



Brocade Fabric OS v3.2.1a Release Notes v1.0

May 15, 2006

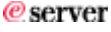
Document History

Document Title	Summary of Changes	Publication Date
Brocade Fabric OS v3.2.1a Release Notes v1.0	First release	May 15, 2006

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Overview

Fabric OS v3.2.1a is a patch release containing fixes to defects found since the release of Fabric OS v3.2.1. Aside from these fixes, this patch release includes the same feature set as Fabric OS v3.2.1.

Fabric OS v3.2.0 contains significant enhancements in the areas of Fibre Channel long-distance support, scalability, and manageability, to name a few. In addition, several improvements since the release of Fabric OS v3.1.3 have been incorporated in this release. Major new features include:

- Additional support allows a switch running Fabric OS v3.2.0 to recognize a SilkWorm Multiprotocol Router Model AP7420 connected to the fabric
- Updated security enhancements:
 - RADIUS
 - DH-CHAP authentication
- Brocade Fabric Watch and Advanced Web Tools usability enhancements

Brocade software release policy is to carry forward all fixes in patches to subsequent maintenance and feature releases of Fabric OS.

Supported Switches

Fabric OS v3.2.1 supports SilkWorm 3200 and 3800 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 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 numbers and 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 here.



The serial number label is located as follows:

- SilkWorm 3200 and 3800: Back of chassis

3. World Wide Name (WWN)

- SilkWorm 3016, 3250, 3850, 3900, and 4100 switches, and SilkWorm 12000 and 24000 directors: Provide the license ID. Use the **licenseIdShow** command to display the license ID.
- SilkWorm Multiprotocol Router Model AP7420: Provide the switch WWN. Use the **switchShow** command to display the switch WWN.
- All other SilkWorm switches: Provides the switch WWN. Use the **wnn** command to display the switch WWN.

Standards Compliance

Brocade Fabric OS v3.2.1 conforms to the following Fibre Channel Standards in a manner consistent with accepted engineering practices and procedures. 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. For a list of standards conformance, visit the following Brocade Web site:

<http://www.brocade.com/sanstandards>

Important Notes

This section lists information you should be aware of when running Fabric OS v3.2.1.

OS Requirements

The following table summarizes the versions of Brocade software that are supported in conjunction with this release. These are the *earliest* software versions that interoperate and which have not reached their EOL. Brocade recommends using the *latest* software release versions to get the most benefit out of the SAN.

For a list of the effective end-of-life dates for all versions of Fabric OS, visit the following Brocade Web site:

http://www.brocade.com/support/end_of_life.jsp

Standalone Switches, Directors, & Routers	General Compatibility
SilkWorm 2xxx Series	2.6.1 or later
SilkWorm 3200, 3800	3.1.2 or later
SilkWorm 325x, 385x, 3900, 12000, 24000	4.2.0 or later
SilkWorm 4100	4.4.0a or later
SilkWorm 200E, 48000	5.0.1 or later
SilkWorm Multiprotocol Router AP7420	7.3.0 or later
OEM-Specific Embedded Switches	General Compatibility
SilkWorm 3000	3.1.2 or later
SilkWorm 3016	4.2.1 or later
SilkWorm 4012	5.0.0 or later

General

The major features incorporated in Fabric OS v3.2.1 are summarized in the following table.

Category	Feature	Release
Manageability	Advanced Performance Monitoring - ISL monitoring (CLI only)	v3.2.0, v4.4.0
	Fabric Watch enhancements	v3.2.0, v4.4.0
	Export performance data	v3.2.0, v4.4.0
Security-Related	RADIUS support	v3.2.0, v4.4.0
	Multiple user accounts	v3.2.0, v4.4.0
	SSL/HTTPS support	v4.4.0
	SNMPv3 support	v4.4.0
	DH-CHAP authentication (switch-switch)	v3.2.0, v4.4.0
	SAN Gateway security	v3.2.0, v4.4.0
Long-Distance Enhancements	<p>Trunking over extended fabrics (SilkWorm 3200, 3250, 3850, 3800, 3900, 12000, 24000 (all Bloom-ASIC-based platforms) is only supported at 2 Gbit/sec speed, as follows:</p> <ul style="list-style-type: none"> four links at 10 km @ 2 Gbit/sec per trunk group three links at 25 km @ 2 Gbit/sec per trunk group two links at 50 km @ 2 Gbit/sec per trunk group <p>When configuring an Extended Fabrics trunk, make sure that the <code>vc_translation_link_init</code> option is set to 1 (enabled). This option can be set using the portCfgLongDistance command. If this option is disabled on a port, the port will not participate in a trunk; instead, it will come up as an individual Lx_Port.</p>	v3.2.0, v4.4.0
MPRS Enhancements	Max Hop Count (FC Router) – CLI only	v3.2.0, v4.4.0
	WAN_TOV (FC Router) – CLI only	v3.2.0, v4.4.0
Scalability	Support for 1280 total ports and 34 domains with security enabled	v3.2.0, v4.4.0
Usability Improvements + RFEs	Security Management – enable/merge secure fabrics (Fabric Manager only)	v3.2.0, v4.4.0
	Web Tools and Fabric Manager usability improvements	v3.2.0, v4.4.0
	Enhanced Fabric Watch support	v3.2.0, v4.4.0

Other Notes

The tables below list other important information you should consider about the Fabric OS v3.2.1.

Fabric OS Area	Description
Performance Monitoring	On Fabric OS v3.2.x, with only a single Arbitrated Loop Physical Address (ALPA) on a loop port, the PortShowAlpaCrc CLI command fails with error message “invalid argument.” Also, with other interfaces such as FabricWatch, the CurVal of alpaPerfCRC does not change from 0 percent. Work Around: Specify port number and ALPA number as input in the single ALPA case. If there are multiple ALPAs on the loop port, there is no problem displaying each ALPA CRC

Advanced Web Tools Updates

- For instructions on installing Mozilla 1.6 on Solaris 2.8 and Solaris 2.9, refer to the following Web site:

<http://www.mozilla.org/releases/mozilla1.6/>

- Issue:** The Mozilla browser does not support the Switch Admin module properly in Fabric OS v2.6.x. In Fabric OS v2.6.2, a warning message is displayed. For other 2.6.x versions, no warning message is displayed.

Workaround: The Netscape browser is not supported by Web Tools. However, if you must access the Switch Admin module from a Solaris operating system on a Fabric OS v2.6.x switch, use the Netscape v4.7.7 or later browser.

- 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.

- Advanced Web Tools browser, operating system, and Java Plug-in support is updated for Fabric OS v4.4.0. The following table identifies the supported browsers, operating systems, and Java Plug-ins for this release.

Priority	OS	Browser	Plug-in
1	Windows 2000	IE 6.0	1.4.2_03
2	Windows XP	IE 6.0	1.4.2_03
3	Windows 2003	IE 6.0	1.4.2_03
4	Solaris 2.9	Mozilla 1.6	1.4.2_03
5	Red Hat Linux 9.0	Mozilla 1.6	1.4.2_03
6	Solaris 2.8	Mozilla 1.6	1.4.2_03

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

Launch Switch Environment	Problems
Firmware: Fabric OS v3.1+ or v4.1+ Operating System: any supported operating system (with supported browser) Browser: any supported browser (on supported operating system)	<p>Issue: When viewing the topology from WebTools, if your initial login was a v3.1+ or v4.1+ switch and you view the topology from a switch with a previous version of the Fabric OS, there is no print function available in the Fabric Topology window.</p> <p>Web Tools v3.1.0+ and v4.1.0+ includes a Print button in the Fabric Topology window. Earlier versions do not.</p> <p>Workaround: If the Fabric Topology window does not display a Print button, you can right-click anywhere inside the window and select Print from the popup menu.</p>
Firmware: Fabric OS v2.6.x Operating System: Solaris Browser: Mozilla	<p>Issue: The Switch Admin does not launch correctly.</p> <p>Workaround: The Netscape browser is not supported by Web Tools. However, if you must access the Switch Admin on a switch running Fabric OS v2.6.x from a Solaris operating system, use the Netscape browser.</p>
Firmware: version <i>prior</i> to Fabric OS v2.6.2, v3.1.2, or v4.2.0 with secure mode enabled Operating System: Solaris Browser: Mozilla	<p>Issue: When accessing the Switch Admin, Zoning, Fabric Watch, or High Availability Admin, the browser might crash.</p> <p>Workaround: The Netscape browser is not supported by Web Tools. However, if you must access the Switch Admin, Zoning, Fabric Watch, or High Availability Admin from a Solaris operating system, use the Netscape browser.</p>
Firmware: version <i>prior</i> 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)	<p>Issue: When trying to access a switch running 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.</p> <p>Workaround: Use a launch switch running Fabric OS v2.6.2, v3.1.2, or v4.2.0 or later to access the switch.</p>
	<p>Issue: When trying to perform end-to-end monitoring (Brocade Advanced Performance Monitoring) on a SilkWorm 24000 or SilkWorm 3250, the SilkWorm 24000 or SilkWorm 3250 will be displayed as a 16-port switch.</p> <p>Workaround: For a SilkWorm 3250, ignore the extra ports. For a SilkWorm 24000, use a launch switch running Fabric OS v4.2.0 or later to perform end-to-end monitoring on the switch.</p>
	<p>Issue: When trying to perform zoning on a SilkWorm 24000 or SilkWorm 3250, the SilkWorm 24000 or SilkWorm 3250 will be displayed as a 16-port switch.</p> <p>Workaround: If you are running 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.</p>

Launch Switch Environment	Problems
<p>Firmware: Fabric OS v 2.6.2, v3.1.2, or v4.2.0</p> <p>Operating System: any supported operating system (with supported browser)</p> <p>Browser: any supported browser (on supported operating system)</p>	<p>Issue: The Name Server table will not display properly for a switch running firmware versions prior to Fabric OS v2.6.2, v3.1.2, or v4.2.0.</p> <p>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.</p>
<p>Firmware: version <i>prior</i> to Fabric OS v2.6.2,v3.1.2, or v4.2.0</p> <p>Operating System: Solaris</p> <p>Browser: Netscape</p>	<p>Issue: Any switches running Fabric OS v2.6.2, v3.1.2, or v4.2.0 or later are unsupported through Netscape.</p> <p>Workaround: Netscape is not a supported browser for switches running Fabric OS v2.6.2, v3.1.2, or v4.2.0 or later. Use Mozilla browser to manage all of your switches from a Solaris operating system.</p>
<p>Firmware: version <i>prior</i> to Fabric OS v2.6.1, v3.0.x, or v4.0.x</p> <p>Operating System: Windows</p> <p>Browser: Internet Explorer</p>	<p>Issue: When you are trying to run the Fabric View, the browser might crash.</p> <p>Workaround: Use a launch switch that runs Fabric OS versions v2.6.1, v3.0.x, or v4.0.x or later, so that you can use Switch Explorer (not Fabric View).</p>

Documentation Updates

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

The most recent Fabric OS product manuals are available on Brocade Connect:

<http://www.brocadeconnect.com/>

The Fabric OS v3.1.0 documentation set supports Fabric OS v3.2.0, supplemented with the *Brocade Fabric OS Documentation Addendum*, publication number 53-0000605-02. With the exception of the following three documents, you should use the Fabric OS v3.1.0 document set and the *Brocade Fabric OS Documentation Addendum* for Fabric OS v3.2.0 documentation support:

- *Brocade Fabric OS MIB Reference Manual* (53-0000521-08)
- *Brocade Secure Fabric OS Quick Start Guide* (53-0000352-04)
- *Brocade Secure Fabric OS User's Guide* (53-0000526-04)

The following Brocade Fabric OS v3.1.0 publications are represented in the *Brocade Fabric OS Documentation Addendum*.

Document Title	Publication Number
<i>Brocade Advanced Performance Monitor User's Guide v3.1.0/4.1.0</i>	53-0000514-02
<i>Brocade Advanced Web Tools User's Guide v3.1.0</i>	53-0000503-02
<i>Brocade Advanced Zoning User's Guide v3.1.0/4.1.0</i>	53-0000523-02
<i>Brocade Diagnostic and System Error Reference User's Guide v3.1.0</i>	53-0000511-04
<i>Brocade Distributed Fabrics User's Guide v3.1.0/4.1.0</i>	53-0000516-02
<i>Brocade Fabric OS Procedures Guide v3.1.0</i>	53-0000501-02
<i>Brocade Fabric OS Reference v3.1.0</i>	53-0000500-02
<i>Brocade Fabric Watch User's Guide v3.1.0</i>	53-0000504-02
<i>Brocade ISL Trunking User's Guide v3.1.0/4.1.0</i>	53-0000520-02

SilkWorm 3200 Hardware Reference Manual

(Publication number 53-0001619-06)

The *Temperature* condition in Table A-3 on page A-3 of Appendix A refers to the ambient air temperature at the air intake vents on the nonport side of the switch. You should change the *Temperature* condition within the “Condition” heading in the table to *Ambient Temperature* and also add the following note to the table:

NOTE: The temperature inside the switch can be up to 75 degrees Celsius (167 degrees F) during switch operation.

SilkWorm 3800 Hardware Reference Manual

(Publication number 53-0001576-06)

The *Temperature* condition in Table A-3 on page A-3 of Appendix A refers to the ambient air temperature at the air intake vents on the nonport side of the switch. You should change the *Temperature* condition within the “Condition” heading in the table to *Ambient Temperature* and also add the following note to the table:

NOTE: The temperature inside the switch can be up to 75 degrees Celsius (167 degrees F) during switch operation.

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.”

Closed Defects in Fabric OS v3.2.1a

This table lists the defects that were closed with fixes in Fabric OS v3.2.1a.

Fabric OS v3.2.1a		
Defect ID	Severity	Description
DEFECT000054738	High	<p>Summary: With a Brocade switch running Fabric OS v3.2.0 in interop mode, an e_port may segment when connecting to specific 3rd-party switches.</p> <p>Symptom: This only occurs with specific 3rd-party switches.</p> <p>Solution: Avoids segmentation upon receiving version 3 exchange fabric parameters (EFP) from this specific 3rd-party switch.</p> <p>Workaround: Use an older version of code on the 3rd-party switch that supports version 2 exchange fabric parameters (EFP).</p> <p>Probability: High</p> <p>Risk of Fix: Low</p> <p>Service Request# RQST00000036288</p> <p>Reported in Release: V3.2.0</p>
DEFECT000055754	High	<p>Summary: The end-to-end acceptance of the n_port login (PLOGI ACC) is not getting through on a SilkWorm 3800.</p> <p>Symptom: The switch accepts the PLOGI, but sends neither SCSI nor logout commands</p> <p>Solution: Optimizes code to expedite the programming of the filters, prevents frame drops, and allows a maximum number of outstanding f_port logins (FLOGI).</p> <p>Workaround: portdisable/portenable the port for the host losing access to the device.</p> <p>Probability: Low</p> <p>Risk of Fix: Low</p> <p>Service Request# RQST00000036905</p> <p>Reported in Release: V3.2.0</p>

Fabric OS v3.2.1a		
Defect ID	Severity	Description
DEFECT000062540	High	<p>Summary: SilkWorm 3800 running Fabric OS v3.2.0a dropped the n_port login (PLOGI) accept (ACC) with a device running at 1 Gig.</p> <p>Symptom: PLOGI ACC is dropped because a remote f_port running at 1 Gig violated the buffer credit model.</p> <p>Solution: Forces the buffer credit to come up earlier and allocates an extra credit to avoid the problem if the limit is violated.</p> <p>Probability: Low</p> <p>Risk of Fix: Low</p> <p>Service Request# RQST00000042149</p> <p>Reported in Release: V3.2.0</p>
DEFECT000063276	High	<p>Summary: Intermittent loss of target on switch running Fabric OS 3.2.0x.</p> <p>Symptom: Devices connected to a loop port lost the connection following the reset of other devices on the loop.</p> <p>Solution: Fixes a zoning race condition.</p> <p>Probability: Medium</p> <p>Risk of Fix: Low</p> <p>Service Request# RQST00000042994</p> <p>Reported in Release: V3.2.0</p>
DEFECT000064367	High	<p>Summary: A SilkWorm 3800 is flooding a host by sending n_port logins (PLOGI) every millisecond.</p> <p>Symptom: The PLOGI's are not being flushed following an f_port login (FLOGI). Consequently, all the accumulated PLOGI's are being sent out simultaneously at retry time.</p> <p>Solution: Eliminates a small window between device information updates from the name server.</p> <p>Probability: Low</p> <p>Risk of Fix: Low</p> <p>Service Request# RQST00000043088</p> <p>Reported in Release: V3.2.0</p>

Fabric OS v3.2.1a		
Defect ID	Severity	Description
DEFECT000064400	High	<p>Summary: SilkWorm 3800 displays a stack overflow message and panics during normal operation.</p> <p>Symptom: Stack overflow: CRITICAL MQ-QWRITE, 1, mqWrite, queue = transmit_q, queue ID = 102ff1e0, msg = 102fd400, errno = 0x3d0001</p> <p>Solution: Increases the stack size for portRxTask to prevent the stack overflow and avoids impacting the memory used by other tasks.</p> <p>Probability: Medium</p> <p>Risk of Fix: Low</p> <p>Service Request# RQST00000043852</p> <p>Reported in Release: V3.2.0</p>
DEFECT000065642	High	<p>Summary: After using Fabric Manager v5.0.0 to change the admin password on a SilkWorm 3800 switch, when the switch reboots, it reverts to an old admin password.</p> <p>Symptom: Fabric Manager is using Fabric Access (API) to change the password, but the old password persists.</p> <p>Solution: Write the new password to flash memory following a password change using Fabric Manager.</p> <p>Workaround: Use the CLI command passwd to change the admin password.</p> <p>Customer Impact: Minimal, since there is a workaround.</p> <p>Probability: High</p> <p>Risk of Fix: Low</p> <p>Service Request# RQST00000045006</p> <p>Reported in Release: V3.2.0</p>