Brocade Fabric OS v3.1.2a Release Notes_v1.0

April 2, 2004

Document History

Document Title	Summary of Changes	Publication Date
Brocade Fabric OS v3.1.2a Release Notes_v1.0	First release	April 2, 2004

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Overview

Fabric OS v3.1.2a is a patch release that contains fixes to a small number of additional issues found since the release of Fabric OS v3.1.2. Aside from these changes, this patch is functionally identical to the Fabric OS v3.1.2 release. Brocade Fabric OS v3.1.2 provides the following enhancements and new features to Fabric OS v3.1.2x:

- Reduces fabric configuration downtime.

  Extended-edge PID for mixed fabrics eliminates host reboot for hosts that statically bind PIDS.

- Improves fabric diagnostics.

  PathInfo command displays information about the path between any two ports in a fabric.

- Improves manageability and ease of use

  Advanced Web Tools is improved.

About This Release

This patch includes:

- Fixes to defects as detailed in the section "Defect Closed in Fabric OS v3.1.2a"
- Updates to the “Important Notes” section regarding compatibility of v4.2.0 with v3.x releases prior to v3.1.0

Supported Switches

Fabric OS v3.1.2 supports SilkWorm 3200 (3534-F08) and 3800 (2109-F16) switches.

Technical Support

Contact your switch support supplier for hardware, firmware, and software support, including product repairs and part ordering. To assist your support representative and to expedite your call, have the following three sets of information immediately available when you call:

1. General Information

- Technical Support contract number, if applicable
- Switch model
- Switch operating system version
- Error messages received
- **supportShow** command output
- Detailed description of the problem and specific questions
- Description of any troubleshooting steps already performed and results

2. Switch Serial Number

The switch serial number and corresponding bar code are provided on the serial number label, as shown below.

Type 2109-F16	**Type 3534-F08**
S/N PPSSSSS	**S/N PPSSSSS**

The serial number label is located as follows:

- *SilkWorm 2000 series (2109-S16/S08 & 3534-1RU) switches:* Bottom of chassis
- *SilkWorm 3200 (3534-F08) and 3800(2109-F16) switches: Front and bottom* of chassis
- *SilkWorm 3900 (2109-F32) switches: Front and b*ottom of chassis
- *SilkWorm 6400 and 12000 (2109-M12) switches:* Inside front of chassis, on wall to right of ports

3. World Wide Name (WWN)

- *SilkWorm 3900 (2109-F32) and 12000 (2109-M12) switches:* Provide the license ID. Use the **licenseidshow** command to display the license ID.
- *All other SilkWorm (2109 & 3534) switches:* Provide the switch WWN. Use the **wwn** command to display the switch WWN.

Standards Compliance

Brocade Fabric OS v3.1.2 conforms to the following Fibre Channel Standards, in a manner consistent with accepted engineering practices and procedures:

- FC-AL ANSI X3.272: 1996
- FC-AL-2 NCIT S 332: 1999
- FC-FLA NCIT S TR-20: 1998
- FC-GS-3 NCITS 348-2000 Rev 7.01
- FC-FG ANSI X3.289: 1996
- FC-PH ANSI X3.230: 1994
- FC-PH-2 ANSI X3.297: 1997
- FC-PH-3 ANSI X3.303: 1998
- FC-PLDA NCIT S TR-19: 1998
- FC-SW-2 Rev 5.3
- FC-VI Rev 1.61
- FC-MI Rev 1.92
- FC-BB Rev 4.7
- FC-FS Rev 1.7
- FC-BB-2 Rev 5.3
- IPFC RFC 2625
- FCP ANSI X3.269: 1996
- FCP-2 Rev 7

In certain cases, Brocade might add proprietary supplemental functions to those specified in the standards. Brocade verifies conformance with Fibre Channels Standards by subjecting its switches to SANmark Conformance Tests developed by the Fibre Channel Industry Association. Brocade switches have earned the SANmark logo, indicating such conformance. SANmark is a limited testing program and does not test all standards or all aspects of standards.

Important Notes

This section lists information you should be aware of when running Fabric OS v3.1.2.

OS Requirements

The following table summarizes the versions of Brocade software that are supported in conjunction with this release. These are the minimum software versions that would interoperate. Brocade recommends using the latest software release versions to get the most benefit out of the SAN.

Fabric OS v2.4.x or earlier, v3.0.0x or earlier, and v4.0.0 or earlier have reached their end-of-life and are no longer supported as of February 2004.

	2109-S08/S16 3534-1RU	2109-F16 3534-F08	2109-F32 2109-M12	2005-H08/H16 2109-M14	Fabric Manager
General compatibility	2.6.0c or later	3.0.2c or later	4.0.2 or later	4.2.0b or later	3.0.2c or later
With Secure Fabric OS enabled	2.6.1 or later	3.1.0 or later	4.1.0 or later	4.2.0b or later	3.0.2c or later
Recommended software versions	2.6.2 or later	3.1.2 or later	4.2.0b or later	4.2.0b or later	4.1.1 or later

Maximizing Fabric Availability During SilkWorm 3900 Hot Code Activation

During code activation on a SilkWorm 3900 (2109-F32) running Fabric OS 4.1.0 or later, data keeps flowing between hosts and storage devices. However, fabric services are unavailable for a period of approximately 50 to 55 seconds. Possible disruption of the fabric can be minimized by ensuring that switches logically adjacent to the SilkWorm 3900 (2109-F32 directly connected via an ISL) are running, at the minimum, Fabric OS 2.6.1 or later, 3.1.0 or later, or 4.1.0 or later. More information is available in the firmware download section of the *Brocade Fabric OS Procedures Guide*, publication number 53-0000518-03.

Mixed-Fabric Environment with Different SilkWorm Platforms

Fabric OS v2.6.2/v3.1.2/v4.2.0 introduced a new switch PID format: extended-edge PID (Format 2). Extended-edge PID might be useful if you introduce a Fabric OS v4.2.0 switch to a fabric consisting solely of Fabric OS v2.x/v3.x switches. Before adding a Fabric OS v4.2.0 switch to such a fabric, refer to *Brocade Fabric OS Procedures Guide,* publication number 53-0000518-03, for information on the extended-edge PID format. Note that in order to use the extended-edge PID format, Fabric OS v2.6.2, v3.1.2, and v4.2.0 must be deployed together, as applicable, to the switches.

If extended-edge PID format is set before downgrading from the current Fabric OS release to an older Fabric OS version that does not support extended-edge PID format, PID must be returned to supported formats, such as core PID (Format 1) or native PID (Format 0).

Advanced Web Tools Updates

- Advanced Web Tools recognizes Brocade switches released after Fabric OS v3.1.2 as generic 16-port switches.
- When using a mixed fabric—that is, a fabric containing v4.x, v3.x and v2.x switches—Brocade recommends that you use the most advanced switches to control the fabric. For example, use the v4.x switches as the primary FCS, the location to perform zoning tasks, and the time server (CLI). Brocade also recommends that you use the most recently released firmware to control the fabric.
- Advanced Web Tools browser, operating system, and Java Plug-in support is updated for Fabric OS v3.1.2. The following table identifies the supported browsers, operating systems, and Java Plug-ins for this release.

Operating System	Browser	Java Plug-in
RedHat Linux 9.0	Mozilla 1.4	1.4.2
Solaris 2.8	Mozilla 1.4	1.4.2

Operating System	Browser	Java Plug-in
RedHat Linux 9.0	Mozilla 1.4	1.4.2
Solaris 2.8	Mozilla 1.4	1.4.2
Solaris 2.9	Mozilla 1.4	1.4.2
Windows 2000	Internet Explorer 6.0	1.3.1_04 1.4.1_02 (recommended)
Windows 2003	Internet Explorer 6.0	1.3.1_04 1.4.1_02 (recommended)
Windows XP	Internet Explorer 6.0	1.3.1_04 1.4.1_02 (recommended)

- Two Domain/Four Domain Fabric Licensing

  If your fabric includes a switch with a license for a limited number of switches in the fabric and the fabric exceeds the switch limit indicated in the license, Web Tools allows a 45-day "grace period" in which you can still monitor the switch. However, Web Tools will display warning messages periodically.

  These messages warn you that your fabric size exceeds the supported switch configuration limit and tells you how long you have before Web Tools will be disabled. After the 45-day grace period, you will no longer be able to launch Web Tools from the switch with the limited switch license if that switch is still exceeding the switch limit. Two domain/four domain fabric licensing is applicable only to 2 Gbit/sec switches.

- For instructions on installing Mozilla 1.4 on Solaris 8 and Solaris 9, refer to the following Web site:

http://ftp.mozilla.org/pub/mozilla.org/mozilla/releases/mozilla1.4/mozilla-sparc-sun-solaris2.8_1.4.readme

- **Issue:** The Mozilla browser does not support the Switch Admin module properly in Fabric OS v2.6.x; a warning message is displayed. For other 2.6.x versions, no warning message is displayed.

  Workaround: Use Netscape 4.7.7 or later.

- The additionally supported browsers, operating systems, and Java Plug-ins introduce the following limitations when using mixed OS versions in Advanced Web Tools v3.1.2.

Launch Switch Environment	Problems
Firmware: Fabric OS v2.6.x **Operating System:** Solaris **Browser:** Mozilla	**Issue**: The Switch Admin does not launch correctly. If you try to launch the Switch Admin using Fabric OS v2.6.2 on a Solaris operating system with a Mozilla browser, a warning dialog displays telling you to use the Netscape browser. If you try to launch the Switch Admin using Fabric OS v2.6.1 or lower on a Solaris operating system with a Mozilla browser, the Switch Admin fails and no warning is displayed. **Workaround:** Although the Netscape browser is not supported by Web Tools for switches running Fabric OS v2.6.2, 3.1.2, or 4.2.0 or later, if you must access the Switch Admin on a switch running Fabric OS v2.6.x from a Solaris operating system, use the Netscape 4.77 browser.

Launch Switch Environment	Problems
Firmware: version *prior* to Fabric OS v2.6.2, v3.1.2, or v4.2.0 with secure mode enabled **Operating System:** Solaris Browser: **Mozilla**	**Issue**: If you try to launch the Switch Admin, Zoning, Fabric Watch, or High Availability Admin using firmware versions prior to v2.6.2, 3.1.2, or 4.2.0 on a Solaris operating system with a Mozilla browser, the browser might crash due to a buffer overflow problem with Mozilla. **Workaround**: Although the Netscape browser is not supported by Web Tools for switches running Fabric OS v2.6.2, 3.1.2, or 4.2.0 or later, if you must access the Switch Admin, Zoning, Fabric Watch, or High Availability Admin on a switch running firmware versions prior to v2.6.2, 3.1.2, or 4.2.0, from a Solaris operating system, use the Netscape 4.77 browser.
Firmware: version *prior* to Fabric OS v2.6.2, v3.1.2, or v4.2.0 **Operating System:** Any supported operating system (with supported browser) **Browser:** Any supported browser (on supported operating system)	**Issue**: When trying to access a switch running firmware versions Fabric OS v2.6.2, v3.1.2, or v4.2.0 from the launch switch, Switch Explorer will display a null pointer exception, and the SwitchInfo applet will not display; Switch Explorer does not work properly with switches running the latest firmware. **Workaround**: Use a launch switch running Fabric OS v2.6.2, v3.1.2, or v4.2.0 or later to access the switch.
	Issue: When trying to perform end-to-end monitoring (Performance Monitor) on a SilkWorm 24000 (2109-M14) or SilkWorm 3250 (2005-H08), the SilkWorm 24000 (2109-M14) or SilkWorm 3250 (2005-H16) is displayed as a 16-port switch. **Workaround:** For a SilkWorm 3250 (2005-H08), ignore the extra ports. For a SilkWorm 24000 (2109-M14), use a launch switch running Fabric OS v4.2.0 or later to perform end-to-end monitoring on the switch.
	Issue: When trying to perform zoning on a SilkWorm 24000 (2109-M14) or SilkWorm 3250 (2005-H08), the SilkWorm 24000 (2109-M14) or SilkWorm 3250 (2005-H08) is displayed as a 16-port switch. **Workaround:** If you are running Brocade Secure Fabric OS, select a switch running Fabric OS v2.6.2, v3.1.2, or v4.2.0 or later as the primary FCS switch. If you are not running Secure Fabric OS, use a launch switch running Fabric OS v2.6.2, v3.1.2, or v4.2.0 or later to perform zoning on the switch.
Firmware: Fabric OS v2.6.2, v3.1.2, or v4.2.0 **Operating System:** Any supported operating system (with supported browser) **Browser:** Any supported browser (on supported operating system)	**Issue:** The Name Server table does not display properly for a switch running firmware versions prior to Fabric OS v2.6.2, v3.1.2, or v4.2.0. **Workaround:** If secure mode is enabled, select a switch running Fabric OS v2.6.2, v3.1.2, or v4.2.0 or later as the primary FCS switch. If secure mode is not enabled, use a launch switch running Fabric OS v2.6.2, v3.1.2, or v4.2.0 or later to access the Name Server table on the switch.
Firmware: version *prior* to Fabric OS v2.6.2, 3.1.2, or 4.2.0 **Operating System:** Solaris **Browser:** Netscape	**Issue**: Any switches running Fabric OS v2.6.2, 3.1.2, or 4.2.0 or later are unsupported through Netscape. **Workaround**: The Netscape browser is not supported by Web Tools for switches running Fabric OS v2.6.2, 3.1.2, or 4.2.0 or later. Use the Mozilla browser to manage all of your switches from a Solaris operating system.
Firmware: version *prior* to Fabric OS	**Issue**: When you are trying to run Fabric View, the browser

Launch Switch Environment	Problems
v2.6.1, v3.0.x, or v4.0.x **Operating System:** Windows **Browser:** Internet Explorer	might crash. **Workaround**: Use a launch switch that runs Fabric OS v2.6.1, v3.0.x, or v4.0.x or later, so that you can use Switch Explorer (not Fabric View).

Fabric Watch Updates

Per customer request, the Fabric Watch default threshold has been changed so that fewer messages are logged. The changes are in **bold** and effective as of Fabric OS v3.1.2 and v4.2.0.

Class	Class Area Name	Description	Default Settings		
			Threshold Settings	Alarm Settings	Threshold State
Port	Link failure count	Monitors number of link failures.	Unit Error(s) Time Base Minute Low 1 High 60 Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Loss of synchronization count	Monitors number of loss synchronization errors.	Unit Error(s) Time Base Minute Low 1 High 120 Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Loss of signal count	Monitors number of signal loss errors.	Unit Error(s) Time Base Minute Low 1 High 120 Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Primitive sequence protocol error	Monitors number of primitive sequence errors.	Unit Error(s) Time Base Minute Low 1 High 60 Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Invalid transmission word	Monitors number of invalid words transmitted.	Unit Error(s) Time Base Minute Low 1 High 60 Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Invalid CRC count	Monitors number of CRC errors.	Unit Error(s) Time Base Minute Low 1 High 60 Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative

Class	Class Area Name	Description	Default Settings		
			Threshold Settings	Alarm Settings	Threshold State
					Continued…
	Receive performance	Monitors received rate in MB/sec.	Unit KB/sec Time Base Low 0 High 0 Buffer 0	Changed 0 Exceeded 0 Below 0 Above 0 In-between 0	Informative Informative Informative Informative Informative
	State changes	Monitors state changes.	Unit Error(s) Time Base Minute Low 1 High 120 Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
E_Port	Link failure count	Monitors number of link failures.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Loss of synchronization count	Monitors number of loss synchronization errors.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Loss of signal count	Monitors number of signal loss errors.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Primitive sequence protocol error	Monitors number of primitive sequence errors.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Invalid transmission word	Monitors number of invalid words transmitted.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Invalid CRC count	Monitors number of CRC errors.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Receive performance	Monitors received rate in	Unit KB/sec Time Base	Changed 0 Exceeded 0	Informative Informative

Class	Class Area Name	Description	Default Settings		
			Threshold Settings	Alarm Settings	Threshold State
		KB/sec.	Low 120000 **High 220000** Buffer 0	Below 0 Above 0 In-between 0	Normal Faulty Informative
					Continued…
	Transmit performance	Monitors transmit rate in KB/sec.	Unit KB/sec Time Base Low 120000 **High 220000** Buffer 0	Changed 0 Exceeded 0 Below 0 Above 0 In-between 0	Informative Informative Normal Faulty Informative
	State changes	Monitors state changes.	Unit Error(s) Time Base Minute Low 1 **High 2** Buffer 0	Changed 0 Exceeded 0 **Below 1** Above 1 In-between 0	Informative Informative Normal Faulty Informative
Fabric Copper Port	Link failure count	Monitors number of link failures.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 1** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Loss of synchronization count	Monitors number of loss synchronization errors.	Unit Error(s) Time Base Minute Low 1 **High 8** Buffer 0	Changed 0 Exceeded 0 **Below 1** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Loss of signal count	Monitors number of signal loss errors.	Unit Error(s) Time Base Minute Low 1 **High 8** Buffer 0	Changed 0 Exceeded 0 **Below 1** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Primitive sequence protocol error	Monitors number of primitive sequence errors.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Invalid transmission word	Monitors number of invalid words transmitted.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Invalid CRC count	Monitors number of CRC errors.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	State changes	Monitors state changes.	Unit Error(s) Time Base Minute	Changed 0 Exceeded 0	Informative Informative

Class	Class Area Name	Description	Default Settings		
			Threshold Settings	Alarm Settings	Threshold State
			Low 1 **High 15** Buffer 0	**Below 0** Above 1 In-between 0	Normal Faulty Informative

Continued…

Fabric Optic Port	Link failure count	Monitors number of link failures.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Loss of synchronization count	Monitors number of loss synchronization errors.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Loss of signal count	Monitors number of signal loss errors.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Primitive sequence protocol error	Monitors number of primitive sequence errors.	Unit Error(s) Time Base Minute Low 1 **High 0** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Invalid transmission word	Monitors number of invalid words transmitted.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 0** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	Invalid CRC count	Monitors number of CRC errors.	Unit Error(s) Time Base Minute Low 1 **High 5** Buffer 0	Changed 0 Exceeded 0 **Below 1** Above 1 In-between 0	Informative Informative Normal Faulty Informative
	State changes	Monitors state changes.	Unit Error(s) Time Base Minute Low 1 **High 15** Buffer 0	Changed 0 Exceeded 0 **Below 1** Above 1 In-between 0	Informative Informative Normal Faulty Informative

Other Notes

This table lists other important information you should be aware of regarding Fabric OS v3.1.2 qualification.

Area	Description
Compatability	Sometimes in a mixed fabric of v4.x/3.x/2.x, fabric reconfiguration is caused by link reset on v3.x/v2.x; This only happens in the fabric containing any Fabric OS v3.x versions released prior to v3.1.0 or Fabric OS v2.x versions releases prior to v2.6.1 under heavy traffic or cpu intensive operations such as large (50k) zone database propagation. Use latest revision code across all releases in a mix fabric is highly recommended practice.
Fabric configuration	During fabric configuration, the countdown message that used to appear on the console no longer appears, starting with Fabric OS v2.6.2, v3.1.2, and v4.2.0. The fabric reconfiguration message is instead captured in the error log. For details, refer to the DIAG messages in the section "Brocade Diagnostic and System Error Reference User's Guide, v3.1" in this document.
Fabric Watch, e-mail alert error message	When enabling e-mail alerts in Fabric Watch and an event occurs, the message "ErrLog: Error Level=3 [(null)]" is captured to the system error log. This message is from SMTP and can be ignored.
FARP requests	Fabric OS v2.x and v3.x do not support FARP requests, only ARP requests. When using IP over Fibre Channel, confirm that all host HBAs support ARP requests and issue ARP requests.
Boot over SAN	Boot over SAN JNI 6460 fails to initialize when switch port speed is configured to 2 Gbit/sec. Setup: Single 3800 switch with v3.1.2_bld05, Compaq DL580 server, TRIMM 4HDD JBOD Hard set the port that is connected to the JNI 6460 to 2 Gbit/sec. Hard set the port speed that is connected to the JBOD to 1Gbit/sec. Power on the server and observe the PC monitor. The error message reports that the JNI 6460 fails to initialize. The port status reports "No_Sync". **Note:** This symptom does not appear when port speed is set to autonegotiate. The JNI 6460 HBA will operate with the FC switch as long as the port speed setting is Auto or 1 Gbit/sec. When the switch port is set to 2 Gbit/sec, the JNI 6460 HBA is unable to initialize.
License removal	When a user removes a license from the switch, the licensed feature is not disabled until the switch is rebooted or a switch disable and enable is performed.
Security, PKICERT utility	Before using the PKICERT utility to prepare a Certificate Signing Request (CSR), ensure that there are no spaces in the switch names of any switches in the fabric. The Web site that processes the CSRs and generates the digital certificates does not accept switch names containing spaces, and any CSRs that do not conform to this requirement are rejected.

Area	Description
Zoning	To use zoning in a non-RCS (Reliable Commit Service) mode fabric—that is, in a fabric containing switches with firmware versions other than v2.6.x or later, v3.1 or later, and v4.1 or later—install all appropriate zoning licenses on all the switches in the fabric before attempting to bring a switch in to the fabric. Furthermore, if the zoning license is to be removed, the user must make sure it is reinstalled properly on the affected switch before attempting the **cfgenable** zoning operation. Failure to follow these steps can cause inconsistency of zoning configuration on the affected switches should a zoning operation be attempted from a remote switch in the fabric. On the affected switches, an error message appears on the console or telnet session (this can also be seen by using **errShow** or **errDump** command), indicating that the zoning license was missing.
Mixed fabric environment with extended-edge PID format	If downgrading from a current release that supports extended-edge PID (Format 2) to a prior version without the support of this new PID format, **configShow** and other configure commands might present different values.

New Command Introduced in v3.1.2

pathInfo

Displays routing and statistics information along a path.

SYNOPSIS **pathInfo** [[[*domain*], *source port*], *destination port*] [,"**-r**"]

AVAILABILITY root, admin

DESCRIPTION

The **pathInfo** command displays detailed routing information from a source port (or area) on the local switch to a destination port (or area) on another switch. This routing information describes the exact path that a user data stream takes to go from the source to the destination. If the user specifies inactive ports or a path through a switch that does not have active routing tables to the destination, **pathInfo** describes the path that would be used if the ports were active. If the user specifies a destination port that is not active, **pathInfo** uses the embedded port as the destination.

For switches with blades, the ingress and egress points are specified as area numbers. For a non-bladed switch, ingress and egress points are specified as ports. This agrees with the representation shown in the **switchShow** command.

In addition, **pathInfo** can provide, upon request, statistics on every traversed ISL.

Routing and statistics information is provided by every switch along the path, based on the current routing tables information statistics calculated continuously in real time. Each switch represents one hop.

Other options allow the collection of information on the reverse path or on a user-selected path (source route).

For each hop, the routing information output includes the following:

Hop	The hop number, the local switch being hop 0.
In Port	The port (or area) from which the frames come; for hop 0, the source port. For a switch with blades, this is specified as the area number; otherwise, it is specified as the port number.
Domain ID	The domain ID of the switch.
Name	The name of the switch.

Out Port	The output port that the frames take to reach the next hop; for the last hop, the destination port or area. For a switch with blades, this is specified as the area number; otherwise, it is specified as the port number.
BW	The bandwidth of the output ISL, in Gbit/sec. BW does not apply to the embedded port.
Cost	The cost of the link used by FSPF routing protocol. Cost applies only to an E_Port.

For each hop, statistics are broken down into basic and extended. They are reported below the routing information, separated into input port statistics and output port statistics. For each port, they are further separated into transmit and receive statistics. Statistics are not reported for the embedded port.

Some values are measured over multiple time intervals. For example, the output line utilization in bytes per second is calculated over both a 1-second period and over a 64-second period. This gives an idea of both the current line utilization and the utilization over a longer period of time. The time interval is reported in parenthesis after the value's description.

Maximum Hop Count

pathInfo uses a special frame that is sent hop-by-hop from the source switch to the destination switch, collecting routing and statistics information at every hop. To prevent such a frame from looping forever if an error occurs, a maximum number of hops is enforced.

The hop count includes all hops in the direct path from source to destination, and also all the hops in the reverse path, if the tracing of the reverse path is requested. The default value for the maximum hop count is 25.

Basic Statistics

Basic statistics report variables that give an indication of ISL congestion along the path. They include the following:

B/s	Bytes per second.
Txcrdz	The length of time, in milliseconds, that the port has been prevented from transmitting frames due to lack of buffer-to-buffer credit. This is an indication of downstream congestion. Note that other commands—for example **portStatsShow** might express this value in units other than milliseconds.

Extended Statistics

Extended statistics report variables of general interest. They include the following:

F/s	Frames per second.
Words	Total number of 4-byte Fibre Channel words.
Frames	Total number of frames.
Errors	Total number of errors that might cause a frame to be received incorrectly. This includes CRC errors, bad-EOF errors, frame-truncated errors, frame-too-short errors, and encoding errors inside a frame

Reverse Path

In general, the path from port A on switch X to port B on switch Y might be different from the path from port B to port A. The difference could be in the links traversed between the same sequence of switches, or the reverse path might even involve different switches. The trace reverse path option allows the user to determine both routing and statistics information for the reverse path, in addition to those for the direct path.

Source Route

The source route option allows the user to specify a sequence of switches or ports (or areas) that the **pathInfo** frame has to follow to reach the destination. Therefore, the path might be different from the one the actual traffic from source to destination takes.

The source route is expressed as a sequence of switches, a sequence of output ports (or areas), or a combination thereof. The next hop in the source route is described by either the output port (or area) to be used to reach the hop or the domain ID of the next hop.

The source route can specify a partial route from source to destination as a full route, or as an arbitrary route across the fabric. If a partial route is specified, the remaining hops to the destination is the path from the input port (or area) on the first hop not listed in the source route. The maximum hop count is enforced.

If the source route does not specify all the switches along a section of the path, a further option allows to specification of a strict path versus a loose path. A strict source route requires that only the specified switches be reported in the path description. If two switches are specified back-to-back in the source route descriptor but are not directly connected, the switches in between are ignored. In case of a loose source route, the switches in between arereported. The concepts of strict and loose route apply to the portion(s) of the path described by domains, not to the part described by output ports/areas.

OPERANDS

The following operands are allowed:

domain	The ID of the destination domain.
source port	The port (or area) whose path to the destination domain is sought. The embedded port (-1) is used by default. For a switch with blades, the destination is specified as the area; otherwise, it is specified as the port. If the source port is given as -1 with no additional arguments, then basic statistics are displayed for the route.
destination port	A port on the destination switch. **pathInfo** returns the state of the port (or area). The embedded port (-1) is used by default or if the user specifies a destination port that is not active. For a switch with blades, the destination is specified as the area; otherwise, it is specified as the port.
-r	Show reverse path in addition to forward path in display output.

Without operands, **pathInfo** displays a menu in which the following parameters can be provided:

max hops	The maximum number of hops that the **pathInfo** frame is allowed to traverse. Default: 25.
domain	The ID of the destination domain. Mandatory, no default.
source port	The port whose path to the destination domain is sought. It can be an F_Port or an E_Port. The embedded port (-1) is used by default. For a switch with blades, this is specified as the area; otherwise, it is specified as the port.
destination port	A port on the destination switch. **pathInfo** returns the state of the port and all requested statistics pertaining to the port. The embedded port (-1) is used by default or if the specified destination port is not an existing active port. For a switch with blades, this is specified as the area; otherwise, it is specified as the port.
basic stats	Requests the reporting of basic statistics on every link. Default: no.
extended stats	Requests the reporting of extended statistics on every link. Default: no.

trace reverse path	Provides path information from the destination port to the source port. Default: no.
source route	Specifies a sequence of switches or ports that the **pathInfo** frame should traverse. Note that if an output port (or area) to the next hop is specified, the user is not prompted for the domain of the next switch; that is determined by the port (or area) specified. Default: no.
strict source rte	Specifies that the source route must be followed strictly as indicated, skipping possible intermediate switches. When using this option, the source route must be specified using domain numbers (rather than the output port).
Timeout	The maximum time allowed to wait for the response. Default: 10 seconds.

EXAMPLES

The following example shows the **pathInfo** command invoked with all operands on the command line:

```
web226:root> pathInfo 91
Target port is Embedded
   Hop In Port  Domain ID (Name)      Out Port    BW   Cost
   ---------------------------------------------------------
     0       E         9 (web226)          2       1G   1000
     1       3        10 (web229)          8       1G   1000
     2       8         8 (web228)          9       1G   1000
     3       6        91 (web225)          E       -      -
```

This next example shows the **pathInfo** command invoked through the menu, including basic and extended statistics:

```
web226:root> pathInfo

         Max hops: (1..127) [25]
         Domain: (1..239) [-1] 8
         Source port: (0..15) [-1]
         Destination port: (0..255) [-1]
         Basic stats (yes, y, no, n): [no] y
         Extended stats (yes, y, no, n): [no] y
         Trace reverse path (yes, y, no, n): [no]
         Source route (yes, y, no, n): [no]
         Timeout: (1..30) [5]

Target port is Embedded

     Hop  In Port  Domain ID (Name)      Out Port    BW   Cost
     ---------------------------------------------------------
      0       E         9 (web226)          2       1G   1000

     Port                         E                            2
                         Tx             Rx             Tx             Rx
                         ---------------------------------------------
     B/s (1s)             -              -              0              0
     B/s (64s)            -              -              1              1
     Txcrdz (1s)          -              -              0              -
     Txcrdz (64s)         -              -              0              -
     F/s (1s)             -              -              0              0
     F/s (64s)            -              -           2743              0
     Words                -              -        2752748        2822763
     Frames               -              -         219849          50881
     Errors               -              -              -              0


     Hop  In Port  Domain ID (Name)      Out Port    BW   Cost
     ---------------------------------------------------------
      1       3        10 (web229)         12       1G   1000
```

```
Port                          3                            12
                         Tx            Rx             Tx             Rx
                         ---------------------------------------------
B/s (1s)                 36            76              0              0
B/s (64s)                 5             5              5              5
Txcrdz (1s)               0             -              0              -
Txcrdz (64s)              0             -              0              -
F/s (1s)                  1             1              0              0
F/s (64s)                 0             0              0              0
Words             240434036       2294316        2119951        2121767
Frames             20025929         54999         162338          56710
Errors                    -             4              -              0


Hop  In Port  Domain ID (Name)      Out Port    BW   Cost
---------------------------------------------------------
 2      14         8 (web228)          E       -      -

Port                         14                              E
                         Tx            Rx             Tx             Rx
                         ---------------------------------------------
B/s (1s)                  0             0              -              -
B/s (64s)                 5             5              -              -
Txcrdz (1s)               0             -              -              -
Txcrdz (64s)              0             -              -              -
F/s (1s)                  0             0              -              -
F/s (64s)                 0             0              -              -
Words              20158695       1021842              -              -
Frames              1665662         56849              -              -
Errors                    -             4              -              -
```

SEE ALSO

portStatsShow, **switchShow**

Commands Modified in v3.1.2

The following commands have been modified in v3.1.2:

- quietMode
- switchShow

quietMode

Sets/clears shell quiet mode.

SYNOPSIS quietMode [*newMode*]

AVAILABILITY all users (display)

admin (set/clear)

DESCRIPTION

This command affects the output displayed on the switch's console (serial port or telnet session).

By default, quiet mode is turned off, and all switch tasks can send output to the console. Some output is caused by asynchronous events, such as the fabric reconfiguring, or by devices logging in.

When quiet mode is turned on, only output produced by shell commands is shown; all asynchronous output produced by other tasks is suppressed. This is useful when driving a telnet session using a script that might not expect any asynchronous output.

OPERAND

The following operand is optional:

newMode 0 to clear quiet mode (all tasks can print to the console)

1 to set quiet mode (only shell commands can print)

EXAMPLE

The following example first displays the current mode and then on turns quite mode on:

```
sw5:admin> quietMode
Quiet Mode is OFF
sw5:admin> quietMode 1
Committing configuration...done.
Quiet Mode is now ON
```

switchShow

The **switchShow** command now supports the **–portcount** option, which returns the number of ports on the switch. The syntax is:

```
switchShow, "-portcount"
```

Modified Commands Introduced in v3.1.2a

configure

Changes system configuration settings.

SYNOPSIS **`configure`**

AVAILABILITY admin

DESCRIPTION

This command changes some system configuration settings, including:

- Switch fabric settings
- Virtual channel settings
- Zoning operation parameters
- RSCN transmission mode
- Arbitrated loop settings
- System services settings
- Portlog events disable/enable settings

This command cannot execute on an enabled system; you must first disable the system, using the **switchDisable** command.

Navigate the **configure** command output by responding to a series of hierarchical menus. Each top-level menu and its associated submenus consists of a text prompt, a list of acceptable values (if appropriate), and a default value (shown in brackets). Press **Enter** to use the default value (refer to "Special Inputs," later in this command description).

Switch Fabric Settings

There are several settings that control the overall behavior and operation of the fabric. Some of these values, such as the domain, are normally assigned automatically by the fabric and can be different from one switch to another. However, other parameters, such as the buffer-to-buffer credit or the timeout values, can be changed to suit particular applications or operating environments, as long as there is agreement among all switches, to allow formation of the fabric.

The following table defines changeable settings affecting the fabric.

Field	Type	Default	Range

Domain	Number	1	Varies
BB Credit	Number	16	1 to 27
R_A_TOV	Number	10000	E_D_TOV * 2 to 120000
E_D_TOV	Number	2000	1000 to R_A_TOV / 2
Data Field Size	Number	2112	256 to 2112
Sequence Level Switching	Boolean	0	0 to 1
Disable Device Probing	Boolean	0	0 to 1
Suppress Class F Traffic	Boolean	0	0 to 1
SYNC IO mode	Boolean	0	0 to 1
VC Encoded Address Mode	Boolean	0	0 to 1
Disable Translative Mode	Boolean	0	0 to 1
Switch PID Format	Number	1	0 to 2
Per-frame Route Priority	Boolean	0	0 to 1
Long Distance Fabric	Boolean	0	0 to 1

Domain — The domain number uniquely identifies the switch in a fabric. Normally, the fabric automatically assigns this value. The range of allowed values varies depending on the switch model and other system settings (refer to VC Encoded Address Mode).

BB Credit — The buffer-to-buffer (BB) credit represents the number of buffers available to attached devices for frame receipt. The range of allowed values varies depending on other system settings.

R_A_TOV — The resource allocation timeout value (R_A_TOV) displays in milliseconds. This variable works with the variable E_D_TOV to determine the switch's actions when presented with an error condition.

Allocated circuit resources with detected errors are not released until the time value has expired. If the condition is resolved prior to the timeout, the internal timeout clock resets and waits for the next error condition.

E_D_TOV — Error detect time out value (E_D_TOV) displays in milliseconds. This timer flags a potential error condition when an expected response is not received (an acknowledgment or reply in response to packet receipt, for example) within the set time limit. If the time for an expected response exceeds the set value, then an error condition is met.

Data Field Size — This specifies the largest possible value, in bytes, for the size of a type-1 (data) frame. The switch advertises this value to other switches in the fabric during construction of the fabric as well as to other devices when they connect to the fabric. Setting this to a value smaller than 2112 might result in decreased performance.

Sequence Level Switching — When set to 1, frames of the same sequence from a particular source are transmitted together as a group. When set to 0, frames are transmitted interleaved among multiple sequences.

Under normal conditions, sequence-level switching should be disabled for better performance. However, some host adapters have performance issues when receiving interleaved frames from multiple sequences. When there are

	such devices attached to the fabric, sequence-level switching should be enabled.
Disable Device Probing	When this is set, devices that do not register themselves with the Name Server will not be present in the Name Server database. Set this mode only if the switch's N_Port discovery process (PLOGI, PRLI, INQUIRY) causes some attached device to fail.
Suppress Class F Traffic	By default, the switch can send Class-F frames. When this option is turned on, Class-F traffic is converted to Class-2 traffic before being transmitted.
SYNC IO mode	By default, SYNC IO is used for performance enhancement. When the option is set, SYNC IO is used.
VC Encoded Address Mode	When set, frame source and destination addresses utilize an address format compatible with some first-generation switches. Set this mode only if the fabric includes such switches. **Note:** VC-encoded address mode cannot be set in security mode. Also, when this mode is set, security mode cannot be enabled.
Disable Translative Mode	The setting is only relevant if VC-encoded address mode also is set. This feature, when set, disables translative addressing to achieve explicit address compatibility with some first-generation switches. Set this feature only if hardware or software systems are attached to the fabric that explicitly relies on a specific frame address format.
Switch PID Format	The setting is only relevant if VC-encoded address mode is not set: 0 Native PID format (16 based, 16 port format), for fabrics with legacy low-count port switches. 1 Core PID format (0 based, 256 port format), preferred mode for mixed fabrics with legacy and new switches. 2 Extended Edge PID format (16 based, 256 port format), used in mixed fabrics with legacy and new switches to avoid rebooting host systems when static PID binded is used. If VC-encoded address mode is not set, the default setting is 1. **Note: configDefault** does not change switch PID format.
Per-frame Route Priority	In addition to the eight virtual channels used in frame routing priority, support also is available for per-frame-based prioritization when this value it set. When pre-frame route priority set, the virtual channel ID is used in conjunction with a frame header to form the final virtual channel ID.
Long Distance Fabric	When this value is set, ISLs in a fabric can be up to 100 km long. The exact distance is determined by the per-port configuration on the E_Ports of each ISL. Configure both E_Ports in an ISL to run the same long-distance level; otherwise, the fabric segments. The Brocade Extended Fabrics license is required to set this mode.

Virtual Channel Settings

You can tune the switch in a specific application by configuring the parameters for the switch's eight virtual channels. Note that the first two virtual channels are reserved for the switch's internal functions and are not user-configurable.

The default virtual channel settings are optimized for switch performance. Changing the default values can improve switch performance somewhat but also can severely degrade performance; you should not change these settings without fully understanding the effects.

Field	Type	Default	Range
VC Link Control	Number	0	0 to 1
VC Class 2	Number	2	2 to 5
VC Class 3	Number	3	2 to 5
VC Multicast	Number	7	6 to 7
VC Priority 2	Number	2	2 to 3
VC Priority 3	Number	2	2 to 3
VC Priority 4	Number	2	2 to 3
VC Priority 5	Number	2	2 to 3
VC Priority 6	Number	3	2 to 3
VC Priority 7	Number	3	2 to 3

VC Link Control — Specifies the virtual channel used for N_Port-generated, Class-2 link control frames (ACKs, P_BSYs, P_RJTs). Forces N_Port-generated link control frames to be sent using a Class-2 data virtual channel when set to 0. When this value is set to 1, the control frames are sent using a virtual channel normally reserved for fabric-internal traffic. This setting is configurable only when VC-encoded Address Mode is set.

VC Class 2 — Specifies the virtual channel used for Class-2 frame traffic. This setting is configurable only when VC-encoded address mode is set.

VC Class 3 — Specifies the virtual channel used for Class-3 frame traffic. This setting is configurable only when VC-encoded address mode is set.

VC Multicast — Specifies the virtual channel used for multicast frame traffic. This setting is configurable only when VC-encoded address mode is set.

VC Priority — Specifies the class of frame traffic given priority for a virtual channel.

Zoning Operation Parameter

The zoning operation parameter is shown in the following table.

Field	Type	Default	Range
Disable Nodename Zone Checking	Boolean	0	0 to 1

Disable Nodename Zone Checking — By default, zoning uses both port WWN and node WWN to perform zoning. However, when this value is set to 1, node WWN cannot be used in zoning.

RSCN Transmission Mode

The RSCN transmission mode parameter is shown in the following table.

Field	Type	Default	Range
End-device RSCN Transmission Mode	Number	1	0 to 2

Values range from 0 through 2, as follows:

0 RSCN only contains a single PID.

1 RSCN contains multiple PIDs.

2 Indicates fabric address RSCN.

Arbitrated Loop Settings

The following table defines changeable settings affecting Fibre Channel Arbitrated.

Field	Type	Default	Range
Send FAN frames?	Boolean	1	0 to 1
Always send RSCN?	Boolean	0	0 to 1
Enable CLOSE on OPEN Received?	Number	4	0 to 4
AL_PA 0x00?	Boolean	0	0 to 1
Initialize All Looplets?	Boolean	0	0 to 1

Send FAN frames? — Specifies whether fabric address notification (FAN) frames are sent to public loop devices to notify them of their node ID and address. Set to 1 to send, 0 to not send.

Always send RSCN? — After loop initialization, a remote state change notification (RSCN) is issued only when FL_Ports detect new devices or the absence of preexisting devices. When this feature is set, an RSCN will always be issued following the completion of loop initialization, regardless of the presence of new or absence of preexisting devices.

Enable CLOSE on OPEN Received? — There are compatibility issues between Tachlite-based products and switches with Enable Close on OPEN Received. The introduction of multiple options works around the issues and a known "Open Deadlock" defect, which has become part of legacy code. The default is 4.

Value	Enable CLS on OPN	Open Deadlock
0	0 (Tachlite compatible)	Not fixed
1	1	Not fixed
2	0 (Tachlite compatible)	Firmware fix
3	1	Firmware fix
4	1	Hardware fix

AL_PA 0x00? — Some loop devices do not like AL_PA 0 on the same loop. This option provides a workaround for such devices. By default, the switch can use phantom AL_PA 0 for an embedded port in QuickLoop configuration. Set to 1 to have the switch not use AL_PA 0.

Initialize All Looplets? — By default, only looplets in the same zone reinitialize. Set to 1 to re-initialize all the looplets in QuickLoop.

System Services Settings

The following table defines changeable settings affecting Fibre Channel Arbitrated.

Field	Type	Default	Range
rstatd	Boolean	Off	On or Off

rusersd	Boolean	Off	On or Off
rapid	Boolean	On	On or Off
thad	Boolean	On	On or Off
Disable RLS	Boolean	On	On or Off

rstatd — Dynamically enables or disables a server that returns information through remote procedure calls (RPC) about system operation information. The protocol provides for a widerange of system statistics; however, only the Ethernet interface statistics (refer to **ifShow**) and system up time (refer to **uptime**) are supported.

The retrieval of this information is supported by a number of operating systems that support RPC. On most UNIX-based systems (HP-UX, Irix, Linux, Solaris, and so on), the commands to retrieve the information are **rup** and **rsysinfo**. Refer to your local system documentation for the appropriate usage of **rup**, **rsysinfo**, or equivalent commands.

rusersd — Dynamically enables or disables a server that returns information through remote procedure calls (RPC) about the user logged in to the system. The information returned includes the user login name, the system name, the login protocol or type, login time, idle time, and remote login location (if applicable).

The retrieval of this information is supported by a number of operating systems that support RPC. On most UNIX-based systems (HP-UX, Irix, Linux, Solaris, and so on), the command to retrieve the information is **rusers**. Refer to your local system documentation for the appropriate usage of **rusers** or equivalent command.

Rapid — Dynamically enables or disables API service.

Thad — Dynamically enables or disables Fabric Watch service.

Disable RLS probing — Enables or disables FCP RLS (read link state) information probing for F/FL_Port. It is disabled by default.

Portlog Events Disable/Enable Settings

Port events can be disabled from logging. The default is on, or enabled. When this setting is disabled, this event will not be logged by portlog.

Special Inputs

Carriage return — When entered alone at a prompt without any preceding input, accepts the default value (if applicable) and moves to the next prompt.

Interrupt — Aborts the command immediately and ignores all changes made.

End-of-file — When entered alone at the prompt without any preceding input, terminates the command, saving any changes made.

OPERANDS none

EXAMPLE

```
switch:admin> configure

     Configure...

  Fabric parameters (yes, y, no, n): [no] y

    Domain: (1..239) [1]
    BB credit: (1..27) [16]
    R_A_TOV: (4000..120000) [10000]
```

```
  E_D_TOV: (1000..5000) [2000]
  Data field size: (256..2112) [2112]
  Sequence Level Switching: (0..1) [0]
  Disable Device Probing: (0..1) [0]
  Suppress Class F Traffic: (0..1) [0]
  SYNC IO mode: (0..1) [0]
  VC Encoded Address Mode: (0..1) [0]
  Switch PID Format: (0..2) [1]
  Per-frame Route Priority: (0..1) [0]
  Long Distance Fabric: (0..1) [0]

Virtual Channel parameters (yes, y, no, n): [no] y

  VC Priority 2: (2..3) [2]
  VC Priority 3: (2..3) [2]
  VC Priority 4: (2..3) [2]
  VC Priority 5: (2..3) [2]
  VC Priority 6: (2..3) [3]
  VC Priority 7: (2..3) [3]

Zoning Operation parameters (yes, y, no, n): [no] y

  Disable NodeName Zone Checking: (0..1) [0]

RSCN Transmission Mode (yes, y, no, n): [no] y

  End-device RSCN Transmission Mode
    0 = RSCN with single PID, 1 = RSCN with multiple PIDs, 2 = Fabric RSCN): (0..2) [1]

Arbitrated Loop parameters (yes, y, no, n): [no] y

  Send FAN frames?: (0..1) [1]
  Always Send RSCN?: (0..1) [0]
  Enable CLOSE on OPEN received?: (0..4) [4]
  Do Not Allow AL_PA 0x00?: (0..1) [0]
  Initialize All Looplets?: (0..1) [0]

System services (yes, y, no, n): [no] y

  rstatd (on, off): [off]
  rusersd (on, off): [off]
  rapid (on, off): [on]
  thad (on, off): [on]
  Disable RLS probing (on, off): [on]
Portlog events enable (yes, y, no, n): [no]

   Committing configuration...done.
```

SEE ALSO

agtcfgDefault, agtcfgSet, agtcfgShow, configDefault, configShow, ifShow, ipAddrSet, portCfgLongDistance, switchDisable, switchEnable, uptime

Documentation Updates

This section provides information on last-minute additions and corrections to the documentation.

Brocade Fabric OS v3.1.0 and v3.1.1 Release Notes

In Fabric OS v3.1.0 and v3.1.1 Release Notes, the “SilkWorm 2xxx Scalability Limit” section specifies that fabrics containing Fabric OS v2.6.1 or later should not exceed 500 user (non-ISL) ports or devices. Brocade has increased to 728 the maximum number of devices supported in fabrics that include SilkWorm

2000-series switches running Fabric OS v2.6.1 or later. This is only a change to the documentation; there is no change to the Fabric OS.

SilkWorm 3800 Hardware Reference Manual

(publication number 53-0001576-06)

The following statement should be added to the Port Status LED information for when the port status is "offline" in Table 3-1, "Port Side LED Patterns During Normal Operation," on page 3-2:

"When a Port Status LED indicator light is off, another possible hardware status is offline."

Brocade ISL Trunking User's Guide, v3.1.0/4.1.0

(publication number 53-0000520-02)

Page 1-3 of the *Brocade ISL Trunking User's Guide* v3.1.0/4.1.0 contains the following statement:

> "... ISL Trunking does not support the "LE", "L1", or "L2" **portcfglongdistance** modes. For information about these modes and Extended Fabrics in general, refer to the *Distributed Fabrics User's Guide*."

This statement should be modified to say the following:

> "...Trunking is supported for normal E_Ports (referred to as "L0" in the **portcfglongdistance** command) with LWL media up to 5 km at the full speed permitted by the link. With LWL media, the throughput begins to fall off beyond 5 km, due to normal latency effects. ISL Trunking does not support the "LE", "L1", or "L2" **portcfglongdistance** modes. For information about these modes and extended fabrics in general, refer to the *Brocade Distributed Fabrics User's Guide*."

Brocade Distributed Fabrics User's Guide, v3.1.0/4.1.0

(publication number 53-0000516-02)

On page 3-6, the following statement is incorrect:

> "VC_Translation_Link_Init
>
> Specify 1 to activate long distance link initialization sequence. This mode is used to initiate long distance connections. When configuring a long distance connection, the first port configured does not require this mode. When configuring the second port of a connection, use this mode to initiate communication between the ports."

Instead, you should specify 1 to activate the long-distance link initialization sequence for all ports, including the first port configured.

Brocade Secure Fabric OS User's Guide, v3.1.0/4.1.0

(publication number 53-0000526-02)

The *Brocade Secure Fabric OS User's Guide* was updated for releases v2.6.2, v3.1.2, and v4.2.0. The updated book is *Brocade Secure Fabric OS User's Guide*, publication number 53-0000526-03.

Brocade Secure Fabric OS User's Guide, v2.6.2/3.1.2/4.2.0

(publication number 53-0000526-03)

On page 2-3, following this paragraph:

> "All switches that are shipped with Fabric OS v3.1.2 or v4.2.0 installed already have the required PKI objects and a digital certificate. If a switch no longer has the required PKI objects, refer to section 'Recreating PKI Objects if Required' on page 2-19 for information on recreating the PKI

objects. If a switch no longer has the required digital certificate, refer to section ‘Obtaining the Digital Certificate File’ on page 2-14 for information on obtaining digital certificates.”

Add the following paragraph:

“Switch digital certificates are checked when a switch joins a fabric, either because the switch is added to the fabric or because the switch is booting. Changes to the certificate--for example, if the certificate is removed or corrupted--might not be noticed until the switch is rebooted.”

On page 3-2, following the second paragraph of "Enabling Secure Mode":

“Secure Mode is enabled using the **secmodeenable** command. This command must be entered through a **sectelnet**, Secure Shell, or serial connection to the switch designated as the primary FCS switch. The command fails if any switch in the fabric is not capable of enforcing Secure Fabric OS policies. If the primary FCS switch fails to participate in the fabric, the role of the primary FCS switch moves to the next available switch listed in the FCS policy.”

Add the following note:

“**Note:** To activate security, all switches in the fabric are automatically rebooted. All I/O should be stopped prior to running the **secmodeenable** command.”

Brocade Secure Fabric OS QuickStart Guide, v2.6.1/3.1.0/4.1.0

(publication number 53-0000352-02)

The *Brocade Secure Fabric OS QuickStart Guide* was updated for releases v2.6.2, v3.1.2, and v4.2.0. The updated book is *Brocade Secure Fabric OS QuickStart Guide*, publication number 53-0000352-03.

Brocade Fabric OS Procedures Guide, v3.1.0

(publication number 53-0000501-02)

After the first paragraph of the section "Connect ISLs to Switch," on page 1-10, add the following note:

“**Note:** When a new switch is attached to a fabric, if the domain ID is not unique, the fabric delays user traffic, which has the potential of terminating jobs in progress, and reassigns the new switch a domain ID not in use.”

The section "Firmwaredownload Issues," in Chapter 9, "Troubleshooting," does not apply to Brocade SilkWorm switches running Fabric OS v3.1.x.

Fabric OS v2.6.2/v3.1.2/v4.2.0 introduced a new switch PID format: extended-edge PID (Format 2). Extended-edge PID is useful if you introduce a Fabric OS v4.2.0 switch to a fabric consisting solely of Fabric OS v2.x/v3.x switches with hosts that statically bind the PID. Before adding a Fabric OS v4.2.0 switch to such a fabric, refer to *Brocade Fabric OS Procedures Guide*, publication number 53-0000518-03, for information on the extended-edge PID format.

On page 6-3, after the heading “Zoning Restrictions,” add the following:

“**Note**

The maximum number of items that can be stored in the zoning configuration database depends on the switches in the fabric, whether or not interop mode is enabled, and the number of bytes required for each item. The number of bytes required for an item depends on the specifics of the fabric but cannot exceed 64 bytes per item. At 64 bytes per item, you can have:

- 767 entries for a fabric with at least one 2.x or 3.x switch and interop mode disabled.
- 383 entries for a fabric with at least one 2.x or 3.x switch and interop mode enabled.
- 997 entries for a fabric consisting solely of 4.x switches and interop mode disabled.
- 498 entries for a fabric consisting solely of 4.x switches and interop mode enabled.

You can use the **cfgSize** command to check both the maximum available size and the currently saved size. If you believe you are approaching the maximum, you can save a partially completed zoning configuration and use the **cfgSize** command to determine the remaining space."

On page 2-4, after the following paragraph:

"Domain IDs are assigned dynamically when a switch is enabled. However, the Domain ID can be set manually in order to control the number, or to resolve a Domain ID conflict when merging fabrics."

Add this Note:

"**Note**

If a switch already has a domain ID when enabled and that domain ID conflicts with a switch already in the fabric, the conflict is automatically resolved. The process can take several seconds, during which time traffic is delayed, potentially causing timeouts."

Brocade Advanced Zoning User's Guide, v3.1.0/4.1.0

(publication number 53-0000523-02)

On page 2-11, after the heading "Detailed Zone Configuration Procedures," add the following:

"**Note**

The maximum number of items that can be stored in the zoning configuration database depends on the switches in the fabric, whether or not interop mode is enabled, and the number of bytes required for each item. The number of bytes required for an item depends on the specifics of the fabric but cannot exceed 64 bytes per item. At 64 bytes per item, you can have:

- 767 entries for a fabric with at least one 2.x or 3.x switch and interop mode disabled.
- 383 entries for a fabric with at least one 2.x or 3.x switch and interop mode enabled.
- 997 entries for a fabric consisting solely of 4.x switches and interop mode disabled.
- 498 entries for a fabric consisting solely of 4.x switches and interop mode enabled.

You can use the **cfgSize** command to check both the maximum available size and the currently saved size. If you believe you are approaching the maximum, you can save a partially completed zoning configuration and use the **cfgSize** command to determine the remaining space."

Brocade Web Tools User's Guide, v3.1.0

(publication number 53-0000503-02)

The following row should be added to Table 5-9, "Configure (Fabric Field) Descriptions":

Switch PID Format	**Allows you to select a switch PID format from one of the following:** **- VC encoding** **- Format 0 (16-port encoding) – native format** **- Format 1 (0-base, 256 port encoding) – core PID format** **- Format 2 (16-base, 256 port encoding) – extended-edge PID format**

The following row of information should be removed from Table 5-9:

VC Encoded Address Mode	Set this mode only if the fabric includes a SilkWorm 1000 switch. When set, the frame source and destination address use an address format that is compatible with SilkWorm 1000 switches. This option is greyed out if the switch is in Interop Mode.

Brocade Fabric OS Reference Manual, v3.1

(publication number 53-0000500-02)

The following commands are modified in the documentation. Unless otherwise specified, the changes to these commands are described after this list:

- **configure**
- **fabretryshow**
- **portcfggport**
- **portCfgLongDistance**
- **portCfgLslMode**
- **quietMode** Refer to the section "Commands Modified in v3.1.2" for the description.
- **SwitchShow** Refer to the section "Commands Modified in v3.1.2" for the description.
- **zonecreate**

The following command is added in the documentation:

- **pathInfo** Refer to the section "New Command Introduced in v3.1.2" for the description.

configure

Change the Domain, R_A_TOV, and E_D_TOV fields in Table 2-2, as follows:

Field	Default	Range
Domain	1	varies
R_A_TOV	10000	E_D_TOV * 2 to 12000
E_D_TOV	2000	1000 to R_A_TOV / 2

fabretryshow

Add descriptions for two lines of command output, as follows:

"EMT Fabric Controller Mark Timestamp

ETP Exchange Trunking Parameter"

portcfggport

Add a note regarding the command behavior on a SilkWorm 3200, as follows:

"**Note:** On a SilkWorm 3200, a fabric license is required for the **portcfggport** command to function properly; otherwise, a "fabric support required" message displays."

portCfgLongDistance

Add a note regarding the coexistence with the **portCfgLslMode** command, as follows:

"**Note: portCfgLslMode** and **portCfgLongDistance** cannot both be enabled at the same time; otherwise, the fabric segments."

portCfgLslMode

Add a note regarding the coexistence with the **portCfgLongDistance** command, as follows:

"**Note: portCfgLslMode** and **portCfgLongDistance** cannot both be enabled at the same time; otherwise, the fabric segments."

zonecreate

Change the *zonename* operand as follows:

zonename	Name for a zone to be created, in quotation marks. This name cannot be used for any other zone objects. Zone names are limited to 64 characters.

Brocade Diagnostic and System Error Reference User's Guide, v3.1

(publication number 53-0000511-04)

The following error messages should be added to the documentation.

DIAG Messages

DIAG-BADINT

Message

```
Critical DIAG-BADINT, 1
```

Probable Cause

Port received an unexpected interrupt. This usually indicates an ASIC failure. This message is generated by the **centralmemorytest** or the **cmitest** command.

Recommended Action

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity

Critical

DIAG-BUS_TIMEOUT

Message

```
Critical DIAG-BUS_TIMEOUT, 1
```

Probable Cause
ASIC register or ASIC SRAM did not respond to an ASIC data access. This usually indicates an ASIC failure. This message is generated by the **portregtest** or the **sramretentiontest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CAMFLTR

Message

```
Critical DIAG-CAMFLTR, 1
```

Probable Cause
ASIC internal logic failed. This usually indicates an ASIC failure. This message is generated by the **filtertest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CAMINIT

Message

```
Critical DIAG-CAMINIT, 1
```

Probable Cause

Port failed to initialize due to one of the following reasons:

- Switch is not disabled
- Diagnostic queue is absent
- Malloc failed
- Chip is not present
- Port is not in loopback mode
- Port is not active
- There was a software operational setup error or motherboard failure
- There occurred a retry, reboot, or replacement of motherboard assembly

This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **camtest** command.

Recommended Action

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity

Critical

DIAG-CAMSID

Message

```
Critical DIAG-CAMSID, 1
```

Probable Cause
ASIC failed SID NO translation test. This usually indicates an ASIC failure. This message is generated by the **camtest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CAMSTAT

Message

```
Critical DIAG-CAMSTAT, 1
```

Probable Cause
The ASIC improperly counted the number of frames with CRC errors. This usually indicates an ASIC failure. This message is generated by the **statisticstest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CLEAR_ERR

Message

```
Warning DIAG-CLEAR_ERR, 3
```

Probable Cause
The port diag error flag (OK or BAD) is cleared.

Recommended Action
This message is for information only; no action is required.

Severity
Warning

DIAG-CMBISRF

Message

```
Critical DIAG-CMBISRF, 1
```

Probable Cause
ASIC central memory SRAMs did not complete the BISR within the timeout period. This usually indicates an ASIC failure. This message is generated by the **centralmemorytest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CMBISRTO

Message

```
Critical DIAG-CMBISRTO, 1
```

Probable Cause
The ASIC central memory SRAMs did not complete the BISR within the timeout period. This usually indicates an ASIC failure. This message is generated by the **centralmemorytest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CMERRPTN

Message

```
Critical DIAG-CMERRPTN, 1
```

Probable Cause
Error detected at the wrong port. This usually indicates an ASIC failure. This message is generated by the **centralmemorytest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CMERRTYPE

Message

```
Critical DIAG-CMERRTYPE, 1
```

Probable Cause
Port got the wrong CMEM error type. This usually indicates an ASIC failure. This message is generated by the **centralmemorytest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CMICKSUM

Message

```
Critical DIAG-CMICKSUM, 1
```

Probable Cause
CMI message received failed. This usually indicates an ASIC or motherboard failure. This message is generated by the **cmitest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CMIDATA

Message

```
Critical DIAG-CMIDATA, 1
```

Probable Cause
CMI data received did not match data transmitted. This usually indicates an ASIC or motherboard failure. This message is generated by the **cmitest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CMIINVCAP

Message

```
Critical DIAG-CMIINVCAP, 1
```

Probable Cause
ASIC unintentionally got a CMI capture flag. This usually indicates an ASIC or motherboard failure. This message is generated by the **cmitest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CMINOCAP

Message

```
Critical DIAG-CMINOCAP, 1
```

Probable Cause
CMI intended receiver ASIC failed to get a CMI capture flag. This usually indicates an ASIC or motherboard failure. This message is generated by the **cmitest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CMISA1

Message

```
Critical DIAG-CMISA1, 1
```

Probable Cause
An attempt to send a CMI message from one ASIC to another failed. This usually indicates an ASIC failure. This message is generated by the **cmitest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-CMNOBUF

Message

```
Critical DIAG-CMNOBUF, 1
```

Probable Cause
Port could not get any buffers. This usually indicates an ASIC failure. This message is generated by the **centralmemorytest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-DATA

Message

```
Critical DIAG-DATA, 1
```

Probable Cause
Payload received by a port did not match payload transmitted. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **crossporttest** or **portloopbacktest** commands.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-ERRSTAT (2LONG)

Message

```
Critical DIAG-ERRSTAT (2LONG), 1
```

Probable Cause
The Port Error Statistics counter is nonzero, meaning that a "Frame too long" error was detected when receiving frames. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** or **spinsilk** commands.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-ERRSTAT (BADEOF)

Message

```
Critical DIAG-ERRSTAT (BADEOF), 1
```

Probable Cause
The Port Error Statistics counter is nonzero, meaning that a "Bad end of file" error was detected when receiving frames. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** or **spinsilk** commands.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-ERRSTAT (BADORD)

Message

```
Critical DIAG-ERRSTAT (BADORD), 1
```

Probable Cause
The Port Error Statistics counter is nonzero, meaning that a "Bad symbol on fiber-optic cable" error was detected when receiving frames. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** or **spinsilk** commands.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-ERRSTAT (CRC)

Message

```
Critical DIAG-ERRSTAT (CRC), 1
```

Probable Cause
The Port Error Statistics counter is nonzero, meaning that a "Cyclic redundancy check on frame failed" error was detected when receiving frames. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** or **spinsilk** commands.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-ERRSTAT(CRL)

Message

```
Critical DIAG-ERRSTAT(CRL), 1
```

Probable Cause
The Port Error Statistics counter is nonzero, meaning that a "Cyclic redundancy check on frame failed" error was detected when receiving frames. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** command.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-ERRSTAT (DISCC3)

Message

```
Critical DIAG-ERRSTAT (DISCC3), 1
```

Probable Cause
The Port Error Statistics counter is nonzero, meaning that a "Discarded Class 3 frames" error was detected when receiving frames. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** or **spinsilk** commands.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-ERRSTAT (ENCIN)

Message

```
Critical DIAG-ERRSTAT (ENCIN), 1
```

Probable Cause
The Port Error Statistics counter is nonzero, meaning that an "Encoding error, inside frame" error was detected when receiving frames. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** or **spinsilk** commands.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-ERRSTAT (ENCOUT)

Message

```
Critical DIAG-ERRSTAT (ENCOUT), 1
```

Probable Cause
The Port Error Statistics counter is nonzero, meaning that an "Encoding error, outside frame" error was detected when receiving frames. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** or **spinsilk** commands.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-ERRSTAT (TRUNC)

Message

```
Critical DIAG-ERRSTAT (TRUNC), 1
```

Probable Cause
The Port Error Statistics counter is nonzero, meaning that a "Truncated frame" error was detected when receiving frames. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** or **spinsilk** commands.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-INIT

Message

```
Critical DIAG-INIT, 1
```

Probable Cause
Port failed to go active in the loopback mode requested. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **crossporttest**, **portloopbacktest**, or **spinsilk** commands.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-INTNIL

Message

```
Critical DIAG-INTNIL, 1
```

Probable Cause
ASIC failed to get a CMI error (interrupt). This usually indicates an ASIC failure. This message is generated by the **cmitest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-INTNOTCLR

Message

```
Critical DIAG-INTNOTCLR, 1
```

Probable Cause
The interrupt bit could not be cleared. This usually indicates an ASIC failure. This message is generated by the **centralmemorytest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-LCMEM

Message

```
Critical DIAG-LCMEM, 1
```

Probable Cause
Data read from the central memory location did not match data previously written into the same location. This usually indicates an ASIC failure. This message is generated by the **centralmemorytest** and **cmemretentiontest** commands.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-LCMEMTX

Message

```
Critical DIAG-LCMEMTX, 1
```

Probable Cause
Central memory transmit path failure: ASIC 1 failed to read ASIC 2 using the transmit path. This usually indicates a motherboard failure. This message is generated by the **centralmemorytest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-LCMRS

Message

```
Critical DIAG-LCMRS, 1
```

Probable Cause
Central memory read short: M bytes requested but not received. This usually indicates an ASIC failure. This message is generated by the **centralmemorytest** and the **cmemretentiontest** commands.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-LCMTO

Message

```
Critical DIAG-LCMTO, 1
```

Probable Cause
Central memory timeout: data transfer initiated did not complete within the timeout period. This usually indicates an ASIC failure. This message is generated by the **centralmemorytest** and the **cmemretentiontest** commands.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-MEMNULL

Message

```
Critical DIAG-MEMNULL, 1
```

Probable Cause
The ASIC failed to malloc. This usually indicates a motherboard failure. This message is generated by the **ramtest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-MEMORY

Message

```
Critical DIAG-MEMORY, 1
```

Probable Cause
Data read from RAM location did not match previously written data into the same location. This usually indicates a CPU RAM failure. This message is generated by the **ramtest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-MEMSZ

Message

```
Critical DIAG-MEMSZ, 1
```

Probable Cause
Memory size to be tested is less than or equal to 0. This usually indicates a motherboard failure. This message is generated by the **ramtest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-NOSEGMENT

Message

```
Critical DIAG-NOSEGMENT, 1
```

Probable Cause
Port failed to go into loopback mode. This message usually indicates improper cable connections. This message is generated by the **spinsilk** command.

Recommended Action
Verify cable connections. Reseat the SFPs and cables and then reexecute the test.

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

Severity
Critical

DIAG-PORTABSENT

Message

```
Critical DIAG-PORTABSENT, 1
```

Probable Cause
Port is not present. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** or **spinsilk** commands.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-PORTDIED

Message

```
Critical DIAG-PORTDIED, 1
```

Probable Cause
Port was in loopback mode and then went inactive. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **crossporttest**, **portloopbacktest**, or **spinsilk** commands.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-PORTM2M

Message

```
Critical DIAG-PORTM2M, 1
```

Probable Cause
Port is connected to itself (self-loopback). This port M-to-port M connection is not allowed by the test. This message usually indicates improper cable connections. This message is generated by the **spinsilk** command.

Recommended Action
Reconnect port (M) to a different port (N) and reexecute the test.

Severity
Critical

DIAG-PORTSTOPPED

Message

```
Critical DIAG-PORTSTOPPED, 1
```

Probable Cause
Port is no longer transmitting, as indicated by the Number Of Frames Transmitted counter being stuck at N frames. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **spinsilk** command.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-PORTWRONG

Message

```
Critical DIAG-PORTWRONG, 1
```

Probable Cause
Frame erroneously received by port M instead of the intended port N. This usually indicates an ASIC failure. This message is generated by the **portloopbacktest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-POST_SKIPPED

Message

```
Warning DIAG-POST_SKIPPED, 4
```

Probable Cause
POST was not executed on the last boot up.

Recommended Action
This message is for information purposes only; no action is required.

Severity
Warning

DIAG-REGERR

Message

```
Critical DIAG-REGERR, 1
```

Probable Cause
Data read from an ASIC register or ASIC SRAM did not match data previously written into the same location. This usually indicates an ASIC failure. This message is generated by the **portregtest** or the **sramretentiontest** commands.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-REGERR_UNRST

Message

```
Critical DIAG-REGERR_UNRST, 1
```

Probable Cause
Port failed to unreset. This usually indicates an ASIC failure. This message is generated by the **portregtest** or the **sramretentiontest** commands.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-STATS (C3FRX)

Message

```
Critical DIAG-STATS (C3FRX), 1
```

Probable Cause
Port counter value did not match the number of frames actually transmitted. In this case, C3FRX = number of Class 3 frames received. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** command.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-STATS (FRX)

Message

```
Critical DIAG-STATS (FRX), 1
```

Probable Cause
Port counter value did not match the number of frames actually transmitted. In this case, FRX = number of frames received. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** command.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-STATS (FTX)

Message

```
Critical DIAG-STATS (FTX), 1
```

Probable Cause
Port counter value did not match the number of frames actually transmitted. In this case, FTX = number of frames transmitted. This can be caused by a faulty cable or deteriorated SFP. It can also indicate deeper problems in the motherboard or ASIC. This message is generated by the **portloopbacktest** command.

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-TBRAM_INC_RWTEST

Message

```
Critical DIAG-TBRAM_INC_RWTEST, 1
```

Probable Cause
ASIC internal registers failed read-modify-write operation. This usually indicates an ASIC failure. This message is generated by the **turboramtest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-TBRAM_INC_WTEST

Message

```
Critical DIAG-TBRAM_INC_WTEST, 1
```

Probable Cause
ASIC internal registers failed write operation. This usually indicates an ASIC failure. This message is generated by the **turboramtest** command.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-TIMEOUT

Message

```
Critical DIAG-TIMEOUT, 1
```

Probable Cause
For **portloopbacktest** and **crossporttest**:

Port failed to receive frame within timeout period.

For **centralmemorytest**:

Port failed to detect an interrupt within the timeout period.

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

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

If the problem persists:

For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

DIAG-XMIT

Message

```
Critical DIAG-XMIT, 1
```

Probable Cause
Port failed to transmit frame. This usually indicates an ASIC failure. This message is generated by the **camtest**, **portloopbacktest**, and **spinsilk** commands.

Recommended Action
For the SilkWorm 3800, replace the motherboard FRU.

For the SilkWorm 3200, replace the entire switch.

Severity
Critical

Fabric Reconfiguration Message

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 received an EFP or EFP ACC that has a payload error, listing this switch as 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) command.

HA: At F2 State
: According to the Fibre Channel specification, F2 is defined as the principal switch selection. If a failover occurs at this time, the switch is forced to restart principal switch selection.

HA: No Upstream
: After failover, the newly active fabric thinks it is subordinate, but there is no upstream.

HA: bad EFP resp
: Received an invalid EFP response.

HA: RJT EFP resp
: Received an EFP reject response in which 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 response with a different domain list.

HA: PPRI EFP resp
: Received an EFP accept response in which the response has a different principal switch priority number.

HA: PWWN EFP resp
: Received an EFP accept response in which the response has a different principal switch World Wide Name.

HA: MAX EFP resp

An EFP to a neighbor failed to respond, and the fabric reached its maximum 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
User has run the **fabricprincipal** command, forcing 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. Some troubleshooting tasks include:

- Verify that the port was not disabled using the **portshow** command.
- Verify that the port is cabled correctly.
- Verify that the SFP has not deteriorated.

Refer to the Fibre Channel Standard FC-SW3, Chapters 6 and 7, for more information on fabric initialization.

Severity
Information

Security Messages

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 might 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 defined or active, or both policy sets were failed by the daemon. A negative value 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: 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 defined or active, or both policy sets were failed by the daemon. A negative value 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 defined or active, or both policy sets were failed by the daemon. A negative value 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 might 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 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 wraparound.

Recommended Action
No action is required.

Severity
Information

SEC-SECCHANGE

Message

```
Info SEC-SECCHANGE, 4, text message
```

Probable Cause

A major security 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, 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 process 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 that the security event was planned.
If the security event was planned, no action is required.

Severity

Information

PID Change Message

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 PID. For more information on PID format, refer to the *Brocade Fabric OS Procedures Guide*.

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

Severity
Warning

Defects Closed in Fabric OS v3.1.2a

Defects Closed In Fabric OS v3.1.2a		
Defect ID	**Severity**	**Description**
DEFECT000037174	Medium	Summary: SilkWorm 3800/SilkWorm 3600 failing marginally due to invalid temperature warning. Customer Symptom: Observe following message: 0x101e8d60 (tThad): Mar 1 17:33:57 WARNING FW-BELOW, 3, envTemp001 (Env Temperature 1) is below low boundary. Current value: -60 C. (faulty) Solution: 1. Making sure that temperature A/D converter value is read into internal data structure before making the data available to monitoring software 2. Make sure to wait to 1.2s before pull A/D convert data during power on to accommodate worst-case sensor initialization time. SR#. RQST00000027597
DEFECT000037236	High	Summary: GID_FT request fails with certain HBA on SW3800. Customer Symptom: When HBA issues a GID_FT request and the accept response from SilkWorm 3800 switch has the wrong TYPE and no Subtype. Solution: Corrected the function ctRealloc, which messed up the iu_ahdr and iu_data pointers of the iu in a corner case.

Defects Closed In Fabric OS v3.1.2a		
Defect ID	**Severity**	**Description**
		SR#. RQST00000026594
DEFECT000037674	Medium	Summary: Switch sends out a LIRP frame that does not contain all the devices on the loop. The bad LIRP precipitates a loop re-initialization. Customer Symptom: It takes over 10 seconds to initialize the loop in quick loop mode. Solution: Fix unprotected access to pltmap. SR#. RQST00000026295
DEFECT000037701	High	Summary: Switch fails to send swFabricWatchTrap. Customer Symptom: Remove and insert the ISL several times, observe that switch fails to send swFabricWatchTrap for events in the following areas: - eportSync - eportSignal - eportState - fopportLink - fopportSync - fopportSignal - fopportState Solution: Change the interface called to get thresholds on errors for a port, as the port may be offline by the time we decide to send a trap. SR#. RQST00000026464
DEFECT000038126	Medium	Summary: Help page for 'configure' command needs updating across all platforms Customer Symptom: Configure help page does not accurately offer customer the necessary information to configure the switch. Solution: Modified configure help page to reflect latest 3.1.2 code
DEFECT000040845	Medium	Summary: Zoning transaction aborted logged at Error level causes Call Home. Symptom: End user uses API to intentionally abort zone transaction and saw following in errlog: Error ZONE-TRANS_ABORT, 2, Zone transaction aborted - Solution: Change log level from Error to Info when abort zone transaction. SR#. RQST00000028262