



# Brocade Fabric OS v5.3.0d

## Release Notes v1.0

December 5, 2007

### Document History

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|--|--------------------|------------------|
| Brocade Fabric OS v5.3.0d Release Notes v1.0 | First release      | December 5, 2007 |

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## Contents

|  |           |
|--|-----------|
| <b>Quick Look</b>  | <b>5</b>  |
| <b>Overview</b>  | <b>5</b>  |
| New Fabric OS Features   | 5         |
| RAS (Reliability, Availability, Serviceability)                            | 6         |
| Management   | 6         |
| Security   | 6         |
| Other  | 6         |
| New Web Tools Features   | 7         |
| Optionally Licensed Software   | 7         |
| Licensed Software Bundle as Standard                                       | 7         |
| Supported Switches   | 8         |
| Standards Compliance   | 8         |
| Technical Support  | 8         |
| <b>Important Notes</b>   | <b>10</b> |
| Fabric OS Compatibility  | 10        |
| Firmware Upgrades and Downgrades   | 11        |
| Fabric Scalability   | 12        |
| FICON Support  | 13        |
| PKI Certification  | 13        |
| Fabric OS  | 13        |
| Diagnostics backport test  | 13        |
| Diagnostics spinsilk Test  | 14        |
| Other Known Issues in This Release of Fabric OS                            | 14        |
| <b>RFEs Implemented in Fabric OS v5.3.0</b>                                | <b>19</b> |
| <b>Web Tools RFEs Implemented in Fabric OS v5.3.0</b>                      | <b>20</b> |
| <b>Documentation Updates</b>   | <b>21</b> |
| Brocade Fabric OS Administrator's Guide (Publication Number 53-1000448-01) | 21        |
| Brocade 5000 Hardware Reference Manual (Publication Number 53-1000424-01)  | 23        |
| Brocade 5000 QuickStart Guide (Publication Number 53-1000425-01)           | 24        |
| Brocade 24000 Hardware Reference Manual (Publication Number 53-0000396-01) | 24        |
| Web Tools Administrator's Guide (Publication Number 53-1000435-01)         | 25        |
| Fabric OS Command Reference Manual (Publication Number 53-1000436-01)      | 26        |
| Web Tools Documentation Addendum (Publication Number 53-1000791-01)        | 26        |
| iSCSI Administrator's Guide (Publication Number 53-1000440-01)             | 27        |
| <b>Closed Defects in Fabric OS v5.3.0d</b>                                 | <b>27</b> |
| <b>Closed Defects in Fabric OS v5.3.0c</b>                                 | <b>30</b> |
| <b>Closed Defects in Fabric OS v5.3.0b</b>                                 | <b>33</b> |

|   |           |
|---|-----------|
| <b>Closed Defects in Fabric OS v5.3.0a.....</b> | <b>35</b> |
|---|-----------|

## Quick Look

If you are already using the most recent version of the Fabric OS v5.3.0c Release Notes, here are the changes in this version of the Release Notes.

- A list of the defects that were closed in Fabric OS v5.3.0d has been added to the end of these release notes.

## Overview

Brocade Fabric OS v5.3.0 supports two new hardware blades for the Brocade 48000 director: FC10-6 Fibre Channel port blade and FA4-18 application blade. In addition, Fabric OS v5.3.0 supports a new application platform, the Brocade 7600.

- The Brocade FC10-6 blade is the new 6-port 10 Gbit Fibre Channel port blade designed for the Brocade 48000 director. This blade is designed to extend the value of the FC infrastructure to include 10 Gbit/sec FC and DWDM connected SANs. The Brocade FC10-6 blade provides the same high availability features that exist in the Brocade 48000 director today, satisfying the stringent requirements expected of an enterprise-class director.
- The Brocade FA4-18 application blade is an advanced FC director blade that is capable of enabling fabric intelligence by hosting storage management applications that provide storage virtualization, data mobility, and data protection functionality. The FA4-18 is designed for the Brocade 48000 Fibre Channel director and provides the same high availability and RAS features that exist in a Brocade 48000 director and which are expected in an enterprise class SAN.
- The Brocade 7600 application platform is a fixed configuration, 1U high chassis that is capable of enabling fabric intelligence by hosting storage applications that provide storage virtualization, data mobility, and data protection functionality. The Brocade 7600 is designed to provide the same high availability and RAS features that exist in all Brocade platforms utilized in an enterprise class SAN.
- The Brocade 200E now supports deployment as an Access Gateway. This innovative technology from Brocade allows simplified, interoperable fabric expansion through the use of NPIV, and was previously only available for embedded blade server switches. With support on the 200E, environments that wish to deploy stand-alone switches can now take advantage of the benefits of Access Gateway.

Fabric OS v5.3.0 supersedes Fabric OS v5.2.0, v5.2.1 and v5.2.2. All users are strongly encouraged to upgrade to v5.3.0 as soon as they have access to it.

## New Fabric OS Features

The new features in the Fabric OS v5.3.0 release are summarized below;

- IPv6 support for the management ports
- Firmware download enhancements
  - Support for SCP (Secure Copy)
  - Support for passive FTP
- iSCSI blade – FC4-16IP enhancements
  - Support for iSCSI re-direction
  - Support for CHAP binding
  - Support for LUN delete from a virtual target
- Access Gateway mode support on the Brocade 200E
- Access Gateway enhancements:
  - Web Tools support
  - Fabric Manager support
  - NPIV on F\_Ports
- Fibre Channel Routing enhancements
- IP Broadcast zone support

- IP over FC also via FCR
- IP Filter support (formerly MAC and Management port ACLs in Secure Fabric OS (SFOS))
- Support for FCS with base Fabric OS (formerly in SFOS)
- Support for multiple NTP servers
- Security Enhancements
  - Support for security Admin role
  - Support for account lock-out for admin role.
  - Support for strong password policies preventing repeat or sequence characters
  - P-EAP/MS-CHAPv2 support for RADIUS
- FC-IP
  - Fast Write and Tape Pipelining are supported over secure tunnels
  - Differentiated Services Code Point (DSCP) markings.
- New FC Fast Write feature
- New SNMP Features
  - SNMP AD/RBAC support
  - 3DES and AES privacy protocol support
  - FCIP MIB
  - IPv6 trap destination
  - IPv6 SNMP ACL entries.

#### **RAS (Reliability, Availability, Serviceability)**

- The RASLog has been modified to support IPv6. RAS will also obsolete **traceftp** and **savecore** CLI and add its functionality to **supportsave** and **supportftp**.

#### **Management**

- Fabric OS 5.3.0 adds a new user role, the secAdmin or Security Administrator. This role has responsibility for logging, auditing, security administration and user management. The addition of the secAdmin role allows users to isolate security management from complete Administrator management.

#### **Security**

- All remaining essential elements of SFOS have now been integrated into the base Fabric OS 5.3.0. (Fabric OS v5.3.0 will be the last major release that is compatible with SFOS)
- FICON Cascading no longer requires SFOS.
- MAC policies have now been replaced by IP filters, allowing configuration of acceptable IP addresses and ranges that may gain management access to the switch.
- Protected-Extensible Authentication Protocol (P-EAP with MSCHAP-v2) support for RADIUS.
- DH-CHAP now supported for authentication of HBAs and end-devices in addition to switches.
- Additional password strengthening options.
- Lockout of Admin users that fail authorization.
- Flexible E\_Port authentication settings, allowing better interoperability options for fabrics with varying levels of support. Certificate authentication is now optional.
- Auditing of authorization attempts.

#### **Other**

- New optional FC Fast Write feature for the Brocade 7500 and FR4-18i provides optimization and performance improvements for synchronous SCSI write operations.
- SAS Re-direction provides simplified virtualization configuration.

- Various Request for Enhancements (RFE)

## **New Web Tools Features**

New Web Tools features in the Fabric OS v5.3.0 release are summarized below.

- Usability enhancements
  - Web-started GUI
  - Revamped Switch Explorer
  - Single-signed application
  - Common GUI components with new search and export capabilities
  - “Advanced” vs. “Basic” views in Switch and Port Admin modules
  - Progress bars, other window handling improvements
- New platform and hardware support
  - FA4-18 blade (including separate FWDL and blade IP setting)
  - Brocade 7600 application platform
  - FC10-6 blade
- Access Gateway Enhancements:
  - Full configuration of Access Gateway parameters such as port mapping, Failover and Failback policies, etc.
  - Tabular display of port mapping, port settings, port status, and WWN of attached devices.
- iSCSI setup wizard for improved usability
- IPv6 support
- Support for Security Admin role, P-EAP protocol
- WTEZ Switch Setup enhancements
- Passive FCS support (enforcement but no configuration)
- IP Filtering
- FC Fast Write support

## ***Optionally Licensed Software***

This Fabric OS release includes all basic switch and fabric support software, as well as the following optionally licensed software that is enabled via license keys:

- Brocade Extended Fabrics—Up to 500 km of switched fabric connectivity at full bandwidth over long distances
- Brocade ISL Trunking Over Extended Fabrics—Enhanced to enable trunking over long-distance links of up to 250 km
- Brocade Fabric Manager—Administration, configuration, and maintenance of fabric switches and SANs with host-based software
- Brocade Advanced Performance Monitoring—Performance monitoring of networked storage resources
- Brocade Fabric Watch—Monitoring of mission-critical switch operations
- High Performance Extension (formerly “FC-IP”)—Fibre Channel over IP extension includes FC-IP trunking, multi-tunnel support, compression, and the new FC Fast Write feature.

## ***Licensed Software Bundle as Standard***

The following licensed software is bundled with the hardware and no additional purchase is necessary:

- Brocade Web Tools—Administration, configuration, and maintenance of fabric switches and SANs
- Brocade Advanced Zoning—Division of a fabric into virtual private SANs

- IPSec – IP Security (for the Brocade 7500 and FR4-18i blade in the Brocade 48000)

### ***Supported Switches***

Fabric OS v5.3.0 adds support for the FC10-6 blade and the FA4-18 application blade. Both blades are designed to function within Brocade 48000 director. Fabric OS v5.3.0 also supports the Brocade 200E, 3014, 3016, 3250, 3850, 3900, 4012, 4016, 4018, 4020, 4024, 4100, 4900, 5000, 7500, 7600, 24000, and 48000.

Access Gateway is also supported by Fabric OS v5.3.0, and is supported on the same embedded switches as 5.2.0. Access Gateway is also supported on the 200e beginning with 5.3.0.

**IMPORTANT:** The SilkWorm 12000 is not supported in Fabric OS v5.3.0. In addition Fabric OS v5.3.0 does not run on the SilkWorm 2000 series, 3200, 3800 or AP7420. However, FOS 5.3.0 can be used in the same fabric with older versions of FOS on other hardware platforms if they are using the appropriate minimum FOS code levels as noted on pages 9-10.

### ***Standards Compliance***

This software conforms to the 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>

### ***Technical Support***

Contact your switch supplier for hardware, firmware, and software support, including product repairs and part ordering. To expedite your call, have the following information immediately available:

#### **1. General Information**

- Technical Support contract number, if applicable
- Switch model
- Switch operating system version
- Error numbers and messages received
- **supportSave** 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.

FT00X0054E9

The serial number label is located as follows:

- Brocade 3014—Top of the chassis, under the insertion arm
- Brocade 3016, 4012, and 4024 —Bottom of the switch module
- Brocade 4016 and 4018— Top of the switch module
- Brocade 4020—Side of the switch module
- Brocade 200E, 3250, and 3850—Bottom of the chassis
- Brocade 3900—Non-port side of the chassis
- Brocade 4100, 4900, and 7500—On the switch ID pull-out tab located inside the chassis on the port side on the left
- Brocade 24000 and 48000—Inside the chassis next to the power supply bays

## 3. World Wide Name (WWN)

- Brocade 200E, 3014, 3016, 3250, 3850, 3900, 4012, 4016, 4018, 4020, 4024, 4100, 4900, and 7500 switches and SilkWorm 12000 and Brocade 24000, and 48000 directors provide the license ID. Use the **licenseIDShow** command to display the license ID.
  - All other Brocade switches provide the switch WWN. Use the **wwn** command to display the switch's WWN.

## Important Notes

This section lists information that you should consider before you use this firmware release.

### *Fabric OS Compatibility*

The following table lists the earliest versions of Brocade software supported in this release, that is, the *earliest* supported software versions that interoperate. Brocade recommends using the *latest* software versions to get the greatest benefit from 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](http://www.brocade.com/support/end_of_life.jsp)

| Fabric OS Interoperability with Brocade Switches and Firmware  |                               |
|--|-------------------------------|
| <b>Switches:</b> Brocade 2000 Series and 6400  | Fabric OS v2.6.2 <sup>1</sup> |
| <b>Switches:</b> Brocade 3000 and 3600, SilkWorm 3200 and 3800   | Fabric OS v3.2.1              |
| <b>Embedded Switch:</b> Brocade 4012   | Fabric OS v5.0.0              |
| <b>Switches:</b> Brocade 200E, 325x, 385x, 3900, and 4100<br><b>Embedded Switches:</b> Brocade 3014, 3016 and 4012<br><b>Directors:</b> SilkWorm 12000, Brocade 24000, and 48000 (without FR4-18i blade)                         | Fabric OS v5.0.1              |
| <b>Embedded Switch:</b> Brocade 4020   | Fabric OS v5.0.2              |
| <b>Switches:</b> Brocade 200E, 325x, 385x, 3900, and 4100<br><b>Embedded Switches:</b> Brocade 3014, 3016, 4012, and 4020<br><b>Directors:</b> SilkWorm 12000, Brocade 24000 and 48000 (without FR4-18i blade)                   | Fabric OS v5.0.3              |
| <b>Switches:</b> Brocade 200E, 325x, 385x, 3900, and 4100<br><b>Embedded Switches:</b> Brocade 3014, 3016, 4012, 4016, and 4020<br><b>Directors:</b> SilkWorm 12000, Brocade 24000 and 48000 (without FR4-18i blade)             | Fabric OS v5.0.4              |
| <b>Switches:</b> Brocade 200E, 325x, 385x, 3900, and 4100<br><b>Embedded Switches:</b> Brocade 3014, 3016, 4012, 4016, 4018, 4020, and 4024<br><b>Directors:</b> SilkWorm 12000, Brocade 24000 and 48000 (without FR4-18i blade) | Fabric OS v5.0.5              |
| <b>Switches:</b> Brocade 200E, 325x, 385x, 3900, 4100, 4900 and 7500<br><b>Directors:</b> Brocade 24000 and 48000 (with or without FR4-18i blade)<br><b>Router:</b> Brocade 7500   | Fabric OS v5.1.0              |
| <b>Switches:</b> Brocade 200E, 325x, 385x, 3900, 4100, 4900 and 7500<br><b>Directors:</b> Brocade 24000 and 48000 (any combination of FC4-16, FC4-32, FC4-48, FC4-16IP, and FR4-18i blades)<br><b>Router:</b> Brocade 7500       | Fabric OS v5.2.0 <sup>1</sup> |

| <b>Fabric OS Interoperability with Brocade Switches and Firmware</b>  |                                     |
|---|-------------------------------------|
| <b>Switches:</b> Brocade 200E, 325x, 385x, 3900, 4100, 4900, 5000 and 7500<br><b>Embedded Switches:</b> Brocade 3014, 3016, 4012, 4016, 4018, 4020 and 4024<br><b>Directors:</b> Brocade 24000 and 48000 (any combination of FC4-16, FC4-32, FC4-48, FC4-16IP, and FR4-18i blades)<br><b>Router:</b> Brocade 7500                       | Fabric OS v5.2.1                    |
| <b>Switches:</b> Brocade 5000   | Fabric OS v5.2.1_NI                 |
| <b>Switches:</b> Brocade 200E, 325x, 385x, 3900, 4100, 4900, 5000, 7500 and 7600<br><b>Embedded Switches:</b> Brocade 3014, 3016, 4012, 4016, 4018, 4020 and 4024<br><b>Directors:</b> Brocade 24000 and 48000 (any combination of FC4-16, FC4-32, FC4-48, FC4-16IP, FR4-18i, FA4-18, and FC10-6 blades)<br><b>Router:</b> Brocade 7500 | Fabric OS v5.3.0                    |
| <b>Router:</b> SilkWorm AP7420  | XPath 7.4.X <sup>2</sup>            |
| <b>Fabric OS FCR Interoperability with McDATA Switches and Firmware <sup>2</sup></b>  |                                     |
| Intrepid 6140 and 6064  | EOS v7.x, v8.x, v9.2.0 <sup>2</sup> |
| Sphereon 3232, 4300, 4500 and 3216  | EOS v7.x, v8.x, v9.2.0 <sup>2</sup> |
| Intrepid 10000  | EOS v9.2.0 <sup>2</sup>             |

- (1) Fabric OS v2.6.2 can interoperate with Fabric OS v5.2.0 through the FC routing capability of the Brocade AP7420, Brocade 7500, or FR4-18i blade in the Brocade 48000 director.
- (2) Fabric OS and McDATA E/OS v4.x, v5.x, 6.x can interoperate through the FC routing capability of the SilkWorm AP7420 only. Fabric OS and McDATA E/OS v7.x can interoperate through the FC routing capability of the SilkWorm AP7420, Brocade 7500, or FR4-18i blade in the Brocade 48000. Fabric OS and McDATA E/OS v8.x and v9.2.x can interoperate through the FC routing capability of the Brocade 7500, or FR4-18i blade in the Brocade 48000.

### ***Firmware Upgrades and Downgrades***

- Brocade does not support upgrading from more than two previous releases, for example, upgrading from Fabric OS v5.1.x to v5.3.x is supported but upgrading from Fabric OS v5.0.x or a previous release directly to v5.3.x is not.
- Currently, Brocade does not support downgrading from Fabric OS v5.3.0 to 5.2.1\_NI. In order to downgrade from Fabric OS v5.3.0 to v5.2.1\_NI you must first downgrade to Fabric OS v5.2.1 or Fabric OS v5.2.2.
- The Brocade 5000 running Fabric OS v5.2.1\_NI may not be upgraded to Fabric OS 5.3.0. Fabric OS v5.3.0 does not support Native Interoperability for deployment in M-EOS fabrics.
- Fabric OS v5.1.1 supports a maximum MTU value of 2284. However, Fabric OS v5.2.1 and v5.3.0 support an MTU value of up to 2348. Prior to downgrading the Fabric OS to v5.1.1 the user must change the MTU size less than or equal to 2284. If the configuration of the target unit has an MTU value greater than 2284, the FCIP tunnels will not go online after firmware downgrade.
- Upgrading a switch from Fabric OS v5.0.x or a previous release to v5.3.0 requires a two-step process: first upgrade to v5.1.x or v5.2.x and then upgrade to v5.3.0. In addition, prior to upgrading to v5.3.0 Device-based routing must not be in use, otherwise the upgrade will fail. You can use the **aptPolicy** command to verify the routing policy.

- Chassis configuration options 3 and 4 are no longer supported for the Brocade 48000; see the “Brocade 48000 Chassis Configuration Options” table for details.
- Brocade supports downgrading up to two previous releases, for example, if you upgrade to Fabric OS v5.3.0 from v5.1.x, you can revert back to v5.1.x. However, you cannot downgrade from Fabric OS v5.3.0 to v5.0.0 or to a previous release.
- If the Brocade 48000 contains an FC10-6 or an FA4-18 blade or has enabled any of the new software features in Fabric OS v5.3.0, such as IPv6, you cannot downgrade below Fabric OS v5.3.0. If you wish to do so, you must a) remove these features, b) physically remove the blade(s), and then c) downgrade the firmware.
- If the Brocade 48000 has FC4-48 or FC4-16IP blades installed or any new software features from Fabric OS v5.2.0, such as FCR trunking and administrative domains for virtual fabrics, you cannot downgrade below Fabric OS v5.2.0. If you wish to do so, you must a) remove these features, b) physically remove the blade, and then c) downgrade firmware.
- When you downgrade to Fabric OS v5.1.x, you will also need to remove the v5.2.x features (and any installed FC4-48 or FC4-16IP blade). In all cases, the firmwareDownload command will guide you to remove any features and blades that need to be removed.
- If McDATA i10K in the edge fabric is connected to FCR, before downgrade to Fabric OS v5.2.x or v5.1.x, disconnect the i10K switch. Failure to do so may result in iswitchd core dump.

### ***Fabric Scalability***

Fabric OS v5.3.0 supports the same fabric scalability as Fabric OS v5.0.x and v5.2.x, that is, 2,560 ports with 50 domains.

Fabric OS v5.3.0 using interop mode 1 supports interoperability with McDATA Open Fabric mode for fabrics up to a maximum of 200 ports and 4 domains.

For FC Routing environments, the following scalability numbers apply:

| <b>Fibre Channel Routing Scalability</b>            |                  |
|---|------------------|
| Max # edge fabrics per metaSAN                      | 32               |
| Max # edge fabrics per chassis                      | 16               |
| Max # local switches per edge fabric                | 26               |
| Max # front domains per edge fabric                 | 10               |
| Max # translate domains per edge fabric             | 33               |
| Max # total domains per edge fabric                 | 69               |
| Max # local switches per edge fabric (M-EOS fabric) | 16 <sup>1</sup>  |
| Max # WWNs per edge fabric (M-EOS fabric)           | 800 <sup>1</sup> |
| Max # imported devices per fabric (M-EOS fabric)    | 300 <sup>1</sup> |
| Max # local switches per backbone fabric            | 10               |
| Max # translate domains per backbone fabric         | 33               |
| Max # total domains per backbone fabric             | 69               |

| Fibre Channel Routing Scalability          |                   |
|--|-------------------|
| Max # FCR switches per metaSAN             | 6                 |
| Max # FCR switches per backbone fabric     | 6                 |
| Max # local WWNs per edge fabric           | 1200              |
| Max # local WWNs per backbone fabric       | 512               |
| Max # imported devices per fabric          | 1000              |
| Max # local & remote WWNs per fabric       | 1300              |
| Max # device database entries per metaSAN  | 10000             |
| Max # LSAN zones per metaSAN               | 3000 <sup>2</sup> |
| Max # entries per LSAN zone                | 64                |
| Max # hops between edge switches           | 12                |
| Max # EX_Port s to an edge fabric from FCR | 4 8(4G)           |
| EX_Port s per FCR                          | 32                |

Table Notes:

- 1) M-EOS fabrics must be running M-EOS 9.x firmware or later.
- 2) All BB FCRs with Fabric OS v5.3.0 and above

Other Notes:

- 1) IPFC over FCR is only supported for edge to edge.
- 2) FC Fast Write is only supported for edge to edge.

### ***FICON Support***

For Fabric OS v5.2.0 and later, the Switch Connection Control high integrity requirement for cascading FICON is available in the standard base Fabric OS. End users can now cascade FICON without purchasing a separate Secure Fabric OS license.

**NOTE:** The FC4-48 Fibre Channel port blade is not supported to connect to System z environments via FICON channels or via FCP zLinux on System z. To attach the Brocade 48000 director o the System z environment, use an FC4-16 or FC4-32 Fibre Channel port blade.

### ***PKI Certification***

As of May 15, 2005, Brocade no longer includes a PKI Certificate as part of the installed Secure Fabric OS. If you wish to activate Secure Fabric OS on a supported director or switch, you must contact Brocade to obtain a PKI certificate.

Refer to the *Secure Fabric OS Administrator's Guide*, Chapter 2, "Adding Secure Fabric OS to the Fabric," for a description on how to obtain certificates from the Brocade Certificate Authority.

### ***Fabric OS***

#### **Diagnostics backport test**

The backport test passes only in a) a pure Brocade 24000 director or b) a Brocade 24000 system with no FC4-16 blades and under Option 5.

Do not run backport tests in any configuration other than the two listed above; use the minicycle test instead.

## Diagnostics spinsilk Test

The following configurations *will pass the spinsilk test*:

- Pure Brocade 24000 director (only CP2 and FC-16 blades)
- Pure Brocade 48000 director, option 5
- Pure Brocade 48000 director, option 5 (with FC4-16 blades)

The following configurations *will fail the spinsilk test*; use the minicycle test instead:

- Mixed Brocade 24000 director (with either CP4 or FC4-16 blades)
- Pure Brocade 48000, option 1

“Pure Brocade 48000” refers to a director with CP4 and FC4-16 blades only.

## Other Known Issues in This Release of Fabric OS

The following are known issues in this release of Fabric OS.

| Areas           | Description of known issues in this release of Fabric OS.  |
|-----------------|--|
| Broadcast Zones | <ul style="list-style-type: none"><li>• In Fabric OS v5.3.0, a zone with the name “broadcast” (case-sensitive) is a special zone for setting up recipients of broadcast packets. In Fabric OS versions earlier than v5.3.0, a zone named “broadcast” does not have special significance. Therefore, you must make sure that if a broadcast zone is configured, then the active and standby CPs should be running the same Fabric OS version. Otherwise an HA failover might change the zone configuration.</li></ul> <p>Refer to the <i>Fabric OS Administrator’s Guide</i> for additional information about broadcast zones.</p>                                |
| Brocade 48000   | <ul style="list-style-type: none"><li>• Before moving the slider UP on a Control Processor blade that is being activated, observe that amber LED is not ON for the active CP for at least 5 seconds and all LEDs are off on new inserted CP.</li><li>• In a core-edge design, when a fully populated 384-port Brocade 48000 (populated with 8 FC4-48 blades) is an edge switch in a large SAN, it can experience high CPU utilization and may panic if it becomes a principal switch. SAN design best practice recommends deploying a high port-count switch as both core and principal switch to reduce fabric stress and provide ease of management.</li></ul> |
| Brocade 7500    | <ul style="list-style-type: none"><li>• Brocade 7500 fans operate at the correct speed, that is, at maximum on bootup. However, this initial speed may trigger an error message that indicates that the speed is too high (“above threshold”). You can disregard this message; the fan speed is adjusted to a nominal speed shortly after bootup. This message is benevolent. The fan speed will be adjusted to a nominal speed shortly after bootup.</li></ul>  |

| Areas                    | Description of known issues in this release of Fabric OS.  |
|--------------------------|--|
| Diagnostics              | <ul style="list-style-type: none"> <li>All offline diagnostics commands should be used only when the switch is disabled.</li> <li>POST can fail if new SFPs are added during POST. SFPs should only be added while the switch is “online” or if the switch is powered off.</li> <li>When you use the diagnostic commands <b>systemVerification</b> and <b>diagSetBurnin</b>, the switch or blade will fault when the burn-in error log is full. Clear the burn-in log before running <b>systemVerification</b> or <b>diagSetBurnin</b>.</li> <li>If there are ISLs present on the switch that are not used for routing (due to them having higher linkcosts), disable the links before running <b>spinfab</b>.</li> </ul>  |
| Distance mode            | <ul style="list-style-type: none"> <li>Distance setting is not persistent. After a configuration uploads and downloads, distance settings will be lost and the desired distance will be shown as 0.</li> </ul>   |
| Fabric Merge             | <ul style="list-style-type: none"> <li>Do not try to merge fabrics with conflicting domain IDs over a VE_Port. Before merging two fabrics over FC-IP with VE_Ports at each end, it is recommended that all domain ID and zoning conflicts are resolved.</li> </ul>   |
| Fabric OS – CLI commands | <ul style="list-style-type: none"> <li>This release does not support underscore (_) as part of the name for dd and ddset in the <b>iscsicfg</b> command.</li> <li>The <b>slotOff</b> and <b>slowOn</b> commands are now obsolete; use <b>slotPowerOff</b> and <b>slotPowerOn</b> instead. The <b>portLogPortShow</b> command is also now obsolete.</li> <li>When performing a configdownload, you may receive a message stating "configDownload not permitted." An invalid parameter was passed to the switch. The invalid parameter could be from a switch security policy, such as the password policy, or the NTP server address. This causes a partial configuration to be downloaded onto the switch. For example, when an NTP server address is invalid, configdownload fails and all data processed prior to the NTP server address data had already been saved in the switch and cannot be backed out. To fix the problem, correct the invalid parameter and re-issue the configdownload command.</li> </ul> |
| FC Fast Write            | <ul style="list-style-type: none"> <li>Only WWN zone (including normal zone and FC Fast Write zone) is supported on FC Fast Write enabled port.</li> <li>Only single device loop port is supported.</li> <li>NPIV (example Access gateway) port is not supported.</li> <li>FCR backbone devices are not supported. That is FC Fast Write should not be enabled on backbone devices.</li> <li>FCR edge to edge support is limited by all the target devices on given edge fabric that host talks to should be connected to a Brocade 7500 or FR4-18i in FC Fast Write mode. FC Fast Write should not be enabled on ports when testing the remote mirror application.</li> <li>When a very high volume of traffic is being sent by host, FC Fast Write IOs may time out and frame may be dropped.</li> <li>Within the context of FC Fast Write, L_Port is not supported in Fabric OS v5.3.0</li> </ul>   |

| Areas        | Description of known issues in this release of Fabric OS.   |
|--------------|---|
| FC Routing   | <ul style="list-style-type: none"> <li>• If a SilkWorm AP7420 is present in the backbone fabric, the command “fosconfig - disable fcr” may take up to 8 minutes to complete. If the AP7420 is replaced by a FR4-18i or Brocade 7500, the command completes immediately.</li> <li>• EX_Port trunking is not enabled by default.</li> <li>• FCR switch does not support an edge fabric with one McDATA switch set to ‘never principal’. The EX_Port connected to that edge fabric will not come up.</li> <li>• FCR switch does not support edge fabrics that consist of McDATA switches with ‘domain ID offset’. The EX_Port connected to that edge fabric may fail the RDI process and will not come up. EX_Port s come up disabled (failed to init in time) if attached to a Native mode switch running EOS 9.x that has non-default DID offset configured.</li> <li>• FCR does not support an edge fabric that has both McDATA and Brocade switches in it. For example, FCR is not supported if a Brocade 5000 running v5.2.1_NI is connected to an edge fabric that includes McDATA switches.</li> <li>• Device discovery may fail when an HBA use the GA_NXT name server query to discover devices through an FCR since the query is mishandled by the FCR. This problem has been seen with a QLogic HBA with Solaris 10 X86 Update 2, patch level 125101-09 and Leadville.</li> </ul> |
| FC10-6 Blade | <ul style="list-style-type: none"> <li>• Clear the long distance configurations from the FC10-6 ports prior to replacing the FC10-6 with a 4 Gbps blade. If the configurations are not cleared and you install a 4 Gbps blade, some ports may not come online due to a buffer allocation issue. To resolve it, re-install the FC10-6 blade and use <b>portcfgdefault</b> to clear the long distance configuration on each of the 10 Gbps long distance ports.</li> <li>• In rare instances POST/Systemverification failures have been observed on the FC10-6.</li> </ul>  |



| Areas                                   | Description of known issues in this release of Fabric OS.  |
|---|--|
| FC4-48 port blade for the Brocade 48000 | <ul style="list-style-type: none"> <li>Configure command only gives a maximum login per port setting. The command allows over 127, where ports for the FC4-48 blade will honor that value as long as its share areas values are 127 or less.</li> <li>Before replacing FC4-32 blade with FC4-48 blade, restore ports 16 – 31 of the FC4-32 blade if these ports are used for port swapping. Failure to do so will fault the FC4-48 blade. The only way to restore back to original settings is to add the FC4-32 blade back in to the slot and port swap the ports back to port's default setting.</li> <li>FC4-48 ports should not belong to the zone or in an administrative domain in which FICON devices are present.</li> <li>FC4-48 blade does not support loop. Private L_Ports will be shown on these ports in switchShow, but will not participate in the fabric</li> <li>The porttest and spinfab commands on any platform will not work on E_Ports connected to a FC4-48 port.</li> <li>In a core-edge design, making an edge 384-port Brocade 48000 the principal switch causes high CPU utilization and may cause panics. SAN design best practice recommends moving the reduction of fabric stress and ease of management.</li> <li>The FC4-48 Fibre Channel port blade is not supported to connect to the System z environments via FICON channels or via FCP zLinux on System z. To use the Brocade 48000 director to attach to the System z environment, please use the FC4-16 or FC4-32 Fibre Channel port blades</li> <li>All zones involving the shared ports (domain, port or WWN) of an FC4-48 blade would be treated as session based in "interopmode 2" fabric configuration.</li> </ul> |
| Firmware upgrade/downgrade              | <ul style="list-style-type: none"> <li>When upgrading from Fabric OS v5.1.0x to v5.2.0x or v5.3.0, if there are two or more inter-fabric links (IFL) connected to an edge fabric, one IFL will stay online and the other IFLs will go online and offline. This will cause a temporary traffic disruption going from multiple IFLs to 1 IFL and then back to multiple IFLs. This is due to the front domain consolidation new feature in v5.2.0 where the IFLs connected to the same edge share the same front domain</li> <li>When downgrading from Fabric OS v5.3.0 or v5.2.x to v5.1.0x, FC traffic will be disruptive if there is front domain consolidation prior to the downgrade even in the case of a single IFL.</li> <li>Upon firmware download the FC4-16IP blade does not preserve disabled GE ports in disabled state. If you wish to retain GE ports in a disabled state across firmware download, you must configure them as persistently disabled.</li> <li></li> </ul>   |
| FRU insertion                           | <ul style="list-style-type: none"> <li>FW_FRU_INSERTED message is displayed twice when a power supply FRU is inserted and powered on. There is no functional impact.</li> </ul>  |
| HA                                      | <ul style="list-style-type: none"> <li>If there is an already segmented port and backbone devices are exported to an edge fabric, a build fabric / fabric reconfiguration can occur after running <b>haFailover</b>. Ensure that there are no segmented ports before upgrading firmware.</li> </ul>  |

| Areas                   | Description of known issues in this release of Fabric OS.  |
|-------------------------|--|
| IPSec for FR4-18i blade | <ul style="list-style-type: none"> <li>• IPSec implementation details: <ul style="list-style-type: none"> <li>○ Pre-shared key</li> <li>○ Main mode (IKE negotiation protocol)</li> <li>○ Tunnel mode in ESP (Encapsulating Security Payload)</li> </ul> </li> <li>• IPSec specific statistics not provided</li> <li>• No NAT or IPv6 support</li> <li>• Jumbo frames will not be supported on secure tunnels.</li> <li>• ICMP redirect is not supported for IPSec-enabled tunnels.</li> <li>• Only a single secure tunnel will be allowed on a port. Non-secure tunnels will not be allowed on the same port as secure tunnels.</li> <li>• Modify operations are not allowed on secure tunnels. To change the configuration of a secure tunnel, you must first delete the tunnel and then recreate it with the desired options.</li> <li>• Only a single route is supported on an interface with a secure tunnel.</li> <li>• An IPSec tunnel cannot be created using the same local IP address if ipperf is active and using the same local IP address (source IP address).</li> <li>• Unidirectional supported throughput is ~104Mbytes/sec and bidirectional supported throughput is ~90Mbytes/sec.</li> <li>• An IPSec tunnel takes longer to come online than a non-IPSec tunnel.</li> </ul>  |
| iSCSI                   | <ul style="list-style-type: none"> <li>• Enterprise storage array targets may not show up consistently in the disk management window of an iSCSI initiator when the same LUNs are mapped to two different virtual targets (VTs). When the initiator logs in to the VTs, the targets keep disappearing from the disk management window. If the session to one of the VTs is disconnected, the remaining VT appears and stabilizes in the disk management window.</li> <li>• Under certain conditions, hosts on an IP network may not be able to issue a ping command to iSCSI gateway ports in another subnet. You can work around this problem by issuing a ping command from the iSCSI gateway port. The hosts will then be able to successfully issue ping commands to the iSCSI gateway port.</li> <li>• An IP network disconnection lasting five seconds or more may cause COPA failure on the disconnected PC, which in turn may cause a loss of connection to an enterprise storage array</li> <li>• If traffic is run from hosts to certain targets with severe impairment conditions in the IP network for hours at time, throughput to the targets will drop, and may take up to 10 minutes to recover after the impairment condition is removed. Note that this problem is highly intermittent, and is unlikely to be seen in a customer environment. We believe that this issue is the result of host/target interaction, and is not the result of action on the iSCSI gateway.</li> <li>• A Microsoft windows PC host was unable to discover enterprise storage array LUNs. The Microsoft iSCSI initiator is able to discover targets if the software is uninstalled and reinstalled without the MPIO option.</li> </ul> |

| Areas                       | Description of known issues in this release of Fabric OS.   |
|-----------------------------|---|
| Management – Proxy switches | <ul style="list-style-type: none"> <li>If you are using a Fabric OS v4.x switch as an API or SMI-S proxy to manage a v5.1.0 switch, you must be running Fabric OS v4.4.0d, as a minimum requirement.</li> </ul>   |
| Performance Monitoring      | <ul style="list-style-type: none"> <li>If the user tries to save more than 512 monitors using the <b>perfCfgSave</b> command, some of the monitors may be lost.</li> </ul>  |
| Scalability                 | <ul style="list-style-type: none"> <li>Support for Default Zoning policies have been added to Fabric OS v5.1.0. Typically, when you issue the <b>cfgDisable</b> command in a large fabric with thousands of devices, the name server indicates to all hosts that they can communicate with each other. To ensure that all devices in a fabric do not see each other during a <b>cfgDisable</b> operation, you can activate a <i>Default Zone</i> with policy set to “no access”. If Default zoning policies are enabled, all <b>cfgEnable/Disable</b> commands and zoning changes must be run from a switch in the fabric running Fabric OS v5.1.0/v5.2.0.</li> <li>In large fabrics with more than 1,000 ports, it is recommended that the MS Platform Database is disabled, it is also required that the Platform DB be disabled before downgrading to previous versions of Fabric OS. This can be done using the <b>msPLMgmtDeactivate</b> command.</li> </ul> |
| Security                    | <ul style="list-style-type: none"> <li>Remove any password enforced expiration of admin or root accounts before downgrading firmware to 5.0.1 or lower versions.</li> </ul>   |
| System boot                 | <ul style="list-style-type: none"> <li>Not all Fabric OS services are available when the prompt becomes available during boot up. Wait for all the services to come up before using the switch or performing zoning actions.</li> </ul>   |
| Web Tools                   | <ul style="list-style-type: none"> <li>When the regional language is set to anything other than English, Brazilian Portuguese, French, German, Italian, Japanese, Korean, Traditional Chinese, Simplified Chinese or Spanish, Web Tools may not finish loading when connecting to a switch running FOS 5.3.0, 5.3.0a or 5.3.0b. The Switch Explorer progress bar hangs while initializing switch details. This problem can be overcome by change the regional settings for the operating system to English and re-load Web Tools.</li> </ul>  |

## RFEs Implemented in Fabric OS v5.3.0

| RFE Number | Description of RFEs Implemented in Fabric OS v5.3.0  |
|------------|--|
| 2536       | Provided new FOS CLIs to rename an alias, a zone and a zone configuration. Zone – copy copies the zone object to a new zone object. Zoneobjectrename renames the zone object                                       |
| 3191       | The switch detects and handles a corrupted zone config [under /etc/fabos/zone*] gracefully instead of rebooting. The switch will also log the error in RASLog.   |
| 3199       | Added a new command that provides both the WWN and Serial Number of the switch. Added a –sn option to display the serial number. For example, wwn –sn will return both the world wide name and serial number data. |

| <b>RFE Number</b> | <b>Description of RFEs Implemented in Fabric OS v5.3.0</b>   |
|-------------------|--|
| 3402              | Added additional information on a faulty port in fabric watch to aid in troubleshooting.   |
| 3424              | Provided the ability to use passive FTP to download firmware.  |
| 3740              | Added the capability for the customer to specify a quality password policy that includes the ability to prohibit the selection of passwords with consecutive, identical characters.      |
| 3770              | Multiple NTP servers can be utilized by the tsclockserver for redundancy. For example, if one site NTP server fails (DR scenario) there is a backup that can be reached by the switches. |
| 3991              | A RASLog message is logged when a 2.x switch joins the fabric.   |
| 3776              | HA failover and user notification occurs on a Brocade 48000 when there is a failed Ethernet chip (Oscillator chip).  |

### **Web Tools RFEs Implemented in Fabric OS v5.3.0**

| <b>RFE Number</b> | <b>Description of Web Tools RFEs Implemented in Fabric OS v5.3.0</b>                                       |
|-------------------|--|
| 3969              | Provided individual Error counters for FC Ports from Port admin  |
| 3970              | Provide SFP TX /RX power information in DB level from port admin from Web Tools                            |
| 3971              | Added Clear Counter feature to reset all the counters that are being displayed                             |
| 3993              | Provided ability to clear Brocade 7500 or FR4-18i GE port Error counters with 'portStatsClear' CLI command |

## Documentation Updates

This section provides information on last-minute additions and corrections to the documentation. The most recent Fabric OS v5.3.0 documentation manuals are available on the Brocade Partner Network: <http://partner.brocade.com/>

### ***Brocade Fabric OS Administrator's Guide (Publication Number 53-1000448-01)***

On page 12 before the instructions "To set static addresses for the Ethernet network interface", insert the following text:

On an AP blade, configure the two external Ethernet interfaces to two different subnets, or if two subnets are not present, configure one of the interfaces and leave the other unconfigured. Otherwise the following message will show up and also blade status may go into a faulty state after a reboot.

```
Neighbor table overflow.  
print: 54 messages suppressed
```

On page 136, under the heading "Restoring a Configuration," a note should be placed before the next section stating the following:

If a **configupload** command is issued on a non-FCR platform, such as the configuration file from a Brocade 7500 to a Brocade 7600, FCR-like parameters may be viewed in the uploaded data. This is harmless to the switch and can be ignored.

On page 182, under the section Downloading SAS and SA Applications to the FA4-18 blade, the following note should appear after the second paragraph:

An SAS and SA firmwaredownload is unsupported while the switch is running POST.

On page 201, under the section 'Blade Troubleshooting Tips' add the following bulleted item:

The director is unable to downgrade after removing FR4-18i blade.

The persistent configuration changes are required to be done prior to the blade removal:

- Either delete EX\_Port configuration before removing the FR4-18i blade
- Or insert a non-Brocade FR4-18i blade in the slot.

Otherwise the system is prone to accidental configuration changes, for example in situations where the user may have done a slotpoweroff for debugging and not intended the EX\_Port configuration to be cleared. Pre-install is designed to catch and prevent such accidental changes and requires explicit actions on the part of the user in such situations.

On page 239 in step 8 and page 236 the output for fcrfabricshow should display as follows:

```
switch:admin> fcrfabricshow
FCR WWN: 10:00:00:05:1e:13:59:00, Dom ID: 2, Info: 10.32.156.52 1080::8:800:200C:1234/64,
```

```
"fcr_7500"
EX_Port FID Neighbor Switch Info (WWN, enet IP, name)
-----
7  10 10:00:00:05:1e:34:11:e5 10.32.156.33 "7500" 1080::8:8FF:FE0C:417A/64
4  116 10:00:00:05:1e:37:00:44 10.32.156.34 "7500"
```

```
FCR WWN: 10:00:00:05:1e:12:e0:00, Dom ID: 100, Info:10.32.156.50 1080::8:60F:FE0C:456A/64
```

```
"fcr_7500"
EX_Port FID Neighbor Switch Info (WWN, enet IP, name)
-----
4  95 10:00:00:05:1e:37:00:45 10.32.156.31 "7500"

FCR WWN: 10:00:00:05:1e:12:e0:00, Dom ID: 100, Info: 10.32.156.50, "fcr_Brocade 7500"
EX_Port FID Neighbor Switch Info (WWN, enet IP, name)
-----
4  95 10:00:00:05:1e:37:00:45 10.32.156.31 "Brocade 7500"
5  95 10:00:00:05:1e:37:00:45 10.32.156.31 "Brocade 7500"
6  95 10:00:00:05:1e:37:00:45 10.32.156.31 "Brocade 7500"
```

On page 253, under the IPFC over FCR section, put the following text after the last paragraph:

If you have an FID with a pre-existing IPFC data session that you want to disable then the IPFC traffic across the FCR may not stop even after disabling the broadcasting to some edge fabrics. When you disable the IPFC traffic broadcast configuration it will take effect on the next ARP command. If there is an active IPFC data session through the FCR, disabling the FID on the FCR, using the fcrbcastconfig command, would be effective after clearing the ARP cache on the host of the IP devices forcing the IP devices to re-send ARP or after the IP devices send the periodic ARP command. Clearing the ARP cache forces the IP devices to re-send ARP or after the IP devices send the periodic ARP command.

***Brocade 5000 Hardware Reference Manual (Publication Number 53-1000424-01)***

On page 11, under the heading “Items included with the Brocade 5000,” replace the following bullet:

- “• Power plug current/voltage rating: 15A/125V”

With:

- “• Power plug current/voltage rating: 1.4A/125V”

On page 12, under the heading “Installation and Safety Considerations,” replace the following bullet:

“To install and operate the switch successfully, ensure that the following requirements are met:

- The primary AC input is 90-264 VAC (switch autosenses input voltage), 47-63 Hz.”

With:

“To install and operate the switch successfully, ensure that the following requirements are met:

- The primary AC input is 100-240 VAC (switch autosenses input voltage), 47-63 Hz.”

On page 22, Figure 2 LEDs on Prot Side of Brocade 5000, the captions for callouts 3 and 4 are reversed and should read as follows:

3 System Power LED

4 Power Supply Status LED

On page 30, under the heading “Facility Requirements,” replace the following bullet:

“Electrical:

- Primary AC input 90-264 VAC (switch autosenses input voltage), 47-63 Hz.”

With:

“Electrical:

- Primary AC input 100-240 VAC (switch autosenses input voltage), 47-63 Hz.”

On page 31, in Table 2 “Power Supply Specifications,” replace the “Input voltage value” with the following:

“100 - 244 VAC, Universal”

On page 33, under the heading Fibre Channel Port Specifications, the last paragraph should read as follows:

The ports are capable of operating at 1, 2, or 4 Gbit/sec and are able to autonegotiate to the higher of 1 or 2 OR 4 Gbit/sec.

***Brocade 5000 QuickStart Guide (Publication Number 53-1000425-01)***

On page 5, under the heading “Items included with the Brocade 5000,” replace the following bullet:

“• Power plug current/voltage rating: 15A/125V”

With:

“• Power plug current/voltage rating: 1.4A/125V”

On page , under the heading “Site Planning and Safety Guides,” replace the following bullet:

“The primary AC input is 90-264 VAC (switch auto-senses input voltage), 47-440 Hz.”

With:

“The primary AC input is 100-240 VAC (switch auto-senses input voltage), 47-440 Hz.”

***Brocade 24000 Hardware Reference Manual  
(Publication Number 53-0000396-01)***

On page 13, under the heading “Disconnect from Network and Fabric,” add the following note:

Note: the **switchShutdown** command is only used for dual domain directors and is used to stop traffic on a single domain.



**Web Tools Administrator's Guide**  
**(Publication Number 53-1000435-01)**

On page 2, in Table 1 and Table 2, change the Java Plug-In version from 1.5.0\_06 to 1.6.0.

On page 3, under the heading "Installing Java on the workstation," replace the following sentence:

Java Plug-in version 1.5.0\_06 must be installed on the workstation for the correct operation of Web Tools.

With:

Java Plug-in version 1.6.0 must be installed on the workstation for the correct operation of Web Tools.

On page 3, in the procedure "To install the JRE on your Solaris or Linux client workstation," replace step 1 and step 2:

1. Locate the JRE on the Internet, at the following URL:

*[http://java.sun.com/products/archive/j2se/5.0\\_06/index.html](http://java.sun.com/products/archive/j2se/5.0_06/index.html)*

**NOTE**

This URL points to a non-Brocade Web site and is subject to change without notice.

2. Select **JRE 5.0 Update 6**.

With:

1. Locate the JRE on the Internet, at the following URL:

*<http://java.sun.com/products/archive/j2se/6/index.html>*

**NOTE**

This URL points to a non-Brocade Web site and is subject to change without notice.

2. Click **Download JRE**.

On page 4, in the procedure "To install the Java plug-in on Windows," replace the last two bullet items in step 3:

- If no Java Plug-in is installed, point the browser to a switch running Fabric OS 5.2.0 or later to install JRE 1.5.0\_06. Web Tools will guide you through the steps to download the proper Java Plug-in.
- If an outdated version is currently installed, uninstall it, reboot your personal computer, relaunch the browser, and enter the address of a switch running Fabric OS 5.2.0 or later to install JRE 1.5.0\_06. Web Tools will guide you through the steps to download the proper Java Plug-in.

With:

- If no Java Plug-in is installed, point the browser to a switch running Fabric OS 5.2.0 or later to install JRE 1.6.0. Web Tools will guide you through the steps to download the proper Java Plug-in.
- If an outdated version is currently installed, uninstall it, reboot your personal computer, relaunch the browser, and enter the address of a switch running Fabric OS 5.2.0 or later to install JRE 1.6.0. Web Tools will guide you through the steps to download the proper Java Plug-in.

On page 25, the instructions in the Installing Java on the Workstation section require a correction.

Replace:

Create a symbolic link from this location...

`$FIREFOX/plugins/libjavaplugin_oji.so`

...to this location:

`$JRE/plugin/$ARCH/ns600/libjavaplugin_oji.so`

With:

Create a symbolic link from this location...

`$FIREFOX/plugins/libjavaplugin_oji.so`

...to this location:

`$JRE/plugin/$ARCH/ns700/libjavaplugin_oji.so`

### ***Fabric OS Command Reference Manual (Publication Number 53-1000436-01)***

On page 107 the following statement is made.

The command is supported only on Brocade 200E, 3250, 3850, 3900, 4100, 24000, and 48000 platforms; use portLoopbackTest or monocycle instead.

It should state the following.

The command is supported only on Brocade 200E, 3250, 3850, 3900, 4100, 24000, and 48000 platforms. However, the crossPortTest command doesn't run on supported Switches running FOSv5.3.0. Use portLoopbackTest or monocycle instead.

### ***Web Tools Documentation Addendum (Publication Number 53-1000791-01)***

This document describes how to set up Fibre Channel over Internet Protocol (FCIP) Tunneling Service through Web Tools. It provides information for:

- Understanding the FCIP tunneling service
- Configuring an FCIP interswitch/interfabric link
- Managing the FCIP tunneling service

***iSCSI Administrator's Guide***  
**(Publication Number 53-1000440-01)**

The table shown below is missing from the iSCSI Administrator's Guide. It lists the iSCSI support within FOS v5.3.0

| Item                            | Description   |
|---------------------------------|---|
| iSCSI Initiator Driver Versions | <ul style="list-style-type: none"><li>• Windows<ul style="list-style-type: none"><li>• MS iSCSI initiator 2.02 and 2.03</li></ul></li><li>• Linux<ul style="list-style-type: none"><li>• RH EL 4 Default Initiator</li><li>• 2.6.10 – 4.0.2 iSCSI initiator (SourceForge.net Initiator)</li><li>• 2.4.20 – 3.6.2 iSCSI initiator (SourceForge.net Initiator)</li><li>• SUSE 9 and 10</li></ul></li><li>• Solaris<ul style="list-style-type: none"><li>• iSCSI is built-in to 5.11 with the latest Solaris Express release 08/06</li></ul></li><li>• AIX<ul style="list-style-type: none"><li>• iSCSI is built-in to the 5..3 ML4</li></ul></li><li>• HP-UX<ul style="list-style-type: none"><li>• 11iv1 – B.11.23.03e</li><li>• 11iv2 – B.11.23.03e</li></ul></li></ul> |
| NIC/TOE Cards                   | <ul style="list-style-type: none"><li>• iSCSI HBAs<ul style="list-style-type: none"><li>• Alacritech SES2002XT</li><li>• Qlogic 4050c</li></ul></li></ul>   |

**Closed Defects in Fabric OS v5.3.0d**

This section lists defects that have been closed since the GA release of Fabric OS v5.3.0c.

| Defect ID       | Technical Severity | Description of Closed Defects in Fabric OS v5.3.0d   |
|-----------------|--------------------|--|
| DEFECT000206634 | Medium             | <p>Summary: POST &amp; system verification enhancements</p> <p>Symptom: POST &amp; system verification tests run stress tests that are solely intended for engineering design verification.</p> <p>Solution: Removed "minicycle" for all platforms; "fcrpathtest internal loopback" for FR4-18i, and multiple iterations of alternating diagnostic/operational code downloads for FC4-16IP. Additional enhancements for FA4-18 is planned for a future release.</p> <p>Probability: Low</p> <p>Risk of Fix: Low</p> <p>Found in Release: v5.3.0c</p> |

| Defect ID       | Technical Severity | Description of Closed Defects in Fabric OS v5.3.0d   |
|-----------------|--------------------|--|
| DEFECT000206553 | Medium             | <p>Summary: FC4-48 blade drops frame on Brocade 48000 on ports that are routed through director ports above 256.</p> <p>Symptom: Filter logic can be programmed incorrectly in the following situations: When port type cannot be determined during filter install, such as install Performance Monitor (PM) on a port that is offline. This can result in all frames are dropped on the ISL in situations where the port is enabled as ISL port. This symptom could also occur in event timing sequence situations, resulting in the host being unable to see the target.</p> <p>Solution: After port types are established, ensure that all previous filters are cleared before setting up new filter logic based on port type.</p> <p>Probability: Low</p> <p>Risk of Fix: Low</p> <p>Found in Release: v5.2.1a</p> |
| DEFECT000206349 | Medium             | <p>Summary: Switch panic can occur when many servers reboot at the same time with a certain type of HBA that does not cut off light during bootup.</p> <p>Symptom: Switch panic can occur due to HBA not shutting off light and sending invalid primitives during boot, causing port "LOSS of SYNC" and generating too many interrupts.</p> <p>Solution: Code was changed to fault the port to avoid too many interrupts generated to CPU in a short period of time.</p> <p>Probability: Low</p> <p>Risk of Fix: Low</p> <p>Found in Release: v5.3.0b</p>  |
| DEFECT000206520 | Medium             | <p>Summary: SRDFA suspends in a fast-write environment</p> <p>Symptom: SRDFA suspends fairly consistently during a batch window. The configuration is fairly unique - which has a full Gig-E per interface with link latencies at around 30 ms round trip. The problem occurs when there are more the 768 outstanding fast-write I/O's for SRDF.</p> <p>Solution: Code was changed to shuttle non-tape piped write I/O by passing fast-write functionality during "out of exchange resources" situations.</p> <p>Probability: Low</p> <p>Risk of Fix: Low</p> <p>Found in Release: v5.3.0</p>  |

| Defect ID       | Technical Severity | Description of Closed Defects in Fabric OS v5.3.0d  |
|-----------------|--------------------|---|
| DEFECT000204660 | Medium             | <p>Summary: Various web tool related problems reported on FOS v5.3.x that does not have suitable workarounds.</p> <p>Symptom: The following web tools problems were addressed: Web tools fails to upgrade Brocade7600 from FOS v5.3.x to FOS v6.0.x; Web tool doesn't display fabric event information with "https" access; and unable to open web tool GUI to switches from laptop.</p> <p>Solution: Change code to ensure SAS can upgrade from v5.3.x to v6.0.x on Brocade 7600; to correctly set ssl.enabled configuration parameter when webd comes up and when certificates are added/removed; to allow configurable parameter in webdconfigure for configuring the max heap size, and reduced default max heap size to 512MB such that all PCs can handle it.</p> <p>Probability: High</p> <p>Risk of Fix: Low</p> <p>Found in Release: v5.3.0a</p> |
| DEFECT000206657 | High               | <p>Summary: Brocade 4024 post failure on chassis power on.</p> <p>Symptom: Cold boot of a fully loaded chassis on Brocade 4024, during POST an unexpected interrupt causes POST to fail and switch fault.</p> <p>Solution: Code was changed to delay the process of the interrupt during POST.</p> <p>Probability: Low</p> <p>Risk of Fix: Low</p> <p>Found in Release: v5.2.1b</p>   |

## Closed Defects in Fabric OS v5.3.0c

This section lists defects that have been closed since the GA release of Fabric OS v5.3.0b.

| Defect ID       | Technical Severity | Description of Closed Defects in Fabric OS v5.3.0c   |
|-----------------|--------------------|--|
| DEFECT000086982 | High               | <p>Summary: I/O Ops failure due to incorrect CUP Port PDCM bit for port 256 after firmware upgrade from FOS v5.1.x to later releases.</p> <p>Symptom: After firmware upgrade from FOS v5.1 to FOSv5.2.x/5.3.x, perform a Read PID command 'x'9A' for the CUP Port 'x'FE' data returned show that the PDCM Bit for port 256 to be zero. This problem exists only after a firmware upgrade in the FICON environment.</p> <p>Solution: During firmwaredownload on a chassis based switch, the original FOS v5.1.x PDCM matrix which does not have bit set for port 255, will dump the PDCM matrix info from Active CP to standby CP. When standby CP becomes active, it will not have the PDCM bit set for port 255. Fixed the code to take care of this condition properly.</p> <p>Workaround: Disabling and enabling the fms mode will set the PDCM bit for port 255.</p> <p>Probability: Low</p> <p>Found in Release: v5.2.0</p> |
| DEFECT000202429 | High               | <p>Summary: An FC Analyzer trace shows an FCR port is receiving periodic RRQ and ABTS frames.</p> <p>Symptom: The problem exists with later versions of McDATA edge switches where FCR did not respond to unsupported CT command and the McDATA switch in the edge fabric will retry indefinitely. This was not a functionality issue.</p> <p>Solution: The fix is to reject the unsupported CT command.</p> <p>Probability: Low</p> <p>Found in Release: v6.0.0</p>   |
| DEFECT000203297 | High               | <p>Summary: After switchdisable and switchenable all FCR switches, from the edge fabric translate domain are missing</p> <p>Symptom: After switchdisable and switchenable all FCR switches, proxydevices and nameserver entries no longer match to one recorded before. The command "fcrproxydevshow -a" shows 0 devices and from the edge fabric, translate domains are missing.</p> <p>Solution: Fix a timing issue while interop with i10k switch that occurs only if the 2nd IFL is connected to the same switch in the edge fabric as the 1st IFL and the 1st IFL is fully up, to catch the EFP sent by i10k on the 1st IFL only.</p> <p>Probability: Low</p> <p>Found in Release: v6.0.0</p>   |

| Defect ID       | Technical Severity | Description of Closed Defects in Fabric OS v5.3.0c  |
|-----------------|--------------------|---|
| DEFECT000205107 | High               | <p>Summary: Unable to establish connectivity between HBA and Storage</p> <p>Symptom: Hosts losing paths to targets due to FCR daemon fails to send the GA_NXT response from Brocade 7500 to the host connecting to Mcdt switch in open fabric mode cause by incorrect domain offset in its address translation.</p> <p>Solution: Fixed code to properly set a flag to indicate where the GA_NXT response should go to edge fabric or backbone fabric such that FCR daemon can send the GA_NXT response to the host connecting to MCDT switch with correct domain offset.</p> <p>Probability: Low</p> <p>Found in Release: v5.3.0</p> <p>Service Request ID: RQST00000066272</p> |
| DEFECT000206466 | High               | <p>Summary: Brocade FA4-18 BP cannot sustain burst of messages on two remote connections via Ethernet interface.</p> <p>Symptom: Application on BP cannot sustain two burst streams from a BP on the management interfaces regardless of what the message size is.</p> <p>Solution: Remove the limitation on the amount of processor cycles consumed by the networking stack on FA4-18 BP only.</p> <p>Workaround: Use a single remote connection for the burst stream.</p> <p>Probability: Low</p> <p>Found in Release: v5.3.0</p>   |
| DEFECT000203685 | Medium             | <p>Summary: Expected traps (fruHistoryTrap) are not sent by the Brocade 48000 switch.</p> <p>Symptom: Expected traps are not sent by switch in the case where a FRU is removed/inserted such as remove/insert a CP card.</p> <p>Solution: When the FRU is inserted/removed, a fruHistoryTrap should be generated. Changed code to track the correct SCN subtype code for FRU insertion for FAN/slot component and to generate fruHistoryTrap. NOTE fruStatusChangeTrap will not be generated with FRU insert/remove.</p> <p>Probability: Low</p> <p>Found in Release: v5.2.1</p> <p>Service Request ID: RQST00000064947</p>   |

| Defect ID       | Technical Severity | Description of Closed Defects in Fabric OS v5.3.0c   |
|-----------------|--------------------|--|
| DEFECT000204051 | Medium             | <p>Summary: FOS v5.3.0 webGUI hangs at startup 93%</p> <p>Symptom: After upgrading switches to FOSv5.3.0, the Web Tools GUI bar showing the "Initializing Switch Details" will get stuck at 93%. The problem shows up if the client's regional and language settings are set to some non-US such as Dutch, Russian, and Greek. English, French, German, Italian, Spanish, Portuguese, Simplified Chinese, Traditional Chinese, Japanese and Korean work fine.</p> <p>Solution: Fixed code to make sure GUI launches properly for unsupported locales.</p> <p>Probability: Low</p> <p>Found in Release: v5.3.0</p> <p>Service Request ID: RQST00000064994</p> |
| DEFECT000204796 | Medium             | <p>Summary: A PLOGI received by Brocade 7500/FR4-18i prior to address translation table being programmed may not get the correct domain name offset while operating in the open fabric mode.</p> <p>Symptom: Host without PLOGI retry may be unable to boot over a FCR connection.</p> <p>Solution: Fixed code to adjust PLOGI frame SID with proper domain offset to proxy PID in open fabric mode. This is not an issue for host does PLOGI retry.</p> <p>Probability: Low</p> <p>Found in Release: v5.3.0</p> <p>Service Request ID: RQST00000065984</p>  |
| DEFECT000205199 | Medium             | <p>Summary: Web Tools does not use the correct speed reference when displaying Ethernet speed.</p> <p>Symptom: Using Web Tools, moving the mouse over the Ethernet speed, it always results in 0. The switch is operating at correct speed without functional impact.</p> <p>Workaround: Find mgmt port Ethernet speed from the CLI</p> <p>Solution: Fix underlying MAPS to return proper speed rather than speed type.</p> <p>Probability: High</p> <p>Found in Release: v5.3.0</p> <p>Service Request ID: RQST00000066328</p>  |



## Closed Defects in Fabric OS v5.3.0b

This section lists defects that have been closed since the GA release of Fabric OS v5.3.0a.

| Defect ID       | Technical Severity | Description of Closed Defects in Fabric OS v5.3.0b   |
|-----------------|--------------------|--|
| DEFECT000203741 | High               | <p>Summary: Brocade 7500/FR4-18i with Tape Pipelining command chopping caused backup data unreadable</p> <p>Symptom: With FC Tape Pipelining enabled on a Brocade 7500/FR4-18i FCIP connection, data written to tape using a block size of greater than 128KB will not be readable by some applications.</p> <p>Workaround: Configure application to use less than 128kb size when tape pipelining is enabled or disable tape pipelining.</p> <p>Probability: Low</p> <p>Reported in Release: v5.2.1</p> <p>Service Request #: RQST00000065010</p>   |
| DEFECT000205135 | High               | <p>Summary: Brocade FA4-18 blade running Fabric OS v5.3.0 is restricted to slots 1, 2 or 3 in a DCX chassis the first time it's upgrade to Fabric OS v6.0.0.</p> <p>Symptom: A Brocade FA4-18 blade installed with Fabric OS v5.3.0x code will not come up in a new DCX platform unless it is installed in slots 1, 2 or 3.</p> <p>Workaround: Brocade FA4-18 running v5.3.0x should be installed only in slots 1, 2 or 3 in a DCX platform for the first time upgrade. All other DCX slots should be avoided. This will also be documented in the Fabric OS v6.0.0 release notes for the DCX chassis.</p> <p>Probability: High</p> <p>Reported in Release: v5.3.0</p> |
| DEFECT000205405 | High               | <p>Summary: Some backplane ports on the Brocade 4024 shows CRC errors in chassis</p> <p>Symptom: Some backplane ports in some chassis show unusually high numbers of CRC errors.</p> <p>Probability: Low</p> <p>Reported in Release: v5.3.0</p>  |

| Defect ID       | Technical Severity | Description of Closed Defects in Fabric OS v5.3.0b  |
|-----------------|--------------------|---|
| DEFECT000085981 | Medium             | <p>Summary: Running supportsave in a loop on two Brocade 200E switches, various "sh: /tmp files not found" messages were seen during supportsave execution (randomly)</p> <p>Symptom: When supportsave is run continuously on a switch, certain types of files are not detected and provide "SupportSave completed sh: /tmp/supportSave_files/CONSOLE0: No such file or directory" messages periodically. The file name varies.</p> <p>Probability: Medium</p> <p>Reported in Release: v5.3.0</p> |
| DEFECT000202170 | Medium             | <p>Summary: <u>Request for a revised message from Fabric Watch.</u></p> <p>Symptom: When the SFP/XFP power and voltage readings are above/below the range, an excessive number of alert messages were reported.</p> <p>Probability: Medium</p> <p>Reported in Release: v5.3.0</p>   |
| DEFECT000203299 | Medium             | <p>Summary: Brocade 7500 sends FCP_RSP without Sequence Initiative</p> <p>Symptom: 3<sup>rd</sup> party application will not work with Brocade 7500 FCIP Fast Write application.</p> <p>Probability: Medium</p> <p>Reported in Release: v5.3.0</p> <p>Service Request#: RQST00000064609</p>   |
| DEFECT000204694 | Medium             | <p>Summary: On a Brocade FR4-18i or 7500 the proxy PID is improperly converted to 000000 for an ACC to a REC extended link request when an EX_Port is configured for interop mode.</p> <p>Symptom: Tape backup may not work with devices in McDATA edge fabrics may not work across FCR due to an improper response to a REC extended link request to a tape device</p> <p>Probability: High</p> <p>Reported in Release: v5.2.2</p> <p>Service Request #: RQST00000065690</p>                     |

**Comment [M1]:** Need a better summary statement added to Team Track

## Closed Defects in Fabric OS v5.3.0a

This section lists defects that have been closed since the GA release of Fabric OS v5.3.0.

| Defect ID       | Technical Severity | Description of Closed Defects in Fabric OS v5.3.0a   |
|-----------------|--------------------|--|
| DEFECT000085292 | High               | <p>Summary: iswitchd panic when doing data migration using DMM</p> <p>Symptom: Issue only happens when DMM issues an invalid frame to the FOS switch. Defect within DMM has been fixed, therefore the panic of the FOS switch is not expected to happen.</p> <p>Solution: Made single sequence frame processing logic robust so that the Fibre channel IU (information unit) is not freed prematurely before it is fully processed.</p> <p>Workaround: Upgrade SAS application firmware.</p> <p>Probability: Low</p> <p>Reported in Release: v5.2.0</p> <p>Service Request#: RQST00000059419</p> |
| DEFECT000085775 | High               | <p>Summary: A Diag failure and a FA4-18 fault were observed after continuously running a CP failover test overnight</p> <p>Symptom: Diag failure caused FA4-18 to report a fault.</p> <p>Solution: Removed EBM reinitialization for framer path test. Updated error handling in Anzio driver when link goes down in link up state.</p> <p>Workaround: Use slotpoweroff and slotpoweron commands to cycle power on the blade</p> <p>Probability: Low</p> <p>Reported in Release: v5.3.0</p>   |

| Defect ID       | Technical Severity | Description of Closed Defects in Fabric OS v5.3.0a  |
|-----------------|--------------------|---|
| DEFECT000085977 | High               | <p>Summary: Panic occurs on Brocade 24000 when running MS commands GPT/GPPN/GPS/GAPNL continuously</p> <p>Symptom: Switch will panic occasionally with the following message.</p> <p>2007/04/05-21:22:16, [KSWD-1003], 20, FFDC, WARNING, SilkWorm24000, kSWD: Detected unexpected termination of: "[3]msd:0'RfP=657,RgP=657,DfP=0,died=1,rt=12770144,dt=41800,to=50000,aJc=12718644,aJp=12702043,abiJc=1616326908,abiJp=1616310308,aSeq=767,kSeq=0,kJc=0,kJp=0</p> <p>Solution: Fixed the race condition that existed between two threads within management server that would cause IU (Information Unit) corruption while processing GPT/GPPN/GPS/GAPNL commands.</p> <p>Probability: Low</p> <p>Reported in Release: v5.2.0</p> <p>Service Request#: RQST00000059963</p> |
| DEFECT000202083 | High               | <p>Summary: Brocade 4900 constantly rebooting in third-party lab.</p> <p>Symptom: Name Server crashes. Supportsave shows: "File :/core_files/panic/core.pd1184614039 SECTION:CONSOLE_LOG.</p> <p>Solution: The logic that handles device login and logout in the Name Server is made robust to gracefully handle such rare conditions.</p> <p>Probability: Medium</p> <p>Reported in Release: v5.3.0</p> <p>Service Request #: RQST00000063537</p>  |
| DEFECT000202198 | High               | <p>Summary: Brocade 5000 running FOS v5.3x rejects GID_FT command from an HBA with an "FC4-type not registered"</p> <p>Symptom: The HBA driver will see its GID_FT query being rejected even if it has previously registered with NS using RFT_ID</p> <p>Solution: Modified NS module to properly handle the NS requests that can come in any order</p> <p>Probability: Low</p> <p>Reported in Release: v5.3.0</p> <p>Service Request#: RQST00000063843</p>   |

| Defect ID       | Technical Severity | Description of Closed Defects in Fabric OS v5.3.0a  |
|-----------------|--------------------|---|
| DEFECT000203000 | High               | <p>Summary: FCIP configuration functionality should be restored in FOS 5.3.x WT.</p> <p>Symptom: Unable to configure FCIP tunnels using Web Tools</p> <p>Solution: Added FCIP wizard and stand-alone tab support for near end tunnel configuration.</p> <p>Probability: High</p> <p>Reported in Release: v5.3.0</p>   |
| DEFECT000203383 | High               | <p>Summary: GA_NXT returns VI PID and PWWN in FR mode</p> <p>Symptom: In frame redirect mode, the GA_NXT query from initiator returns the VI PID and PWWN instead of host PWWN</p> <p>Solution: Fixed GA_NXT processing logic in Frame redirect mode</p> <p>Probability: Low</p> <p>Reported in Release: v5.3.0</p>   |
| DEFECT000203438 | High               | <p>Summary: GPN_NN returns VI PID and PWWN in FR mode</p> <p>Symptom: If frame redirect mode is enabled the response for GPN_NN query returns VI PWWN and PID instead of initiator PWWN and PID.</p> <p>Solution: Added translation from PWWN to PID for remote devices in the GPN_NN query logic in Frame Re-direction mode.</p> <p>Probability: Medium</p> <p>Reported in Release: v5.3.0</p> |
| DEFECT000204440 | High               | <p>Summary: Memory leak in scpd during NS queries</p> <p>Symptom: CP reboots after running for 3 days.</p> <p>Solution: Fixed the memory leak issue in NS API/library that was causing scpd to crash eventually.</p> <p>Probability: Medium</p> <p>Reported in Release: v5.3.0</p>  |

| Defect ID       | Technical Severity | Description of Closed Defects in Fabric OS v5.3.0a  |
|-----------------|--------------------|---|
| DEFECT000087182 | Medium             | <p>Summary: Open Mode: Zone enforcement does not succeed on 48K with WWN Zoning</p> <p>Symptom: In Open mode, when F-Ports are connected to ports 16-47 on the FC4-48 blade with WWN zoning, the Zone enforcement shows as SESSION BASED and the "portcamshow" command displays mis-leading information.</p> <p>Solution: Fixed zone enforcement logic for shared ports in open mode.</p> <p>Probability: Medium</p> <p>Reported in Release: v5.3.0</p> |