IP commands in a frame.

### Recommended Action

All filter area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-BELOW, portCRCs

### Message

```
Switch: <number>, Warning FW-BELOW, 3, portCRCs<element index> (Port Invalid CRCs  
<element index>) is below low boundary. current value : <value> Error(s)/minute.  
(normal)
```

### Probable Cause

Indicates that the number of invalid CRC errors per minute has fallen below the low boundary and provides the current value.

### Recommended Action

No action is required. A low level of invalid CRC errors means the switch is functioning normally.

### Severity

Information

**FW-BELOW, portLink****Message**

```
Switch: <number>, Warning FW-BELOW, 3, portLink<element index> (Port Link Failures
<element index>) is below low boundary. current value : <value> Error(s)/minute.
(normal)
```

**Probable Cause**

Indicates that the number of link losses per minute that the port experiences has fallen below the low boundary and provides the current value.

Link loss errors occur when a link experiences a loss of signal and fails. Both physical and hardware problems can cause link loss errors. Link loss errors frequently occur due to a loss of synchronization. Check for concurrent loss of synchronization errors and, if applicable, troubleshoot them. Link losses also occur due to hardware failures.

**Recommended Action**

No action is required. A low level of link loss errors means the switch is functioning normally.

**Severity**

Information

**FW-BELOW, portProtoErr****Message**

```
Switch: <number>, Warning FW-BELOW, 3, portProtoErr<element index> (Port Protocol
Errors <element index>) is below low boundary. current value : <value> Error(s)/
minute. (normal)
```

**Probable Cause**

Indicates that the number of protocol errors per minute has fallen to a value below the low boundary and provides the current value.

### Recommended Action

No action is required. A low level of protocol errors means the switch is functioning normally.

### Severity

Information

## FW-BELOW, portRXPerf

### Message

```
Switch: <number>, Warning FW-BELOW, 3, portRXPerf<element index> (Port RX  
Performance<element index>) is below low boundary. current value : <value> KB/s.  
(info)
```

### Probable Cause

Indicates that the amount of incoming traffic to a port (in kilobytes per second) has fallen below the low boundary and provides the current value.

### Recommended Action

All receive-performance messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-BELOW, portSignal

### Message

```
Switch: <number>, Warning FW-BELOW, 3, portSignal<element index> (Port Loss of Signal <element index>) is below low boundary. current value : <value> Error(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of signal losses per minute has fallen to a value below the low boundary and provides the current value.

### Recommended Action

No action is required. A low level of signal loss errors means the switch is functioning normally.

### Severity

Information

## FW-BELOW, portState

### Message

```
Switch: <number>, Warning FW-BELOW, 3, portState<element index> (Port State Changes<element index>) is below low boundary. current value : <value> Change(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of times per minute that the port has switched to a different port type has fallen below the low boundary and provides the current value. The state of the port has changed for one of the following reasons:

- The port has gone offline.
- The port has come online.
- The port is testing.
- The port is faulty.

- The port has become an E\_Port.
- The port has become an F\_Port.
- The port has segmented.
- The port has become a trunk port.

### Recommended Action

No action is required. A low level of port type change messages means the switch is functioning normally.

### Severity

Information

## FW-BELOW, portSync

### Message

```
Switch: <number>, Warning FW-BELOW, 3, portSync<element index> (Port Loss of Sync
<element index>) is below low boundary. current value : <value> Error(s)/minute.
(normal)
```

### Probable Cause

Indicates that the number of synchronization losses per minute has fallen below the low boundary and provides the current value.

### Recommended Action

No action is required. A low level of synchronization losses means the switch is functioning normally.

### Severity

Information



**FW-BELOW, portTXPerf****Message**

```
Switch: <number>, Warning FW-BELOW, 3, portTXPerf<element index> (Port TX
Performance<element index>) is below low boundary. current value : <value> KB/s.
(info)
```

**Probable Cause**

Indicates that the amount of traffic that the switch transmits from the port (in kilobytes per second) has fallen below the low boundary and provides the current value.

**Recommended Action**

All transmit-performance messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

**Severity**

Information

**FW-BELOW, portWords****Message**

```
Switch: <number>, Warning FW-BELOW, 3, portWords<element index> (Port Invalid Words
<element index>) is below low boundary. current value : <value> Error(s)/minute.
(normal)
```

**Probable Cause**

Indicates that the number of invalid words per minute has fallen to a value below the low boundary and provides the current value. Invalid Words messages usually indicate a hardware problem with an SFP or cable.

### **Recommended Action**

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### **Severity**

Information

## **FW-BELOW, samAvgOcc**

### **Message**

```
Switch: <number>, Warning FW-BELOW, 3, samAvgOcc <element index> (Sam Avg Duration <element index>) is below low boundary, current value: <value> Hours. (normal)
```

### **Probable Cause**

Indicates that the average duration of the downtime occurrences of the port has fallen below the low boundary and provides the current value.

### **Recommended Action**

No action is required. A low level of downtime means the switch is functioning normally.

### **Severity**

Information

**FW-BELOW, samDownTime****Message**

```
Switch: <number>, Warning FW-BELOW, 3, samDownTime <element index> (Sam DownTime  
<element index>) is below low boundary, current value: <value> %. (normal)
```

**Probable Cause**

Indicates that the total amount of port downtime since the switch came online has fallen below the low boundary and provides the current value. This counter tracks the time a port is in faulty status. This does not include periods when the port has been disabled or is off-line.

**Recommended Action**

No action is required. A low level of downtime means the switch is functioning normally.

**Severity**

Information

**FW-BELOW, samFreq****Message**

```
Switch: <number>, Warning FW-BELOW, 3, samFreq <element index> (Sam Frequency  
<element index>) is below low boundary, current value: <value> Hours. (normal)
```

**Probable Cause**

Indicates that the number of times per hour that the port goes down has fallen below the low boundary and provides the current value.

**Recommended Action**

No action is required. A low level of downtime means the switch is functioning normally.

## Severity

Information

### FW-BELOW, samUpTime

## Message

```
Switch: <number>, Warning FW-BELOW, 3, samUpTime <element index> (Sam UpTime <element index>) is below low boundary, current value: <value> %. (faulty)
```

## Probable Cause

Indicates that the total amount of port uptime since the switch came online has fallen below the low boundary and provides the current value. This counter tracks the time a port is available.

## Recommended Action

If you experience problematic amounts of downtime, troubleshoot your port with the `portshow` command.

Check for bad cables, deteriorated SFPs, or dirty connections. Replace the cables and SFPs as necessary.

## Severity

Warning

### FW-BELOW, secAPI000

## Message

```
Switch: <number>, Warning FW-BELOW, 3, secAPI000 (Sec API Violation) is below low boundary. current value : 0 Violation(s)/minute. (normal)
```

## Probable Cause

Indicates that the number of API violations per minute has fallen below the low boundary and provides the current value. API violations indicate that an API connection request has been received from an unauthorized IP address.

The SNMP\_POLICY contains a list of TCP/IP addresses that are authorized to establish API connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

**FW-BELOW, secDCC000**

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secDCC000 (Sec DCC Violation) is below low  
boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of DCC violations per minute has fallen below the low boundary and provides the current value. DCC violations indicate that an unauthorized device tried to join the fabric.

The DCC\_POLICY allows for the specification of rules for binding device ports (typically HBA ports) to specific switch ports. DCC policies ensure that whenever a device performs an FLOGI request that the WWN specified in the FLOGI is validated to be connected to the authorized port. Enforcement for private loop devices not performing FLOGI is done through the name server.

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

## FW-BELOW, secHTTP000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secHTTP000 (Sec HTTP Violation) is below low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of HTTP violations per minute has fallen below the low boundary and provides the current value. HTTP violations indicate that a browser connection request has been received from an unauthorized IP address.

The HTTP\_POLICY contains a list of TCP/IP addresses that are authorized to establish browser connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

## FW-BELOW, secIllCmd000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secIllCmd000 (Sec Illegal Commands) is below low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of illegal commands per minute has fallen below the low boundary and provides the current value. This counter tracks how many times commands allowed only on the primary FCS switch have been executed on a non-primary FCS switch.

There are many commands that can be executed only on the primary FCS switch as well as one security command that can be executed only on a backup FCS switch. The counter increments every time someone issues one of these commands on a switch where it is not allowed.

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

## FW-BELOW, secIncDB000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secIncDB000 (Sec Incompatible DB) is below  
low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of incompatible security DB violations has fallen below the low boundary and provides the current value. This violation indicates the number of secure switches with different version stamps have been detected.

When a switch is in secure mode, it connects only to another switch that is in secure mode and has a compatible security database. A compatible security database means the version stamp and FCS policy matches exactly.

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

## FW-BELOW, secInvCert000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secInvCert000 (Sec Invalid Certificate) is
below low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of invalid certificates per minute has fallen below the low boundary and provides the current value. This violation indicates that a packet with an invalid certificate has been received from the primary FCS.

Before a new primary FCS switch sends any configuration data to any switch in the fabric, it first sends its certificate to all the switches in the fabric. The receiving switch has to verify that the sender is the primary FCS switch and its certificate is signed by the Root CA recognized by the receiving switch. This counter keeps track of the number of packets received with invalid signatures.

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

## FW-BELOW, secInvSign000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secInvSign000 (Sec Invalid Signature) is
below low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of invalid signatures per minute has fallen below the low boundary and provides the current value. Invalid signature violations indicate a packet with an invalid signature has been received from the primary FCS.



When the primary fabric configuration server (FCS) downloads a new configuration to other switches in the fabric, the packet is signed using the private key of the primary FCS. The receiving switch has to verify this signature with the public key of the primary FCS switch. If the difference is too great, it rejects the packet. This counter keeps track of the number of packets received with invalid signatures.

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

## FW-BELOW, secInvTS000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secInvTS000 (Sec Invalid Timestamp) is below low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of invalid timestamps per minute has fallen below the low boundary and provides the current value. Invalid timestamp violations indicate a packet with an invalid timestamp has been received from the primary FCS.

When the primary fabric configuration server (FCS) downloads a new configuration to other switches in the fabric, the packet is tagged with a timestamp. The receiving switch compares this timestamp to its current time. If the difference is too great, it rejects the packet. This counter keeps track of packets rejected due to invalid timestamps.

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

## FW-BELOW, secLogin000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secLogin000 (Sec Login Violation) is below low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of login violations per minute has fallen below the low boundary and provides the current value. Login violations indicate that a login failure has been detected.

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

## FW-BELOW, secMS000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secMS000 (Sec MS Violation) is below low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of MS violations per minute has fallen below the low boundary and provides the current value. MS violations indicate that a Management Server (MS) access request has been received from an unauthorized WWN.

The MS\_POLICY contains a list of WWNs of device ports that are allowed to access the Management Server functionality.

### Recommended Action

This message is for information purposes only and no action is required.

**Severity**

Information

**FW-BELOW, secMS000****Message**

```
Switch: <number>, Warning FW-BELOW, 3, secNoFCS000 (Sec No FCS) is below low  
boundary. current value : 0 Violation(s)/minute. (normal)
```

**Probable Cause**

Indicates that the number of no-FCS violations per minute has fallen below the low boundary and provides the current value. This counter records how often the switch loses contact with the primary FCS switch.

When the primary FCS switch in the fabric sends its certificate to a switch, the receiving switch saves the WWN of that primary FCS switch. If a secure switch finds that there are no FCSs in the fabric, but it still has the WWN of the last primary FCS switch, it increments this counter and resets the WWN of the primary FCS to all zeros.

**Recommended Action**

This message is for information purposes only and no action is required.

**Severity**

Information

## FW-BELOW, secPanel000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secPanel000 (Sec FrontPanel Violation) is below low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of front panel violations per minute has fallen below the low boundary and provides the current value. Front Panel violations indicate that an unauthorized front panel request has been received. The SAN Switch 16 is the only switch with front panel admin access.

The FRONT\_PANEL\_POLICY contains a list of switch WWNs for which front panel access is enabled.

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

## FW-BELOW, secRSNMP000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secRSNMP000 (Sec RSNMP Violation) is below low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Description

Indicates that the number of RSNMP violations per minute has fallen below the low boundary, and provides the current value. RSNMP violations indicate that an SNMP “get” operation request has been received from an unauthorized IP address.

**Recommended Action**

This message is for information purposes only and no action is required.

**Severity**

Information

**FW-BELOW, secSCC000**

**Message**

```
Switch: <number>, Warning FW-BELOW, 3, secSCC000 (Sec SCC Violation) is below low  
boundary. current value : 0 Violation(s)/minute. (normal)
```

**Probable Cause**

Indicates that the number of SCC violations per minute has fallen below the low boundary and provides the current value. SCC violations indicate that an unauthorized switch tried to join the fabric.

The SCC\_POLICY contains a list of switches (by WWN) that are allowed to be members of a fabric.

**Recommended Action**

This message is for information purposes only and no action is required.

**Severity**

Information

## FW-BELOW, secSerial000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secSerial000 (Sec Serial Violation) is below low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of serial violations per minute has fallen below the low boundary and provides the current value. Serial violations indicate that an unauthorized serial port request has been received.

The SERIAL\_POLICY contains a list of switch WWNs for which serial port access is enabled.

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

## FW-BELOW, secSES000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secSES000 (Sec SES Violation) is below low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of SES violations per minute has fallen below the low boundary and provides the current value. SES violations indicate that a SCSI Enclosure Services (SES) request has been received from an unauthorized IP address.

The MS\_POLICY contains a list of WWNs of device ports that are allowed to access the Management Server functionality.

**Recommended Action**

This message is for information purposes only and no action is required.

**Severity**

Information

**FW-BELOW, secSlapBP000**

**Message**

```
Switch: <number>, Warning FW-BELOW, 3, secSlapBP000 (Sec SLAP Bad Packets) is below  
low boundary. current value : 0 Violation(s)/minute. (normal)
```

**Probable Cause**

Indicates that the number of SLAP bad packets per minute has fallen below the low boundary and provides the current value. This counter keeps track of the number of unexpected SLAP packets and SLAP packets with bad transmission IDs.

**Recommended Action**

This message is for information purposes only and no action is required.

**Severity**

Information

## FW-BELOW, secSlapFail000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secSlapFail000 (Sec SLAP Failures) is below  
low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of SLAP failures per minute has fallen below the low boundary and provides the current value. This violation indicates a Switch Link Authentication Protocol (SLAP) error has been detected.

SLAP may fail for a number of reasons. The switch on the other side may not support SLAP, may have an invalid certificate, may not be signed properly, or may send unexpected packets. The port where SLAP fails is segmented. This counter keeps track of the number of SLAP failures.

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

## FW-BELOW, secTelnet000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secTelnet000 (Sec Telnet Violation) is below  
low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of Telnet violations per minute has fallen below the low boundary and provides the current value. Telnet violations indicate that a Telnet connection request has been received from an unauthorized IP address.



The TELNET\_POLICY contains a list of TCP/IP addresses that are authorized to establish Telnet connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

**Recommended Action**

This message is for information purposes only and no action is required.

**Severity**

Information

**FW-BELOW, secTSSync000**

**Message**

```
Switch: <number>, Warning FW-BELOW, 3, secTSSync000 (Sec TS Out of Sync) is below low boundary. current value : 0 Violation(s)/minute. (normal)
```

**Probable Cause**

Indicates that the number of Time Service out-of-sync violations per minute has fallen below the low boundary and provides the current value.

**Recommended Action**

This message is for information purposes only and no action is required.

**Severity**

Information

## FW-BELOW, secWSNMP000

### Message

```
Switch: <number>, Warning FW-BELOW, 3, secWSNMP000 (Sec WSNMP Violation) is below low boundary. current value : 0 Violation(s)/minute. (normal)
```

### Probable Cause

Indicates that the number of WSNMP violations per minute has fallen below the low boundary and provides the current value. WSNMP violations indicate that an SNMP “get/set” operation request has been received from an unauthorized IP address.

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Information

## FW-BELOW, sfpCrnt

### Message

```
Switch: <number>, Warning FW-BELOW, 3, sfpCrnt<element index> (Sfp Current <element index>) is below low boundary, current value: <value> mA. (faulty)
```

### Probable Cause

Indicates that the value of SFP current has fallen below the low boundary and provides the current value.

### Recommended Action

The supplied current of the SFP transceiver is outside of the normal range, indicating a possible hardware failure. Verify that your optical components are clean and function properly. Replace deteriorating cables, and SFPs. Check for damage from heat or age.

**Severity**

Warning

**FW-BELOW, sfpRX****Message**

```
Switch: <number>, Warning FW-BELOW, 3, sfpRX<element index> (Sfp RX power <element index>) is below low boundary, current value: <value> uWatts. (info)
```

**Probable Cause**

Indicates that the receive power value has fallen below the low boundary and provides the current value.

The received optical power of the SFP transceiver is outside of the factory-set normal range. The receive performance area measures the amount of incoming laser (in Mamp) to help you determine if the SFP is in good working condition or not. If the counter often exceeds the threshold, the SFP is deteriorating.

**Recommended Action**

Verify that your optical components are clean and function properly. Replace deteriorating cables, and SFPs. Check for damage from heat or age.

**Severity**

Information

**FW-BELOW, sfpTemp****Message**

```
Switch: <number>, Warning FW-BELOW, 3, sfpTemp<element index> (Sfp temperature <element index>) is below low boundary, current value: <value> C. (faulty)
```

**Probable Cause**

Indicates that the temperature of the SFP has fallen to a value below the low boundary and provides the current value.

### Recommended Action

This message is for information purposes only and no action is required.

### Severity

Warning

## FW-BELOW, sfpTX

### Message

```
Switch: <number>, Warning FW-BELOW, 3, sfpTX<element index> (Sfp TX power <element index>) is below low boundary, current value: <value> uWatts. (info)
```

### Probable Cause

Indicates that the transmit power value has fallen below the low boundary and provides the current value.

The transmitted optical power of the SFP transceiver is outside of the normal range. The transmit performance area measures the amount of outgoing laser (in Mamp) to help you determine if the SFP is in good working condition or not. If the counter often exceeds the threshold, the SFP is deteriorating.

### Recommended Action

Verify that your optical components are clean and function properly. Replace deteriorating cables, or SFPs. Check for damage from heat or age.

### Severity

Information

**FW-BELOW, sfpVolt****Message**

```
Switch: <number>, Warning FW-BELOW, 3, sfpVolt<element index> (Sfp Voltage <element index>) is below low boundary, current value: <value> mV. (faulty)
```

**Probable Cause**

Indicates that the SFP voltage value has fallen below the low boundary and provides the current value. Frequent voltage fluctuations are an indication that the SFP is deteriorating.

**Recommended Action**

Configure the low threshold to 1 so that the threshold triggers an alarm when the value falls to 0 (Faulty). Frequent voltage fluctuations are an indication that the SFP is deteriorating. Replace the SFP.

**Severity**

Warning

**FW-CHANGED, alpaPerfCRC****Message**

```
Switch: <number>, Info FW-CHANGED, 4, alpaPerfCRC<element index> (ALPA Invalid CRCs <element index>) value has changed. current value : <value> Error(s)/minute. (info)
```

**Probable Cause**

Indicates that the cumulative number of CRC errors has changed, and provides the current value. These messages indicate errors have been detected in the FC frame. Invalid CRC messages occur when the number of CRC errors in Fibre Channel frames for specific source ID (SID) and destination ID (DID) pairs change. These messages may also be caused by dirty equipment, temperature fluctuations, and aging equipment.

You should set your high boundaries to five- or six-digit figures; only large numbers of messages indicate a problem in this area.

### Recommended Action

Verify that your optical components are clean and function properly. Replace deteriorating cables, or SFPs. Check for damage from heat or age.

### Severity

Information

## FW-CHANGED, eePerfCR

### Message

```
Switch: <number>, Info FW-CHANGED, 4, eePerfCR<element index> (EE Invalid CRCs  
<element index>) value has changed. current value : <value> Change(s). (info)
```

### Probable Cause

Indicates that the cumulative number of CRC errors has changed, and provides the current value. Invalid CRC messages occur when the number of CRC errors in Fibre Channel frames for specific source ID (SID) and destination ID (DID) pairs change. These messages may also be caused by dirty equipment, temperature fluctuations, and aging equipment.

### Recommended Action

This message is for information purposes only. The CRC error area of the End-to-End Performance Monitor class helps you tune your fabric. To reduce CRC messages, experiment with alternative topologies and cabling schemes. Clean equipment, check temperatures, and replace old hardware.

### Severity

Information

**FW-CHANGED, eePerfRx****Message**

```
Switch: <number>, Info FW-CHANGED, 4, eePerfRx<element index> (EE RX Performance <element index>) value has changed. current value : <value> KB/s. (info)
```

**Probable Cause**

Indicates that the cumulative number of word frames that the switch receives has changed, and provides the current value. Receive performance messages appear due to the number of word frames that travel from the configured SID to the DID pair.

**Recommended Action**

All receive count area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

**Severity**

Information

**FW-CHANGED, eePerfTx****Message**

```
Switch: <number>, Info FW-CHANGED, 4, eePerfTx<element index> (EE TX Performance <element index>) value has changed. current value : <value> KB/s. (info)
```

**Probable Cause**

Indicates that the cumulative number of word frames that the switch transmits has changed, and provides the current value. Transmit performance messages appear due to the number of word frames that travel from the configured SID to the DID pair.

### Recommended Action

All transmit count area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-CHANGED, envFan

### Message

```
Switch: <number>, Info FW-CHANGED, 4, envFan<element index> (Env Fan <element index>) value has changed, current value: <value> RPM. (info)
```

### Probable Cause

Indicates that the speed of the fan has changed to a new value. Provides the new fan RPM value. Fan problems typically contribute to temperature problems.

### Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation. Consistently abnormal fan speeds generally indicate that the fan is malfunctioning.

### Severity

Information



**FW-CHANGED, envPS****Message**

```
Switch: <number>, Info FW-CHANGED, 4, envPS<element index> (Env Power Supply  
<element index>) value has changed, current value: 1 (1 OK/0 FAULTY). (info)
```

**Probable Cause**

Indicates that the state of the power supply has changed from faulty to functional or from functional to faulty.

**Recommended Action**

This message is informational only. If the power supply is below the acceptable boundary, verify that it is seated correctly in the chassis. If the problem persists, replace the power supply.

**Severity**

Information

**FW-CHANGED, envTemp****Message**

```
Switch: <number>, Info FW-CHANGED, 4, envTemp<element index> (Env Temperature  
<element index>) value has changed, current value: <value> C. (info)
```

**Probable Cause**

Indicates that the internal temperature of the switch has changed to a new value, and provides the current value.

**Recommended Action**

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation. To prevent recurring messages, disable the changed alarm for this threshold.

If you receive a temperature-related message, check for an accompanying fan-related message and check fan performance. If all fans are functioning normally, check the climate control in your lab.

## Severity

Information

### **FW-CHANGED, fabricDI000**

## Message

```
Switch: <number>, Info FW-CHANGED, 4, fabricDI000 (Fabric Domain ID) value has
changed. current value : <value> DID Change(s). (info)
```

## Probable Cause

Indicates that the total number of domain ID changes has changed, and provides the current value. Domain ID changes occur when there is a conflict of domain IDs in a single fabric and the principal switch has to assign another domain ID to the switch.

## Recommended Action

All domain ID messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

**FW-CHANGED, fabricED****Message**

```
Switch: <number>, Info FW-CHANGED, 4, fabricED<element index> (Fabric E-port down <element index>) value has changed. current value : <value> Down(s). (info)
```

**Probable Cause**

Indicates that the number of times that the E\_Port has gone down has changed, and provides the current value. E\_Ports go down each time you remove a cable or SFP. SFP failures also cause E\_Ports to go down. E\_Port downs may also be caused by transient errors.

**Recommended Action**

Check both ends of the physical connection and verify that the SFPs and cable are functioning properly.

**Severity**

Information

**FW-CHANGED, fabricFL000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, fabricFL000 (Fabric Fabric login) value has changed. current value : <value> Login(s). (info)
```

**Probable Cause**

Indicates that the number of fabric logins has changed, and provides the current value. Fabric login messages occur when a port or device initializes with the fabric. The event is called a fabric login or FLOGI.

**Recommended Action**

All fabric login messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

### FW-CHANGED, fabricFR000

## Message

```
Switch: <number>, Info FW-CHANGED, 4, fabricFR000 (Fabric Reconfigure)value has
changed. current value : <value> Reconfig(s). (info)
```

## Probable Cause

Indicates that the cumulative number of fabric reconfigurations has changed, and provides the current value. The following occurrences can cause a fabric reconfiguration:

- Two switches with the same domain ID have connected to one another.
- Two fabrics have joined.
- An E\_Port has gone offline.
- A principal link has segmented from the fabric.

## Recommended Action

Verify that the cable is properly connected at both ends. Verify that the SFPs have not become faulty.

An inexplicable fabric reconfiguration may be a transient error and may not require troubleshooting.

## Severity

Information

**FW-CHANGED, fabricSC000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, fabricSC000 (Fabric Segmentation) value has
changed. current value : <value> Segmentation(s). (info)
```

**Probable Cause**

Indicates that the total number of times that the fabric segmented has changed, and provides the current value. Segmentation changes may occur due to:

- Zone conflicts.
- Incompatible link parameters. During E\_Port initialization, ports exchange link parameters. Rarely, incompatible parameters result in segmentation.
- Domain conflicts.
- Segmentation of the principal link between two switches.

**Recommended Action**

All fabric segmentation messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

**Severity**

Information

**FW-CHANGED, fabricSS****Message**

```
Switch: <number>, Info FW-CHANGED, 4, fabricSS<element index> (Fabric SFP change
<element index>) value has changed. current value : <value> Change(s). (info)
```

**Probable Cause**

Indicates that the number of SFP state changes has changed, and provides the current value. These messages occur when an SFP state changes, such as when the SFP is inserted or removed.

### Recommended Action

All SFP state changes area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-CHANGED, fabricZC000

### Message

```
Switch: <number>, Info FW-CHANGED, 4, fabricZC000 (Fabric Zoning change) value has  
changed. current value : <value> Zone Change(s). (info)
```

### Probable Cause

Indicates that the total number of times that zone configurations on the fabric have changed has changed, and provides the current value. Zone change messages occur when there is a change to the effective zone configuration.

### Recommended Action

All zoning messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

**FW-CHANGED, filterPerfPT****Message**

```
Switch: <number>, Info FW-CHANGED, 4, filterPerfPT<element index> (FILTER Filter Counter <element index>) value has changed. current value : <value> Frame(s). (info)
```

**Probable Cause**

Indicates that the number of frame types or commands that the port receives has changed, and provides the current value. The port has received SCSI Read, SCSI Write, SCSI Read and Write, SCSI Traffic, or IP commands in a frame.

**Recommended Action**

All filter area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

**Severity**

Information

**FW-CHANGED, portCRCs****Message**

```
Switch: <number>, Warning FW-CHANGED, 4 portCRCs<element index> (Port Invalid CRCs <element index>) value has changed. current value : <value> Error(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of invalid CRC errors per minute has changed, and provides the current value.

**Recommended Action**

This message is for information purposes only. Frequent fluctuations in CRC errors generally indicate an aging fabric. Check your SFPs, cables, and connections for faulty hardware. Verify that all optical hardware is clean.

## Severity

Information

### FW-CHANGED, portLink

## Message

```
Switch: <number>, Info FW-CHANGED, 4, portLink<element index> (Port Link Failures  
<element index>) value has changed. current value : <value> Error(s)/minute. (info)
```

## Probable Cause

Indicates that the number of port link failures per minute that the port experiences has changed, and provides the current value.

Link loss errors occur when a link experiences a loss of signal and fails. Both physical and hardware problems can cause link loss errors. Link loss errors frequently occur due to a loss of synchronization. Check for concurrent loss of synchronization errors and, if applicable, troubleshoot them. Link losses also occur due to hardware failures.

## Recommended Action

If the number of link loss errors has risen, troubleshoot transmitters, receivers, and fibers, and verify that all cables connect properly. Losses of synchronization commonly cause link failures. If you receive concurrent loss of synchronization errors, troubleshoot the loss of synchronization.

## Severity

Information



**FW-CHANGED, portProtoErr****Message**

```
Switch: <number>, Info FW-CHANGED, 4, portProtoErr<element index> (Port Protocol Errors <element index>) value has changed. current value : <value> Error(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of protocol errors per minute has changed, and provides the current value. Occasional protocol errors occur due to software glitches. Persistent protocol errors occur due to hardware problems.

**Recommended Action**

Check both ends of your connection, and verify that your cable and SFP are not faulty.

**Severity**

Information

**FW-CHANGED, portRXPerf****Message**

```
Switch: <number>, Info FW-CHANGED, 4, portRXPerf<element index> (Port RX Performance<element index>) value has changed. current value : <value> KB/s. (info)
```

**Probable Cause**

Indicates that the amount of incoming traffic to a port (in kilobytes per second) has changed, and provides the current value.

**Recommended Action**

All receive-performance messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

### FW-CHANGED, portSignal

## Message

```
Switch: <number>, Info FW-CHANGED, 4, portSignal<element index> (Port Loss of Signal <element index>) value has changed. current value : <value> Error(s)/minute. (info)
```

## Probable Cause

Indicates that the number of signal losses per minute has changed, and provides the current value.

## Recommended Action

Loss of signal generally indicates a physical problem. Check both ends of your cable connection. Verify that the cable is not faulty.

## Severity

Information

### FW-CHANGED, portState

## Message

```
Switch: <number>, Info FW-CHANGED, 4, portState<element index> (Port State Changes<element index>) value has changed. current value : <value> Change(s)/minute. (info)
```

## Probable Cause

Indicates that the number of times per minute that the port has switched to a different port type has changed, and provides the current value. The state of the port has changed for one of the following reasons:

- The port has gone offline.

- The port has come online.
- The port is testing.
- The port is faulty.
- The port has become an E\_Port.
- The port has become an F\_Port.
- The port has segmented.
- The port has become a trunk port.

### Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-CHANGED, portSync

### Message

```
Switch: <number>, Info FW-CHANGED, 4, portSync<element index> (Port Loss of Sync  
<element index>) value has changed. current value : <value> Error(s)/minute. (info)
```

### Probable Cause

Indicates that the number of synchronization losses per minute has changed, and provides the current value.

Loss of synchronization errors frequently occur due to a faulty SFP or cable. Signal losses often create synchronization losses.

### Recommended Action

Check for problems with the appropriate SFP and cable. Check both ends of your cable connection. Verify that your SFP functions properly. Verify that your cable is not faulty. If you continue to experience sync loss errors, troubleshoot your HBA and contact your switch service provider.

## Severity

Information

### FW-CHANGED, portTXPerf

## Message

```
Switch: <number>, Info FW-CHANGED, 4, portTXPerf<element index> (Port TX  
Performance<element index>) value has changed. current value : <value> KB/s. (info)
```

## Probable Cause

Indicates that the amount of traffic that the switch transmits from the port (in kilobytes per second) has changed and provides the current value.

## Recommended Action

All transmit-performance messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

### FW-CHANGED, portWords

## Message

```
Switch: <number>, Info FW-CHANGED, 4, portWords<element index> (Port Invalid Words  
<element index>) value has changed. current value : <value> Error(s)/minute. (info)
```

## Probable Cause

Indicates that the number of invalid words per minute has changed, and provides the current value. Invalid Words messages usually indicate a hardware problem with an SFP or cable.

**Recommended Action**

Check both ends of your connections, your SFP, and your cable to verify that none are faulty.

**Severity**

Information

**FW-CHANGED, samAvgOcc****Message**

```
Switch: <number>, Info FW-CHANGED, 4, samAvgOcc<element index> (Sam Avg Duration <element index>) value has changed, current value: <value> Hours. (info)
```

**Probable Cause**

Indicates that the average duration of the downtime occurrences of the port has changed, and provides the current value.

**Recommended Action**

If your port experiences problematic durations of downtime, use the `portshow` command to investigate the performance of your port. Check the SFPs for deterioration. If the problem continues replace the SFPs.

**Severity**

Information

## FW-CHANGED, samDownTime

### Message

```
Switch: <number>, Info FW-CHANGED, 4, samDownTime<element index> (Sam DownTime <element index>) value has changed, current value: <value> %. (info)
```

### Probable Cause

Indicates that the total amount of port downtime since the switch came online has changed, and provides the current value. This counter tracks the time a port is in faulty status. This does not include periods when the port has been disabled or is off-line.

### Recommended Action

If you experience problematic amounts of downtime, troubleshoot your port with the `portshow` command. If the problem continues replace the SFPs.

### Severity

Information

## FW-CHANGED, samFreq

### Message

```
Switch: <number>, Info FW-CHANGED, 4, samFreq<element index> (Sam Frequency <element index>) value has changed, current value: <value> Hours. (info)
```

### Probable Cause

Indicates that the number of times per hour that the port goes down has changed, and provides the current value.

### Recommended Action

If your port experiences problematic durations of downtime, use the `portshow` command to investigate the performance of your port. Check the SFPs for deterioration. If the problem continues replace the SFPs.

## Severity

Information

### FW-CHANGED, samUpTime

## Message

```
Switch: <number>, Info FW-CHANGED, 4, samUpTime<element index> (Sam UpTime <element index>) value has changed, current value: <value> %. (info)
```

## Probable Cause

Indicates that the total amount of port uptime since the switch came online has changed, and provides the current value. This counter tracks the time a port is available.

## Recommended Action

If you experience problematic amounts of downtime, troubleshoot your port with the `portshow` command. If the problem continues replace the SFPs. This threshold can be used to determine when routine maintenance should be performed on a port, such as replacing or cleaning an SFP.

## Severity

Information

### FW-CHANGED, secAPI000

## Message

```
Switch: <number>, Info FW-CHANGED, 4, secAPI000 (Sec API Violation) value has changed. current value : 10 Violation(s)/minute. (info)
```

## Probable Cause

Indicates that the number of API violations per minute has changed, and provides the current value. API violations indicate that an API connection request has been received from an unauthorized IP address.

The SNMP\_POLICY contains a list of TCP/IP addresses that are authorized to establish API connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

### Recommended Action

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

**FW-CHANGED, secDCC000**

### Message

```
Switch: <number>, Info FW-CHANGED, 4, secDCC000 (Sec DCC Violation) value has
changed. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of DCC violations per minute has changed, and provides the current value. DCC violations indicate that an unauthorized device tried to join the fabric.

The DCC\_POLICY allows for the specification of rules for binding device ports (typically HBA ports) to specific switch ports. DCC policies ensure that whenever a device performs an FLOGI request that the WWN specified in the FLOGI is validated to be connected to the authorized port. Enforcement for private loop devices not performing FLOGI is done through the name server.

### Recommended Action

Refer to the ERRORLOG to find out the device WWN, switch WWN, and switch port. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information



**FW-CHANGED, secHTTP000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secHTTP000 (Sec HTTP Violation) value has
changed. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of HTTP violations per minute has changed, and provides the current value. HTTP violations indicate that a browser connection request has been received from an unauthorized IP address.

The HTTP\_POLICY contains a list of TCP/IP addresses that are authorized to establish browser connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

**Recommended Action**

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

**FW-CHANGED, secIllCmd000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secIllCmd000 (Sec Illegal Commands) value has
changed. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of illegal commands per minute has changed, and provides the current value. This counter tracks how many times commands allowed only on the primary FCS switch have been executed on a non-primary FCS switch.

There are many commands that can be executed only on the primary FCS switch as well as one security command that can be executed only on a backup FCS switch. The counter increments every time someone issues one of these commands on a switch where it is not allowed.

### Recommended Action

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

## FW-CHANGED, secIncDB000

### Message

```
Switch: <number>, Info FW-CHANGED, 4, secIncDB000 (Sec Incompatible DB) value has changed. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of incompatible security DB violations has changed, and provides the current value. This violation indicates the number of secure switches with different version stamps have been detected.

When a switch is in secure mode, it connects only to another switch that is in secure mode and has a compatible security database. A compatible security database means the version stamp and FCS policy matches exactly.

### Recommended Action

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

**FW-CHANGED, secInvCert000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secInvCert000 (Sec Invalid Certificate) value  
has changed. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of invalid certificates per minute has changed, and provides the current value. This violation indicates that a packet with an invalid certificate has been received from the primary FCS.

Before a new primary FCS switch sends any configuration data to any switch in the fabric, it first sends its certificate to all the switches in the fabric. The receiving switch has to verify that the sender is the primary FCS switch and its certificate is signed by the Root CA recognized by the receiving switch. This counter keeps track of the number of packets received with invalid signatures.

**Recommended Action**

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

**FW-CHANGED, secInvSign000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secInvSign000 (Sec Invalid Signature) value  
has changed. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of invalid signatures per minute has changed, and provides the current value. Invalid signature violations indicate a packet with an invalid signature has been received from the primary FCS.

When the primary fabric configuration server (FCS) downloads a new configuration to other switches in the fabric, the packet is signed using the private key of the primary FCS. The receiving switch has to verify this signature with the public key of the primary FCS switch. If the difference is too great, it rejects the packet. This counter keeps track of the number of packets received with invalid signatures.

### Recommended Action

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

## FW-CHANGED, secInvTS000

### Message

```
Switch: <number>, Info FW-CHANGED, 4, secInvTS000 (Sec Invalid Timestamp) value has changed. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of invalid timestamps per minute has changed, and provides the current value. Invalid timestamp violations indicate a packet with an invalid timestamp has been received from the primary FCS.

When the primary fabric configuration server (FCS) downloads a new configuration to other switches in the fabric, the packet is tagged with a timestamp. The receiving switch compares this timestamp to its current time. If the difference is too great, it rejects the packet. This counter keeps track of packets rejected due to invalid timestamps.

### Recommended Action

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

**FW-CHANGED, secLogin000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secLogin000 (Sec Login Violation) value has
changed. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of login violations per minute has changed, and provides the current value. Login violations indicate that a login failure has been detected.

**Recommended Action**

Refer to the ERRORLOG to find out the IP location of the login attempt. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

**FW-CHANGED, secMS000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secMS000 (Sec MS Violation) value has changed.
current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of MS violations per minute has changed, and provides the current value. MS violations indicate that a Management Server (MS) access request has been received from an unauthorized WWN.

The MS\_POLICY contains a list of WWNs of device ports that are allowed to access the Management Server functionality.

### Recommended Action

Refer to the ERRORLOG to determine from which WWN the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

## FW-CHANGED, secNoFCS000

### Message

```
Switch: <number>, Info FW-CHANGED, 4, secNoFCS000 (Sec No FCS) value has changed.  
current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of no-FCS violations per minute has changed, and provides the current value. This counter records how often the switch loses contact with the primary FCS switch.

When the primary FCS switch in the fabric sends its certificate to a switch, the receiving switch saves the WWN of that primary FCS switch. If a secure switch finds that there are no FCSs in the fabric, but it still has the WWN of the last primary FCS switch, it increments this counter and resets the WWN of the primary FCS to all zeros.

### Recommended Action

Refer to the ERRORLOG for more information. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

**FW-CHANGED, secPanel000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secPanel000 (Sec FrontPanel Violation) value has changed. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of front panel violations per minute has changed, and provides the current value. Front Panel violations indicate that an unauthorized front panel request has been received. The SAN Switch 16 is the only switch with front panel admin access.

The FRONTPANEL\_POLICY contains a list of switch WWNs for which front panel access is enabled.

**Recommended Action**

Refer to the ERRORLOG to find out from which switch WWN the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

**FW-CHANGED, secRSNMP000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secRSNMP000 (Sec RSNMP Violation) value has changed. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of RSNMP violations per minute has changed, and provides the current value. RSNMP violations indicate that an SNMP “get” operation request has been received from an unauthorized IP address.

## Recommended Action

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

## Severity

Information

### FW-CHANGED, secSCC000

## Message

```
Switch: <number>, Info FW-CHANGED, 4, secSCC000 (Sec SCC Violation) value has  
changed. current value : 10 Violation(s)/minute. (info)
```

## Probable Cause

Indicates that the number of SCC violations per minute has changed, and provides the current value. SCC violations indicate that an unauthorized switch tried to join the fabric.

The SCC\_POLICY contains a list of switches (by WWN) that are allowed to be members of a fabric.

## Recommended Action

Refer to the ERRORLOG to find out the switch WWN. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

## Severity

Information



**FW-CHANGED, secSerial000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secSerial000 (Sec Serial Violation) value has
changed. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of serial violations per minute has changed, and provides the current value. Serial violations indicate that an unauthorized serial port request has been received.

The SERIAL\_POLICY contains a list of switch WWNs for which serial port access is enabled.

**Recommended Action**

Refer to the ERRORLOG to find out from which switch WWN the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

**FW-CHANGED, secSES000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secSES000 (Sec SES Violation) value has
changed. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of SES violations per minute has changed, and provides the current value. SES violations indicate that a SCSI Enclosure Services (SES) request has been received from an unauthorized IP address.

The MS\_POLICY contains a list of WWNs of device ports that are allowed to access the Management Server functionality.

### Recommended Action

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

## FW-CHANGED, secSlapBP000

### Message

```
Switch: <number>, Info FW-CHANGED, 4, secSlapBP000 (Sec SLAP Bad Packets) value has changed. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of SLAP bad packets per minute has changed, and provides the current value. This counter keeps track of the number of unexpected SLAP packets and SLAP packets with bad transmission IDs.

### Recommended Action

Refer to the ERRLOG for more information. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

**FW-CHANGED, secSlapFail000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secSlapFail000 (Sec SLAP Failures) value has
changed. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of SLAP failures per minute has changed, and provides the current value. This violation indicates a Switch Link Authentication Protocol (SLAP) error has been detected.

SLAP may fail for a number of reasons. The switch on the other side may not support SLAP, may have an invalid certificate, may not be signed properly, or may send unexpected packets. The port where SLAP fails is segmented. This counter keeps track of the number of SLAP failures.

**Recommended Action**

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

**FW-CHANGED, secTelnet000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secTelnet000 (Sec Telnet Violation) value has
changed. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of Telnet violations per minute has changed, and provides the current value. Telnet violations indicate that a Telnet connection request has been received from an unauthorized IP address.

The TELNET\_POLICY contains a list of TCP/IP addresses that are authorized to establish Telnet connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

### Recommended Action

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

## FW-CHANGED, secTSSync000

### Message

```
Switch: <number>, Info FW-CHANGED, 4, secTSSync000 (Sec TS Out of Sync) value has changed. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of TS out-of-sync violations per minute has changed, and provides the current value.

### Recommended Action

Refer to the ERRLOG for more information. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

**FW-CHANGED, secWSNMP000****Message**

```
Switch: <number>, Info FW-CHANGED, 4, secWSNMP000 (Sec WSNMP Violation) value has
changed. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of WSNMP violations per minute has changed, and provides the current value. WSNMP violations indicate that an SNMP “get/set” operation request has been received from an unauthorized IP address.

**Recommended Action**

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

**FW-CHANGED, sfpCrnt****Message**

```
Switch: <number>, Info FW-CHANGED, 4, sfpCrnt<element index> (Sfp Current <element
index>) value has changed, current value: <value> mA. (info)
```

**Probable Cause**

Indicates that the value of SFP current has changed, and provides the current value.

**Recommended Action**

This message requires action only if the current is outside normal range.

If the supplied current of the SFP transceiver is outside of the normal range, this might indicate a hardware failure. Frequent messages indicate that you must replace the SFP.

## Severity

Information

### **FW-CHANGED, sfpRX**

## Message

```
Switch: <number>, Info FW-CHANGED, 4, sfpRX<element index> (Sfp RX power <element index>) value has changed, current value: <value> uWatts. (info)
```

## Probable Cause

Indicates that the amount of incoming laser power in the SFP has changed to a new value, and provides the current value.

The receive performance area measures the amount of incoming laser (in Mamp) to help you determine if the SFP is in good working condition or not. If the counter often exceeds the threshold, the SFP is deteriorating.

## Recommended Action

Frequent changes indicate that you must replace the SFP before it deteriorates.

## Severity

Information

## FW-CHANGED, sfpTemp

### Message

```
Switch: <number>, Info FW-CHANGED, 4, sfpTemp<element index> (Sfp Temperature <element index>) value has changed, current value: <value> C. (info)
```

### Probable Cause

Indicates that the temperature of the SFP has changed to a new value, and provides the current value.

### Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation. Temperature related messages usually indicate that you must replace the SFP.

### Severity

Information

## FW-CHANGED, sfpTX

### Message

```
Switch: <number>, Info FW-CHANGED, 4, sfpTX<element index> (Sfp TX power <element index>) value has changed, current value: <value> uWatts. (info)
```

### Probable Cause

Indicates that the transmit power value has changed, and provides the current value.

The transmitted optical power of the SFP transceiver is outside of the normal range. The transmit performance area measures the amount of outgoing laser (in Mamp) to help you determine if the SFP is in good working condition or not. If the counter often exceeds the threshold, the SFP is deteriorating.

### Recommended Action

Frequent changes indicate that you must replace the SFP before it deteriorates.

### Severity

Information

## FW-CHANGED, sfpVolt

### Message

```
Switch: <number>, Info FW-CHANGED, 4, sfpVolt<element index> (Sfp Voltage <element index>) value has changed, current value: <value> mV. (info)
```

### Probable Cause

Indicates that the SFP voltage value has changed, and provides the current value.

### Recommended Action

Frequent voltage fluctuations are an indication that the SFP is deteriorating. Replace the SFP.

### Severity

Information

## FW-EXCEEDED, alpaPerfCRC

### Message

```
Switch: <number>, Info FW-EXCEEDED, 4, alpaPerfCRC<element index> (ALPA Invalid CRCs <element index>) is exceeded boundary. current value : <value> Error(s)/minute. (info)
```

### Probable Cause

Indicates that the cumulative number of CRC errors has risen above or fallen below the acceptable range, and provides the current value. These messages indicate errors have been detected in the FC frame. Invalid CRC messages occur



when the number of CRC errors in Fibre Channel frames for specific source ID (SID) and destination ID (DID) pairs change. These messages may also be caused by dirty equipment, temperature fluctuations, and aging equipment. You should set your high boundaries to five- or six-digit figures; only large numbers of messages indicate a problem in this area.

### Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

Clean connectors. Check for damage from heat or age.

### Severity

Information

## FW-EXCEEDED, eePerfCR

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, eePerfCR<element index> (EE Invalid CRCs  
<element index>) is exceeded boundary. current value : <value> Change(s). (info)
```

### Probable Cause

Indicates that the cumulative number of CRC errors has risen above or fallen below the acceptable range, and provides the current value. Invalid CRC messages occur when the number of CRC errors in Fibre Channel frames for specific source ID (SID) and destination ID (DID) pairs change. These messages may also be caused by dirty equipment, temperature fluctuations, and aging equipment.

### Recommended Action

This message is for information purposes only. The CRC error area of the End-to-End Performance Monitor class helps you tune your fabric. To reduce CRC messages, experiment with alternative topologies and cabling schemes. Clean equipment, check temperatures, and replace old hardware.

### Severity

Information

## FW-EXCEEDED, eePerfRx

### Message

```
Switch: <number>, Info FW-EXCEEDED, 4, eePerfRx<element index> (EE RX Performance <element index>) is exceeded boundary. current value : <value> KB/s. (info)
```

### Probable Cause

Indicates that the cumulative number of word frames that the switch receives has risen above or fallen below the acceptable range, and provides the current value. Receive performance messages appear due to the number of word frames that travel from the configured SID to the DID pair.

### Recommended Action

All receive count area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-EXCEEDED, eePerfTx

### Message

```
Switch: <number>, Info FW-EXCEEDED, 4, eePerfTx<element index> (EE TX Performance <element index>) is exceeded boundary. current value : <value> KB/s. (info)
```

### Probable Cause

Indicates that the cumulative number of word frames that the switch transmits has risen above or fallen below the acceptable range, and provides the current value. Transmit performance messages appear due to the number of word frames that travel from the configured SID to the DID pair.

**Recommended Action**

All transmit count area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

**Severity**

Information

**FW-EXCEEDED, envFan****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, envFan<element index> (Env Fan <element index>) exceeded boundary, current value: <value> RPM. (faulty)
```

**Probable Cause**

Indicates that the speed of the fan has risen to an unacceptably high value or fallen to an unacceptably low value. The error displays the new fan RPM value. Fan problems typically contribute to temperature problems.

**Recommended Action**

Consistently abnormal fan speeds generally indicate that the fan is malfunctioning. Replace the fan.

**Severity**

Warning

## FW-EXCEEDED, envPS

### Message

```
Switch: <number>, Info FW-EXCEEDED, 4, envPS<element index> (Env Power Supply <element index>) exceeded boundary, current value: 1 (1 OK/0 FAULTY). (info)
```

### Probable Cause

Indicates that the state of the power supply has changed from faulty to OK or from OK to faulty.

### Recommended Action

This message is informational only. If the power supply is faulty, verify that it is seated correctly in the chassis. If the problem persists, replace the power supply.

### Severity

Information

## FW-EXCEEDED, envTemp

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, envTemp<element index> (Env Temperature <element index>) exceeded boundary, current value: <value> C. (faulty)
```

### Probable Cause

Indicates that the internal temperature of the switch has risen to a value that might damage the switch or has fallen to a value that might adversely affect performance.

### Recommended Action

If you receive a temperature-related message, check for an accompanying fan-related message and check fan performance. If all fans are functioning normally, check the climate control in your lab.

## Severity

Warning

### FW-EXCEEDED, fabricDI000

## Message

```
Switch: <number>, Info FW-EXCEEDED, 4, fabricDI000 (Fabric Domain ID) is exceeded boundary. current value : <value> DID Change(s). (info)
```

## Probable Cause

Indicates that the total number of domain ID changes has risen above or fallen below the acceptable range, and provides the current value. Domain ID changes occur when there is a conflict of domain IDs in a single fabric and the principal switch has to assign another domain ID to the switch.

## Recommended Action

All domain ID messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

### FW-EXCEEDED, fabricED

## Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, fabricED<element index> (Fabric E-port down <element index>) is exceeded boundary. current value : <value> Down(s). (info)
```

## Probable Cause

Indicates that the number of times that the E\_Port has gone down has risen above the high boundary or fallen below the low boundary and provides the current value. E\_Ports go down each time you remove a cable or SFP. SFP failures also cause E\_Ports to go down. E\_Port downs may also be caused by transient errors.

### Recommended Action

Check both ends of the physical connection and verify that the SFPs and cable are functioning properly.

### Severity

Information

## FW-EXCEEDED, fabricFL000

### Message

```
Switch: <number>, Info FW-EXCEEDED, 4, fabricFL000 (Fabric Fabric login) is exceeded  
boundary. current value : <value> Login(s). (info)
```

### Probable Cause

Indicates that the number of fabric logins has risen above or fallen below the acceptable range, and provides the current value. Fabric login messages occur when a port or device initializes with the fabric. The event is called a fabric login or FLOGI.

### Recommended Action

All fabric login messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

**FW-EXCEEDED, fabricFR000****Message**

```
Switch: <number>, Info FW-EXCEEDED, 4, fabricFR000 (Fabric Reconfigure) is exceeded  
boundary. current value : <value> Reconfig(s). (info)
```

**Probable Cause**

Indicates that the total number of fabric reconfigurations has risen above or fallen below the acceptable range, and provides the current value. The following occurrences can cause a fabric reconfiguration:

- Two switches with the same domain ID have connected to one another.
- Two fabrics have joined.
- An E\_Port has gone offline.
- A principal link has segmented from the fabric.

**Recommended Action**

Verify that the cable is properly connected at both ends. Verify that the SFPs have not become faulty. An inexplicable fabric reconfiguration may be a transient error and may not require troubleshooting.

**Severity**

Information

**FW-EXCEEDED, fabricSC000****Message**

```
Switch: <number>, Info FW-EXCEEDED, 4, fabricSC000 (Fabric Segmentation) is exceeded  
boundary. current value : <value> Segmentation(s). (info)
```

**Probable Cause**

Indicates that the total number of times that the fabric segmented has risen above or fallen below the acceptable range, and provides the current value. Segmentation changes may occur due to:

- Zone conflicts.
- Incompatible link parameters. During E\_Port initialization, ports exchange link parameters. Rarely, incompatible parameters result in segmentation.
- Domain conflicts.
- Segmentation of the principal link between two switches.

### Recommended Action

All fabric segmentation messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-EXCEEDED, fabricSS

### Message

```
Switch: <number>, Info FW-EXCEEDED, 4, fabricSS<element index>) (Fabric SFP change  
<element index>) is exceeded boundary. current value : <value> Change(s). (info)
```

### Probable Cause

Indicates that the number of SFP state changes has risen above or fallen below the acceptable range, and provides the current value. These messages occur when an SFP state changes, such as when the SFP is inserted or removed.

### Recommended Action

All SFP state changes area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information



**FW-EXCEEDED, fabricZC000****Message**

```
Switch: <number>, Info FW-EXCEEDED, 4, fabricZC000 (Fabric Zoning change) is
exceeded boundary. current value : <value> Zone Change(s). (info)
```

**Probable Cause**

Indicates that the number of times that zone configurations on the fabric have changed has risen above or fallen below the acceptable range, and provides the current value. Zone change messages occur when there is a change to the effective zone configuration.

**Recommended Action**

All zoning messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

**Severity**

Information

**FW-EXCEEDED, filterPerfPT****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, filterPerfPT<element index> (FILTER Filter
Counter <element index>) is exceeded boundary. current value : <value> Frame(s).
(info)
```

**Probable Cause**

Indicates that the number of frame types or commands that the port receives has risen above or fallen below the acceptable range, and provides the current value. The port has received SCSI Read, SCSI Write, SCSI Read and Write, SCSI Traffic, or IP commands in a frame.

## Recommended Action

All filter area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

### FW-EXCEEDED, portCRCs

## Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, portCRCs<element index> (Port Invalid CRCs  
<element index>) is exceeded boundary. current value : <value> Error(s)/minute.  
(info)
```

## Probable Cause

Indicates that the number of invalid CRC errors per minute has risen above or fallen below the acceptable range, and provides the current value.

## Recommended Action

This message is for information purposes only. An increase in CRC errors generally indicate an aging fabric. Check your SFPs, cables, and connections for faulty hardware. Verify that all optical hardware is clean.

## Severity

Information

**FW-EXCEEDED, portLink****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, portLink<element index> (Port Link Failures <element index>) is exceeded boundary. current value : <value> Error(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of link losses per minute has risen above or fallen below the acceptable range, and provides the current value.

Link loss errors occur when a link experiences a loss of signal and fails. Both physical and hardware problems can cause link loss errors. Link loss errors frequently occur due to a loss of synchronization. Check for concurrent loss of synchronization errors and, if applicable, troubleshoot them. Link losses also occur due to hardware failures.

**Recommended Action**

Troubleshoot transmitters, receivers, and fibers, and verify that all cables connect properly. Losses of synchronization commonly cause link failures. If you receive concurrent loss of synchronization errors, troubleshoot the loss of synchronization.

**Severity**

Information

## FW-EXCEEDED, portProtoErr

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, portProtoErr<element index> (Port Protocol Errors <element index>) is exceeded boundary. current value : <value> Error(s)/minute. (info)
```

### Probable Cause

Indicates that the number of protocol errors per minute has risen above or fallen below the acceptable range, and provides the current value. Occasional protocol errors occur due to software glitches. Persistent protocol errors occur due to hardware problems.

### Recommended Action

Check both ends of your connection, and verify that your cable and SFP are not faulty.

### Severity

Information

## FW-EXCEEDED, portRXPerf

### Message

```
Switch: <number>, Info FW-EXCEEDED, 4, portRXPerf<element index> (Port RX Performance<element index>) is exceeded boundary. current value : <value> KB/s. (info)
```

### Probable Cause

Indicates that the amount of incoming traffic to a port (in kilobytes per second) has risen above or fallen below the acceptable range, and provides the current value.

## Recommended Action

All receive-performance messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

## FW-EXCEEDED, portSignal

## Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, portSignal<element index> (Port Loss of  
Signal <element index>) is exceeded boundary. current value : <value> Error(s)/  
minute. (info)
```

## Probable Cause

Indicates that the number of signal losses per minute has risen above or fallen below the acceptable range, and provides the current value.

## Recommended Action

Loss of signal generally indicates a physical problem. Check both ends of your cable connection. Verify that the cable is not faulty.

## Severity

Information

## FW-EXCEEDED, portState

### Message

```
Switch: <number>, Info FW-EXCEEDED, 4, portState<element index> (Port State Changes<element index>) is exceeded boundary. current value : <value> Change(s)/minute. (info)
```

### Probable Cause

Indicates that the number of times per minute that the port has switched to a different port type has risen above or fallen below the acceptable range, and provides the current value. The state of the port has changed for one of the following reasons:

- The port has gone offline.
- The port has come online.
- The port is testing.
- The port is faulty.
- The port has become an E\_Port.
- The port has become an F\_Port.
- The port has segmented.
- The port has become a trunk port.

### Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

**FW-EXCEEDED, portSync****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, portSync<element index> (Port Loss of Sync
<element index>) is exceeded boundary. current value : <value> Error(s)/minute.
(info)
```

**Probable Cause**

Indicates that the number of synchronization losses per minute has risen above or fallen below the acceptable range, and provides the current value.

Loss of synchronization errors frequently occur due to a faulty SFP or cable. Signal losses often create synchronization losses.

**Recommended Action**

Check for problems with the appropriate SFP and cable. Check both ends of your cable connection. Verify that your SFP functions properly. Verify that your cable is not faulty. If you continue to experience sync loss errors, troubleshoot your HBA and contact your switch service provider.

**Severity**

Information

**FW-EXCEEDED, portTXPerf****Message**

```
Switch: <number>, Info FW-EXCEEDED, 4, portTXPerf<element index> (Port TX
Performance<element index>) is exceeded boundary. current value : <value> KB/s.
(info)
```

**Probable Cause**

Indicates that the amount of traffic that the switch transmits from the port (in kilobytes per second) has risen above or fallen below the acceptable range, and provides the current value.

## Recommended Action

All transmit-performance messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

## FW-EXCEEDED, portWords

## Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, portWords<element index> (Port Invalid  
Words <element index>) is exceeded boundary. current value : <value> Error(s)/  
minute. (info)
```

## Probable Cause

Indicates that the number of invalid words per minute has risen above or fallen below the acceptable range, and provides the current value. Invalid Words messages usually indicate a hardware problem with an SFP or cable.

## Recommended Action

Check both ends of your connections, your SFPs, and your cable to verify that none are faulty.

## Severity

Information



**FW-EXCEEDED, samAvgOcc****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, samAvgOcc <element index> (Sam Avg  
Duration <element index>) exceeded boundary, current value: <value> Hours. (info)
```

**Probable Cause**

Indicates that the average duration of the downtime occurrences of the port has risen above or fallen below the acceptable range, and provides the current value.

**Recommended Action**

If your port experiences problematic durations of downtime, use the `portshow` command to investigate the performance of your port. Check the SFPs for deterioration. If the problem continues replace the SFPs.

**Severity**

Information

**FW-EXCEEDED, samDownTime****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, samDownTime <element index> (Sam DownTime  
<element index>) exceeded boundary, current value: <value> %. (info)
```

**Probable Cause**

Indicates that the total amount of port downtime since the switch came online has risen above or fallen below the acceptable range, and provides the current value. This counter tracks the time a port is in faulty status. This does not include periods when the port has been disabled or is off-line.

**Recommended Action**

If you experience problematic amounts of downtime, troubleshoot your port with the `portshow` command. If the problem continues replace the SFP.

## Severity

Information

### **FW-EXCEEDED, samFreq**

## Message

```
Switch: <number>, Warning FW-EXCEEDED, 3 samFreq <element index> (Sam Frequency <element index>) exceeded boundary, current value: <value> Hours. (faulty)
```

## Probable Cause

Indicates that the number of times per hour that the port goes down has risen above or fallen below the acceptable range, and provides the current value.

## Recommended Action

If your port experiences problematic durations of downtime, use the `portshow` command to investigate the performance of your port. Check the SFPs for deterioration. If the problem continues replace the SFPs.

## Severity

Warning

### **FW-EXCEEDED, samUpTime**

## Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, samUpTime <element index> (Sam UpTime <element index>) exceeded boundary, current value: <value> %. (info)
```

## Probable Cause

Indicates that the total amount of port uptime since the switch came online has risen above or fallen below the acceptable range, and provides the current value. This counter tracks the time a port is available.

## Recommended Action

If you experience problematic amounts of downtime, troubleshoot your port with the `portshow` command. If the problem continues replace the SFP. This threshold can be used to determine when routine maintenance should be performed on a port, such as replacing or cleaning an SFP.

## Severity

Information

### FW-EXCEEDED, secAPI000

## Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, secAPI000 (Sec API Violation) exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

## Probable Cause

Indicates that the number of API violations per minute has risen above or fallen below the acceptable range, and provides the current value. API violations indicate that an API connection request has been received from an unauthorized IP address.

The `SNMP_POLICY` contains a list of TCP/IP addresses that are authorized to establish API connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

## Recommended Action

Refer to the `ERRORLOG` to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

## Severity

Information

## FW-EXCEEDED, secDCC000

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, secDCC000 (Sec DCC Violation) exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of DCC violations per minute has risen above or fallen below the acceptable range, and provides the current value. DCC violations indicate that an unauthorized device tried to join the fabric.

The DCC\_POLICY allows for the specification of rules for binding device ports (typically HBA ports) to specific switch ports. DCC policies ensure that whenever a device performs an FLOGI request that the WWN specified in the FLOGI is validated to be connected to the authorized port. Enforcement for private loop devices not performing FLOGI is done through the name server.

### Recommended Action

Refer to the ERRORLOG to find out the device WWN, switch WWN, and switch port. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

## FW-EXCEEDED, secHTTP000

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, secHTTP000 (Sec HTTP Violation) exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of HTTP violations per minute has risen above or fallen below the acceptable range, and provides the current value. HTTP violations indicate that a browser connection request has been received from an unauthorized IP address.

The HTTP\_POLICY contains a list of TCP/IP addresses that are authorized to establish browser connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

### Recommended Action

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

## FW-EXCEEDED, secIllCmd000

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, secIllCmd000 (Sec Illegal Commands)
exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of illegal commands per minute has risen above or fallen below the acceptable range, and provides the current value. This counter tracks how many times commands allowed only on the primary FCS switch have been executed on a non-primary FCS switch.

There are many commands that can be executed only on the primary FCS switch as well as one security command that can be executed only on a backup FCS switch. The counter increments every time someone issues one of these commands on a switch where it is not allowed.

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-EXCEEDED, secIncDB000

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, secIncDB000 (Sec Incompatible DB) exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of incompatible security DB violations has risen above or fallen below the acceptable range, and provides the current value. This violation indicates the number of secure switches with different version stamps have been detected.

When a switch is in secure mode, it connects only to another switch that is in secure mode and has a compatible security database. A compatible security database means the version stamp and FCS policy matches exactly.

### Recommended Action

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

## FW-EXCEEDED, secInvCert000

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, secInvCert000 (Sec Invalid Certificate) exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of invalid certificates per minute has risen above or fallen below the acceptable range, and provides the current value. This violation indicates that a packet with an invalid certificate has been received from the primary FCS.

Before a new primary FCS switch sends any configuration data to any switch in the fabric, it first sends its certificate to all the switches in the fabric. The receiving switch has to verify that the sender is the primary FCS switch and its certificate is signed by the Root CA recognized by the receiving switch. This counter keeps track of the number of packets received with invalid signatures.

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-EXCEEDED, secInvSign000

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, secInvSign000 (Sec Invalid Signature)
exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of invalid signatures per minute has risen above or fallen below the acceptable range, and provides the current value. Invalid signature violations indicate a packet with an invalid signature has been received from the primary FCS.

When the primary fabric configuration server (FCS) downloads a new configuration to other switches in the fabric, the packet is signed using the private key of the primary FCS. The receiving switch has to verify this signature with the public key of the primary FCS switch. If the difference is too great, it rejects the packet. This counter keeps track of the number of packets received with invalid signatures.

### Recommended Action

Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

## Severity

Information

### FW-EXCEEDED, secInvTS000

## Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, secInvTS000 (Sec Invalid Timestamp)
exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

## Probable Cause

Indicates that the number of invalid timestamps per minute has risen above or fallen below the acceptable range, and provides the current value. Invalid timestamp violations indicate a packet with an invalid timestamp has been received from the primary FCS.

When the primary fabric configuration server (FCS) downloads a new configuration to other switches in the fabric, the packet is tagged with a timestamp. The receiving switch compares this timestamp to its current time. If the difference is too great, it rejects the packet. This counter keeps track of packets rejected due to invalid timestamps.

## Recommended Action

This message is for information purposes only and requires no action.

## Severity

Information



**FW-EXCEEDED, secLogin000****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, secLogin000 (Sec Login Violation) exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

**Description**

Indicates that the number of login violations per minute has risen above or fallen below the acceptable range, and provides the current value. Login violations indicate that a login failure has been detected.

**Recommended Action**

Refer to the ERRORLOG to find out the IP location of the login attempt. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

**FW-EXCEEDED, secMS000****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, secMS000 (Sec MS Violation) exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of MS violations per minute has risen above or fallen below the acceptable range, and provides the current value. MS violations indicate that a Management Server (MS) access request has been received from an unauthorized WWN.

The MS\_POLICY contains a list of WWNs of device ports that are allowed to access the Management Server functionality.

## Recommended Action

Refer to the ERRORLOG to determine from which WWN the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

## Severity

Information

### FW-EXCEEDED, secNoFCS000

## Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, secNoFCS000 (Sec No FCS) exceeded  
boundary. current value : 10 Violation(s)/minute. (info)
```

## Probable Cause

Indicates that the number of no-FCS violations per minute has risen above or fallen below the acceptable range, and provides the current value. This counter records how often the switch loses contact with the primary FCS switch.

When the primary FCS switch in the fabric sends its certificate to a switch, the receiving switch saves the WWN of that primary FCS switch. If a secure switch finds that there are no FCSs in the fabric, but it still has the WWN of the last primary FCS switch, it increments this counter and resets the WWN of the primary FCS to all zeros.

## Recommended Action

Refer to the ERRORLOG for more information. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

## Severity

Information

**FW-EXCEEDED, secPanel000****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, secPanel000 (Sec FrontPanel Violation)
exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of front panel violations per minute has risen above or fallen below the acceptable range, and provides the current value. Front Panel violations indicate that an unauthorized front panel request has been received. The SAN Switch 16 is the only switch with front panel admin access.

The FRONT\_PANEL\_POLICY contains a list of switch WWNs for which front panel access is enabled.

**Recommended Action**

Refer to the ERRORLOG to find out from which switch WWN the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

**FW-EXCEEDED, secRSNMP000****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, secRSNMP000 (Sec RSNMP Violation) exceeded
boundary. current value : 10 Violation(s)/minute. (info)
```

**Description**

Indicates that the number of RSNMP violations per minute has risen above or fallen below the acceptable range, and provides the current value. RSNMP violations indicate that an SNMP “get” operation request has been received from an unauthorized IP address.

### Recommended Action

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

## FW-EXCEEDED, secSCC000

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, secSCC000 (Sec SCC Violation) exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of SCC violations per minute has risen above or fallen below the acceptable range, and provides the current value. SCC violations indicate that an unauthorized switch tried to join the fabric.

The SCC\_POLICY contains a list of switches (by WWN) that are allowed to be members of a fabric.

### Recommended Action

Refer to the ERRORLOG to find out the switch WWN. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

**FW-EXCEEDED, secSerial000****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, secSerial000 (Sec Serial Violation)
exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of serial violations per minute has risen above or fallen below the acceptable range, and provides the current value. Serial violations indicate that an unauthorized serial port request has been received.

The SERIAL\_POLICY contains a list of switch WWNs for which serial port access is enabled.

**Recommended Action**

Refer to the ERRORLOG to find out from which switch WWN the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

**FW-EXCEEDED, secSES000****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, secSES000 (Sec SES Violation) exceeded
boundary. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of SES violations per minute has risen above or fallen below the acceptable range, and provides the current value. SES violations indicate that a SCSI Enclosure Services (SES) request has been received from an unauthorized IP address.

The MS\_POLICY contains a list of WWNs of device ports that are allowed to access the Management Server functionality.

### Recommended Action

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

## FW-EXCEEDED, secSlapBP000

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, secSlapBP000 (Sec SLAP Bad Packets)
exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

### Description

Indicates that the number of SLAP bad packets per minute has risen above or fallen below the acceptable range, and provides the current value. This counter keeps track of the number of unexpected SLAP packets and SLAP packets with bad transmission IDs.

### Recommended Action

Refer to the ERRLOG for more information. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information

**FW-EXCEEDED, secSlapFail000****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, secSlapFail000 (Sec SLAP Failures)
exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of SLAP failures per minute has risen above or fallen below the acceptable range, and provides the current value. This violation indicates a Switch Link Authentication Protocol (SLAP) error has been detected.

SLAP may fail for a number of reasons. The switch on the other side may not support SLAP, may have an invalid certificate, may not be signed properly, or may send unexpected packets. The port where SLAP fails is segmented. This counter keeps track of the number of SLAP failures.

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

**FW-EXCEEDED, secTelnet000****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, secTelnet000 (Sec Telnet Violation)
exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of Telnet violations per minute has risen above or fallen below the acceptable range. Provides the new boundary. Telnet violations indicate that a Telnet connection request has been received from an unauthorized IP address.

The TELNET\_POLICY contains a list of TCP/IP addresses that are authorized to establish Telnet connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-EXCEEDED, secTSSync000

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, secTSSync000 (Sec TS Out of Sync) exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

### Probable Cause

Indicates that the number of TS out-of-sync violations per minute has risen above or fallen below the acceptable range, and provides the current value.

### Recommended Action

Refer to the ERRLOG for more information. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

### Severity

Information



**FW-EXCEEDED, secWSNMP000****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, secWSNMP000 (Sec WSNMP Violation) exceeded boundary. current value : 10 Violation(s)/minute. (info)
```

**Probable Cause**

Indicates that the number of WSNMP violations per minute has risen above or fallen below the acceptable range, and provides the current value. WSNMP violations indicate that an SNMP “get or set” operation request has been received from an unauthorized IP address.

**Recommended Action**

Refer to the ERRORLOG to find out from what IP address the request arrived. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

**FW-EXCEEDED, sfpCrnt****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, sfpCrnt<element index> (Sfp Current <element index>) exceeded boundary, current value: <value> mA. (faulty)
```

**Probable Cause**

Indicates that the value of SFP current has risen above or fallen below the acceptable range, and provides the current value.

**Recommended Action**

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

The supplied current of the SFP transceiver is outside of the normal range, indicating a possible hardware failure. If the current rises above the high boundary, you must replace the SFP.

### Severity

Warning

### FW-EXCEEDED, sfpRX

### Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, sfpRX<element index> (Sfp RX power <element index>) exceeded boundary, current value: <value> uWatts. (info)
```

### Probable Cause

Indicates that the receive power value has risen above or fallen below the acceptable range, and provides the current value.

The received optical power of the SFP transceiver is outside of the factory-set normal range. The receive performance area measures the amount of incoming laser (in Mamp) to help you determine if the SFP is in good working condition or not. If the counter often exceeds the threshold, the SFP is deteriorating.

### Recommended Action

This error indicates that you must replace the SFP before it deteriorates.

### Severity

Information

**FW-EXCEEDED, sfpTemp****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, sfpTemp<element index> (Sfp temperature <element index>) exceeded boundary, current value: <value> C. (info)
```

**Probable Cause**

Indicates that the temperature of the SFP has risen above or fallen below the acceptable range. SFPs experience temperature problems as they deteriorate. The message provides the new SFP temperature value.

**Recommended Action**

Temperature related messages usually indicate that you must replace the SFP.

**Severity**

Information

**FW-EXCEEDED, sfpTX****Message**

```
Switch: <number>, Warning FW-EXCEEDED, 3, sfpTX<element index> (Sfp TX power <element index>) exceeded boundary, current value: <value> uWatts. (info)
```

**Probable Cause**

Indicates that the transmit power value has risen above or fallen below the acceptable range, and provides the current value.

The transmitted optical power of the SFP transceiver is outside of the normal range. The transmit performance area measures the amount of outgoing laser (in Mamp) to help you determine if the SFP is in good working condition or not. If the counter often exceeds the threshold, the SFP is deteriorating.

**Recommended Action**

This error indicates that you must replace the SFP before it deteriorates.

## Severity

Information

### FW-EXCEEDED, sfpVolt

## Message

```
Switch: <number>, Warning FW-EXCEEDED, 3, sfpVolt<element index> (Sfp Voltage <element index>) exceeded boundary, current value: <value> mV. (faulty)
```

## Probable Cause

Indicates that the SFP voltage value has risen above or fallen below the acceptable range, and provides the current value.

## Recommended Action

Frequent voltage fluctuations are an indication that the SFP is deteriorating. Replace the SFP.

## Severity

Warning

### FW-FRU\_ABSENT

## Message

```
Switch: <number>, Info FW-FRU_ABSENT, 4, <fru type> state has changed to FRU_ABSENT.
```

## Description

The FRU has changed to state FRU\_ABSENT. The FRU is now not installed on the switch. This is a transient state during the installation of a new FRU. The *<fru type>* can be one of the following hardware items:

- slot card
- power supply

- fan unit
- WWN card

### Recommended Action

This message is for information purposes only. Continue the FRU installation process. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `fwfrucfg` command.

### Severity

Information

## FW-FRU\_FAULTY

### Message

```
Switch: <number>, Info FW-FRU_FAULTY, 4, <fru type> state has changed to FRU_FAULTY.
```

### Description

The FRU has changed to state `FRU_FAULTY`. The FRU is faulty and must be replaced. The `<fru type>` can be one of the following hardware items:

- slot card
- power supply
- fan unit
- WWN card

### Recommended Action

This message is for information purposes only. Install a new FRU for the specified faulty hardware, using the `fwfrucfg` command. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `fwfrucfg` command.

### Severity

Information

## FW-FRU\_INSERTED

### Message

```
Switch: <number>, Info FW-FRU_INSERTED, 4, <fru type> state has changed to
FRU_INSERTED.
```

### Description

The FRU has changed to state FRU\_INSERTED. The FRU is now inserted on the switch. This is a transient state during the installation of a new FRU. The *<fru type>* can be one of the following hardware items:

- slot card
- power supply
- fan unit
- WWN card

### Recommended Action

This message is for information purposes only. Continue the FRU installation process. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `fwfrucfg` command.

### Severity

Information

## FW-FRU\_OFF

### Message

```
Switch: <number>, Info FW-FRU_OFF, 4, <fru type> state has changed to FRU_OFF.
```

### Description

The FRU has changed to state FRU\_OFF. The FRU is now inserted on the switch but is not enabled. This is a transient state during the installation of a new FRU. The *<fru type>* can be one of the following hardware items:

- slot card
- power supply
- fan unit
- WWN card

### Recommended Action

This message is for information purposes only. Continue the FRU installation process. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `fwfrucfg` command.

### Severity

Information

## FW-FRU\_ON

### Message

```
Switch: <number>, Info FW-FRU_ON, 4, <fru type> state has changed to FRU_ON.
```

### Description

The FRU has changed to state `FRU_ON`. The FRU is now inserted on the switch and powered on. This is a transient state during the installation of a new FRU. The `<fru type>` can be one of the following hardware items:

- slot card
- power supply
- fan unit
- WWN card

### Recommended Action

This message is for information purposes only. Continue the FRU installation process. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `fwfrucfg` command.

## Severity

Information

### FW-FRU\_READY

## Message

```
Switch: <number>, Info FW-FRU_READY, 4, <fru type> state has changed to FRU_READY.
```

## Description

The FRU has changed to state FRU\_READY. The FRU is now inserted on the switch and enabled. The *<fru type>* can be one of the following:

- Slot
- Power Supply
- Fan
- WWN

## Recommended Action

This message is for information purposes only. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `fwfrucfg` command.

## Severity

Information



## FW-FRU\_UP

### Message

```
Switch: <number>, Info FW-FRU_UP, 4, <fru type> state has changed to FRU_UP.
```

### Description

The FRU has changed to state FRU\_UP. The FRU is now inserted on the switch and powered on. This is a transient state during the installation of a new FRU. The *<fru type>* can be one of the following hardware items:

- slot
- power supply
- fan unit
- WWN

### Recommended Action

This message is for information purposes only. Continue the FRU installation process. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `fwfrucfg` command.

### Severity

Information

## FW-INBETWEEN, alpaPerfCRC

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, alpaPerfCRC<element index> (ALPA Invalid  
CRCs <element index>) is between high & low boundaries. current value : <value>  
Error(s)/minute. (info)
```

### Description

Indicates the cumulative number of Invalid CRC errors is within acceptable range. Invalid CRC messages occur when the number of CRC errors in Fibre Channel frames for specific source ID (SID) and destination ID (DID) pairs change. These messages may also be caused by dirty equipment, temperature fluctuations, and aging equipment.

You should set your high boundaries to five- or six-digit figures; only large numbers of messages indicate a problem in this area.

### Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-INBETWEEN, eePerfCR

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, eePerfCR<element index> (EE Invalid CRCs  
<element index>) is between high & low boundaries. current value : <value>  
Change(s). (info)
```

### Description

Indicates that the cumulative number of CRC errors has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. Invalid CRC messages occur when the number of CRC

errors in Fibre Channel frames for specific source ID (SID) and destination ID (DID) pairs change. These messages may also be caused by dirty equipment, temperature fluctuations, and aging equipment.

### Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-INBETWEEN, eePerfRx

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, eePerfRx<element index> (EE RX  
Performance <element index>) is between high & low boundaries. current value :  
<value> KB/s. (info)
```

### Description

Indicates that the cumulative number of word frames that the switch receives has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. Receive performance messages appear due to the number of word frames that travel from the configured SID to the DID pair.

### Recommended Action

All receive count area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-INBETWEEN, eePerfTx

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, eePerfTx<element index> (EE TX  
Performance <element index>) is between high & low boundaries. current value :  
<value> KB/s. (info)
```

### Description

Indicates that the cumulative number of word frames that the switch transmits has changed from a value outside of the acceptable range to a value within the acceptable range. Transmit performance messages appear due to the number of word frames that travel from the configured SID to the DID pair.

### Recommended Action

All transmit count area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-INBETWEEN, envFan

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, envFan<element index> (Env Fan <element  
index>) is between high and low boundaries, current value: <value> RPM. (faulty)
```

### Probable Cause

Indicates that the speed of the fan has changed from a value outside the acceptable range to a value inside the acceptable range. The message provides the new fan RPM value. Fan problems typically contribute to temperature problems.

**Recommended Action**

This message is for information purposes only. Consistently abnormal fan speeds generally indicate that the fan is malfunctioning. Replace the fan.

**Severity**

Warning

**FW-INBETWEEN, envPS****Message**

```
Switch: <number>, Warning FW-INBETWEEN, 3, envPS<element index> (Env Power Supply  
<element index>) is between high and low boundaries, current value: 1 (1 OK/0  
FAULTY). (normal)
```

**Probable Cause**

Indicates that the power supply counter changed from a value outside the acceptable range to a value within the acceptable range.

**Recommended Action**

This message is informational only.

**Severity**

Information

## FW-INBETWEEN, envTemp

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, envTemp<element index> (Env Temperature <element index>) is between high and low boundaries, current value: <value> C. (normal)
```

### Description

Indicates that the internal temperature of the switch has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

### Recommended Action

This is information only. Respond to this message as is appropriate to the particular policy of the end-user installation.

If you receive a temperature-related message, check for an accompanying fan-related message and check fan performance. If all fans are functioning normally, check the climate control in your lab.

### Severity

Information

## FW-INBETWEEN, fabricDI000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, fabricDI000 (Fabric Domain ID) is between high & low boundaries. current value : <value> DID Change(s). (info)
```

### Description

Indicates that the total number of domain ID changes has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. Domain ID changes occur when there is a conflict of domain IDs in a single fabric and the principal switch has to assign another domain ID to the switch.

## Recommended Action

All domain ID messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

## FW-INBETWEEN, fabricED

## Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, fabricED<element index> (Fabric E-port  
down <element index>) is between high & low boundaries. current value : <value>  
Down(s). (info)
```

## Description

Indicates that the number of times that the E\_Port has gone down has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. E\_Ports go down each time you remove a cable or SFP. SFP failures also cause E\_Ports to go down. E\_Port downs may also be caused by transient errors.

## Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

## FW-INBETWEEN, fabricFL000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, fabricFL000 (Fabric Fabric login) is  
between high & low boundaries. current value : <value> Login(s). (info)
```

### Description

Indicates that the number of fabric logins has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. Fabric login messages occur when a port or device initializes with the fabric. The event is called a fabric login or FLOGI.

### Recommended Action

All fabric login messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-INBETWEEN, fabricFR000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, fabricFR000 (Fabric Reconfigure) is  
between high & low boundaries. current value : <value> Reconfig(s). (info)
```

### Description

Indicates that the total number of fabric reconfigurations has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. The following occurrences can cause a fabric reconfiguration:

- Two switches with the same domain ID have connected to one another.
- Two fabrics have joined.
- An E\_Port has gone offline.



- A principal link has segmented from the fabric.

### Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-INBETWEEN, fabricSC000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, fabricSC000 (Fabric Segmentation) is  
between high & low boundaries. current value : <value> Segmentation(s). (info)
```

### Description

Indicates that the total number of times that the fabric segmented has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. Segmentation changes may occur due to:

- Zone conflicts.
- Incompatible link parameters. During E\_Port initialization, ports exchange link parameters. Rarely, incompatible parameters result in segmentation.
- Domain conflicts.
- Segmentation of the principal link between two switches.

### Recommended Action

All fabric segmentation messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-INBETWEEN, fabricSS

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, fabricSS<element index>) (Fabric SFP  
change <element index>) is between high & low boundaries. current value : <value>  
Change(s). (info)
```

### Description

Indicates that the number of SFP state changes has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. These messages occur when an SFP state changes, such as when the SFP is inserted or removed.

### Recommended Action

All SFP state changes area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-INBETWEEN, fabricZC000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, fabricZC000 (Fabric Zoning change) is  
between high & low boundaries. current value : <value> Zone Change(s). (info)
```

### Description

Indicates that the total number of times that zone configurations on the fabric have changed has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. Zone change messages occur when there is a change to the effective zone configuration.

## Recommended Action

All zoning messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

## FW-INBETWEEN, filterPerfPT

## Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, filterPerfPT<element index> (FILTER  
Filter Counter <element index>) is between high & low boundaries. current value :  
<value> Frame(s). (info)
```

## Description

Indicates that the number of frame types or commands that the port receives has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. The port has received SCSI Read, SCSI Write, SCSI Read and Write, SCSI Traffic, or IP commands in a frame.

## Recommended Action

All filter area messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

## FW-INBETWEEN, portCRCs

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3 portCRCs<element index> (Port Invalid CRCs
<element index>) is between high & low boundaries. current value : <value> Error(s)/
minute. (info)
```

### Description

Indicates that the number of invalid CRC errors per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

### Recommended Action

This message is for information purposes only. Fluctuations in the number of CRC errors generally indicate an aging fabric. Check your SFPs, cables, and connections for faulty hardware. Verify that all optical hardware is clean.

### Severity

Information

## FW-INBETWEEN, portLink

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, portLink<element index> (Port Link
Failures <element index>) is between high & low boundaries. current value : <value>
Error(s)/minute. (info)
```

### Description

Indicates that the number of link losses per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

Link loss errors occur when a link experiences a loss of signal and fails. Both physical and hardware problems can cause link loss errors. Link loss errors frequently occur due to a loss of synchronization. Check for concurrent loss of synchronization errors and, if applicable, troubleshoot them. Link losses also occur due to hardware failures.

### Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-INBETWEEN, portProtoErr

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, portProtoErr<element index> (Port
Protocol Errors <element index>) is between high & low boundaries. current value :
<value> Error(s)/minute. (info)
```

### Description

Indicates that the number of protocol errors per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

### Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-INBETWEEN, portRXPerf

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, portRXPerf<element index> (Port RX Performance<element index>) is between high & low boundaries. current value : <value> KB/s. (info)
```

### Description

Indicates that the amount of incoming traffic to a port (in kilobytes per second) has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

### Recommended Action

All receive-performance messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Information

## FW-INBETWEEN, portSignal

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, portSignal<element index> (Port Loss of Signal <element index>) is between high & low boundaries. current value : <value> Error(s)/minute. (info)
```

### Description

Indicates that the number of signal losses per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

## Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation. Frequent loss of signal generally indicates a physical problem. Check both ends of your cable connection. Verify that the cable is not faulty.

## Severity

Information

## FW-INBETWEEN, portState

## Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, portState<element index> (Port State Changes<element index>) is between high & low boundaries. current value : <value> Change(s)/minute. ()
```

## Description

Indicates that the number of times per minute that the port has switched to a different port type has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. The state of the port has changed for one of the following reasons:

- The port has gone offline.
- The port has come online.
- The port is testing.
- The port is faulty.
- The port has become an E\_Port.
- The port has become an F\_Port.
- The port has segmented.
- The port has become a trunk port.

## Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Warning

### FW-INBETWEEN, portSync

## Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, portSync<element index> (Port Loss of Sync <element index>) is between high & low boundaries. current value : <value> Error(s)/minute. (info)
```

## Description

Indicates that the number of synchronization losses per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

## Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

### FW-INBETWEEN, portTXPerf

## Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, portTXPerf<element index> (Port TX Performance<element index>) is between high & low boundaries. current value : <value>KB/s. (info)
```

## Description

Indicates that the amount of traffic that the switch transmits from the port (in kilobytes per second) has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.



## Recommended Action

All transmit-performance messages are for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

## FW-INBETWEEN, portWords

## Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, portWords<element index> (Port Invalid Words <element index>) is between high & low boundaries. current value : <value> Error(s)/minute. (info)
```

## Description

Indicates that the number of invalid words per minute has changed from a value that exceeded the acceptable range to a value within the acceptable range, and provides the current value. Invalid Words messages usually indicate a hardware problem with an SFP or cable.

## Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

## FW-INBETWEEN, samAvgOcc

### Message

```
Switch: <number>, Warning FW-INBETWEEN,3, samAvgOcc <element index> (Sam Avg  
Duration <element index>) is between high and low boundaries, current value: <value>  
Hours. (info)
```

### Description

Indicates that the average duration of the downtime occurrences of the port has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-INBETWEEN, samDownTime

### Message

```
Switch: <number>, Warning FW-INBETWEEN,3, samDownTime <element index> (Sam DownTime  
<element index>) is between high and low boundaries, current value: <value> %.  
(info)
```

### Description

Indicates that the total amount of port downtime since the switch came online has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. This counter tracks the time a port is in faulty status. This does not include periods when the port has been disabled or is off-line.

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

**FW-INBETWEEN, samFreq****Message**

```
Switch: <number>, Warning FW-INBETWEEN,3, samFreq <element index> (Sam Frequency  
<element index>) is between high and low boundaries, current value: <value> Hours.  
(normal)
```

**Description**

Indicates that the number of times per hour that the port goes down has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

## FW-INBETWEEN, samUpTime

### Message

```
Switch: <number>, Warning FW-INBETWEEN,3, samUpTime <element index> (Sam UpTime  
<element index>) is between high and low boundaries, current value: <value> %.  
(normal)
```

### Description

Indicates that the total amount of port uptime since the switch came online has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. This counter tracks the time a port is available.

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-INBETWEEN, secAPI000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secAPI000 (Sec API Violation) is between  
high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of API violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. API violations indicate that an API connection request has been received from an unauthorized IP address.

The SNMP\_POLICY contains a list of TCP/IP addresses that are authorized to establish API connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

**FW-INBETWEEN, secDCC000****Message**

```
Switch: <number>, Warning FW-INBETWEEN, 3, secDCC000 (Sec DCC Violation) is between  
high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

**Description**

Indicates that the number of DCC violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. DCC violations indicate that an unauthorized device tried to join the fabric.

The DCC\_POLICY allows for the specification of rules for binding device ports (typically HBA ports) to specific switch ports. DCC policies ensure that whenever a device performs an FLOGI request that the WWN specified in the FLOGI is validated to be connected to the authorized port. Enforcement for private loop devices not performing FLOGI is done through the name server.

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

## FW-INBETWEEN, secHTTP000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secHTTP000 (Sec HTTP Violation) is  
between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of HTTP violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. HTTP violations indicate that a browser connection request has been received from an unauthorized IP address.

The HTTP\_POLICY contains a list of TCP/IP addresses that are authorized to establish browser connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-INBETWEEN, secIllCmd000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secIllCmd000 (Sec Illegal Commands) is  
between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of illegal commands per minute has changed from a value outside of the acceptable range to a value. The new value is displayed. This counter tracks how many times commands allowed only on the primary FCS switch have been executed on a non-primary FCS switch.

There are many commands that can be executed only on the primary FCS switch as well as one security command that can be executed only on a backup FCS switch. The counter increments every time someone issues one of these commands on a switch where it is not allowed.

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

**FW-INBETWEEN, secIncDB000****Message**

```
Switch: <number>, Warning FW-INBETWEEN, 3, secIncDB000 (Sec Incompatible DB) is  
between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

**Description**

Indicates that the number of incompatible security DB violations has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. This violation indicates the number of secure switches with different version stamps have been detected.

When a switch is in secure mode, it connects only to another switch that is in secure mode and has a compatible security database. A compatible security database means the version stamp and FCS policy matches exactly.

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

## FW-INBETWEEN, secInvCert000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secInvCert000 (Sec Invalid Certificate)
is between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of invalid certificates per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. This violation indicates that a packet with an invalid certificate has been received from the primary FCS.

Before a new primary FCS switch sends any configuration data to any switch in the fabric, it first sends its certificate to all the switches in the fabric. The receiving switch has to verify that the sender is the primary FCS switch and its certificate is signed by the Root CA recognized by the receiving switch. This counter keeps track of the number of packets received with invalid signatures.

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-INBETWEEN, secInvSign000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secInvSign000 (Sec Invalid Signature) is
between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of invalid signatures per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. Invalid signature violations indicate a packet with an invalid signature has been received from the primary FCS.



When the primary fabric configuration server (FCS) downloads a new configuration to other switches in the fabric, the packet is signed using the private key of the primary FCS. The receiving switch has to verify this signature with the public key of the primary FCS switch. If the difference is too great, it rejects the packet. This counter keeps track of the number of packets received with invalid signatures.

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-INBETWEEN, secInvTS000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secInvTS000 (Sec Invalid Timestamp) is  
between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of invalid timestamps per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. Invalid timestamp violations indicate a packet with an invalid timestamp has been received from the primary FCS.

When the primary fabric configuration server (FCS) downloads a new configuration to other switches in the fabric, the packet is tagged with a timestamp. The receiving switch compares this timestamp to its current time. If the difference is too great, it rejects the packet. This counter keeps track of packets rejected due to invalid timestamps.

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-INBETWEEN, secLogin000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secLogin000 (Sec Login Violation) is between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of login violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. Login violations indicate that a login failure has been detected.

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-INBETWEEN, secMS000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secMS000 (Sec MS Violation) is between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of MS violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. MS violations indicate that a Management Server (MS) access request has been received from an unauthorized WWN.

The MS\_POLICY contains a list of WWNs of device ports that are allowed to access the Management Server functionality.

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

**FW-INBETWEEN, secNoFCS000****Message**

```
Switch: <number>, Warning FW-INBETWEEN, 3, secNoFCS000 (Sec No FCS) is between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

**Description**

Indicates that the number of no-FCS violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. This counter records how often the switch loses contact with the primary FCS switch.

When the primary FCS switch in the fabric sends its certificate to a switch, the receiving switch saves the WWN of that primary FCS switch. If a secure switch finds that there are no FCSs in the fabric, but it still has the WWN of the last primary FCS switch, it increments this counter and resets the WWN of the primary FCS to all zeros.

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

## FW-INBETWEEN, secPanel000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secPanel000 (Sec FrontPanel Violation) is
between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of front panel violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. Front Panel violations indicate that an unauthorized front panel request has been received. The SAN Switch 16 is the only switch with front panel admin access.

The FRONT\_PANEL\_POLICY contains a list of switch WWNs for which front panel access is enabled.

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-INBETWEEN, secRSNMP000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secRSNMP000 (Sec RSNMP Violation) is
between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of RSNMP violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. RSNMP violations indicate that an SNMP “get” operation request has been received from an unauthorized IP address.

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

**FW-INBETWEEN, secSCC000****Message**

```
Switch: <number>, Warning FW-INBETWEEN, 3, secSCC000 (Sec SCC Violation) is between  
high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

**Description**

Indicates that the number of SCC violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. SCC violations indicate that an unauthorized switch tried to join the fabric.

The SCC\_POLICY contains a list of switches (by WWN) that are allowed to be members of a fabric.

**Recommended Action**

Refer to the ERRORLOG to find out the switch WWN. Responses to security class messages depend on user policies. Consult your security administrator for response strategies and policies.

**Severity**

Information

## FW-INBETWEEN, secSerial000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secSerial000 (Sec Serial Violation) is between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of serial violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range. Serial violations indicate that an unauthorized serial port request has been received.

The SERIAL\_POLICY contains a list of switch WWNs for which serial port access is enabled.

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-INBETWEEN, secSES000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secSES000 (Sec SES Violation) is between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of SES violations per minute has changed from a value outside the acceptable range to a value within the acceptable range, and provides the current value. SES violations indicate that a SCSI Enclosure Services (SES) request has been received from an unauthorized IP address.

The MS\_POLICY contains a list of WWNs of device ports that are allowed to access the Management Server functionality.

---

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

**FW-INBETWEEN, secSlapBP000****Message**

```
Switch: <number>, Warning FW-INBETWEEN, 3, secSlapBP000 (Sec SLAP Bad Packets) is  
between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

**Description**

Indicates that the number of SLAP bad packets per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. This counter keeps track of the number of unexpected SLAP packets and SLAP packets with bad transmission IDs.

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

## FW-INBETWEEN, secSlapFail000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secSlapFail000 (Sec SLAP Failures) is  
between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of SLAP failures per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. This violation indicates a Switch Link Authentication Protocol (SLAP) error has been detected.

SLAP may fail for a number of reasons. The switch on the other side may not support SLAP, may have an invalid certificate, may not be signed properly, or may send unexpected packets. The port where SLAP fails is segmented. This counter keeps track of the number of SLAP failures.

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-INBETWEEN, secTelnet000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secTelnet000 (Sec Telnet Violation) is  
between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of Telnet violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. Telnet violations indicate that a Telnet connection request has been received from an unauthorized IP address.



The TELNET\_POLICY contains a list of TCP/IP addresses that are authorized to establish Telnet connections to switches in the fabric. The IP addresses use standard dot notation (for example, 128.192.64.102).

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

**FW-INBETWEEN, secTSSync000****Message**

```
Switch: <number>, Warning FW-INBETWEEN, 3, secTSSync000 (Sec TS Out of Sync) is  
between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

**Description**

Indicates that the number of TS out-of-sync violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

**Recommended Action**

This message is for information purposes only and requires no action.

**Severity**

Information

## FW-INBETWEEN, secWSNMP000

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, secWSNMP000 (Sec WSNMP Violation) is  
between high and low boundaries, current value : 3 Violation(s)/minute. (info)
```

### Description

Indicates that the number of WSNMP violations per minute has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value. WSNMP violations indicate that an SNMP “get/set” operation request has been received from an unauthorized IP address.

### Recommended Action

This message is for information purposes only and requires no action.

### Severity

Information

## FW-INBETWEEN, sfpCrnt

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, sfpCrnt<element index> (Sfp Current  
<element index>) is between high and low boundaries, current value: <value> mA.  
(normal)
```

### Description

Indicates that the value of SFP current has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

## Recommended Action

This is information only. Respond to this message as is appropriate to the particular policy of the end-user installation. If the current fluctuates often creating frequent messages, it indicates that you must replace the SFP.

## Severity

Information

### FW-INBETWEEN, sfpRX

## Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, sfpRX<element index> (Sfp RX power
<element index>) is between high and low boundaries, current value: <value> uWatts.
(info)
```

## Probable Cause

Indicates that the receive power value has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

The receive performance area measures the amount of incoming laser (in Mamp) to help you determine if the SFP is in good working condition or not. If the counter often exceeds the threshold, the SFP is deteriorating.

## Recommended Action

This message is informational. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

## FW-INBETWEEN, sfpTemp

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, sfpTemp<element index> (Sfp temperature <element index>) is between high and low boundaries, current value: <value> C. (info)
```

### Probable Cause

Indicates that the temperature of the SFP has changed from a value outside the acceptable range to a value within the acceptable range, and provides the current value.

### Recommended Action

This message is informational. Respond to the message as is appropriate to the particular policy of the end-user installation. Temperature related messages usually indicate that you must replace the SFP.

### Severity

Information

## FW-INBETWEEN, sfpTX

### Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, sfpTX<element index> (Sfp TX power <element index>) is between high and low boundaries, current value: <value> uWatts. (info)
```

### Description

Indicates that the transmit power value has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

The transmit performance area measures the amount of outgoing laser (in Mamp) to help you determine if the SFP is in good working condition or not. If the counter often exceeds the threshold, the SFP is deteriorating.

## Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Information

### FW-INBETWEEN, sfpVolt

## Message

```
Switch: <number>, Warning FW-INBETWEEN, 3, sfpVolt<element index> (Sfp Voltage  
<element index>) is between high and low boundaries, current value: <value> mV.  
(normal)
```

## Description

Indicates that the SFP voltage value has changed from a value outside of the acceptable range to a value within the acceptable range, and provides the current value.

## Recommended Action

Frequent voltage fluctuations are an indication that the SFP is deteriorating. Replace the SFP.

## Severity

Information

### FW-STATUS\_GBIC, missing

## Message

```
Switch: <number>, Warning FW-STATUS_GBIC, 3, GBIC@Port # is missing
```

## Description

Indicates that the LED state of port # is missing.

### Recommended Action

Insert an SFP to the port. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `switchstatuspolicyset` command.

### Severity

Warning

## FW-STATUS\_GBIC, present

### Message

```
Switch: <number>, Warning FW-STATUS_GBIC, 3, GBIC@Port # is present
```

### Description

Indicates that the LED state of port # is present.

### Recommended Action

Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `switchstatuspolicyset` command.

### Severity

Warning

## FW-STATUS\_PORT, bypassed

### Message

```
Switch: <number>, Warning FW-STATUS_PORT, 3, Port # is bypassed
```

### Description

Indicates that the LED state of port # is bypassed.

**Recommended Action**

Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `switchstatuspolicyset` command.

**Severity**

Warning

**FW-STATUS\_PORT, disable****Message**

```
Switch: <number>, Warning FW-STATUS_PORT, 3, Port # is disable
```

**Description**

Indicates that the LED state of port # is disabled.

**Recommended Action**

Enable the port using the `portenable` command.

**Severity**

Warning

**FW-STATUS\_PORT, faulted****Message**

```
Switch: <number>, Warning FW-STATUS_PORT, 3, Port # is faulted
```

**Description**

Indicates that the LED state of port # is faulted.

### Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

### Severity

Warning

## FW-STATUS\_PORT, loopback

### Message

```
Switch: <number>, Warning FW-STATUS_PORT, 3, Port # is loopback
```

### Description

Indicates that the LED state of port # is loopback.

### Recommended Action

Loopback plugs are used to test a port. After you have tested the port, remove the loopback plug.

### Severity

Warning

## FW-STATUS\_PORT, not online

### Message

```
Switch: <number>, Warning FW-STATUS_PORT, 3, Port # is not online
```

### Description

Indicates that the LED state of port # is not online.



## Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `switchstatuspolicyset` command.

## Severity

Warning

### FW-STATUS\_PORT, online

## Message

```
Switch: <number>, Warning FW-STATUS_PORT, 3, Port # is online/traffic
```

## Description

Indicates that the LED state of port # is online.

## Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

## Severity

Warning

### FW-STATUS\_PORT, segmented

## Message

```
Switch: <number>, Warning FW-STATUS_PORT, 3, Port # is segmented
```

## Description

Indicates that the LED state of port # is segmented.

### Recommended Action

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

### Severity

Warning

## FW-STATUS\_PORT, without signal

### Message

```
Switch: <number>, Warning FW-STATUS_PORT, 3, Port # is without signal
```

### Description

Indicates that the LED state of port # is “without signal.”

### Recommended Action

Verify that the Fibre Channel cable is connected correctly.

Check for a faulty cable or deteriorated SFP. Replace the cable or SFP if necessary.

### Severity

Warning

## FW-STATUS\_SFP, missing

### Message

```
Switch: <number>, Warning FW-STATUS_SFP, 3, SFP@Port # is missing
```

### Description

Indicates that the LED state of port # is missing.

## Recommended Action

Replace the SFP.

Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `switchstatuspolicyset` command.

## Severity

Warning

### FW-STATUS\_SFP, present

## Message

```
Switch: <number>, Warning FW-STATUS_SFP, 3, SFP@Port # is present
```

## Description

Indicates that the LED state of port # is present.

## Recommended Action

Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `switchstatuspolicyset` command.

## Severity

Warning

### FW-STATUS\_SWITCH, DOWN/FAILED To HEALTHY/OK

## Message

```
Switch: <number>, Warning FW-STATUS_SWITCH, 3, Switch status changed from DOWN/  
FAILED To HEALTHY/OK.
```

## Description

Indicates that switch status has changed from down/failed to healthy.

### Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

### Severity

Warning

## FW-STATUS\_SWITCH, DOWN/FAILED To MARGINAL/WARNING

### Message

```
Switch: <number>, Warning FW-STATUS_SWITCH, 3, Switch status changed from DOWN/
FAILED To MARGINAL/WARNING.
```

### Description

Indicates that switch status has changed from down/failed to marginal.

### Recommended Action

Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `switchstatuspolicyset` command.

### Severity

Warning

## FW-STATUS\_SWITCH, HEALTHY/OK to DOWN/FAILED

### Message

```
Switch: <number>, Warning FW-STATUS_SWITCH, 3, Switch status changed from HEALTHY/OK
to DOWN/FAILED
```

### Description

Indicates that switch status has changed from healthy to down/failed.

## Recommended Action

Enter the `switchstatusshow` command to determine the cause of the error and to troubleshoot the problem, or refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `switchstatuspolicyset` command.

## Severity

Warning

## FW-STATUS\_SWITCH, HEALTHY/OK to MARGINAL/WARNING

## Message

```
Switch: <number>, Warning FW-STATUS_SWITCH, 3, Switch status changed from HEALTHY/OK  
to MARGINAL/WARNING
```

## Description

Indicates that switch status has changed from healthy to marginal.

## Recommended Action

Enter the `switchstatusshow` command to determine the cause of the error and to troubleshoot the problem, or refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `switchstatuspolicyset` command.

## Severity

Warning

## FW-STATUS\_SWITCH, MARGINAL/WARNING to DOWN/FAILED

### Message

```
Switch: <number>, Warning FW-STATUS_SWITCH, 3, Switch status changed from MARGINAL/  
WARNING to DOWN/FAILED
```

### Description

Indicates that switch status has changed from marginal to down/failed.

### Recommended Action

Enter the `switchstatusshow` command to determine the cause of the error and to troubleshoot the problem, or refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for information on the `switchstatuspolicyset` command.

### Severity

Warning

## FW-STATUS\_SWITCH, MARGINAL/WARNING to HEALTHY/OK

### Message

```
Switch: <number>, Warning FW-STATUS_SWITCH, 3, Switch status changed from MARGINAL/  
WARNING to HEALTHY/OK
```

### Description

Indicates that switch status has changed from marginal to healthy.

### Recommended Action

This message is for information purposes only. Respond to this message as is appropriate to the particular policy of the end-user installation.

**Severity**

Warning

**HAM-ERROR****Message**

```
Switch: <number>, Critical HAM-ERROR, 4, <error message>
```

**Probable Cause**

This message is logged when HAM encounters a critical error.

**Recommended Action**

Issue the `hadump` command and capture output; then call your switch service provider.

**Severity**

Critical

**HAM-HMON****Message**

```
Switch: <number>, Information HAM-HMON, 4, Standby CP is Healthy
```

**Probable Cause**

All of the standby CP devices monitored by Health Monitor report no error.

**Recommended Action**

No action is required.

**Severity**

Information

## HAM-HMON\_FAULT

### Message

```
Switch: <number>, Critical HAM-HMON_FAULT, 1, Standby CP is not healthy, device  
<device name> status BAD severity = <severity>
```

### Probable Cause

A standby CP device error is reported by the HAM Health Monitor with specific device and severity level. The severity level can be: critical, major, or minor.

The active CP will continue to function normally, but because the standby CP is not healthy, nondisruptive failover is not possible.

### Recommended Action

Replace standby CP. Call your switch service provider if necessary.

### Severity

Critical

## HAM-REBOOT\_REASON

### Message

```
Switch: <number>, Info HAM-REBOOT_REASON, 4, Switch reboot, reason: unknown
```

### Probable Cause

This message is logged when HAM does not have any knowledge about the reason for switch reboot.

### Recommended Action

No action is required.

### Severity

Information



## HAMKERNEL-ERROR

### Message

```
Switch: <number>, Info HAMKERNEL-ERROR, 4, <error information>
```

### Probable Cause

This message is logged when a system error has occurred. *<error information>* indicates where the problem is and is used for troubleshooting.

### Recommended Action

Copy the error message, issue the `hadump` command on both CPs, and contact your switch service provider with the information.

### Severity

Information

## HAMKERNEL-ERROR\_NOTIFICATION

### Message

```
Switch: <number>, Info HAMKERNEL-ERROR_NOTIFICATION, 4, Error notification received:  
<error information>
```

### Probable Cause

The High Availability Manager Kernel has been notified of an error in the system. The source error itself is logged before this message is logged. Depending on the severity of the error logged, the High Availability Manager will reboot or failover, depending on the platform.

### Recommended Action

Copy the error message, issue the `hadump` command on both CPs, and contact your switch service provider with the information.

## Severity

Information

### HAMKERNEL-HTBT\_DOWN

## Message

```
Switch: <number>, Info HAMKERNEL-HTBT_DOWN, 4, Heartbeat down
```

## Probable Cause

This message is logged when the active CP card determines that the standby CP card is down. This might happen as a result of an operator-initiated action such as `firmwaredownload`, when the CP card is reset or removed, or as a result of an error in the standby CP card.

## Recommended Action

If no operator-initiated action has caused the error, issue the `hadump` and `errdump` commands on the active CP card. Contact your switch service provider with the command outputs.

## Severity

Information

### HAMKERNEL-HTBT\_UP

## Message

```
Switch: <number>, Info HAMKERNEL-HTBT_UP, 4, Heartbeat up
```

## Probable Cause

This message is logged when the active CP card detects the standby CP card. This message indicates that the standby CP card is available to take over in case a failure happens on the active CP card. This message is typically seen when the standby CP card reboots.

## Recommended Action

If no operator-initiated action has caused the error, issue the `hadump` and `errdump` commands on the active CP card. Contact your switch service provider with the command outputs.

## Severity

Information

## HAMKERNEL-WARNING

## Message

```
Switch: <number>, Info HAMKERNEL-WARNING, 4, <warning information>
```

## Probable Cause

This message is logged when a system warning has occurred. The *<warning information>* indicates where the problem is and is used for troubleshooting.

## Recommended Action

Copy the error message, issue the `hadump` command on both CPs, and contact your switch service provider with the information.

## Severity

Information

## HIL\_FAN\_1\_FAIL\_MSG

## Message

```
HIL_FAN_1_FAIL_MSG: HIL_ERROR;  
1 blower failed.  
Replace failed blower assembly immediately.
```

## Probable Cause

A blower assembly has failed.

### Recommended Action

Replace the fan FRUs immediately.

### Severity

Error

## HIL\_FAN\_2\_FAIL\_MSG

### Message

```
HIL_FAN_2_FAIL_MSG: HIL_ERROR;  
<s> blowers failed.  
Replace failed blower assemblies immediately.
```

### Probable Cause

More than one blower assembly unit has failed.

### Recommended Action

Replace the fan FRUs immediately.

### Severity

Error

## HIL\_FAN\_HIGH\_RPM\_WARNING\_MSG

### Message

```
HIL_FAN_HIGH_RPM_WARNING_MSG: HIL_WARN;  
Blower <s>, high RPM (<rpm>).
```

### Probable Cause

The blower is faulty due to high RPMs.

**Recommended Action**

Replace the fan FRU immediately.

**Severity**

Warning

**HIL\_FAN\_LOW\_RPM\_FAIL\_MSG****Message**

```
HIL_FAN_LOW_RPM_FAIL_MSG: HIL_ERROR;  
Blower <s> faulted, low RPM (<rpm>).
```

**Probable Cause**

The blower is faulty due to low RPMs.

**Recommended Action**

Replace the fan FRU immediately.

**Severity**

Error

**HIL\_TEMP\_CRITICAL\_SHUTDOWN\_MSG****Message**

```
HIL_TEMP_CRITICAL_SHUTDOWN_MSG: HIL_PANIC;  
Slot <s>, unit shutting down.
```

**Probable Cause**

The blade in the specified slot number has a panic high temperature. The unit is shut down.

### Recommended Action

Power off the blade. Determine if the fans are working correctly. Determine if there is proper airflow through the chassis.

### Severity

Panic

## HIL\_TEMP\_CRITICAL\_MSG

### Message

```
HIL_TEMP_CRITICAL_MSG: HIL_CRITICAL;  
Slot <s>, high temp (<deg>C).  
Unit will be shutdown in 2 minutes if temp remains high.
```

### Probable Cause

The blade in the specified slot number has a critical high temperature.

### Recommended Action

Power off the blade. Determine if the fans are working correctly. Determine if there is proper airflow through the chassis.

### Severity

Critical

## HIL\_TEMP\_WARNING\_MSG

### Message

```
HIL_TEMP_WARNING_MSG: HIL_WARN;  
Slot <s>, high temp (<deg>C).
```

### Probable Cause

The blade in the specified slot number has a high temperature warning.

**Recommended Action**

Power off the blade. Determine if the fans are working correctly. Replace the fan FRUs if necessary. Determine if there is proper airflow through the chassis.

**Severity**

Warning

**HLO-DEADTIMEOUT****Message**

```
Switch: <number>, Error HLO-DEADTIMEOUT, 2, Incompatible Inactivity timeout <dead timeout> from port <port number>, correct value <value>
```

**Probable Cause**

The HLO message was incompatible. The dead timeout value does not match the value specified in the FSPF protocol. Since the dead timeout value is incompatible, the local switch will not accept FSPF frames from the remote switch.

**Recommended Action**

The dead timeout value of the remote switch must be made compatible with the value specified in the FSPF protocol. See the manufacturer's documentation to change this value.

**Severity**

Error

## HLO-HLOTIMEOUT

### Message

```
Switch: <number>, Error HLO-HLOTIMEOUT, 2, Incompatible Hello timeout <HLO timeout>  
from port <port number>, correct value <correct value>
```

### Probable Cause

The HLO message was incompatible and timed out on the specified port. The HLO timeout value does not match the value specified in the FSPF protocol. Since the HLO timeout value is incompatible, the local switch will not accept FSPF frames from the remote switch.

### Recommended Action

The HLO timeout value of the remote switch must be made compatible with the value specified in the FSPF protocol. See the manufacturer's documentation to change this value.

### Severity

Error

## HLO-INVHLO

### Message

```
Switch: <number>, Error HLO-INVHLO, 2, Invalid Hello received from port <port  
number>, Domain = <domain ID>, Remote Port = <remote port ID>
```

### Probable Cause

The HLO message received from the specified local port, domain ID, and remote port ID was reported to be invalid.



## Recommended Action

Since the HLO message from the remote switch is incompatible with the local switch, the local switch will not accept FSPF frames from the remote switch. The HLO message of the remote switch must be made compatible with the value specified in the FSPF protocol. See the manufacturer's documentation to change this value.

## Severity

Error

## kSWD-APP\_NOT\_REFRESH\_ERR

## Message

```
Switch: <number>, Critical kSWD-APP_NOT_REFRESH_ERR, 1, (k_SWD)Application with pid  
<number> not refreshing watchdog.
```

## Probable Cause

A critical kernel software error occurred in the watchdog subsystem. A kernel application is not able to refresh the watchdog. Refer to the specified Process ID number to find out which application is failing. The switch will reboot (on single-CP switches) or failover (on dual-CP switches). [Table 5](#) on page 45 in the section on kSWD, lists the daemons monitored by kSWD.

## Recommended Action

Issue the `savecore` command to find if any core files were created. If a core file is found, FTP all core files to a secure server location.

Collect information from the `i` command. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on the `i` command.

Copy the error message, any core file information, and contact your switch service provider.

## Severity

Critical

## kSWD-kSWD\_GENERIC\_ERR\_CRITICAL

### Message

```
Switch: <number>, Critical kSWD-kSWD_GENERIC_ERR_CRITICAL, 1, kSWD: <error message>
```

### Probable Cause

A critical application error was reported in the watchdog subsystem. Refer to the string at the end of the error message for specific information. The switch will reboot (on single-CP switches) or failover (on dual-CP switches). [Table 5](#) on page 45 lists the daemons monitored by KSWD.

The error message might be any one of the following:

- <Detected unexpected termination of: <daemon name>>  
**Probable Cause:** One of the critical daemons ended unexpectedly.
- <out of swdtab entries>  
**Probable Cause:** Internal resource limitation in the software watchdog table.
- <Performance error <number>>  
**Probable Cause:** Internal error.
- <<daemon name> failed to refresh SWD\*\*\* Sending SIGABRT to pid<process id number>>  
**Probable Cause:** One of the critical daemons is found to be nonresponsive; sending signal abort.
- <SWD: Reboot/Failover action>  
**Probable Cause:** Software watchdog decided to reboot or failover the Control Processor (CP).
- <Sorry, registering the character device failed with <error number>>  
**Probable Cause:** Internal device registration error.
- <ERROR: can not set thresh secs wdt\_period = <number>, savelog\_thresh\_period = <number>>  
**Probable Cause:** Internal setup or initialization error.
- <Error in unregister\_chrdev: <number>>  
**Probable Cause:** Internal error.

## Recommended Action

Issue the `savecore` command to find if any core files were created. If a core file is found, FTP all core files to a secure server location.

Copy the error message, any core file information, and contact your switch service provider.

## Severity

Critical

## LSDB-LSID

## Message

```
Switch: <number>, Error LSDB-LSID, 2, Link State ID <link state ID> out of range
```

## Probable Cause

The link state database ID is out of the acceptable range. The valid link state ID is the same as the valid domain ID, whose range is from 1 to 239. The switch will discard the record since it is not supported.

## Recommended Action

No action is required.

## Severity

Error

## LSDB-MAXINCARN

## Message

```
Switch: <number>, Info LSDB-MAXINCARN, 4, Local Link State Record reached max incarnation
```

## Probable Cause

Indicates that the local link state database reached the maximum incarnations.

### Recommended Action

No action is required. The incarnation number will wrap-around.

### Severity

Information

## LSDB-NOLOCALENTRY

### Message

```
Switch: <number>, Critical LSDB-NOLOCALENTRY, 1, No database entry for local Link  
State Record, domain <local domain>
```

### Probable Cause

There is no local link state record entry in the link state database. The switch should always generate its own local entry when starting up.

### Recommended Action

Issue the following commands: `switchdisable` and `switchenable`. A `switch enable` is required to recover from this error message.

### Severity

Critical

## LSDB-NOLSR

### Message

```
Switch: <number>, Warning LSDB-NOLSR, 3, No Link State Record for domain <local  
domain>
```

### Probable Cause

There is no Link State Database record for the specified local domain.

**Recommended Action**

No action is required. The other switch will pass the LSD when the fabric has become stable.

**Severity**

Warning

**MPATH-NOPARENT****Message**

```
Switch: <number>, Error MPATH-NOPARENT, 2, Null parent, lsId = <number>
```

**Probable Cause**

A null parent was reported. MPATH uses a tree structure in which the parent is used to connect to the root of the tree.

**Recommended Action**

No action is required.

**Severity**

Error

**MPATH-NOPARENTLSR****Message**

```
Switch: <number>, Error MPATH-NOPARENTLSR, 2, Null lsrP, lsId = <ls ID number>
```

**Probable Cause**

The link state record is null.

### Recommended Action

No action is required.

### Severity

Error

## MPATH-UNREACHABLE

### Message

```
Switch: <number>, Warning MPATH-UNREACHABLE, 3, No minimum cost path in candidate list
```

### Probable Cause

No minimum cost path (FSPF MPath) is available in the candidate list (the candidate list is customer defined).

### Recommended Action

No action is required.

### Severity

Warning

## MQ-MSGTYPE

### Message

```
Switch: <number>, Error MQ-MSGTYPE, 2, mqRead, queue = <queue name>, queue ID = <queue ID> type = <message type>
```

### Probable Cause

An unexpected message has been received in the specified message queue. The message queue name and the type of the message are indicated in message.

The following variables can be displayed in the error message:

- *<queue name>*  
fspf\_q
- *<queue ID> <message type>*  
2MSG\_TX  
3MSG\_INTR  
4MSG\_STR  
6MSG\_ASYNC\_IU  
7MSG\_LINIT\_IU  
8MSG\_RSCN  
9MSG\_IOCTL  
10MSG\_ACCEPT  
11MSG\_IU\_FREE  
12MSG\_US  
13MSG\_EXT\_RSCN  
14MSG\_RDTS\_START  
15MSG\_RDTS\_SENDEFP  
16MSG\_RDTS\_RESET

### Recommended Action

Issue the `mqshowall` command and record the output. Provide the `mqshowall` output as well as the error message to your switch service provider.

### Severity

Error

## MS-INVALID\_CTRESP

### Message

```
Switch: <number>, Error MS-INVALID_CTRESP, 2, MS Invalid CT Response from <domain>
```

### Probable Cause

The management server (MS) received an invalid common transport (CT) response from *<domain>*. The MS expects either a CT accept IU or a reject IU; the management server received neither response, which violates the Fibre Channel Generic Services (FS-GS) spec.

### Recommended Action

Check the integrity of the interconnect element at the specified domain.

### Severity

Error

## MS-OUT\_RESOURCES

### Message

```
Switch: <number>, Error MS-OUT_RESOURCES, 2, MS Failure while initializing <action>
```

### Probable Cause

The management server (MS) failed while initializing the specified *<action>*.

The following *<actions>* might be displayed:

**Message:** *<while writing to ms\_els\_q>*

**Probable Cause:** Unable to write a message to the Management Server Extended Link Service Queue.

**Message:** *<while inserting timer to timer list>*

**Probable Cause:** Unable to add timer to resource.

### Recommended Action

This message is often transitory. If the error happens frequently, check the available memory on the switch using the memshow command.

### Severity

Error



## MS-PLDBSEG

### Message

```
Switch: <number>, Warning MS-PLDBSEG, 3, MS Platform Segmented port=<port number>
(<reason for segmentation> D= <domain>)
```

### Probable Cause

The management server (MS) has segmented from another switch *<domain>* at the specified *<port>* due to errors or inconsistencies defined in the MS Platform Service.

The following *<reason for segmentation>* can be displayed:

**Message:** <EXGPLDB failed: Unable to Activate Platform>

**Probable Cause:** Exchange of Platform Service database between fabrics has failed because activation of MS Platform Services failed on the other switch.

**Recommended Action:** The other switch might not support MS Platform Service. Check capability using the `mscapabilityshow` command.

**Message:** <PLCOMIT failed: Unable to activate Platform>

**Probable Cause:** Exchange of Platform Service database between fabrics has failed due to the failure of conditional activation of MS Platform Services on the other switch.

**Recommended Action:** Contact your switch service provider.

**Message:** <EXGPLDB failed: Platform DB not mergeable>

**Probable Cause:** Exchange of Platform Service database between fabrics has failed due to conflicting databases between the switches.

**Recommended Action:** Ensure mergeability of connecting fabrics. For example, some DB objects might have conflicting definitions. Use `msplatshow` to show content of DB and check for conflicts.

**Message:** <EXGPLDB failed: DB size exceeds limit>

**Probable Cause:** Exchange of Platform Service database between fabrics has failed due to the violation of size allowance for MS Platform database.

**Recommended Action:** Ensure that the merged databases will not have a final database size that exceeds the MS Platform database size limitation of 32K.

**Message:** *<Timeout: Ran out of retry count>*

**Probable Cause:** Exceeded number of tries to merge MS Platform database with another fabric. Errors might be present in the fabric intercommunication.

**Recommended Action:** Check that the cable is connected properly and in good condition. Check that the switch power status LED is steady green. Check that the port status LED is steady green. If the error still persists, contact your switch service provider.

**Message:** *<Security: security conflict>*

**Probable Cause:** Security is currently enforced and configuration state of MS Platform Service between merging fabrics is inconsistent.

**Recommended Action:** Fabric might have enabled and disabled MS Platform Service states. Make both fabrics consistent using the commands `m脾mgmtactivate` and `m脾mgmtdeactivate`.

## Severity

Warning

### MS-PLSTATE

## Message

```
Switch: <number>, Debug MS-PLSTATE, 5, MS Platform Service Unstable(<function code>:  
<message string> D= <domain number>)
```

## Probable Cause

The management server (MS) platform service is unstable.

The following variables might be displayed:

The *<function code>* that invoked the error:

`<capmat>` - `m脾PlCapMatrix`

`<CA>` - `m脾PlCondActivate`

The *<message string>* can be one of the following:

**Message:** <No Resp for GCAP from>

**Probable Cause:** Switch did not respond to a request for GCAP (MS Get Capabilities) command.

**Recommended Action:** No action is required.

**Message:** <GCAP sup but not PL by>

**Probable Cause:** GCAP (MS Get Capabilities) is supported but the flag for MS Platform Service is not set. Inconsistency observed.

**Recommended Action:** Set the flag for the MS Platform Service.

**Message:** <GCAP Rejected (reason =BUSY) by>

**Probable Cause:** GCAP (MS Get Capabilities) is not supported by another switch.

**Recommended Action:** Upgrade the firmware level on the switch to a level that supports RCS.

**Message:** <Reject EXGPLDB from>

**Probable Cause:** Request to exchange platform database was rejected. Other switch might be busy.

**Recommended Action:** Wait a few minutes and try the command again.

The <domain number> is the target domain that caused error.

## Severity

Debug

## MS-RCSFAILED

## Message

```
Switch: <number>, Debug MS-RCSFAILED, 5, MS RCS failed. MS CT command = <CT command>
RCS reason =<RCS reason code> (<RCS reason code string>)
```

## Probable Cause

Usage of the reliable commit service (RCS) has failed in MS.

The specified MS <Command Transport command> for an RCS request failed for the specified <RCS\_reason> and is described in more detail in the <RCS\_reason\_code\_string>.

## Recommended Action

Issue the mscapabilityshow command to view RCS capability on the fabric.

Copy error message information, gather switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Debug

## MS-TIME\_OUT

### Message

```
Switch: <number>, Error MS-TIME_OUT, 2, MS time out while <error>
```

### Probable Cause

The Management Server (MS) timed out while acquiring a resource.

The following is displayed as the *<error>*:

- *<acquiring elsSemaRNID lock>*

**Probable Cause:** Unable to acquire a semaphore lock for Request Node Identification Data (RNID).

### Recommended Action

Reboot the switch and retry the command.

If the message persists, copy the error message information, gather switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Error

## MS-UNEXPECTED\_IUDATASZ

### Message

```
Switch: <number>, Error MS-UNEXPECTED_IUDATASZ, 2, MS Unexpected iu_data_sz= <number of bytes>
```

### Probable Cause

The Management Server (MS) received IU data of unexpected size. The IU payload and the IU size might be inconsistent with each other or with the command that is currently being processed.

### Recommended Action

Wait a few minutes and try the operation again.

If the message persists, copy the error message information, gather switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Error

## MS-UNSTABLE\_DCOUNT

### Message

```
Switch: <number>, Debug MS-UNSTABLE_DCOUNT, 5, MS detected ONLY 1 Domain <domain in local resource>.
```

### Probable Cause

The Management Server (MS) detected an unstable count of domains in its own local resource. This message is often transitory.

### Recommended Action

The fabric may be unstable. Wait a few minutes and try the operation again.

### Severity

Debug

## MS-UNSTABLE\_FABRIC

### Message

```
Switch: <number>, Debug MS-UNSTABLE_FABRIC, 5, MS detected Unstable Fabric(function code): <message string> d= <domain number>).
```

### Probable Cause

The Management Server (MS) detected an unstable fabric; the command or operation might not be successfully completed. This message is often transitory.

- *<function code>* invoking error
  - *<MsgPlatDBProc>* - msPlatMsgPlatDBProc
  - *<MsgGCAP>* - msPlatMsgGCAP
  - *<MsgPl(D)ACTV>* - MsPlayMsgActivateProc
- *<message string>*
  - *<DOMAIN\_INVALID for a req from>*  
**Probable Cause:** Domain is invalid for a request.
  - *<No WWN for>*  
**Probable Cause:** Unable to acquire the World Wide Name (WWN) for corresponding domain.
- *<domain number>* Target domain that caused error. Unique to fabric.

### Recommended Action

The fabric may be unstable. Wait a few minutes and try the operation again.

### Severity

Debug

## NBFSM-DUPEPORTSCN

### Message

```
Switch: <number>, Debug NBFSM-DUPEPORTSCN, 5, Duplicate E_Port SCN from port  
<portnumber> in state <state change number>
```

### Probable Cause

A duplicate E\_Port State Change Number was reported. NBFSM states are as follows:

- 0 - Down
- 1 - Init
- 2 - Database Exchange
- 3 - Database Acknowledge Wait
- 4 - Database Wait
- 5 - Full

### Recommended Action

No action is required.

### Severity

Debug

## NBFSM-NGBRSTATE

### Message

```
Switch: <number>, Error NBFSM-NGBRSTATE, 2, Wrong input: <state name> to neighbor  
FSM, state <current state name>, port <portnumber>
```

### Probable Cause

The wrong input was sent to the neighbor Finite State Machine. NBFSM states are as follows:

- 0 - Down
- 1 - Init
- 2 - Database Exchange
- 3 - Database Acknowledge Wait
- 4 - Database Wait
- 5 - Full

### Recommended Action

No action is required. The information is discarded.

### Severity

Error

## NBFSM-XMITFLAG

### Message

```
Switch: <number>, Warning NBFSM-XMITFLAG, 3, DB_XMIT_SET flag not set in state  
<current state name> input <state name>, port <portnumber>
```

### Probable Cause

From the current state, the Data Base transmit set flag was not set for the specified input state on the specified port. NBFSM states are as follows:

- 0 - Down
- 1 - Init
- 2 - Database Exchange
- 3 - Database Acknowledge Wait
- 4 - Database Wait
- 5 - Full

### Recommended Action

No action is required.



**Severity**

Warning

**PANIC-INCONSISTENT****Message**

```
Switch: <number>, Panic PANIC-INCONSISTENT, 0, <panic message>
```

**Probable Cause**

The name server module is trying to sort data and discovers that the expected number of entries does not match the actual number of entries found.

The Name Server Database has a field to indicate number of devices stored in the database. The database is organized as a link list, where each element is a device. When you issue the `ns show` command, the Name Server displays the local devices one by one by traversing the link list. If it finds the number of devices indicated in database does not match the real device number through the link list, this message is displayed. This message usually indicates either corrupted firmware or memory problems.

**Recommended Action**

When this problem occurs, perform a system reboot.

If the problem persists, it may indicate corrupted firmware. Perform a firmware download.

**Severity**

Panic

## PANIC-LSDB\_CKSUM

### Message

```
Switch: <number>, Panic PANIC-LSDB_CKSUM, 0, Link State Database checksum failed,  
lsdbeP = <hexadecimal number>, lsrP = <hexadecimal number>, LSID = <decimal number>
```

### Probable Cause

Error verifying the checksum in the Link State Database. This error message is used in the FSPF (Fabric Shortest Path First) module. The additional information provided includes:

lsdbeP: Link State Database Element Pointer  
lsrP: Link State Record Pointer  
LSID: Link State Identifier

### Recommended Action

Copy the error message and contact your switch service provider.

### Severity

Panic

## PANIC-MALLOC

### Message

```
Switch: <number>, Panic PANIC-MALLOC, 0, malloc failed <additional information>
```

### Probable Cause

Error message shows that a memory allocation failed and provides *<additional information>*.

### Recommended Action

Copy the error message and contact your switch service provider.

**Severity**

Panic

**PANIC-QCREATE****Message**

```
Switch: <number>, Panic PANIC-QCREATE, 0, mqCreate failed
```

**Probable Cause**

Failed to create a message queue. Further details about this error are displayed on the console.

**Recommended Action**

Copy the console output, issue the `supportshow` command and contact your switch service provider.

**Severity**

Panic

**PANIC-SEMCREATE****Message**

```
Switch: <number>, Panic PANIC-SEMCREATE, 0, semCreate failed
```

**Probable Cause**

The Reliable Commit Service (RCS) subsystem used for Security, Management Server, and Zoning failed to create a semaphore.

**Recommended Action**

issue the `supportshow` command and contact your switch service provider.

## Severity

Panic

### PDM-CONFIG

## Message

```
Switch: <number>, Warning PDM-CONFIG, 3, Failed to parse pdm config
```

## Probable Cause

PDM process could not parse the configuration file. This might be caused by a missing configuration file during the installation.

## Recommended Action

Reinstall firmware. If error recurs, contact your switch service provider.

## Severity

Warning

### PDM-FCREATE

## Message

```
Switch: <number>, Warning PDM-FCREATE, 3, File not created: <file name>
```

## Probable Cause

PDM failed to create *<file name>*.

## Recommended Action

Contact your switch service provider.

## Severity

Warning

## PDM-FOPEN

### Message

```
Switch: <number>, Warning PDM-FOPEN, 3, File open failed: <file name>
```

### Probable Cause

PDM could not open *<file name>*.

### Recommended Action

Contact your switch service provider.

### Severity

Warning

## PDM-FREAD

### Message

```
Switch: <number>, Warning PDM-FREAD, 3, File read failed: <file name>
```

### Probable Cause

PDM could not read data from *<file name>*.

### Recommended Action

Contact your switch service provider.

### Severity

Warning

## PDM-FWRITE

### Message

```
Switch: <number>, Warning PDM-FWRITE, 3, File write failed: <file name>
```

### Probable Cause

PDM could not write data to *<file name>*.

### Recommended Action

Contact your switch service provider.

### Severity

Warning

## PDM-WWNFAIL

### Message

```
Switch: <number>, Warning PDM-WWNFAIL, 3, Unable to write gen to WWN: <error code>
```

### Probable Cause

PDM failed to write generation number to the WWN card.

### Recommended Action

Copy error code and contact your switch service provider.

### Severity

Warning

## PD\_TRACE-GENERIC

### Message

```
Switch: <number>, Info PD_TRACE-GENERIC, 4, Watchdog Register Contains: 0x10000000
```

### Probable Cause

This message indicates that information has been written to the Panic Trace logs. The watchdog register codes are as follows:

- 0x10000000 bit set means the wdt forced a core reset.
- 0x20000000 bit set means the wdt forced a chip reset.
- All other code values are reserved.

### Recommended Action

Use the `pdshow` command to view the Panic Trace logs.

### Severity

Information

## PLATFORM-CP\_SERVICE

### Message

```
Switch: <number>, Critical PLATFORM-CP_SERVICE, 1, Internal routing error. Disabling switch(es)
```

### Probable Cause

An internal routing error has occurred. This indicates a hardware problem with the one or both CPs.

### Recommended Action

Replace one or more CPs. After replacing the CPs, execute the `switchenable` command.

## Severity

Critical

### PLATFORM-CPLD\_CTRL, Access FC clock

## Message

```
Switch: <number>, Warning PLATFORM-CPLD_CTRL, 3, Access FC clock: Invalid request
```

## Probable Cause

The platform module fails to read or write argument passed from user space. This could indicate a serious Fabric OS data problem on the CP.

## Recommended Action

Issue a failover or reboot the switch.

## Severity

Warning

### PLATFORM-CPLD\_CTRL, Can't access FC clock

## Message

```
Switch: <number>, Warning PLATFORM-CPLD_CTRL, 3, Can't access FC clock: get_user failed
```

## Probable Cause

The system cannot get data from the userspace to kernel, so it cannot access the FC clock on the port blade. This could indicate a serious Fabric OS data problem on the CP.

## Recommended Action

Issue a failover or reboot the switch.



**Severity**

Warning

**PLATFORM-CPLD\_CTRL, Can't get FC clock****Message**

```
Switch: <number>, Warning PLATFORM-CPLD_CTRL, 3, Can't get FC clock: put_user failed
```

**Probable Cause**

The system cannot put the data from kernel to userspace, so access to FC clock failed. This could indicate a serious Fabric OS data problem on the CP.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Warning

**PLATFORM-CPLD\_CTRL, fabsys\_get\_hwStatus****Message**

```
Switch: <number>, Warning PLATFORM-CPLD_CTRL, 3, fabsys_get_hwStatus: invalid H/W unit
```

**Probable Cause**

The system is trying to get hardware status on a specific blade in a specific slot, but the reported information is not valid. This could indicate a serious Fabric OS data problem on the CP.

**Recommended Action**

Issue a failover or reboot the switch.

## Severity

Warning

### PLATFORM-CPLD\_CTRL, fabsys\_set\_hwUnit

## Message

```
Switch: <number>, Warning PLATFORM-CPLD_CTRL, 3, fabsys_set_hwUnit: invalid H/W unit
```

## Probable Cause

The system is trying to set the status of a blade in a specific slot, but the corresponding data is not valid. This could indicate a serious Fabric OS data problem on the CP.

## Recommended Action

Issue a failover or reboot the switch.

## Severity

Warning

### PLATFORM-CPLD\_CTRL, Can't release i2c bus

## Message

```
Switch: <number>, Warning PLATFORM-CPLD_CTRL, 3, Can't release i2c bus:  
copy_from_user failed
```

## Probable Cause

The system cannot copy data from userspace to kernel, so the i2c bus cannot be released. This could indicate a serious Fabric OS data problem on the CP.

## Recommended Action

Issue a failover or reboot the switch.

**Severity**

Warning

**PLATFORM-FUNCT\_FAIL, fabsys\_set\_cpMaster****Message**

```
Switch: <number>, Critical PLATFORM-FUNCT_FAIL, 1, fabsys_set_cpMaster Select/Set CP master failed
```

**Probable Cause**

The system failed to select or set the HA CP master. This could indicate either a serious Fabric OS data problem or hardware failure on the CP.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-FUNCT\_FAIL, fabsys\_set\_cpMaster****Message**

```
Switch: <number>, Critical PLATFORM-FUNCT_FAIL, 1, fabsys_set_cpMaster Set mastership failed
```

**Probable Cause**

The platform module fails to initialize mastership of high availability (HA). This could indicate either a serious Fabric OS data problem or hardware failure on the CP.

**Recommended Action**

Issue a failover or reboot the switch.

## Severity

Critical

### PLATFORM-FUNCT\_FAIL, fabsys\_set\_ownSwMask

## Message

```
Switch: <number>, Critical PLATFORM-FUNCT_FAIL, 1, fabsys_set_ownSwMask Set own-switch mask failed
```

## Probable Cause

The platform module fails to initialize mastership of high availability (HA). This could indicate either a serious Fabric OS data problem or hardware failure on the CP.

## Recommended Action

Issue a failover or reboot the switch.

## Severity

Critical

### PLATFORM-FUNCT\_FAIL, sysCfgSelectMaster

## Message

```
Switch: <number>, Critical PLATFORM-FUNCT_FAIL, 1, sysCfgSelectMaster Failed
```

## Probable Cause

The platform module fails to initialize mastership of high availability (HA). This could indicate either a serious Fabric OS data problem or hardware failure on the CP.

## Recommended Action

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-FUNCT\_FAIL, sysHaInit****Message**

```
Switch: <number>, Critical PLATFORM-FUNCT_FAIL, 1, sysHaInit Can't initialize HA
```

**Probable Cause**

The platform module fails to initialize mastership of high availability (HA). This could indicate either a serious Fabric OS data problem or hardware failure on the CP.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-MALLOC****Message**

```
Switch: <number>, Critical PLATFORM-MALLOC, 1, <specific error message>
```

**Probable Cause**

The memory allocation failed. The system is low on memory, has severe memory fragmentation, or has a memory leak.

**Recommended Action**

Reboot the switch.

If the problem is not resolved, update the firmware.

If the problem is not resolved, collect information on the switch using the `supportshow` command at two separate intervals and contact your switch service provider.

### Severity

Critical

## PLATFORM-MALLOC, init\_system\_misc

### Message

```
Switch: <number>, Critical PLATFORM-MALLOC, 1, init_system_misc Allocate context  
memory failed
```

### Probable Cause

The platform module fails to allocate memory during initialization. This could indicate a serious Fabric OS data problem on the CP.

### Recommended Action

Issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-MALLOC, pciInitBlade

### Message

```
Switch: <number>, Critical PLATFORM-MALLOC, 1, pciInitBlade Allocate memory for new  
blade failed
```

### Probable Cause

The platform module fails to allocate memory during blade initialization. This could indicate a serious Fabric OS data problem on the CP.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-NOT\_SUPPORT (Critical)****Message**

```
Switch: <number>, Critical PLATFORM-NOT_SUPPORT, 1, <error message> (<name>=  
<value>)
```

**Probable Cause**

The specified platform is not supported or the firmware is corrupt.

**Recommended Action**

Check the FRU header of the blade (if the blade ID is supported); download new firmware and reboot. Issue the `chassisshow` command.

**Severity**

Critical

**PLATFORM-NOT\_SUPPORT (Warning)****Message**

```
Switch: <number>, Warning PLATFORM-NOT_SUPPORT, 3, <error message>
```

**Probable Cause**

The specified platform is not supported or the firmware is corrupt.

### Recommended Action

Check the FRU header of the blade (if the blade ID is supported); download new firmware and reboot.

### Severity

Warning

## PLATFORM-NOT\_SUPPORT, clean\_devices

### Message

```
Switch: <number>, Warning PLATFORM-NOT_SUPPORT, 3, clean_devices: unknown blade!  
Possible memory corruption (slot= <slot>)
```

### Probable Cause

The platform module fails to clean up the blade object due to incorrect object type. This could indicate a serious Fabric OS data problem on the CP.

### Recommended Action

If the message is isolated, monitor the error message on the switch. If the error is repetitive, issue a failover or reboot the switch.

### Severity

Warning

## PLATFORM-NOT\_SUPPORT, fabsys\_asic\_reset

### Message

```
Switch: <number>, Warning PLATFORM-NOT_SUPPORT, 3, fabsys_asic_reset: blade type  
invalid (bladeID= <bldId>)
```

### Probable Cause

The platform module fails to reset ASIC chip due to invalid blade type. This could indicate a serious Fabric OS data problem on the switch.



## Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

## Severity

Warning

### PLATFORM-NOT\_SUPPORT, Invalid Blade ID (Critical)

## Message

```
Switch: <number>, Critical PLATFORM-NOT_SUPPORT, 1, Invalid Blade ID (bladeID= <id>)
```

## Probable Cause

The platform module fails to recognize the blade object type. This could indicate a serious Fabric OS data problem on the switch.

## Recommended Action

Try to reseal the blade. Verify you are using the correct blade for your switch type. If the error continues replace the blade.

## Severity

Critical

### PLATFORM-NOT\_SUPPORT, Invalid Blade ID (Warning)

## Message

```
Switch: <number>, Warning PLATFORM-NOT_SUPPORT, 3, Invalid Blade ID (bladeID=  
<bldId>)
```

## Probable Cause

The platform module fails to recognize the blade object type. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

For a port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

### Severity

Warning

## PLATFORM-NOT\_SUPPORT, Invalid info

### Message

```
Switch: <number>, Warning PLATFORM-NOT_SUPPORT, 3, Invalid info (bladeID= 2)
```

### Probable Cause

The platform module fails to recognize the blade object type. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

### Severity

Warning

## PLATFORM-NULL\_VAL

### Message

```
Switch: <number>, Critical PLATFORM-NULL_VAL, 1, <null value>
```

### Probable Cause

A null pointer is detected.

**Recommended Action**

No action is required.

**Severity**

Critical

**PLATFORM-PDC\_COM, Failover PDC-sync-in error****Message**

```
Switch: <number>, Critical PLATFORM-PDC_COM, 1, Failover PDC-sync-in error on blade  
<slot> (<err>)
```

**Probable Cause**

Private Data Channel fails to sync up data at failover. This could be caused by serious a hardware failure to the CP.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-PDC\_CMD, pdc\_command failed****Message**

```
Switch: <number>, Critical PLATFORM-PDC_CMD, 1, pdc_command() failed: slot=<slot>,  
cmd=<cmd>, offset=<offset>, err=<err>, old_value=<old_value>, new_value=<new_value>,  
retry=<retry>
```

**Probable Cause**

Private Data Channel on the blade in the specified slot is having a problem.

### Recommended Action

Shut down the blade using the `slotpoweroff` command and report the error to your switch service provider.

### Severity

Critical

## PLATFORM-PDC\_CMD, pdc\_command write check failed

### Message

```
Switch: <number>, Critical PLATFORM-PDC_CMD, 1, pdc_command() write check failed:  
slot=<slot>, cmd=<cmd>, offset=<offset>, err=<err>, old_value=<old_value>,  
new_value=<new_value>, retry=<retry>
```

### Probable Cause

Private Data Channel on the blade in the specified slot is having a problem.

### Recommended Action

Shut down the blade using the `slotpoweroff` command and report the error to your switch service provider.

### Severity

Critical

## PLATFORM-PDC\_CMD, pdc\_command write failed

### Message

```
Switch: <number>, Critical PLATFORM-PDC_CMD, 1, pdc_command() write failed:  
slot=<slot>, cmd=<cmd>, offset=<offset>, err=<err>, old_value=<old_value>,  
new_value=<new_value>, retry=<retry>
```

### Probable Cause

Private Data Channel on the blade in the specified slot is having a problem.

**Recommended Action**

Shut down the blade using the `slotpoweroff` command and report the error to your switch service provider.

**Severity**

Critical

**PLATFORM-PDC\_CMD, pdc\_command write parity error: fake error**

**Message**

```
Switch: <number>, Critical PLATFORM-PDC_CMD, 1, pdc_command() write parity error:  
fake error: slot=<slot>, cmd=<cmd>, offset=<offset>, err=<err>,  
old_value=<old_value>, new_value=<new_value>, retry=<retry>
```

**Probable Cause**

The message is from Private Data Channel (PDC) when it experiences a fake PDC write parity error.

**Recommended Action**

If the message is isolated, monitor the error message on the switch. If the message is repetitive, report the error to your switch service provider.

**Severity**

Critical

## PLATFORM-PDC\_CMD, pdc\_command write parity error: read check

### Message

```
Switch: <number>, Critical PLATFORM-PDC_CMD, 1, pdc_command() write parity error:  
read check failed: slot=<slot>, cmd=<cmd>, offset=<offset>, err=<err>,  
old_value=<old_value>, new_value=<new_value>, retry=<retry>
```

### Probable Cause

Private Data Channel on the blade in the specified slot is having a problem.

### Recommended Action

Shut down the blade using the `slotpoweroff` command and report the error to your switch service provider.

### Severity

Critical

## PLATFORM-RESET\_CP

### Message

```
Switch: <number>, Critical PLATFORM-RESET_CP, 1, Resetting the faulted CP (reason =  
<reason>)
```

### Probable Cause

The CP is experiencing a non-recoverable fault and is being reset, most likely due to voltage or high temperature problems. There should be additional system log messages indicating the reason for reset.

## Recommended Action

If the message is isolated, issue the `tempshow` and `voltshow` commands and inspect the output for abnormal values for the affected CP. If voltages are indicated as the problem, replace the CP. For high temperature, assure that blowers are operating properly, ambient temp is within limits, and that there is no blockage of air flow.

## Severity

Critical

**PLATFORM-SERVICE, fabsys\_asic\_reset: can't get blade**

## Message

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_asic_reset: can't get blade  
from ms Reset failed
```

## Probable Cause

The platform module fails to reset ASIC chips. This could indicate a serious Fabric OS data problem on the switch.

## Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

## Severity

Warning

## PLATFORM-SERVICE, fabsys\_asic\_reset: CPLD not mapped

### Message

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_asic_reset: CPLD not mapped  
Can't reset ASICs
```

### Probable Cause

The platform module fails to reset ASIC chips. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

### Severity

Warning

## PLATFORM-SERVICE, fabsys\_asic\_reset: FPGA not mapped

### Message

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_asic_reset: FPGA not mapped  
Can't reset ASICs
```

### Probable Cause

The platform module fails to reset ASIC chips. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

For a Core Switch 2/64, SAN Director 2/128, or a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.



For SAN Switch 2/32: Reboot the switch.

### Severity

Warning

## PLATFORM-SERVICE, fabsys\_asic\_reset: got NULL

### Message

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_asic_reset: got NULL ptr Can't  
reset ASICs
```

### Probable Cause

The platform module fails to reset ASIC chips. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

For a port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

### Severity

Warning

## PLATFORM-SERVICE, fabsys\_asic\_reset: invalid handle

### Message

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_asic_reset: invalid handle  
Can't reset ASICs
```

### Probable Cause

The platform module fails to reset ASIC chips. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

### Severity

Warning

**PLATFORM-SERVICE, fabsys\_asic\_reset: PDC error**

### Message

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_asic_reset: PDC error Can't  
reset ASICs
```

### Probable Cause

The platform module fails to reset ASIC chips. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

### Severity

Warning

**PLATFORM-SERVICE, fabsys\_blade\_hw\_trigger****Message**

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_blade_hw_trigger: invalid  
handle Can't toggle HW trigger
```

**Probable Cause**

The platform module fails to reset ASIC chips. This could indicate a serious Fabric OS data problem on the switch.

**Recommended Action**

For a port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

**Severity**

Warning

**PLATFORM-SERVICE, fabsys\_blade\_reset: FPGA not initialized****Message**

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_blade_reset: FPGA not  
initialized Can't reset blade
```

**Probable Cause**

The platform module fails to reset ASIC chips. This could indicate a serious Fabric OS data problem on the switch.

**Recommended Action**

For a port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

## Severity

Warning

**PLATFORM-SERVICE, fabsys\_blade\_reset: FPGA not mapped**

## Message

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_blade_reset: FPGA not mapped  
Can't reset blade
```

## Probable Cause

The platform module fails to reset ASIC chips. This could indicate a serious Fabric OS data problem on the switch.

## Recommended Action

For a port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

## Severity

Warning

**PLATFORM-SERVICE, fabsys\_blade\_reset: invalid handle**

## Message

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_blade_reset: invalid handle  
Can't reset blade
```

## Probable Cause

The platform module fails to reset ASIC chips. This could indicate a serious Fabric OS data problem on the switch.

## Recommended Action

For a port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

## Severity

Warning

## PLATFORM-SERVICE, Internal routing error

## Message

```
Switch: <number>, Critical PLATFORM-SERVICE, 1, Internal routing error. Disabling  
switch(es)
```

## Probable Cause

This message indicates a failure of one or both of the CPs. With failure of a single CP, the switch will continue to run, though with degraded performance. When both the CPs fail to operate, the switch is disabled in order to redirect traffic through another switch.

## Recommended Action

Replace one or both CPs.

Verify that the CPs are working correctly. The replaced CP can be verified by issuing the `hashow` command. If the output indicates that it is healthy and both CPs are in sync, then the new CP is working correctly.

Issue the `switchenable` command in order to bring the switch back into the fabric. Since the `switchenable` command is potentially disruptive to the fabric, decide when it is appropriate to enable the switch, so that it can rejoin the fabric.

## Severity

Critical

## PLATFORM-SERVICE, IOC\_GET\_CPSLOT get\_user failed

### Message

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, IOC_GET_CPSLOT get_user failed
```

### Probable Cause

The platform module fails to read or write argument passed from user space. This could indicate a serious Fabric OS data problem on the CP.

### Recommended Action

Issue a failover or reboot the switch.

### Severity

Warning

## PLATFORM-SERVICE, IOC\_GET\_CPSLOT put\_user failed

### Message

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, IOC_GET_CPSLOT put_user failed
```

### Probable Cause

The platform module fails to read or write argument passed from user space. This could indicate a serious Fabric OS data problem on the CP.

### Recommended Action

Issue a failover or reboot the switch.

### Severity

Warning

**PLATFORM-SERVICE, IOC\_SET\_PLATFORM get\_user failed****Message**

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, IOC_SET_PLATFORM get_user failed
```

**Probable Cause**

The platform module fails to read or write argument passed from the user space. This could indicate a serious Fabric OS data problem on the switch.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Warning

**PLATFORM-SERVICE, IOC\_SET\_PLATFORM Unknown****Message**

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, IOC_SET_PLATFORM Unknown Set Platform Option
```

**Probable Cause**

The platform module fails to read or write argument passed from user space. This could indicate a serious Fabric OS data problem on the switch.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Warning

## PLATFORM-SERVICE, fabsys\_blade\_hw\_trigger

### Message

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_blade_hw_trigger: invalid handle Can't toggle HW trigger
```

### Probable Cause

Data passed in or out of the platform module is invalid. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

Issue a failover or reboot the switch.

### Severity

Warning

## PLATFORM-SERVICE, fabsys\_blade\_reset

### Message

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_blade_reset: invalid handle Can't reset blade
```

### Probable Cause

The platform module fails to reset the ASIC chip. This could be caused by serious hardware failure to the CP.

### Recommended Action

Issue a failover or reboot the switch.

### Severity

Critical



**PLATFORM-SERVICE, fabsys\_notify\_cer****Message**

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_notify_cer: invalid notification
```

**Probable Cause**

The platform module tries to pass invalid reroute notification. This could indicate a serious Fabric OS data problem on the switch.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Warning

**PLATFORM-SERVICE, fabsys\_reroute\_cb****Message**

```
Switch: <number>, Warning PLATFORM-SERVICE, 3, fabsys_reroute_cb: reroute error Disable switch(es)
```

**Probable Cause**

There is a rerouting error, so to prevent data corruption, the platform module automatically disables the switch. This message may indicate Fabric OS data problem.

**Recommended Action**

Check if all the CP blades are having problems. If so, replace them as soon as possible.

Issue a failover or reboot the switch.

## Severity

Warning

### PLATFORM-SYSPCI\_CFG

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, <function name> <specified error message>
```

## Probable Cause

System Driver failed to initialize the CP board (specifically, the PCI bridges on the CP). There is likely a hardware problem on the CP board; the bridges might be damaged.

## Recommended Action

Cycle power on the CP card. If this does not correct the problem, replace the CP card.

## Severity

Critical

### PLATFORM-SYSPCI\_CFG, blade FPGA is not on PCI

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, blade FPGA is not on PCI list possibly bad HW (<slot>)
```

## Probable Cause

The platform module fails to map FPGA register set on the CP. This could indicate either a serious Fabric OS data problem or hardware failure on the CP.

## Recommended Action

For a port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

## Severity

Critical

## PLATFORM-SYSPCI\_CFG, checkNumPciDev

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, checkNumPciDev Unexpected number  
of PCI devices (<numDev>)
```

## Probable Cause

The platform module fails to successfully scan and initialize the PCI devices. This could indicate a serious hardware failure to the slot specified.

## Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

## Severity

Critical

## PLATFORM-SYSPCI\_CFG, fabsys\_asic\_reset Can't find ASIC

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, fabsys_asic_reset Can't find ASIC (<asic>)
```

### Probable Cause

The platform module fails to reset the ASIC chip. This could be caused by a serious Fabric OS data problem on the CPs.

### Recommended Action

For a Core Switch 2/64, SAN Director 2/128, or a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

For a SAN Switch 2/32: Reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, fabsys\_attach\_pci

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, fabsys_attach_pci PCI scanning failed (<slot>)
```

### Probable Cause

The platform module fails to successfully scan and initialize the PCI devices. This could indicate a serious hardware failure to the slot specified.

## Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

## Severity

Critical

## PLATFORM-SYSPCI\_CFG, fabsys\_blade\_reset

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, fabsys_blade_reset Can't find ASIC (<asic>)
```

## Probable Cause

The platform module fails to reset the ASIC chip. This could be caused by a serious Fabric OS data problem on the CPs.

## Recommended Action

For a Core Switch 2/64, SAN Director 2/128, or a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

## Severity

Critical

## PLATFORM-SYSPCI\_CFG, fabsys\_set\_bladeInit DrawBridge

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, fabsys_set_bladeInit DrawBridge  
not configured before scanning blade (<devid>)
```

### Probable Cause

The platform module fails to successfully scan and initialize the PCI devices. This could indicate a serious hardware failure to the slot specified.

### Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, fabsys\_set\_bladeInit Can't Create

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, fabsys_set_bladeInit Can't create  
file /proc/Blade/cpld (0)
```

### Probable Cause

The platform module fails to create a `cpld` file. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, fabsys\_set\_bladeInit: Got NULL pointer****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, fabsys_set_bladeInit: Got NULL pointer to 21150 bridge (<slot>)
```

**Probable Cause**

The platform module fails to successfully scan and initialize the PCI devices. This could indicate a serious hardware failure to the slot specified.

**Recommended Action**

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, fabsys\_set\_bladeInit: Mapping blade CPLD****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, fabsys_set_bladeInit: Mapping blade CPLD failed (<slot>)
```

**Probable Cause**

The platform module fails to map PCI physical address space. This could indicate a serious hardware failure to the slot specified. This message is unique to the SAN Director 2/128.

**Recommended Action**

If this happens to a port blade, issue the `slotpoweroff` command and then the `slotpoweron` command to reinitialize the blade. If it persists or problem happens on a CP blade, issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, fabsys\_set\_bladeInit: PDC write error Can't enable asic**

**Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, fabsys_set_bladeInit: PDC write error Can't enable asic attention interrupt (<pd_err>)
```

**Probable Cause**

The platform module fails due to private data channel failure. This could indicate a serious hardware failure to the slot specified.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, fabsys\_set\_bladeInit: PDC write error Can't reset asic**

**Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, fabsys_set_bladeInit: PDC write error Can't reset asic (<pd_err>)
```

**Probable Cause**

The platform module fails due to private data channel failure. This could indicate a serious hardware failure to the slot specified.



**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, fabsys\_set\_cpMaster****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, fabsys_set_cpMaster PCI clocks  
not enabled prior to bridge reset (0)
```

**Probable Cause**

The platform driver fails to initialize or configure PCI drawbridge or main PCI bus. This could indicate a serious hardware failure to the CP.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, fabsys\_set\_cpMaster****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, fabsys_set_cpMaster Cannot reset  
two DrawBridges
```

**Probable Cause**

The platform driver fails to initialize or configure PCI drawbridge or main PCI bus. This could indicate a serious hardware failure to the CP.

### Recommended Action

Issue a failover or reboot the switch.  
If the problem persists, replace one or both CPs.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, fabsys\_set\_cpMaster

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, fabsys_set_cpMaster Cannot drop  
PCI self-fence (DB sec. reset ctrl failed) (0)
```

### Probable Cause

The platform driver fails to initialize or configure PCI drawbridge or main PCI bus. This could indicate a serious hardware failure to the CP.

### Recommended Action

Issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, Fault the blade due to bad Hardware

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, Fault the blade due to bad  
Hardware. Too many bogus interrupts for blade (<slot>)
```

### Probable Cause

The platform module has faulted the blade due to too many bad interrupts. This could be caused by a serious hardware failure in the blade.

**Recommended Action**

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, FPGA****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, FPGA is not on Linux PCI list  
possibly bad HW (<slot>)
```

**Probable Cause**

The platform module fails to map FPGA register set for blade in the slot. This could indicate either a serious Fabric OS data problem or hardware failure on the CP.

**Recommended Action**

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

**Severity**

Critical

## PLATFORM-SYSPCI\_CFG, Hardware defect

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, Hardware defect. Power failure on blade (<slot>)
```

### Probable Cause

The platform module is reporting a power failure to blade in slot <slot>.

### Recommended Action

Issue the `voltshow` command to check the EM power status. Check power assembly to make sure there is enough power. If the power is at acceptable levels, reseal the blade and try again.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, init\_stiletto Can't create file

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, init_stiletto Can't create file /proc/Blade/fpga (0)
```

### Probable Cause

The platform module fails to create a proc entry status file. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

Issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, init\_stiletto Mapping

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, init_stiletto Mapping FPGA failed (<slot>)
```

### Probable Cause

The platform module fails to map FPGA register set for stiletto blade. This could indicate either a serious Fabric OS data problem or hardware failure on the CP.

### Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, initFpga

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, initFpga Can't create file /proc/Blade (0)
```

### Probable Cause

The platform module fails to create proc entry status file. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

Issue a failover or reboot the switch.

## Severity

Critical

### PLATFORM-SYSPCI\_CFG, pciCheckBladeDevices

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciCheckBladeDevices PCI forwarding window undefined for bridge: (<devid>)
```

## Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

## Recommended Action

If this happens to a single port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the blade. If the error persists or happens on a CP blade, issue a failover or reboot the switch.

## Severity

Critical

### PLATFORM-SYSPCI\_CFG, pciResetAsics

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciResetAsics Reconfig ASIC failed (0)
```

## Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the switch. This could indicate a serious hardware failure to the system.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, PCI Drawbridge****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, PCI Drawbridge: failed secondary  
side test (<devId>)
```

**Probable Cause**

The platform driver fails to initialize or configure PCI drawbridge or main PCI bus. This could indicate a serious hardware failure to the CP.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, pciSetUp****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciSetUp Can't scan DrawBridge  
(<bridgeIdx>)
```

**Probable Cause**

The platform driver fails to initialize or configure PCI drawbridge or main PCI bus. This could indicate a serious hardware failure to the CP.

### Recommended Action

Issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciSetUp Drawbridge not initialized

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciSetUp DrawBridge not
initialized (<numDev>)
```

### Probable Cause

The platform driver fails to initialize or configure PCI drawbridge or main PCI bus. This could indicate a serious hardware failure to the CP.

### Recommended Action

Issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciSetUp No PCI base address for Drawbridge

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciSetUp No PCI base address for
DrawBridge (<devNo>)
```

### Probable Cause

The platform module fails to successfully scan and initialize the PCI devices. This could indicate a serious hardware failure.



**Recommended Action**

For a Core Switch 2/64, SAN Director 2/128, or a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade. If the error persists or it happens to a CP blade, issue a failover or reboot the switch.

For a SAN Switch 2/16V, 2/8V, and 2/32, reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, GetBrideIndex****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, GetBrideIndex Invalid absolute  
blade count (<slot>)
```

**Probable Cause**

The platform module fails to create or process entry status file. This could indicate a serious Fabric OS data problem on the switch.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

## PLATFORM-SYSPCI\_CFG, pciCheckBladeDevices

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciCheckBladeDevices ASIC memory  
out of range (<slot>)
```

### Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

### Recommended Action

If this happens to a single port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the blade. If the error persists or occurs on a CP blade, issue a failover on the CPs or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciInitBladeFpga

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciInitBladeFpga Can't create  
file /proc/Blade/fpga (0)
```

### Probable Cause

The platform module fails to create a proc entry status file. This could indicate a serious Fabric OS data problem on the switch.

### Recommended Action

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, pciInitBladeFpga****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciInitBladeFpga Can't create  
file /proc/Blade (0)
```

**Probable Cause**

The platform module fails to create a proc entry status file. This could indicate a serious Fabric OS data problem on the switch.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, pciCheckBladeDevices****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciCheckBladeDevices ASIC memory  
out of range (<slot>)
```

**Probable Cause**

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

### Recommended Action

If this happens to a single port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciCheckBladeDevices

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciCheckBladeDevices PCI forwarding window undefined for bridge: (<devId>)
```

### Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

### Recommended Action

If this happens to a single port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

### Severity

Critical

**PLATFORM-SYSPCI\_CFG, pciCheckBladeDevices****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciCheckBladeDevices Pci device  
missing (<numDev>)
```

**Probable Cause**

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

**Recommended Action**

If this happens to a single port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, pciInitBlade Blade has no child bus****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciInitBlade Blade has no child  
bus (<slot>)
```

**Probable Cause**

The platform module fails to successfully scan and initialize the PCI devices. This could indicate a serious hardware failure to the slot specified.

**Recommended Action**

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover on the CPs or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciInitBladeFpga

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciInitBladeFpga Mapping memory for FPGA failed (<slot>)
```

### Probable Cause

The platform module fails to map FPGA register set on the CP. This could indicate either a serious Fabric OS data problem or hardware failure on the CP.

### Recommended Action

For a port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciInitBladeFpga

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciInitBladeFpga No pci memory assigned for FPGA (0)
```

### Probable Cause

The platform module fails to map FPGA register set on the CP. This could indicate either a serious Fabric OS data problem or hardware failure on the CP.

## Recommended Action

For a port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

## Severity

Critical

### PLATFORM-SYSPCI\_CFG, pciInitBladeFpga Old FPGA exists

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciInitBladeFpga Old FPGA exists (<slot>)
```

## Probable Cause

The platform module fails to map FPGA register set on the CP. This could indicate either a serious Fabric OS data problem or hardware failure on the CP.

## Recommended Action

For a port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

## Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciInitOneBlade No blade data

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciInitOneBlade No blade data (0)
```

### Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

### Recommended Action

If this happens to a single port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciInitOneBlade Blade not configured

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciInitOneBlade Blade not configured (<slot>)
```

### Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

### Recommended Action

If this happens to a single port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the blade.



If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

## Severity

Critical

### **PLATFORM-SYSPCI\_CFG, pciInitOneBlade Blade has no child bus**

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciInitOneBlade Blade has no  
child bus (<slot>)
```

## Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

## Recommended Action

If this happens to a single port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

## Severity

Critical

### **PLATFORM-SYSPCI\_CFG, pciInitOneBlade Failed**

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciInitOneBlade Failed (<slot>)
```

## Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

### Recommended Action

If this happens to a single port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciResetAsics

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciResetAsics Reconfig ASIC failed (<slot>)
```

### Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

### Recommended Action

If this happens to a single port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

### Severity

Critical

**PLATFORM-SYSPCI\_CFG, pciResetAsics (SAN Switch 2/32)****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciResetAsics Reconfig ASIC failed (<slot>)
```

**Probable Cause**

The platform module fails to scan, configure, or initialize the PCI devices on the switch. This could indicate a serious hardware failure.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, pciScanBlade Cannot allocate****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciScanBlade Cannot allocate memory for PCI bus (<slot>)
```

**Probable Cause**

The platform module fails to successfully scan and initialize the PCI devices. This could indicate a serious hardware failure to the slot specified.

**Recommended Action**

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

## Severity

Critical

### PLATFORM-SYSPCI\_CFG, pciScanBlade Drawbridge

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciScanBlade DrawBridge not  
initialized (<slot>)
```

## Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

## Recommended Action

If this happens to a single port blade, try to issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

## Severity

Critical

### PLATFORM-SYSPCI\_CFG, pciScanBlade PCI scan found an isolated

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciScanBlade PCI scan found an  
isolated bridge device on blade (<slot>)
```

## Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

## Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

## Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciScanBlade PCI scan found an unexpected

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciScanBlade PCI scan found an  
unexpected non-bridge device at slot (<slot>)
```

## Probable Cause

The platform module fails to successfully scan and initialize the PCI devices. This could indicate a serious hardware failure to the slot specified.

## Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

## Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciScanBlade Requested PCI bus in use

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciScanBlade Requested PCI bus  
already in use (<slot>)
```

### Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

### Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciScanBlade Requested to scan a blade

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciScanBlade Requested to scan a  
blade that has already been scanned. (<slot>)
```

### Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

### Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

## Severity

Critical

### PLATFORM-SYSPCI\_CFG, pciScanBlade Requested to scan invalid

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciScanBlade Requested to scan  
invalid PCI device ID (<numDev>)
```

## Probable Cause

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

## Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

## Severity

Critical

### PLATFORM-SYSPCI\_CFG, pciScanBlade System Signaled Error

## Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciScanBlade System Signaled  
Error occurred (<slot>)
```

## Probable Cause

The platform module fails to successfully scan and initialize the PCI devices. This could indicate a serious hardware failure to the slot specified.

### Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, pciSetUp Can't scan DrawBridge

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciSetUp Can't scan DrawBridge  
(<pci_err>)
```

### Probable Cause

The platform module fails to successfully scan and initialize the PCI devices. This could indicate a serious hardware failure to the slot specified.

### Recommended Action

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

### Severity

Critical



**PLATFORM-SYSPCI\_CFG, pciSetUp DrawBridge****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, pciSetUp DrawBridge not  
initialized (<bridge devNo>)
```

**Probable Cause**

The platform module fails to successfully scan and initialize the PCI devices. This could indicate a serious hardware failure to the slot specified.

**Recommended Action**

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, PCI Drawbridge****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, PCI Drawbridge: failed secondary  
side test (<bus>)
```

**Probable Cause**

The platform module fails to test the second side of drawbridge on this CP.

**Recommended Action**

Issue a failover or reboot the switch.

**Severity**

Critical

## PLATFORM-SYSPCI\_CFG, sys\_set\_master Cannot drop PCI

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, sys_set_master Cannot drop PCI  
self-fence (DB sec. reset ctrl failed) (0)
```

### Probable Cause

The platform module fails to unfence CP from PCI bus from this CP. This could indicate a serious hardware failure to the CP.

### Recommended Action

Issue a failover or reboot the switch.

### Severity

Critical

## PLATFORM-SYSPCI\_CFG, sys\_set\_master Cannot reset

### Message

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, sys_set_master Cannot reset 21555  
bridges (0)
```

### Probable Cause

The platform module fails to reset PCI drawbridge. This could indicate a serious hardware failure to the CP.

### Recommended Action

Issue a failover or reboot the switch.

### Severity

Critical

**PLATFORM-SYSPCI\_CFG, sys\_set\_master PCI clocks****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, sys_set_master PCI clocks not
enabled prior to bridge reset (0)
```

**Probable Cause**

The platform module fails to successfully scan and initialize the PCI devices. This could indicate a serious hardware failure to the slot specified.

**Recommended Action**

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

**Severity**

Critical

**PLATFORM-SYSPCI\_CFG, Trouble accessing PCI control plane****Message**

```
Switch: <number>, Critical PLATFORM-SYSPCI_CFG, 1, Trouble accessing PCI control
plane. Blade has possible PCI problem or lost power (<slot>)
```

**Probable Cause**

The platform module fails to scan, configure, or initialize the PCI devices on the blade in the slot. This could indicate a serious hardware failure to the slot specified.

**Recommended Action**

For a port blade, issue the `slotpoweroff` and `slotpoweron` commands to reinitialize the faulting blade.

If the error persists or it occurs on a CP blade, issue a failover or reboot the switch.

### Severity

Critical

## PORT-ENABLE\_FAIL

### Message

```
Switch: <number>, Info PORT-ENABLE_FAIL, 4, Port <port number> could not be enabled because it is disabled due to long distance.
```

### Probable Cause

The specified port could not be enabled because other ports in the same quad have used up the buffers available for this quad. This happens when other ports were configured to be long distance.

### Recommended Action

To enable this port, the user can reconfigure the other E\_ports so they are “not long distance,” or the user can change the other E\_ports so they are not E\_ports. This will free up some buffers and allow this port to be enabled.

### Severity

Information

## PORT-LINK\_FAULT

### Message

```
Switch: <number>, Warning PORT-LINK_FAULT, 3, Port <port number> Faulted because of many Link Failures
```

### Probable Cause

The specified port is now disabled because the link on this port had multiple failures that exceed an internally set threshold on the port. This problem is typically related to hardware.

## Recommended Action

Check and replace (if necessary) the hardware attached to both ends of the specified *<port number>*, including:

- The media (SFPs)
- The cable (fiber optic or copper ISL)
- The attached devices

When finished checking the hardware, issue the `portenable` command to reenble the port.

## Severity

Warning

## PS-ASPINIT

## Message

```
Switch: <number>, Error PS-ASPINIT, 2, PS: <name of function>(): aspInit() failed.
```

## Probable Cause

The Application Service Provide (the ASP library for all daemons) failed to initialize. The *<name of function>* provides the specific area in which this failure occurred; this failure occurs only in the `main()` portion of the Performance Server daemon.

## Recommended Action

Copy the error message, issue the `supportshow` command and contact your switch service provider.

## Severity

Error

## PS-CALLOC

### Message

```
Switch: <number>, Error PS-CALLOC, 2, PS:<name of function>() Failed to allocate  
<number of bytes> bytes
```

### Probable Cause

The switch failed to allocate the specified number of bytes of memory for the specified *<name of function>*. The function area is specified in the error message; this error can occur in any area in which memory is allocated.

### Recommended Action

Issue the `supportshow` command for further information regarding memory allocation. Copy the error message and contact your switch service provider.

### Severity

Error

## PS-HAINIT

### Message

```
Switch: <number>, Error PS-HAINIT, 2, PS: <name of function>(): ps_init_ha() failed.
```

### Probable Cause

The High Availability initiation failed. The function area is specified in the error message; this error occurs only in `ps_init()`.

### Recommended Action

Copy the error message and contact your switch service provider.

### Severity

Error

## PS-IPCEXIT

### Message

```
Switch: <number>, Error PS-IPCEXIT, 2, PS: <name of function>(): ipcExit() failed.
```

### Probable Cause

The Interprocess Communication (IPC) failed to exit. The IPC is the method used by the switch to communicate with all daemons. The function area is specified in the error message; this error occurs only in main().

### Recommended Action

Copy the error message and contact your switch service provider.

### Severity

Error

## PS-IPCINIT

### Message

```
Switch: <number>, Error PS-IPCINIT, 2, PS: <name of function>(): ipcInit() failed.
```

### Probable Cause

The performance monitor Interprocess Communication (IPC) initiation failed. The IPC is the method used by the switch to communicate with all daemons. The function area is specified in the error message; this error occurs only in main().

### Recommended Action

Issue the `supportshow` command and contact your switch service provider.

### Severity

Error

## PS-SYSMOD

### Message

```
Switch: <number>, Error PS-SYSMOD, 2, PS: <name of function>(): sysMod() failed.
```

### Probable Cause

Unable to open system module. The function area is specified in the error message; this error occurs only in sysModInit() and sysModGetHwModel().

### Recommended Action

Issue the `supportshow` command and contact your switch service provider.

### Severity

Error

## PS-THRCREATE

### Message

```
Switch: <number>, Error PS-THRCREATE, 2, PS: <name of function>(): pthread_create() failed to create <name of thread>, rc = <return code>
```

### Probable Cause

The PS thread was not created due to an unknown reason; a resource allocation problem might be the cause. The function area is specified in the error message; this error occurs only in ps\_init() and ps\_reqmgr\_init().

The possible return codes (RC) are:

- EAGAIN (-11)
- EINVAL (-22)
- EPERM (-1)



## Recommended Action

Issue the `supportshow` command for further information regarding memory allocation. Copy the error message and contact your switch service provider.

## Severity

Error

## RCS-APP\_NOTREG

## Message

```
Switch: <number>, Error RCS-APP_NOTREG, 2, Application <application name> not registered, HA State Replication ineffective
```

## Probable Cause

If the specified application does not register with RCS, then RCS returns this error.

## Recommended Action

Issue the `hashow` command to view HA state.

Issue the `hadisable` and the `haenable` commands.

Issue the `mscapabilityshow` command to query a fabric for RCS service support capability. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

Upgrade the firmware for any switches that do not support RCS.

## Severity

Error

## RCS-LOCAL\_REJECT

### Message

```
Switch: <number>, Information RCS-LOCAL_REJECT, 1, State <current state>,  
Application <application ID> returned <reject reason>
```

### Probable Cause

The specified application on another switch rejects this RCS transaction with the specified reject reason; then, RCS returns this error and RCS aborts the current transaction. The current state describes at what point in the transaction the reject occurred.

### Recommended Action

For the first reject, wait a few minutes and then reinitiate the transaction. Fabric wide commands may take a few minutes to propagate throughout the fabric. Make sure to leave enough time so your commands do not overlap in the fabric.

If this reject happens again, examine the correctness of the data being passed.

### Severity

Information

## RCS-RCSDISABLED

### Message

```
Switch: <number>, Debug RCS-RCSDISABLED, 5, RCS has been disabled. Some switches in  
the fabric do not support this feature
```

### Probable Cause

The RCS feature has been disabled on the local switch because not all switches in the fabric support RCS.

## Recommended Action

Issue the `mscopyshow` command to query a fabric for service support capability. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

Upgrade the firmware for any switches that do not support RCS.

## Severity

Debug

### RCS-RCSEENABLED

## Message

```
Switch: <number>, Debug RCS-RCSEENABLED, 5, RCS has been enabled.
```

## Probable Cause

The RCS feature has been enabled. RCS must be capable on all switches in the fabric to be enabled. If all switches are capable, it is automatically enabled.

## Recommended Action

No action is required.

## Severity

Debug

### RCS-RCSENOEMEM

## Message

```
Switch: <number>, Error RCS-RCSENOEMEM, 2, Failed to allocate memory: <function name>
```

## Probable Cause

The specified RCS function failed to allocate memory.

### Recommended Action

Wait a few minutes and retry the command.  
Check memory usage on the switch using the memshow command.  
Reboot or power cycle the switch.

### Severity

Error

## RPCD-AUTH\_ERR

### Message

```
Switch: <number>, Warning RPCD-AUTH_ERR, 3, Authentication Error: client <IP address> has bad credentials: <bad user name and password pair>
```

### Probable Cause

An authentication error was reported. The specified *<client IP address>* has bad credentials.

### Recommended Action

Enter correct user name and password from the Fabric Access API host.

### Severity

Warning

## RPCD-INIT\_FAIL

### Message

```
Switch: <number>, Error RPCD-INIT_FAIL, 2, Initialization Error: <function> failed,  
error code = <error code number>
```

### Probable Cause

The RPCD initialization failed due to the specified reason. This message usually indicates Fabric OS problems.

The following <function> variables can be displayed:

**Variable:** <apigetsysconfig>

**Probable Cause:** Provides the daemon information about the number of switches in the chassis and which is the master.

**Variable:** <socket>

**Probable Cause:** Method to initialize TCP/IP communication between host and switch.

**Variable:** <bind>

**Probable Cause:** Method to initialize TCP/IP communication between host and switch.

**Variable:** <svctcpcreate>

**Probable Cause:** Method to initialize RPC interface between host and switch.

**Variable:** <scv\_register>

**Probable Cause:** Method to initialize RPC interface between host and switch.

**Variable:** <pthread\_create>

**Probable Cause:** Method to initialize FSS thread.

### Recommended Action

Reinstall the Fabric OS firmware and reboot.

If the error persists, copy the error message, gather switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Error

**RTWR-FAILED****Message**

```
Switch: <number>, Error RTWR-FAILED, 2, RTWR <routine: error message>, <detail 1>, <detail 2>, <detail 3>, <detail 4>, <detail 5>
```

**Probable Cause**

The RTWR failed. <routine: error message> provides the name of the routine having the error, and sometimes specific error information. Additionally, <details\_1\_2\_3\_4\_5> provide details to help isolate the problem.

The <routine: error message> can display any of the following details:

**Variable:** “rtwrInit: No Memory”, 0x9abc, 0x8def, 100, 50, 123

**Probable Cause:** RTWR has run out of memory inside the rtwrInit function.

<Detail 1>, if nonzero, contains the pointer of the payload received.

<Detail 2>, if nonzero, contains the switch ID of the destination domain.

<Detail 3>, if nonzero, contains the size of memory to be allocated.

<Detail 4>, if nonzero, contains the thread ID.

<Detail 5>, if nonzero, contains the process ID.

**Recommended Action:** Check the memory usage on the switch or call your switch service provider.

**Variable:** “rtwrTask: mqRead failed”, 0, 0, 0, 0, 0

**Probable Cause:** Cannot read from a message queue. Might be out of memory.

**Recommended Action:** Check the memory usage on the switch using the memshow command. Issue the supportshow command and contact your switch service provider.

**Variable:** “rtwrTask exited unexpectedly”, 0, 0, 0, 0, 0

**Probable Cause:** Internal error

**Recommended Action:** Check the memory usage on the switch using the memshow command. Issue the supportshow command and contact your switch service provider.

**Variable:** “rtwrRequest: No memory”, 0, 0, 0, 0, 0

**Probable Cause:** RTWR has run out of memory inside the rtwrInit function.

<Detail 1>, if nonzero, contains the pointer of the payload received.

<Detail 2>, if nonzero, contains the switch ID of the destination domain.

<Detail 3>, if nonzero, contains the size of memory to be allocated.

<Detail 4>, if nonzero, contains the thread ID.

<Detail 5>, if nonzero, contains the process ID.

**Recommended Action:** Check the memory usage on the switch using the `memshow` command. Issue the `supportshow` command and contact your switch service provider.

**Variable:** “rtwrAsyncMultiRequest”, 0, 0, 0, 0, 0

**Probable Cause:** Internal error.

**Recommended Action:** Check the memory usage on the switch using the `memshow` command. Issue the `supportshow` command and contact your switch service provider.

**Variable:** “rtwrAsyncMultiRequest: pidlist\_copy failed”, 0, 0, 0, 0, 0

**Probable Cause:** Out of memory.

**Recommended Action:** Check the memory usage on the switch using the `memshow` command. Issue the `supportshow` command and contact your switch service provider.

**Variable:** “rtwrSyncRequest”, 0, 0, 0, 0, 0

**Probable Cause:** Internal error.

**Recommended Action:** Check the memory usage on the switch using the `memshow` command. Issue the `supportshow` command and contact your switch service provider.

**Variable:** “rtwrSyncRequest: Unreachable domain”, 0xff, domain, 0x9abc, domain, 0xff

**Probable Cause:** Domain is not reachable.

**Recommended Action:** Use `fabricshow` to see if the domain is offline. Check the physical ISLs for the domain. Issue the `supportshow` command and contact your switch service provider.

**Variable:** “rtwrSyncRequest: Cannot create sync. semaphore”, 0, 0, 0, 0, 0

**Probable Cause:** Out of memory.

**Recommended Action:** Check the memory usage on the switch using the `memshow` command. Issue the `supportshow` command and contact your switch service provider.

**Variable:** “rtwrSyncRequest: Cannot write message queue”, 0, 0, 0, 0, 0

**Probable Cause:** Out of memory.

**Recommended Action:** Check the memory usage on the switch using the memshow command. Issue the supportshow command and contact your switch service provider.

**Variable:** “rtwrSyncRequest: semaTake failed”, 0, 0, 0, 0, 0

**Probable Cause:** Internal error.

**Recommended Action:** Check the memory usage on the switch using the memshow command. Issue the supportshow command and contact your switch service provider.

**Variable:** “rtwrMsgProcess: msg NULL”, 0, 0, 0, 0, 0

**Probable Cause:** An empty message has been received. Internal error.

**Recommended Action:** Check the memory usage on the switch using the memshow command. Issue the supportshow command and contact your switch service provider.

**Variable:** “rtwrRequestProcess: target\_bm Null”, 0, 0, 0, 0, 0

**Probable Cause:** Out of memory.

**Recommended Action:** Check the memory usage on the switch using the memshow command. Issue the supportshow command and contact your switch service provider.

**Variable:** “rtwrRequestProcess: cannot allocate fcAsyncMultiCB\_t”, 0, 0, 0, 0, 0

**Probable Cause:** Out of memory.

**Recommended Action:** Check the memory usage on the switch using the memshow command. Issue the supportshow command and contact your switch service provider.

**Variable:** “rtwrRequestProcess: rtwrMultiTransmit failed”, 0, 0, 0, 0, 0

**Probable Cause:** Transmission of payload to multiple destinations failed.

**Recommended Action:** Check the memory usage on the switch using the memshow command. Issue the supportshow command and contact your switch service provider.

**Variable:** “rtwrRespProcess”, 0, 0, 0xff, 0xff, 0xff

**Probable Cause:** Invalid pointer to payload.

**Recommended Action:** Check the memory usage on the switch using the



---

memshow command. Issue the supportshow command and contact your switch service provider.

**Variable:**“rtwrRespProcess”, ...

**Probable Cause:** Internal error.

**Recommended Action:** Check the memory usage on the switch using the memshow command. Issue the supportshow command and contact your switch service provider.

**Variable:**”rtwrRespProcess: release\_kiu failed”, ..., 0,0

**Probable Cause:** Internal error.

**Recommended Action:** Check the memory usage on the switch using the memshow command. Issue the supportshow command and contact your switch service provider.

**Variable:**“rtwrRespProcess: no such state”, 0, 0, 0, 0, 0

**Probable Cause:** Internal error.

**Recommended Action:** Check the memory usage on the switch using the memshow command. Issue the supportshow command and contact your switch service provider.

**Variable:**“rtwrTransmit”, domain, ...

**Probable Cause:** Transmission problem to specified domain.

**Recommended Action:** Use fabricshow to see if domain is offline. Check the physical ISLs for the domain. Issue the supportshow command and contact your switch service provider.

**Variable:**“rtwrTransmit: fcAsyncMultiSend failed”, 0, 0, 0, 0, 0

**Probable Cause:** Internal error.

**Recommended Action:** Check the memory usage on the switch using the memshow command. Issue the supportshow command and contact your switch service provider.

## Severity

Error

## RTWR-TRANSMIT

### Message

```
Switch: <number>, Warning RTWR-TRANSMIT, 3, RTWR <error message>, <detail1>, <detail2>, <detail3>, <detail4>, <detail5>
```

### Probable Cause

RTWR has exhausted the maximum number of retries sending data to the specified domain. Details are as follows:

- <error message>: RTWRTransmit: Maxretries exhausted
- <detail1>: Port
- <detail2>: Domain
- <detail3>: Retry Count
- <detail11>: Status
- <detail11>: Process ID

### Recommended Action

Use the `fabricshow` command to see if the specified domain ID is online.

Enable the switch with the specified domain ID.

If the error persists, copy the error message, gather switch information using the `supportshow` command, and contact your switch service provider.

### Severity

Warning

## SCN-SCNQ\_OVERFLOW

### Message

```
Switch: <number>, Critical SCN-SCNQ_OVERFLOW, 1, SCN queue overflow for <daemon name>
```

### Probable Cause

An attempt to write a State Change Notification message to a specific SCN queue has failed because the SCN queue for the specified <daemon name> is full. This might be caused by the daemon hanging or if the system is busy.

The variables for the <daemon name> are:

- fabricd
- asd
- evmd
- fcpd
- webd
- msd
- nsd
- psd
- snmpd
- zoned
- fspfd
- tsd

### Recommended Action

If this message is caused by the system being busy, the condition is temporary.

If this message is caused by a hung daemon, the software watchdog will cause the daemon to dump the core and reboot the switch.

Issue the `savecore` command and FTP the core files to a secure server location.

Save the console messages, copy the message, collect switch information using the `supportshow` command, and contact your switch service provider.

## Severity

Critical

### SEC-PIDCHGERR, PID Change failed: Change Area failed

## Message

```
Switch: <number>, Error SEC-PIDCHGERR, 2, PID Change failed: Change Area failed.  
<reason>
```

## Probable Cause

Either the defined or active policy could not be updated. If the policy database is very large, it may not be able to change the area because the new policy database exceeds the maximum size. This message can also be caused when the switch is short of memory. The `<reason>` value can be either defined, active, or both policy sets were failed by the daemon. A negative values means that a policy set was failed by the daemon.

## Recommended Action

Reduce the size of the policy database.

## Severity

Error

### SEC-PIDCHGERR, PID Change failed: Provision failed

## Message

```
Switch: <number>, Error SEC-PIDCHGERR, 2, PID Change failed: Provision failed.  
<reason>
```

## Probable Cause

The switch security daemon is busy updating something else. The `<reason>` value can be either defined, active, or both policy sets were failed by the daemon. A negative values means that a policy set was failed by the daemon.

## Recommended Action

For the first reject, wait a few minutes and then resend the transaction. Fabric wide commands may take a few minutes to propagate throughout the fabric. Make sure to leave enough time so your commands do not overlap in the fabric.

## Severity

Error

## SEC-PIDCHGERR, PID Change failed: Size check failed

## Message

```
Switch: <number>, Error SEC-PIDCHGERR, 2, PID Change failed: Size check failed.  
<reason>
```

## Probable Cause

Either the new defined or active policy was too large after modifying the area ID. The `<reason>` value can be either defined, active, or both policy sets were failed by the daemon. A negative values means that a policy set was failed by the daemon.

## Recommended Action

Reduce the size of the specified policy database.

## Severity

Error

## SEC-PIDCHGERR, PID Change failed: Switch is busy

### Message

```
Switch: <number>, Error SEC-PIDCHGERR, 2, PID Change failed: Switch is busy.  
<reason>
```

### Probable Cause

The switch security daemon is busy updating something else. The <reason> value can be either defined, active, or both policy sets were failed by the daemon. A negative values means that a policy set was failed by the daemon.

### Recommended Action

For the first reject, wait a few minutes and then resend the transaction. Fabric wide commands may take a few minutes to propagate throughout the fabric. Make sure to leave enough time so your commands do not overlap in the fabric.

### Severity

Error

## SEC-PIDCHGINFO

### Message

```
Switch: <number>, Info SEC-PIDCHGINFO, 4, PID Change: Success
```

### Probable Cause

The PID format of the switch was changed either to Extended Edge PID or from Extended Edge PID. If DCC policies existed, all area ID values either increased or decreased by 16. The values wrap around after a port value of 128. If a DCC policy contains an area of 127 before changing to displaced PID, then the new area is 15 because of the wrap around.

### Recommended Action

No action is required.

**Severity**

Information

**SEC-RSENDFAIL****Message**

```
Switch: <number>, Error SEC-RSENDFAIL, 2, RCS process fails: %s
```

**Probable Cause**

The RCS (Reliable Commit Service) process fails to complete. RCS is a reliable mechanism to transfer data from one switch to the other switches within the fabric. This mechanism guarantees that either all switches commit to the new database or none of them update to the new database. This process can fail if one switch in the fabric is busy or in an error state that can not accept the database.

**Recommended Action**

RCS is used when the security database is changed by a command issued by security (for example, `secpolicysave`, `secpolicyactivate`, and `secversionreset`). If the switch is busy, the command might fail the first time only; retry the command.

If the command fails consistently, copy the message, collect switch information using the `supportshow` command, and contact your switch service provider.

**Severity**

Error

## SEC-SECCHANGE

### Message

Info SEC-SECCHANGE, 4, text message

### Probable Cause

A security admin event has occurred. This message is for information purposes only, but you should verify that the event was planned. The text messages for individual events are:

- `secModeEnable`: Secure mode has been enabled.
- `secModeDisable`: Secure mode has been disabled.
- `secPolicyActivate`: A, B, C policies have been changed. (A, B, and C are names for changed policies.)
- `secVersionReset`: Secure fabric version stamp has been reset.
- `secFCSFailover`: The Primary FCS has failed over to a new switch.
- All password changes: A, B, C account passwords have been changed. (A, B, C are account names for which passwords are changed.)
- `configDownload`: A `configdownload` has been executed that changed the security policy database.
- `secPolicySave`: A change to the security policy database has been saved.
- SNMP community string change: The admin has made a change to the SNMP community strings.

### Recommended Action

Verify the security event was planned.

If the security event was planned, no action is required.

### Severity

Information



## SEC-SECDBFAIL

### Message

```
Switch: <number>, Warning SEC-SECDBFAIL, 3, Security data fails:
```

### Probable Cause

This message occurs when the receiving switch fails to validate the security database sending from the primary FCS switch. This message usually indicates that the data package is corrupted, the time stamp on the package is out of range as a result of replay attack or out-of-sync time service, or the signature verification failed. Signature verification failure indicates either an internal error (such as losing the primary public key) or an invalid database.

### Recommended Action

Issue the `secfabricshow` command to verify that the fabric is still consistent. All the switches should be in READY state. If a switch is in Error state, the database might not be correctly updated for that specific switch. The error might also be a result of an internal corruption or a hacker attack to the secure fabric.

### Severity

Warning

## SEC-SECDLFAIL

### Message

```
Switch: <number>, Warning SEC-SECDLFAIL, 3, Fail to download security data to domain  
<domain number> after <number of retries> retries
```

### Probable Cause

The specified domain number failed to download security data after the specified number of attempts. The primary switch will segment the failed switch after 30 tries. The failed switch might have had some internal error and failed to accept the database download.

## Recommended Action

Reset the version stamp on the switch to 0 and then rejoin the switch to the fabric. Issue the `mscopyshow` command to verify the switch is RCS capable. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information on this command.

If the switch consistently fails, copy the message, collect switch information using the `supportshow` command, and contact your switch service provider.

## Severity

Warning

## SEC-SECFILE

## Message

```
Switch: <number>, Info SEC-SECFILE, 4, Security file: reading binary file. type = 1
```

## Probable Cause

Indicates that the security configuration file is missing or corrupted. The security database is read from the binary file. The ordering of policies and members within a policy may be lost. This may also cause fabric segmentation.

## Recommended Action

If the switch is segmented, recover that switch the same as another segmented switch. If the switch is not segmented, activate a new policy in the fabric so the security configuration file will get updated.

## Severity

Information

## SEC-SECINFO

### Message

```
Switch: <number>, Info SEC-SECINFO, 4, <cause>
```

### Probable Cause

This message can display the following information:

- Low memory
- Queue full
- Fail to set password
- Fail to set SNMP string
- Primary FCS downloads security database
- Non Primary FCS switch receives security database download

### Recommended Action

Usually this is only a transient problem. Retry the command that caused the message.

### Severity

Information

## SEC-SECINFORM

### Message

```
Switch: <number>, Info SEC-SECINFORM, 4, Primary FCS receives data request from  
domain <domain number>
```

### Probable Cause

The primary FCS received a data request from the specified domain. For example, if the switch fails to update the database or is attacked (data injection), a message is generated to the primary FCS to try to correct and resync with the rest of the switches in the fabric.

### Recommended Action

Check the fabric status using the `secfabricshow` command to verify the fabric is not being attacked by unauthorized users.

### Severity

Information

## SEC-SEC\_STATS

### Message

```
Switch: <number>, Warning SEC-SEC_STATS, 3, Security statistics error:
```

### Probable Cause

Logs each error for any statistic-related command for security (`secstatshow`, `secstatsreset`) to keep track of any security violations on the switch. The counter is updated automatically when a security violation occurs. This message might also occur if the updating counter fails.

### Recommended Action

If the message is the result of a user command, retry the statistic command.

### Severity

Warning

## SEC-SECVIOL\_API

### Message

```
Switch: <number>, Info SEC-SECVIOL_API, 4, Security violation: Unauthorized host with IP address <IP address> tries to establish API connection.
```

### Probable Cause

An API security violation was reported. The specified unauthorized host attempted to establish an API connection.

## Recommended Action

Check to see if the host IP address specified in the message can be used to manage the fabric through an API connection. If so, add the host IP address to the API Policy of the fabric. If not, this is an unauthorized access; take the appropriate action as per your enterprise security policy.

## Severity

Information

## SEC-SECVIOL\_HTTP

## Message

```
Switch: <number>, Info SEC-SECVIOL_HTTP, 4, Security violation: Unauthorized host with IP address <IP address> tries to establish HTTP connection.
```

## Probable Cause

An HTTP security violation was reported. The specified unauthorized host attempted to establish an HTTP connection.

## Recommended Action

Check to see if the host IP address specified in the message can be used to manage the fabric through an HTTP connection. If so, add the host IP address to the HTTP Policy of the fabric. If not, this is an unauthorized access; take the appropriate action as per your enterprise security policy.

## Severity

Information

## SEC-SECVIOL\_TELNET

### Message

```
Switch: <number>, Info SEC-SECVIOL_TELNET, 4, Security violation: Unauthorized host with IP address <IP address> tries to establish TELNET session.
```

### Probable Cause

A Telnet security violation was reported. The specified unauthorized host attempted to establish a Telnet connection.

### Recommended Action

Check to see if the host IP address specified in the message can be used to manage the fabric through an Telnet connection. If so, add the host IP address to the Telnet Policy of the fabric. If not, this is an unauthorized access; take the appropriate action as per your enterprise security policy.

### Severity

Information

## SECLIB-SECVIOL\_DCC

### Message

```
Switch: <number>, Info SECLIB-SECVIOL_DCC, 4, Security violation: Unauthorized device <device node name> tries to flogin to port <port number> of switch <port node name>.\
```

### Probable Cause

A DCC security violation was reported. The specified device attempted to FLOGI to an unauthorized port. The DCC policy correlates specific devices to specific port locations. If the device changes connected port, the device will not be allowed to FLOGI.

## Recommended Action

Check DCC policy and verify that the specified device is allowed in the fabric and is included in the DCC policy. If the specified device is not included in the policy, add it to the policy. If the device is not allowed, this is a valid violation message and an unauthorized entity is trying to gain access to your fabric. Action should be taken, as mandated by your Enterprise Security Policy.

## Severity

Information

## SECLIB-SECVIOL\_LOGIN\_API

## Message

```
Switch: <number>, Info SECLIB-SECVIOL_LOGIN_API, 4, Security violation: Login failure attempt via API. IP Addr: <IP address>
```

## Probable Cause

An API login security violation was reported. The wrong password was used while trying to log in through an API connection; the login failed.

## Recommended Action

Use the correct password.

## Severity

Information

## SECLIB-SECVIOL\_LOGIN\_HTTP

### Message

```
Switch: <number>, Info SECLIB-SECVIOL_LOGIN_HTTP, 4, Security violation: Login failure attempt via HTTP. IP Addr: <IP address>
```

### Probable Cause

An HTTP login security violation was reported. The wrong password was used while trying to log in through a web browser; the login failed.

### Recommended Action

Use the correct password.

### Severity

Information

## SECLIB-SECVIOL\_LOGIN\_MODEM

### Message

```
Switch: <number>, Info SECLIB-SECVIOL_LOGIN_MODEM, 4, Security violation: Login failure attempt via Modem.
```

### Probable Cause

A modem login security violation was reported. An unauthorized device attempted to log in through a modem connection; the login failed.

### Recommended Action

Check the Serial Policy and verify that the connection is allowed. If the connection is allowed but not specified, configure the connection.



If the Serial Policy does not allow connection, this is a valid violation message and an unauthorized entity is trying to access your fabric. Take appropriate action as defined by your enterprise security policy. The Serial Policy controls both modem and serial access, so enabling access in Serial Policy will enable both modem and serial access.

## Severity

Information

## SECLIB-SECVIOL\_LOGIN\_REMOTE

## Message

```
Switch: <number>, Info SECLIB-SECVIOL_LOGIN_REMOTE, 4, Security violation: Login failure attempt via TELNET/SSH/RSH. IP Addr: <IP address>
```

## Probable Cause

A remote login security violation was reported. The wrong password was used while trying to log in through Telnet, SSH, or RSH; the login failed. This message is common, and usually indicates user error.

## Recommended Action

The error message lists the violating IP address. Verify that this IP address is being used by a valid switch admin. Use the correct password.

## Severity

Information

## SECLIB-SECVIOL\_LOGIN\_SERIAL

### Message

```
Switch: <number>, Info SECLIB-SECVIOL_LOGIN_SERIAL, 4, Security violation: Login failure attempt via SERIAL.
```

### Probable Cause

A serial login security violation was reported. The wrong password was used while trying to log in through serial connection; the login failed.

### Recommended Action

Use the correct password.

### Severity

Information

## SECLIB-SECVIOL\_MSaccess

### Message

```
Switch: <number>, Info ECLIB-SECVIOL_MSaccess, 4, Security violation: Unauthorized access from MS device node name <device node name>, device port name <device port name>.
```

### Probable Cause

A management server security violation was reported. The specified unauthorized Management Server (MS) device attempted to establish a connection.

### Recommended Action

Check Management Server Policy and verify that the connection is allowed. If the connection is allowed but not specified, enable the connection in MS Policy.

If the MS Policy does not allow the connection, this is a valid violation message and an unauthorized entity is trying to access your fabric. Take appropriate action as defined by your enterprise security policy.

**Severity**

Information

**SECLIB-SECVIOL\_MSfwr****Message**

```
Switch: <number>, Info SECLIB-SECVIOL_MSfwr, 4, Security violation: MS command is forwarded from non primary FCS switch.
```

**Probable Cause**

A security violation was reported. A management server command was forwarded from a non-primary FCS switch.

**Recommended Action**

Check Management Server Policy and verify that the connection is allowed. If the connection is allowed but not specified, enable the connection in MS Policy.

If the MS Policy does not allow the connection, this is a valid violation message and an unauthorized entity is trying to access your fabric. Take appropriate action as defined by your enterprise security policy.

**Severity**

Information

**SECLIB-SECVIOL\_MSOp****Message**

```
Switch: <number>, Info SECLIB-SECVIOL_MSOp, 4, Security violation: MS device <device wwn> operates on non primary FCS switch.
```

**Probable Cause**

A security violation was reported. A Management Server device is operating on a non-primary FCS switch.

## Recommended Action

Check Management Server Policy and verify that the connection is allowed. If the connection is allowed but not specified, enable the connection in MS Policy.

If the MS Policy does not allow the connection, this is a valid violation message and an unauthorized entity is trying to access your fabric. Take appropriate action as defined by your enterprise security policy.

## Severity

Information

### SECLIB-SECVIOL\_RSNMP

## Message

```
Switch: <number>, Info SECLIB-SECVIOL_RSNMP, 4, Security violation: Unauthorized  
host with IP address <IP address> tries to do SNMP read operation.
```

## Probable Cause

A security violation was reported. The specified unauthorized host attempted to perform a Read SNMP operation (RSNMP).

## Recommended Action

Check RSNMP Policy to verify that hosts allowed access to the fabric through SNMP read operations are included in the RSNMP Policy. If the host is allowed access to the fabric but is not included in the RSNMP Policy, add the host to the policy.

If host is not allowed access to the fabric, this is a valid violation message and an unauthorized entity is trying to access your fabric. Take appropriate action as defined by your enterprise security policy.

## Severity

Information

## SECLIB-SECVIOL\_SCC

### Message

```
Switch: <number>, Info SECLIB-SECVIOL_SCC, 4, Security violation: Unauthorized  
switch <switch wwn> tries to join secure fabric.
```

### Probable Cause

A security violation was reported. The specified unauthorized switch attempts to join the secure fabric.

### Recommended Action

Check the Security Connection Control Policy (SCC Policy specifies the WWNs of switches allowed in the fabric) to verify which switches are allowed in the fabric. If the switch is allowed in the fabric but not included in the SCC Policy, add the switch to the policy.

If the switch is not allowed in the fabric, this is a valid violation message and an unauthorized entity is trying to access the fabric. Take appropriate action as defined by your enterprise security policy.

### Severity

Information

## SECLIB-SECVIOL\_WSNMP

### Message

```
Switch: <number>, Info SECLIB-SECVIOL_WSNMP, 4, Security violation: Unauthorized  
host with IP address <IP address> tries to do SNMP write operation.
```

### Probable Cause

A security violation was reported. The specified unauthorized host attempted to perform a write SNMP operation (WSNMP).

## Recommended Action

Check the WSNMP Policy and verify which hosts are allowed access to the fabric through SNMP. If the host is allowed access to the fabric but is not included in the policy, add the host to the policy.

If the host is not allowed access to the fabric, this is a valid violation message and an unauthorized entity is trying to access your fabric. Take appropriate action as defined by your enterprise security policy.

## Severity

Information

## SEMA-SEMGIVE

## Message

```
Switch: <number>, Critical SEMA-SEMGIVE, 1, semaGive, sema = <semaphore>, errno =  
<error number>
```

## Probable Cause

A failure occurred when releasing a semaphore from the queue. The <semaphore> provides which semaphore had the error, and <error number> is the internal error number used for debugging.

## Recommended Action

Copy the message, collect switch information using the supportshow command, and contact your switch service provider.

## Severity

Critical

## SEMA-SEMTAKE

### Message

```
Switch: <number>, Critical SEMA-SEMTAKE, 1, semaTake, sema = <semaphore>, errno =  
<error number>
```

### Probable Cause

A failure occurred when taking a semaphore. The <semaphore> provides which semaphore had the error, and <error number> is the internal error number used for debugging.

### Recommended Action

Copy the message, collect switch information using the supportshow command, and contact your switch service provider.

### Severity

Critical

## SLAP-CERTCHECKFAIL

### Message

```
Switch: <number>, Warning SLAP-CERTCHECKFAIL, 3, Security Violation: Certificate  
verification failed on port %d
```

### Probable Cause

The certificate on a port could not be verified against the root certificate.

### Recommended Action

A switch is trying to join a fabric and its certificate is not valid. A rogue switch could be trying to join the fabric on this port.

If the switch is not allowed access to the fabric, this is a valid violation message and an unauthorized entity is trying to access your fabric. Take appropriate action as defined by your enterprise security policy.

## Severity

Warning

### SLAP-CERTFAIL

## Message

```
Switch: <number>, Warning SLAP-CERTFAIL, 3, Switch certificate is not installed.
```

## Probable Cause

The switch certificate is missing.

## Recommended Action

Get a new certificate by following the field upgrade process. Refer to the *HP StorageWorks Fabric OS 4.2.x Command Reference Manual* for more information.

## Severity

Warning

### SLAP-MALLOCFAIL

## Message

```
Switch: <number>, Warning SLAP-MALLOCFAIL, 3, Malloc failed in SLAP daemon
```

## Probable Cause

The SLAP daemon could not allocate memory.

## Recommended Action

Issue the memshow command to view your memory usage.

Copy the message, collect switch information using the supportshow command, and contact your switch service provider.



**Severity**

Warning

**SLAP-SECPOLICYINIT****Message**

```
Switch: <number>, Warning SLAP-SECPOLICYINIT, 3, Security Policy Initialization Failed
```

**Probable Cause**

The SLAP daemon failed to initialize the security library.

**Recommended Action**

The SLAP daemon did not start because the library initialization failed.

Reboot the switch.

If the problem persists, copy the message, collect switch information using the `supportshow` command, and contact your switch service provider.

**Severity**

Warning

**SLAP-SIGNCHECKFAIL****Message**

```
Switch: <number>, Warning SLAP-SIGNCHECKFAIL, 3, Security Violation: Signature verification failed on port %d
```

**Probable Cause**

The signature of a challenge received could not be verified.

### **Recommended Action**

Check the switch connected to the port, it could be a rogue switch. There could also be an intruder in the link.

If the switch is not allowed access to the fabric, this is a valid violation message and an unauthorized entity is trying to access your fabric. Take appropriate action as defined by your enterprise security policy.

### **Severity**

Warning

## **SLAP-SIGNFAIL**

### **Message**

```
Switch: <number>, Warning SLAP-SIGNFAIL, 3, Signing operation failed.
```

### **Probable Cause**

The switch private key is missing.

### **Recommended Action**

Generate the switch private key and get a certificate by following the field upgrade process.

### **Severity**

Warning

## SLAP-SLAPREJECT

### Message

```
Switch: <number>, Info SLAP-SLAPREJECT, 4, Authentication reject received on port  
<port>
```

### Probable Cause

The authentication was rejected by the peer entity. It could be due to configuration, unsupported authentication, or a valid authentication failure.

### Recommended Action

Validate the security configuration of entities involved in the authentication and that both entities are at the required firmware revisions which support authentication.

If the switch is not allowed access to the fabric, this is a valid violation message and an unauthorized entity is trying to access your fabric. Take appropriate action as defined by your enterprise security policy.

### Severity

Information

## SLAP-WWNCHECKFAIL

### Message

```
Switch: <number>, Warning SLAP-WWNCHECKFAIL, 3, Security Violation: wwn check failed  
on port %d
```

### Probable Cause

The certificate received from a switch does not have the WWN of that switch.

### Recommended Action

The switch connected to the port specified in the message could be a rogue switch; the switch is semented from the fabric. Take the switch offline or disable the ports connecting it to the fabric; then take appropriate action as per your enterprise security policy.

If the switch is a valid part of the SAN and the certificate WWN does not match the switch WWN, reinstall all PKI objects.

### Severity

Warning

## SULIB-ACTIVE\_FAILOVER

### Message

```
Switch: <number>, Info SULIB-ACTIVE_FAILOVER, 4, Active CP forced failover  
succeeded. This CP is now active.
```

### Probable Cause

Indicates that the forced failover was successful and the standby CP is now the active CP.

### Recommended Action

No action is required. The `firmwaredownload` command is progressing as expected. Issue the `firmwaredownloadstatus` command for more information.

### Severity

Information

## SULIB-CP\_REBOOT

### Message

```
Switch: <number>, Info SULIB-CP_REBOOT, 4, Standby CP reboots.
```

### Probable Cause

Indicates that the standby CP will reboot.

### Recommended Action

No action is required. The `firmwaredownload` command is progressing as expected. Issue the `firmwaredownloadstatus` command for more information.

### Severity

Information

## SULIB-CP\_REBOOT\_OK

### Message

```
Switch: <number>, Info SULIB-CP_REBOOT_OK, 4, Standby CP rebooted successfully.
```

### Probable Cause

The standby CP has rebooted successfully.

### Recommended Action

No action is required. The `firmwaredownload` command is progressing as expected. Issue the `firmwaredownloadstatus` command for more information.

### Severity

Information

## SULIB-FWDL\_END

### Message

```
Switch: <number>, Warning SULIB-FWDL_END, 3, FirmwareDownload command has completed successfully
```

### Probable Cause

The firmware download was completed successfully to both the CPs.

### Recommended Action

No action is required. The `firmwaredownload` command has completed as expected. Issue the `firmwaredownloadstatus` command for more information.

### Severity

Warning

## SULIB-FWDL\_FAIL

### Message

```
Switch: <number>, Info SULIB-FWDL_FAIL, 4, FirmwareDownload failed (status=<error message>).
```

### Probable Cause

The firmware download failed. The additional `<error message>` information provides debugging information.

The firmware download error code contains two bytes. The first byte contains the upgrade error message code, as indicated in; the second byte might contain either the reason code (what caused the failure) or the state code (where the failure occurs), as indicated in [Table 7](#). The error code can be retrieved either by running the `firmwaredownloadstatus` command or through the `errshow` and `errdump` commands.

For example, the following entry indicates that the `firmwaredownload` failed in `SUS_SBY_FS_CHECK (0x2e)` state because the “Standby CP failed to reboot” (`0x66`):

```
Switch: 0, Info SULIB-FWDL_FAIL, 4, Firmwaredownload command
failed (status=0x662e).
```

The following entry indicates that the `firmwaredownload` failed (`0x44`) because firmware has not been committed (`0x1e`):

```
Switch: 0, Info SULIB-FWDL_FAIL, 4, Firmwaredownload command
failed (status=0x441e)
```

[Table 7](#) lists the upgrade message and the associated code for that message.

**Table 7: Upgrade Messages and Code Values**

Upgrade Messages	Code
Image is up-to-date. No need to download.	0xF
Boot environment variable is inconsistent.	0x10
Bootenv OSRootPartition is inconsistent.	0x11
Can't access package list (.plist) file.	0x12
RPM database is inconsistent.	0x13
Ran out of memory.	0x14
Firmwaredownload failed due to out of disk space or timeout.	0x15
Failed to create firmware version file.	0x16
Unexpected system error.	0x17
Error in getting lock device.	0x18
Error in releasing lock device.	0x19
Firmwarecommit failed.	0x1a
Firmware directory structure is not compatible.	0x1b
Failed to load kernel image.	0x1c
Bootenv OSLoader is inconsistent.	0x1d
Firmwaredownload failed because new image has not been committed.	0x1e
Firmwarerestore failed.	0x1f

**Table 7: Upgrade Messages and Code Values (Continued)**

Upgrade Messages	Code
Both images are mounted to the same device.	0x20
Error in removing packages.	0x21
Firmwaredownload is already in progress.	0x22
Firmwaredownload timeout.	0x23
Firmwaredownload sanity check failed.	0x30
Sanity check failed because system is non-redundant.	0x31
Sanity check failed because firmwareDownload is already in progress.	0x32
Sanity check failed because FABRIC OS is disabled on Active CP.	0x33
Sanity check failed because HAMD is disabled on Active CP.	0x34
Sanity check failed because firmwareDownload is already in progress.	0x35
Sanity check failed because FABRIC OS is disabled on Standby CP.	0x36
Sanity check failed because HAMD is disabled on Standby CP.	0x37
Firmwaredownload failed on Standby CP.	0x40
Firmwaredownload failed on Standby CP.	0x41
Firmwaredownload failed on Standby CP.	0x42
Firmwarecommit failed on Standby CP.	0x43
Firmwaredownload failed.	0x44
Firmwaredownload failed due to Standby CP timeout.	0x50
Unable to check firmware version due to Standby CP timeout.	0x51
Firmwaredownload failed due to Standby CP timeout.	0x52
Firmwaredownload failed due to Standby CP timeout.	0x53
Standby CP failed to reboot and was not responding.	0x54



**Table 7: Upgrade Messages and Code Values (Continued)**

Upgrade Messages	Code
Firmwarecommit failed due to Standby CP timeout.	0x55
Unable to check firmware version due to Standby CP timeout.	0x56
Unable to restore the original firmware due to Standby CP timeout.	0x57
Standby CP failed to reboot and was not responding.	0x58
Unable to check firmware version due to Standby CP timeout.	0x59
Sanity check failed because firmwareDownload is already in progress.	0x60
Sanity check failed because firmwareDownload is already in progress.	0x61
NOT USED	0x62
System Error.	0x63
Active CP forced failover succeeded. Now this CP becomes Active.	0x64
Standby CP booted up.	0x65
Standby CP failed to reboot.	0x66
Standby rebooted successfully.	0x67
Standby failed to reboot.	0x68
Firmwarecommit has started to restore the secondary partition.	0x69
Local CP is restoring its secondary partition.	0x6a
Unable to restore the secondary partition. Please use firmwaredownloadstatus and firmwareshow to see firmware status.	0x6b
Firmwaredownload has started on Standby CP. It may take up to 10 minutes.	0x6c
Firmwaredownload has completed successfully on Standby CP.	0x6d
Standby CP reboots.	0x6e
Standby CP failed to boot up.	0x6f

**Table 7: Upgrade Messages and Code Values (Continued)**

Upgrade Messages	Code
Standby CP booted up with new firmware.	0x70
Standby CP failed to boot up with new firmware.	0x71
FirmwareDownload has completed successfully on Standby CP.	0x72
FirmwareDownload has started on Standby CP. It may take up to 10 minutes.	0x73
FirmwareDownload has completed successfully on Standby CP.	0x74
Standby CP reboots.	0x75
Standby CP failed to reboot.	0x76
FirmwareCommit has started on Standby CP.	0x77
FirmwareCommit has completed successfully on Standby CP.	0x78
Standby CP booted up with new firmware.	0x79
Standby CP failed to boot up with new firmware.	0x7a
FirmwareCommit has started on both Active and Standby CPs.	0x7b
FirmwareCommit has completed successfully on Active CP.	0x7c
FirmwareCommit failed on Active CP.	0x7d
The original firmware has been restored successfully on Standby CP.	0x7e
Unable to restore the original firmware on Standby CP.	0x7f
Standby CP reboots.	0x80
Standby CP failed to reboot.	0x81
Standby CP booted up with new firmware.	0x82
Standby CP failed to boot up with new firmware.	0x83
There was an unexpected reboot during firmwareDownload. The command is aborted.	0x84
Standby CP was not responding. The command is aborted.	0x85

**Table 7: Upgrade Messages and Code Values (Continued)**

Upgrade Messages	Code
Firmwarecommit has started on both CPs. Please use firmwaredownloadstatus and firmwareshow to see the firmware status.	0x86
Firmwarecommit has started on the local CP. Please use firmwaredownloadstatus and firmwareshow to see the firmware status.	0x87
Firmwarecommit has started on the remote CP. Please use firmwaredownloadstatus and firmwareshow to see the firmware status.	0x88
Please use firmwaredownloadstatus and firmwareshow to see the firmware status.	0x89
Firmwaredownload command has completed successfully.	0x8a
The original firmware has been restored successfully.	0x8b
Remote CP is restoring its secondary partition.	0x8c
Local CP is restoring its secondary partition.	0x8d
Remote CP is restoring its secondary partition.	0x8e
Firmwaredownload has started.	0x8f
Firmwarecommit has started.	0x90
Firmwaredownload has completed successfully.	0x91
Firmwarecommit has completed successfully.	0x92
Firmwarecommit has started to restore the secondary partition.	0x93
Firmwarecommit failed.	0x94
The secondary partition has been restored successfully.	0x95

Table 8 lists the upgrade state and the associated code value for that state.

**Table 8: Upgrade State and Code Values**

Upgrade State	Code
SUS_PEER_CHECK_SANITY	0x21
SUS_PEER_FWDL_BEGIN	0x22
SUS_SBY_FWDL_BEGIN	0x23
SUS_PEER_REBOOT	0x24
SUS_SBY_REBOOT	0x25
SUS_SBY_FABOS_OK	0x26
SUS_PEER_FS_CHECK	0x27
SUS_SELF_FAILOVER	0x28
SUS_SBY_FWDL1_BEGIN	0x29
SUS_SELF_FWDL_BEGIN	0x2a
SUS_SELF_COMMIT	0x2b
SUS_SBY_FWC_BEGIN	0x2c
SUS_SBY_COMMIT	0x2d
SUS_SBY_FS_CHECK	0x2e
SUS_ACT_FWC_BEGIN	0x2f
SUS_PEER_RESTORE_BEGIN	0x30
SUS_SBY_RESTORE_BEGIN	0x31
SUS_PEER_FWC_BEGIN	0x32
SUS_PEER_FS_CHECK1	0x33
SUS_FINISH	0x34
SUS_COMMIT	0x35

**Recommended Action**

Issue the `firmwaredownloadstatus` command for more information.

Refer to the *HP StorageWorks Fabric OS 4.2.x Procedures User Guide* for troubleshooting information.

**Severity**

Information

**SULIB-FWDL\_START****Message**

```
Switch: <number>, Warning SULIB-FWDL_START, 3, FirmwareDownload has started.
```

**Probable Cause**

The firmware download has started. This process can take some time, wait until the process is complete before initiating any new commands to the system.

**Recommended Action**

Do not failover or power down the system during firmware download. Allow the `firmwaredownload` command to continue without disruption. No action is required.

Issue the `firmwaredownloadstatus` command for more information.

**Severity**

Warning

**SYS-BOOT****Message**

```
Switch: <number>, Info, SYS-BOOT, 4, Start reason: SwitchStart, Switch: Switch:  
<number>,
```

**Probable Cause**

This message is printed when a user executes `switchstart` or `switchreboot` command. This indicates all services are brought back up after a temporary shut down of that logical switch.

### Recommended Action

No action is required if the `switchstart` command was executed intentionally. Since reinitializing a switch is a disruptive operation and can stop I/O traffic, you may have to stop and restart the traffic during this process. There are third party tools which run on devices that can be used to stop and start the traffic.

### Severity

Information

## SYS-NOMEM

### Message

```
Switch: <number>, Critical, SYS-NOMEM, 1, No memory
```

### Probable Cause

This message is displayed when the switch runs out of system memory.

### Recommended Action

Reboot or power cycle the switch. Issue the `memshow` command to view the switch memory usage.

### Severity

Critical

## SYS-SHUTDOWN

### Message

```
Switch: <number>, Info SYS-SHUTDOWN, 4, Shutdown reason: switchShutdown, Switch:  
Switch: <number>,
```

### Probable Cause

This message is printed when a user executes the `switchshutdown` or `switchreboot` command. This indicates all services are brought down for a logical switch.

### Recommended Action

No action is required if the `shutdown` command was executed intentionally. You must issue the `switchstart` command to restart traffic on the logical switch.

### Severity

Information

## SYSC-ERROR

### Message

```
Switch: <number>, Critical SYSC-ERROR, 1, <error information>
```

### Probable Cause

The `<error information>` indicates where the source of the error is and is used for troubleshooting.

### Recommended Action

Copy the error message, issue the `hadump` and `errdump` commands and contact your switch service provider.

On bladed switches, issue the `hadump` command on both CPs.

## Severity

Critical

## SYSC-LAUNCHFAIL

## Message

```
Switch: <number>, Critical SYSC-ERROR, 1, Could not launch <error information>
```

## Probable Cause

This message is logged during the boot sequence when one of the programs would not run on the system. The `<error information>` indicates where the source of the error is and is used for troubleshooting.

## Recommended Action

If the message is reported during a reboot after new firmware has been loaded, try reloading the firmware.

If the problem persists, there might be a conflict between the two versions of firmware or the nonvolatile storage might be corrupted. Contact your switch service provider with

- The exact error message.
- The firmware version that was loaded on the switch before the error occurred.
- The firmware version you are trying to load.

## Severity

Critical



## TRACK-CONFIG\_CHANGE

### Message

```
Switch: <number>, Info TRACK-CONFIG_CHANGE, 4, Config file change from task: <task>
```

### Probable Cause

The switch configuration has changed from the specified task. The following are displayed in the error message: <task> PDMI PC

### Recommended Action

No action is required. To see the new configuration, use `configshow`.

### Severity

Information

## TRACK-FAILED\_LOGIN

### Message

```
Switch: <number>, Info TRACK-FAILED_LOGIN, 4, Unsuccessful login
```

### Probable Cause

Login attempt to the specified switch is unsuccessful. This might happen if the user name or password is wrong.

### Recommended Action

Verify that the user name and password are correct.

### Severity

Information

## TRACK-LOGIN

### Message

```
Switch: <number>, Info TRACK-LOGIN, 4, Successful login
```

### Probable Cause

The specified switch reported a successful login.

### Recommended Action

No action is required.

### Severity

Information

## TRACK-LOGOUT

### Message

```
Switch: <number>, Info TRACK-LOGOUT, 4, Successful logout
```

### Probable Cause

The specified switch reported a successful logout.

### Recommended Action

No action is required.

### Severity

Information

## TRACK-TRACK\_OFF

### Message

```
Switch: <number>, Info TRACK-TRACK_OFF, 4, Track-changes off
```

### Probable Cause

The Track Change feature has been turned off.

### Recommended Action

No action is required. Use the `trackchangeset 0` command to enable the Track Changes feature.

### Severity

Information

## TRACK-TRACK\_ON

### Message

```
Switch: <number>, Info TRACK-TRACK_ON, 4, Track-changes on
```

### Probable Cause

The Track Change feature has been turned on.

### Recommended Action

No action is required. Use the `trackchangeset 1` command to disable the Track Changes feature.

### Severity

Information

## TS-CLKSVRERR

### Message

```
Switch: <number>, Warning TS-CLKSVRERR, 3, <Type of clock server used > Clock server  
used instead of < Type of clock server configured > locl: <code> remote: <code>
```

### Probable Cause

The fabric time synchronization distributed from the Principal or Primary FCS switch was not sourced from the <Type of clock server configured>, instead an alternate server was used indicated by <Type of clock server used>. The type of clock server used or configured may be either:

- LOCL  
Local clock on the Principal or Primary FCS switch
- External  
External NTP server address configured.

This may be logged during temporary operational issues such as IP network connection issues to the external clock server or if the fabric is configured for external time synchronization but the Principal or Primary FCS does not support the feature. If the message does not recur, it may be ignored.

### Recommended Action

Check that the Principal or Primary FCS switch has the clock server configured correctly. If the Principal or Primary FCS does not support the feature, either choose a different switch for the role or reset the clock server to LOCL.

### Severity

Warning

## TS-NTPQFAIL

### Message

```
Switch: <number>, Warning TS-NTPQFAIL, 3, NTP Query failed: <error code>
```

### Probable Cause

The NTP query to the configured external clock server failed. Local clock time on the Principal or Primary FCS switch is used for fabric synchronization.

This may be logged during temporary operational issues such as IP network connection issues to the external clock server. If it does not recur, it may be ignored.

### Recommended Action

Verify that the configured clock server address is valid and available. If not, point to a valid and available clock server.

### Severity

Warning

## TS-TSINFO

### Message

```
Switch: <number>, Info TS-TSINFO, 4, text message
```

### Probable Cause

Indicates a time service event is occurring or has failed. The text message may be one of the following:

- Init failed. Time Service exiting  
Initialization error, Time Server exits.

- **Synchronizing time of day clock**  
Usually logged during temporary operational issues when the clock goes out of synchronization. For example, when a time update packet is missed due to fabric reconfiguration or role change of the Principal or Primary FCS switch. If the message does not recur, it can be ignored.
- **Validating time update**  
Usually logged during temporary operational issues when a time update packet cannot be validated in a secure fabric. For example, during fabric reconfiguration or role change of the Primary FCS switch. If the message does not recur, it can be ignored.

### Recommended Action

No action is required.

### Severity

Information

## UCAST-DOUBLEPATH

### Message

```
Switch: <number>, Debug UCAST-DOUBLEPATH, 5, Duplicate Path to Domain <domain ID>,
Output Port = <port number>, PDB pointer = <value>
```

### Probable Cause

Duplicate paths were reported to the specified domain from the specified output port. The path database (PDB) pointer is the address of the path database and provides debugging information.

### Recommended Action

No action is required.

### Severity

Debug

## UCAST-INCONSISTROUTE

### Message

```
Switch: <number>, Critical UCAST-INCONSISTROUTE, 1, Inconsistent route detected:  
Port = <port number>, should be <port number>
```

### Probable Cause

The switch detected an inconsistency in the routing database between the routing protocol and the hardware configuration. The first port number displayed is what the hardware has configured and the second port number displayed is what the protocol is using.

### Recommended Action

Execute the `switchdisable` command and then the `switchenable` command to reset the routing database.

### Severity

Critical

## UPATH-UNREACHABLE

### Message

```
Switch: <number>, Warning UPATH-UNREACHABLE, 3, No minimum cost path in candidate  
list
```

### Probable Cause

The specified switch `Switch: <number>`, is unreachable because no minimum cost path (FSPF UPATH) exists in the candidate list (domain ID list).

### Recommended Action

This will end the current SPF computation and no user action is required.

## Severity

Warning

### USWD-APP\_NOT\_REFRESH\_ERR

## Message

```
Switch: <number>, Critical uSWD-APP_NOT_REFRESH_ERR, 1, (uSWD)Application with pid <number> not refreshing watchdog.
```

## Probable Cause

A critical error occurred in the watchdog subsystem. An application is not able to refresh. Refer to the specified PID number to find out which application is failing. The switch will reboot (on single-CP switches) or failover (on dual-CP switches).

## Recommended Action

Issue the `savecore` command to learn if any core files were created. If a core file is found, transfer the core files to a secure host. Copy the error message and contact your switch service provider.

## Severity

Critical

### uSWD-uSWD\_GENERIC\_ERR\_CRITICAL (uSWD)

## Message

```
Switch: <number>, Critical uSWD-uSWD_GENERIC_ERR_CRITICAL, 1, uSWD: <error message>
```

## Probable Cause

A critical application error was reported in the watchdog subsystem. Refer to the string at the end of the error message for specific information. The switch will reboot (on single-CP switches) or failover (on dual-CP switches).

The `<error message>` might be any one of the following messages:



- `<swd_read_conf() Failed!>`  
**Probable Cause:** Unable to read the list of applications (daemons) that needs to be monitored.
- `<Opening sys module has Failed <number>>`  
**Probable Cause:** Internal error on device number.
- `<Can't get number of switches!>`  
**Probable Cause:** Internal error condition.
- `<Can't open SWD device>`  
**Probable Cause:** Internal error condition. Unable to open the watchdog device.
- `<Registering SCN has Failed, status = <number> error = <number>>`  
**Probable Cause:** Internal error condition.
- `<SWD_USER: sysModGetFd Failed <number>>`  
**Probable Cause:** Internal error condition.

### Recommended Action

Issue the `savecore` command to learn if any core files were created. If a core file is found, transfer the core files to a secure host. Copy the error message and contact your switch service provider.

### Severity

Critical

## ZONE-ALL\_PORTS\_ARE\_OFFLINE

### Message

```
Switch: <number>, Warning ZONE-ALL_PORTS_ARE_OFFLINE, 3, WARNING - All ports are  
offline.
```

### Probable Cause

All the ports in a zone are offline.

### Recommended Action

Check device connection.

### Severity

Warning

## ZONE-DB\_RESTORE\_TIME

### Message

```
Switch: <number>, Info ZONE-DB_RESTORE_TIME, 4, Zone-DB size (<value>) bytes.  
Wallclock Restore time (<milli-seconds>) milli-sec [normal].
```

### Probable Cause

The zone database is verifying that time values are consistent across the fabric.

### Recommended Action

No action is required.

### Severity

Information

## ZONE-DUPLICATE\_ENTRY

### Message

```
Switch: <number>, Warning ZONE-DUPLICATE_ENTRY, 3, WARNING - Duplicate entries in zone(zone name) specification.
```

### Probable Cause

Duplicate Entries in the Zone Object. A zone object member is specified more than once in any single given zone object.

### Recommended Action

Check the members of the zone and delete the duplicate member.

### Severity

Warning

## ZONE-EFFECTIVE\_CFG\_CHANGED

### Message

```
Switch: <number>, Info ZONE-EFFECTIVE_CFG_CHANGED, 4, The effective configuration has changed.
```

### Probable Cause

The effective zone configuration has changed.

### Recommended Action

Verify that this zone configuration change was done on purpose. If the new effective zone configuration is correct, no action is necessary.

### Severity

Information

## ZONE-ENFORCEMIX

### Message

```
Switch: <number>, Info ZONE-ENFORCEMIX, 4, WARNING - HARD & SOFT zones(%s, %s)
definition overlap.\
```

### Probable Cause

A port is zoned with mixed devices (WWN & Domain, Port). During zoning data base cross checking, it is detected that either

- A port zone member is also listed as a member of a MIXED zone,
- or a WWN zone member is also specified as a member of a MIXED zone.

### Recommended Action

If hardware zoning enforcement is preferred, edit the zoning database to have the port zoned with devices defined as WWN or defined as Port, Domain.

### Severity

Information

## ZONE-INCORRECT\_ENFORCEMENT

### Message

```
Switch: <number>, Error ZONE-INCORRECT_ENFORCEMENT, 2, Incorrect zoning enforcement
type(zone type) at port(port number)\
```

### Probable Cause

An incorrect zoning enforcement type was reported on the specified port. This is a software error.

### Recommended Action

Copy the message, collect switch information with the `supportshow` command, and contact your switch service provider.

**Severity**

Error

**ZONE-INCORRECT\_FA\_CONFIG****Message**

```
Switch: <number>, Error ZONE-INCORRECT_FA_CONFIG, 2, FA Zone(zone name) contains  
incorrect number of Initiator
```

**Probable Cause**

The Fabric Assist (FA) zoning configuration has more than one initiator. The probable cause is incorrect entries in the FA Zoning configuration.

**Recommended Action**

Edit the zone database. Make sure that only one initiator is set per FA Zone configuration.

**Severity**

Error

**ZONE-INSUFF\_PID\_COUNT****Message**

```
Switch: <number>, Error ZONE-INSUFF_PID_COUNT, 2, WWN (<wwn>) converted into more  
than 64 PIDs. Total: (<number_of_pids>)
```

**Probable Cause**

The Fabric OS detected a device that contains more than 64 PIDs for a single Node WWN; the detected device is zoned as a node WWN. 64 is the current limit set for a multiple-port device when using Node WWN for zoning. The <wwn> is the world wide name of the device. The <number\_of\_pids> is the attempted and failed number of devices connected to this node device.

### Recommended Action

Create a new node WWN <B>. Reconnect some of the ports currently connected to node WWN <A> to the new node WWN <B>.

Reduce the number of ports the node WWN <A> connects to.

### Severity

Error

## ZONE-IOCTLFAIL

### Message

```
Switch: <number>, Error ZONE-IOCTLFAIL, 2, Ioctl <function> failure in <error message> at port <port number>: err <error string>
```

### Probable Cause

Frame Filter Logic reported a failure during one of the IOCTL calls. The IOCTL call from which the failure is reported, is listed as part of the error message. If this error occurs, it is due to a programming error with regard to adding CAM entries before the filter setup.

### Recommended Action

Copy the error message, collect switch information with the `supportshow` command, and contact your switch service provider.

### Severity

Error

## ZONE-IU\_RETRY\_FAIL

### Message

```
Switch: <number>, Warning ZONE-IU_RETRY_FAIL, 3, IU retry failure
```

### Probable Cause

Link error, the Fabric is busy, or there has been a remote switch failure.

### Recommended Action

Check the link connection, collect switch information with the `supportshow` command, and contact your switch service provider.

### Severity

Warning

## ZONE-MSG\_SAVE

### Message

```
Switch: <number>,, Info ZONE-MSG_SAVE, 4, cfgSave completes successfully.
```

### Probable Cause

The `cfgsave` command was issued by Admin.

### Recommended Action

No action is required.

### Severity

Information

## ZONE-NOLICENSE

### Message

```
Switch: <number>, Error ZONE-NOLICENSE, 2, Missing required license - <license name>.
```

### Probable Cause

The required zoning license is missing.

### Recommended Action

Install the zoning license using the `licenseadd` command. Refer to your switch supplier to obtain a zoning license if you do not have one.

### Severity

Error

## ZONE-NOTOWNER

### Message

```
Switch: <number>, Warning ZONE-NOTOWNER, 3, Not owner of the current transaction %d
```

### Probable Cause

The zoning change operation is not allowed because the zoning transaction is opened by another task. Indicates concurrent modification of the Zoning Database by multiple administrators.

### Recommended Action

Wait until the previous transaction is completed. Verify that only one administrator is working with the zone database at a time.

### Severity

Warning



## ZONE-PORT\_IS\_OFFLINE

### Message

```
Switch: <number>, Warning ZONE-PORT_IS_OFFLINE, 3, WARNING - Port <port number> is  
offline.
```

### Probable Cause

The specified port zone member is offline.

### Recommended Action

Check the device connection, fiber cables, and verify the SFP has not deteriorated.  
Make sure the device is in the stable mode.

### Severity

Warning

## ZONE-PORT\_OUT\_OF\_RANGE

### Message

```
Switch: <number>, Warning ZONE-PORT_OUT_OF_RANGE, 3, zone <current zone> contains  
<port number> which does not exist.
```

### Probable Cause

The port zone member that is targeted for the local switch contains a non-existent port. The effective zoning configuration (displayed in the error message) contains a port number that is out of range.

### Recommended Action

Edit the zone database and change the port number to a viable value in the Effective configuration.

## Severity

Warning

### ZONE-QLOOP\_NOT\_SUPPORTED

## Message

```
Switch: <number>, Warning ZONE-QLOOP_NOT_SUPPORTED, 3, Quick Loop not supported.
```

## Probable Cause

The QuickLoop feature is not supported in Fabric OS v4.2.x. If the QuickLoop Zoning configuration is enabled on the switch, it will not be supported.

## Recommended Action

Edit the zone database to remove the QuickLoop zoning definition in the Effective configuration.

## Severity

Warning

### ZONE-REPORTLUNMISMATCH

## Message

```
Switch: <number>, Error ZONE-REPORTLUNMISMATCH, 2, REPORT LUN check mismatch between (%s, %s).
```

## Probable Cause

The LUN value specified in the zone database does not exist, or is mismatched to the LUN value of the connected device.

## Action

Change the LUN value specified in the zone database to match the device LUN.

**Severity**

Error

**ZONE-SESSION\_HARD\_ZONING****Message**

```
Switch: <number>, Info ZONE-SESSION_HARD_ZONING, 4, port (%d) enforcement changed to  
Session Based Hard Zoning.
```

**Probable Cause**

In Session Based Zoning, the zone enforcement is checked by software. In hardware enforced zoning, zone or alias members are defined using <domain, portarea> exclusively or WWNs exclusively. That is, using one method or the other, to define all objects in the zoning database. If the devices on the port are defined by a mixture of port IDs and WWNs, the zone enforcement is Session Based. Also if the SID list of the hardware enforced zoning overflows (more than 64), the hardware zone enforcement changes to Session Based Zoning.

**Action**

No action is required.

**Severity**

Information

**ZONE-TRANS\_ABORT****Message**

```
Switch: <number>, Error ZONE-TRANS_ABORT, 2, Zoning transaction aborted - <error  
reason>
```

**Probable Cause**

The Zoning Transaction was aborted due to a variety of potential errors. The specific reason can be one of the following:

- Zone Merge Received: The fabric is in the process of merging two zone databases.
- Zone Config update Received: The fabric is in the process of updating the zone database.
- Bad Zone Config: The new config is not viable.
- Zoning Operation failed: A zoning operation failed.
- Shell exited: The command shell has exited.
- Unknown: An error was received for an unknown reason.
- User Command: A user command is currently modifying the zone database.
- Switch Shutting Down: The switch is currently shutting down.

### Recommended Action

Many of the causes of this error message are transitory, or because two admins are working with the zoning database concurrently. If you receive this error wait a few minutes and try again. Verify that no one else is currently modifying the zone database.

### Severity

Error

## ZONE-TRANSCOMMIT

### Message

```
Switch: <number>, Error ZONE-TRANSCOMMIT, 2, Transaction Commit failed. Reason code  
<reason code>
```

### Probable Cause

Reliable Commit Service (RCS) transmit error. RCS is a protocol that transmits changes to the configuration database within a fabric.

## Recommended Action

Often this message is transitory. Wait a few minutes and retry the command. Make sure that your changes to the zone database are not overwriting the work of another admin. Issue the `cfgtransshow` command to find out if there is any outstanding transaction running on their local switches. If the problem persists, collect the error information, collect switch information with the `supportshow` command, and contact your switch service provider.

## Severity

Error

## ZONE-WWNINPORT

## Message

```
Switch: <number>, Warning ZONE-WWNINPORT, 3, WARNING - WWN <WWN number> in HARD PORT  
zone <zone_name>.
```

## Probable Cause

One or more devices are zoned as WWN (with WWN devices) and is also zoned as Port, Domain (with Port, Domain) devices. The devices are used to specify zone members over separate zones.

## Recommended Action

If hardware zoning enforcement is preferred, edit the zoning database to have the device zoned only with one type (WWN or Domain, Port).

## Severity

Warning

## ZONE-WWNSPOOF

### Message

```
Switch: <number>, Error ZONE-WWNSPOOF, 2, WWN spoofing at (d,p)=(domain, port)
PortWWN <WWN number>
```

### Probable Cause

An un-authorized device is accessing the fabric. Zoning detected a discrepancy between the frame and the information that the device registered with the Name Server during PLOGI, ADISC, DISC trap processing. The discrepancy happened within the set of information that includes device PID, port WWN and node WWN. This is considered to be a security violation and the frame is dropped.

### Recommended Action

Investigate which device is accessing the port. Stop the unauthorized device from sending unauthorized frames to the port.

### Severity

Error

## ZONE-WWNZONECHECK

### Message

```
Switch: <number>, Error ZONE-WWNZONECHECK, 2, WWN zoneTypeCheck or zoneGroupCheck
failure(<zone_name>)
```

### Probable Cause

A Zone Filter or Zone Group Check Failure occurred. The Frame Filter Logic reported a failure when creating or adding Zone groups during PLOGI trap processing. This error should not occur. If it does, it is due to a programming error with regard to adding CAM entries before the filter setup.

**Recommended Action**

Copy the error message, collect switch information with the `supportshow` command, and contact your switch service provider.

**Severity**

Error

**ZONE-ZONEGROUPADDFAIL****Message**

```
Switch: <number>, Warning ZONE-ZONEGROUPADDFAIL, 3, WARNING - port <port number> Out  
of CAM entries
```

**Probable Cause**

The total number of entries of SID CAM for the quad exceeded 64 while creating or adding a zone group. The maximum number of CAM entities allowed per quad for hardware zoning enforcement is 64.

**Recommended Action**

If hardware zoning enforcement is preferred, edit the zoning database to have less zoned PIDs for that port.

**Severity**

Warning





This glossary defines terms used in this guide or related to this product and is not a comprehensive glossary of computer terms.

**AL\_PA**

Arbitrated loop physical address. A unique 8-bit value assigned during loop initialization to a port in an arbitrated loop.

**alias**

A logical grouping of elements in a fabric. An alias is a collection of port numbers and connected devices, used to simplify the entry of port numbers and WWNs when creating zones.

**arbitrated loop**

A shared 100-Mb/sec Fibre Channel transport structured as a loop. Can support up to 126 devices and one fabric attachment.

**area number**

In Fabric OS V4.0 and above, ports on a switch are assigned a logical area number. Port area numbers can be viewed by entering the `switchshow` command. They are used to define the operative port for many Fabric OS commands: for example, area numbers can be used to define the ports within an alias or zone.

**autocommit**

A feature of the `firmwaredownload` command. Enabled by default, `autocommit` commits new firmware to both partitions of a control processor.

**autoreboot**

Refers to the `-b` option of the `firmwaredownload` command. Enabled by default.

**backup FCS switch**

Relates to the Secure Fabric OS feature. The backup fabric configuration server serves as a backup in case the primary FCS switch fails. *See also* [FCS switch](#), [primary FCS switch](#).

**BB\_Credit**

Buffer-to-buffer credit. The number of frames that can be transmitted to a directly connected recipient or within an arbitrated loop. Determined by the number of receive buffers available.

**beacon**

A tool in which all of the port LEDs on a switch are set to nonvolatile storage from one side of the switch to the other, to enable identification of an individual switch in a large fabric. A switch can be set to beacon by a CLI command or through Advanced Web Tools.

**bloom**

The code name given to the third-generation Fabric ASIC. This ASIC is used in HP StorageWorks 2 GB switches and beyond.

**CAM**

Content-addressable memory.

**CLI**

Command line interface. An interface that depends entirely on the use of commands, such as through Telnet or SNMP, and does not involve a GUI.

**community (SNMP)**

A relationship between a group of SNMP managers and an SNMP agent, in which authentication, access control, and proxy characteristics are defined. *See also* [SNMP](#).

**compact flash**

Nonvolatile storage that is used in a manner similar to hard disk storage. It is connected to a bridging component that connects to the PCI bus of the processor.

**configuration**

(1) A set of parameters that can be modified to fine-tune the operation of a switch. Use the `configshow` command to view the current configuration of your switch.

(2) In Zoning, a zoning element that contains a set of zones. The Configuration is the highest-level zoning element and is used to enable or disable a set of zones on the fabric. *See also* [zone configuration](#).

**core PID**

Core switch port identifier. This PID format supports higher port count switches and is the default mode for all 4.x switches. The core PID format must be set for all V3.x and earlier switches, if any V4.x switch is included in a fabric. *See also* [native PID](#), [extended edge PID](#).

**DHCP**

Dynamic Host Configuration Protocol.

**DLS**

Dynamic load-sharing. Dynamic distribution of traffic over available paths. Allows for recomputing of routes when an Fx\_Port or E\_Port changes status.

**domain ID**

A unique identifier for all switches in a fabric, used in routing frames. Usually automatically assigned by the principal switch but can be assigned manually. The domain ID for an HP StorageWorks switch can be any integer between 1 and 239.

**EE\_Credit**

End-to-end credit. The number of receive buffers allocated by a recipient port to an originating port. Used by Class 1 and 2 services to manage frame exchange across the fabric, between source and destination.

**error**

As it applies to the Fibre Channel industry, a missing or corrupted frame, timeout, loss of synchronization, or loss of signal (link errors).

**Ethernet**

Popular protocol for LANs.

**exchange**

The highest-level Fibre Channel mechanism used for communication between N\_Ports. Composed of one or more related sequences, it can work in either one or both directions.

**extended edge PID**

Extended edge port identifier. This PID format supports higher port count switches. The area\_ID that results from a change to extended edge PID is the same as the native PID format when port numbers are less than 16. The extended edge PID format must be set on all switches in the fabric. This enables higher port count switches to operate with lower port count switches, and will not require servers to change PID binding. *See also* [core PID](#), [native PID](#).

**Fabric Manager**

An optionally licensed software. Fabric Manager is a GUI that allows for fabric-wide administration and management. Switches can be treated as groups, and actions such as firmware downloads can be performed simultaneously.

**Fabric Watch**

An optionally licensed software. Fabric Watch can be accessed through either the command line or Advanced Web Tools, and it provides the ability to set thresholds for monitoring fabric conditions.

**failover**

Describes the Core Switch 2/64 process of one CP passing active status to another CP. A failover is nondisruptive.

**FC-PH**

The Fibre Channel physical and signaling standard for FC-0, FC-1, and FC-2 layers of the Fibre Channel Protocol. Indicates signaling used for cable plants, media types, and transmission speeds.

**FCP**

Fibre Channel Protocol. Mapping of protocols onto the Fibre Channel standard protocols. For example, SCSI FCP maps SCSI-3 onto Fibre Channel.

### **FCS switch**

Relates to the Secure Fabric OS feature. One or more designated switches that store and manage security parameters and configuration data for all switches in the fabric. They also act as a set of backup switches to the primary FCS switch. *See also* [backup FCS switch](#), [primary FCS switch](#).

### **FDMI**

Fabric Device Management Interface. FDMI is a database service provided by the fabric for Nx\_Ports. The primary use is by HBA devices that register information about themselves and their ports.

### **FIFO**

First in, first out. Refers to a data buffer that follows the first in, first out rule.

### **FL\_Port**

Fabric loop port. A port that is able to transmit under fabric protocol and also has arbitrated loop capabilities. Can be used to connect an NL\_Port to a switch.

### **flash**

Programmable nonvolatile RAM (NVRAM) memory that maintains its contents without power.

### **FLOGI**

Fabric login. The process by which an N\_Port determines whether a fabric is present and, if so, exchanges service parameters with it. *See also* [PLOGI](#).

### **frame**

The Fibre Channel structure used to transmit data between ports. Consists of a start-of-frame delimiter, header, optional headers, data payload, cyclic redundancy check (CRC), and end-of-frame delimiter. There are two types of frames: link control frames (transmission acknowledgements and so forth) and data frames.

### **FRU**

Field replaceable unit. A component that can be replaced onsite.

### **FSP**

Fibre Channel Service Protocol. The common protocol for all fabric services, transparent to the fabric type or topology.

### **FSPF**

Fabric shortest path first. The routing protocol for Fibre Channel switches.

### **FTP**

File Transfer Protocol.

### **gateway**

Hardware that connects incompatible networks by providing translation for both hardware and software. For example, an ATM gateway can be used to connect a Fibre Channel link to an ATM connection.

**GBIC**

Gigabit interface converter. A removable serial transceiver module that allows gigabaud physical-level transport for Fibre Channel and gigabit Ethernet.

**HA**

High availability. A set of features in HP StorageWorks switches that is designed to provide maximum reliability and nondisruptive replacement of key hardware and software modules.

**HBA**

Host bus adapter. The interface card between a server or workstation bus and the Fibre Channel network.

**HTTP**

Hypertext Transfer Protocol. The standard TCP/IP transfer protocol used on the World Wide Web.

**ID\_ID**

Insistent domain ID. A parameter of the `configure` command in the Fabric OS.

**Insistent Domain ID Mode**

Sets the domain ID of a switch as insistent, so that it remains the same over reboots, power cycles, failovers, and fabric reconfigurations.

**IOCTL**

I/O control.

**iSCSI**

Internet Small Computer Systems Interface. A protocol that defines the processes for transferring block storage applications over TCP/IP networks by encapsulating SCSI commands into TCP and transporting them over the network using IP.

**ISL**

Interswitch link. A Fibre Channel link from the E\_Port of one switch to the E\_Port of another.

 **jitter**

A deviation in timing for a bit stream as it flows through a physical medium.

**LAN**

Local area network. A network in which transmissions typically take place over fewer than 5 kilometers (3.4 miles).

**LED**

Light-emitting diode. Used to indicate the status of elements on a switch.

**MALLOC**

Memory allocation. Usually relates to buffer credits.

**MIA**

Media interface adapter. A device that converts optical connections to copper ones, and vice-versa.

## **MIB**

Management Information Base. An SNMP structure to help with device management, providing configuration and device information.

## **N\_Port**

Node port. A port on a node that can connect to a Fibre Channel port or to another N\_Port in a point-to-point connection.

## **Name Server**

Simple Name Server (SNS). A switch service that stores names, addresses, and attributes for up to 15 minutes and provides them as required to other devices in the fabric. SNS is defined by Fibre Channel standards and exists at a well-known address. Also called *directory service*.

## **NAS**

Network-attached storage. A disk array connected to a controller that gives access using a LAN.

## **native PID**

Native PID format is the default port identifier scheme on HP StorageWorks 1 GB series switches and SAN Switch 2/8-EL and SAN Switch 2/16. This format does not support higher port count switches in the fabric. *See also* [core PID](#), [extended edge PID](#).

## **NS**

Name Server. The service provided by a fabric switch that stores names, addresses, and attributes related to Fibre Channel objects. Can cache information for up to 15 minutes. Also called *Simple Name Server* or *directory service*.

## **Performance Monitoring**

An HP StorageWorks switch feature that monitors port traffic and includes frame counters, SCSI read monitors, SCSI write monitors, and other types of monitors.

## **persistent error log**

Error messages of a high enough level (by default, Panic or Critical) are saved to nonvolatile storage memory on the switch instead of to RAM. These messages are saved over reboots and power cycles, constituting the persistent error log. Note that each CP on a Core Switch 2/64 has its own unique persistent error log.

## **PID**

Port identifier. *See also* [core PID](#), [extended edge PID](#), [native PID](#).

## **PKI**

Public key infrastructure. An infrastructure that is based on public key cryptography and CA (certificate authority) and that uses digital certificates.

## **PKI certification utility**

Public key infrastructure certification utility. A utility that makes it possible to collect certificate requests from switches and to load certificates to switches.

**PLOGI**

Port login. The port-to-port login process by which initiators establish sessions with targets. *See also* [FLOGI](#).

**port**

In an HP StorageWorks switch environment, an SFP or GBIC receptacle on a switch to which an optic cable for another device is attached.

**port address**

In Fibre Channel technology, the port address is defined in hexadecimal. In the Fabric OS, a port address can be defined by a domain and port number combination or by area number. In an ESCON Director, an address used to specify port connectivity parameters and to assign link addresses for attached channels and control units.

**port card**

A hardware component that provides a platform for field-replaceable, hot-swappable ports.

**port log**

A record of all activity on a switch, kept in volatile memory.

**port log dump**

A view of what happens on a switch, from the switch's point of view. The `portlogdump` command is used to read the port log.

**port name**

A user-defined alphanumeric name for a port.

**port swapping**

Port swapping is the ability to redirect a failed port to another port. This feature is available in Fabric OS V4.1.0 and higher.

**port\_name**

The unique identifier assigned to a Fibre Channel port. Communicated during login and port discovery.

**POST**

Power-on self-test. A series of tests run by a switch after it is turned on.

**primary FCS switch**

Relates to the Secure Fabric OS feature. The primary fabric configuration server switch actively manages security and configurations for all switches in the fabric.

**principal switch**

The first switch to boot up in a fabric. Ensures unique domain IDs among roles.

**QuickLoop**

A software product that allows multiple ports on a switch to create a logical loop. Devices connected using QuickLoop appear to each other as if they are on the same arbitrated loop.

### **QuickLoop Mode**

Allows initiator devices to communicate with private or public devices that are not in the same loop.

### **R\_A\_TOV**

Resource allocation timeout value. The maximum time a frame can be delayed in the fabric and still be delivered.

### **RCS**

Reliable Commit Service. Refers to ILS command code.

### **RSCN**

Registered state change notification. A switch function that allows notification of fabric changes to be sent from the switch to specified nodes. The fabric controller issues RSCN requests to N\_Ports and NL\_Ports, but only if they have registered to be notified of state changes in other N\_Ports and NL\_Ports. This registration is performed using the State Change Registration (SCR) Extended Link Service. An N\_Port or NL\_Port can issue an RSCN to the fabric controller without having completed SCR with the fabric controller.

### **RX**

Receiving frames.

### **SAN**

Storage area network. A network of systems and storage devices that communicate using Fibre Channel protocols.

### **SCSI**

Small Computer Systems Interface. A parallel bus architecture and a protocol for transmitting large data blocks to a distance of 15 to 25 meters.

### **sectelnet**

A protocol similar to Telnet but with encrypted passwords for increased security.

### **Secure Fabric OS**

Optional licensed feature that provides advanced, centralized security for a fabric.

### **security policy**

Rules that determine how security is implemented in a fabric. Security policies can be customized through Secure Fabric OS or Fabric Manager.

### **SES**

SCSI Enclosure Services. A subset of the SCSI protocol used to monitor temperature, power, and fan status for enclosed devices.

### **SFP**

Small-form-factor pluggable. A transceiver used on 2 GB/sec switches that replaces the GBIC.

### **SFP cable**

A cable specifically designed for use with an SFP. Not compatible with GBICs.



**Simple Name Server (SNS)**

A switch service that stores names, addresses, and attributes for up to 15 minutes and provides them as required to other devices in the fabric. SNS is defined by Fibre Channel standards and exists at a well-known address. Also referred to as *directory service* or *name server*.

**Single CP Mode**

The **-s** option of the `firmwaredownload` command. Using `firmwaredownload -s` enables Single CP Mode. In the Core Switch 2/64, Single CP Mode enables a user to upgrade a single CP and to select full-install, auto-reboot, and auto-commit.

**SNMP**

Simple Network Management Protocol. An Internet management protocol that uses either IP for network-level functions and UDP for transport-level functions, or TCP/IP for both. Can be made available over other protocols, such as UDP/IP, because it does not rely on the underlying communication protocols.

**SNS**

Simple Name Server.

**soft zone**

A zone consisting of zone members that are made visible to each other through client service requests. Typically, soft zones contain zone members that are visible to devices using Name Server exposure of zone members. The fabric does not enforce a soft zone. Note that well-known addresses are implicitly included in every zone.

**SSH**

Secure shell. Used starting in Fabric OS V4.1 to support encrypted Telnet sessions to the switch. SSH encrypts all messages, including the client sending the password at login.

**switch**

A fabric device providing bandwidth and high-speed routing of data using link-level addressing.

**switch name**

The arbitrary name assigned to a switch.

**switch port**

A port on a switch. Switch ports can be E\_Ports, F\_Ports, or FL\_Ports.

**syslog**

Syslog daemon. Used to forward error messages.

**TC**

Track changes.

**Telnet**

A virtual terminal emulation used with TCP/IP. *Telnet* is sometimes used as a synonym for the Fabric OS CLI.

**throughput**

The rate of data flow achieved within a cable, link, or system. Usually measured in bps (bits per second, or b/sec).

**tiering**

The process of grouping particular SAN devices by function and then attaching these devices to particular switches or groups of switches based on that function.

**Time Server**

A Fibre Channel service that allows for the management of all timers.

**track changes**

A Fabric OS feature that can be enabled to report specific activities (for example, logins, logouts, and configuration task changes). The output from the track-changes feature is dumped to the error log for the switch.

**transceiver**

A device that converts one form of signaling to another for transmission and reception; in fiber optics, optical to electrical.

**trap (SNMP)**

The message sent by an SNMP agent to inform the SNMP management station of a critical error. *See also* [SNMP](#).

**trunking**

In Fibre Channel technology, a feature that enables distribution of traffic over the combined bandwidth of up to four ISLs between adjacent switches, while preserving in-order delivery.

**trunking group**

A set of up to four trunked ISLs.

**trunking ports**

The ports in a set of trunked ISLs.

**TS**

Time Server.

**TX**

Transmit.

**U\_Port**

Universal port. A switch port that can operate as a G\_Port, E\_Port, F\_Port, or FL\_Port. A port is defined as a U\_Port when it is not connected or has not yet assumed a specific function in the fabric.

**unicast**

The transmission of data from a single source to a single destination.

**watchdog**

A software daemon that monitors Fabric OS modules on the kernel.

**well-known address**

As it pertains to Fibre Channel technology, a logical address defined by Fibre Channel standards as assigned to a specific function and stored on the switch.

**WWN**

World Wide Name. An identifier that is unique worldwide. Each entity in a fabric has a separate WWN.

**zone**

A set of devices and hosts attached to the same fabric and configured as being in the same zone. Devices and hosts within the same zone have access to others in the zone but are not visible to any outside the zone.

**zone configuration**

A specified set of zones. Enabling a configuration enables all zones in that configuration.

**zoning**

A feature in fabric switches or hubs that allows segmentation of a node by physical port, name, or address.



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