BROCADE

Brocade Fabric OS v5.1.1b
Release Notes v1.0

April 16, 2007

Document History

Document Title	Summary of Changes	Publication Date
Brocade Fabric OS v5.1.1b Release Notes v1.0	First release	April 16, 2007

Contents

Quick Look

If you are already using the most recent version of the Fabric OS Release Notes, v5.1.1a, there are only two changes in this version of the Release Notes.

- A list of the Fabric OS v5.1.1b closed defects at the end of this document.

- A note concerning how fabrics configured with LSAN zones are affected by switches running a mixture of Fabric OS releases has been added to the Other Notes table of this document.

Overview

Fabric OS v5.1.1b is a patch release containing fixes to defects found since the release of Fabric OS v5.1.1a. All defects newly closed in Fabric OS v5.1.1b are listed in the table at the end of this document.

tsTimeZone command

The *Energy Policy Act of 2005* changed the time change dates for Daylight Saving Time (DST) in the US. Beginning in 2007, DST will begin on the second Sunday of March and end the first Sunday of November. A new time was added to the zone format to allow you to set up time zones by region; DST is then automatically adjusted.

The **tsTimeZone** command is used to display or set the time zone as follows:

- `tstimezone [hourOffset [, minuteOffset]]`
  hourOffset (optional) – Specify the number of hours relative to GMT; must be an integer. Valid values are -12 through 12.
  minuteOffset (optional) – Specify the number of minutes relative to the hourOffset value; must be an integer. Valid values are -30, 0, or 30. The hourOffset can be specified without a minuteOffset, which then defaults to zero.

- `tstimezone –interactive`

- `tstimezone <timezonename>`
  zonename – The name of the zoneinfo time zone; will vary as additional time zones are added.

For example, to display the current time zone setup and then change them to GMT -3:30:

```
switch:admin> tsTimeZone
Time Zone Hour Offset: 0
Time Zone Minute Offset: 0

switch:admin> tsTimeZone –3, –30
Updating Time Zone configuration...done.
System Time Zone change will take effect at next reboot.

switch:admin> tsTimeZone
Time Zone Hour Offset: –3
Time Zone Minute Offset: –30
```

Brocade Fabric OS v5.1.0 supports two new standalone platforms, SilkWorm 4900 and SilkWorm 7500, and the new FR4-18i blade for the SilkWorm 48000 director.

In the Fabric OS v5.1.0 release, Brocade delivered the first 4-Gbit/sec FC routing and FC-IP blade, which is compatible with the SilkWorm 48000. Routing with logical SAN (LSAN) enables secure selective sharing of resources between isolated SANs and introduces new features around FC-IP. Each physical GbE port supports up to eight virtual tunnels and has dedicated hardware for line speed compression. The FR4-18i blade is also "encryption ready," so that encryption at line speed can be enabled in a future Fabric OS release.

With the Fabric OS v5.1.0 release, the SilkWorm 48000 is the industry's first and only Fibre Channel director that provides 4-Gbit/sec port speeds, exceptional performance and scalability, and up to 256 ports in a single domain. The high-performance architecture provides auto-speed negotiation to support legacy 1- and 2-Gbit/sec server and storage devices as well as 4-Gbit/sec devices. Trunking support for an aggregate of up to eight
4-Gbit/sec ports creates an Inter-Switch Link (ISL) trunk up to 32 Gbit/sec of bandwidth.

Fully compatible with existing Brocade storage network offerings, the flexible blade format of the SilkWorm 48000 provides "pay-as-you-grow" scalability and support for multiple protocols and transports.

NOTE: Fabric OS v5.1.0 supercedes Fabric OS v5.0.1. All users are strongly encouraged to upgrade to v5.1.0 as soon as you have access to it.

IMPORTANT: The SilkWorm 12000 and these embedded switch modules (SilkWorm 3014, 3016, 4012, 4016, 4018, 4020, and 4024) are not supported in this release; any enhancements and defect fixes for these platforms will be delivered in Fabric OS v5.0.x sustaining releases.

Optionally Licensed Software

Fabric OS v5.1.0 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

- FC-IP—Fibre Channel over IP extension includes FC-IP trunking, multi-tunnel support, and compression

NOTE: All code fixes in patches are incorporated into subsequent maintenance and feature releases of Fabric OS.

Optional Software

Fabric OS supports Brocade Fabric Manager as standalone software. Fabric Manager provides administration, configuration, and maintenance of fabric switches and SANs with host-based software.

New Features

New features in the Fabric OS v5.1.0 release are summarized in the following sections.

Enhancements to the SilkWorm 200E

The Extended Fabrics feature has been enabled on the SilkWorm 200E, and a license key is required. With Extended Fabrics enabled, the SilkWorm 200E can support distances over 100 km at 2 Gbit/sec. Trunking over distance also is supported on the SilkWorm 200E.

Chassis Configuration Options

Similar to previous Fabric OS releases, the SilkWorm 24000 and 48000 chassis running v5.1.0 is assigned a chassis option by the user, which determines the number of domains (logical switches) on the chassis (supported only on the 24000). The FR4-18i blade is supported only using chassis option 5, which is the default setting on the SilkWorm 48000.

Chassis configuration options 3 and 4 are obsolete; if you attempt to upgrade to Fabric OS v5.1.0 with chassis options 3 and 4 enabled, the upgrade will fail. With chassis options 3 and 4, one half of the director chassis has SilkWorm 12000 port blades and the other has SilkWorm 24000 port blades with SilkWorm 24000 CPs.

Device-based routing is obsolete; it was made available in Fabric OS v5.0.1 for the SilkWorm 4100 and the SilkWorm 48000 director. If device-based routing is enabled, the upgrade to Fabric OS v5.1.0 will fail. You can change the type of routing using the **aptPolicy** command.

 The **aptPolicy** command enables you to configure which egress port is selected for an exchange, based on a particular policy:

• Port-based path selection (paths are chosen based on ingress port and destination only). This also includes user-configured paths. (This is required for FICON)

• Exchange-based path selection (paths are chosen based on SID, DID, and OXID). This is the default and recommended setting for all non-FICON environments.

For the SilkWorm 48000, the **aptPolicy** command will not be available, unless the chassis has been configured to run using option 5 described in the table below.

SilkWorm 48000 Chassis Configuration Options

Option	No. of Domains	Max ports per switch	Routing Module	Supported CPs	Supported Port Blades	Implications/Notes
1	1	128	CER	CP2 or CP4	FC2-16, FC4-16	CP4 will be faulted if inserted into a Universal Chassis
2	2	64/64	CER/CER	CP2 only	FC2-16 only	
5	1	256	RTE	CP4 only	FC4-16, FC4-32, FR4-18i	CP4 will be faulted if inserted into a Universal Chassis

Legend

CER = Core Edge Routing. Port-based routing scheme, same as routing option supported in Fabric OS v4.2.0 and v4.4.0

RTE = Advanced Routing. Exchange-based (default) or port-based routing scheme

CP2 = SilkWorm 24000 CP blade

CP4 = Silkworm 48000 CP blade

FC2-16 = 2G, 16-port blade

FC4-16 = 4G, 16-port blade

FC4-32 = 4G, 32-port blade

FR4-18i = 4G, 16+2 routing blade

Zoning

Support for Default Zoning policies have been added to Fabric OS v5.1.0. Typically, when you issue the **cfgDisable** 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 **cfgDisable** operation, you can activate a *Default Zone* with policy set to "no access". If Default zoning policies are enabled, all **cfgEnable/Disable** commands and zoning changes must be run from a switch in the fabric running Fabric OS v5.1.0.

Fabric Scalability

Fabric OS v5.1.0 supports the same fabric scalability as Fabric OS v5.0.1, that is, 2,560 ports with 50 domains.

Security-Related Enhancement

Password aging, password enforcement, and password strength/history has been added to Fabric OS v5.1.0.

Supported Switches

- Fabric OS v5.1.0 adds support for the SilkWorm 4900, 7500, and FR4-18i blade for the SilkWorm 48000. It also supports the SilkWorm 200E, 3250, 3850, 3900, 4100, 24000, and 48000.

Fabric OS Requirements

The following table lists the earliest versions of Brocade software supported in this release, that is, the *earliest* 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

	Earliest Compatible Version	With Secure Fabric OS Enabled	Recommended Software Version
SilkWorm 4020	v5.0.2 [1]	v5.0.2 or later [1]	Latest v5.0.x[3]
SilkWorm 4018	v5.0.5	v5.0.5 or later	Latest v5.0.x[3]
SilkWorm 4016 and 4024	v5.0.4	v5.0.4 or later	Latest v5.0.x[3]
SilkWorm 4012	v5.0.0	v5.0.x	Latest v5.0.x[3]
SilkWorm 3016	v4.2.1	v4.2.1 or later	Latest v5.0.x[3]
SilkWorm 3014	v4.4.1	v4.4.1 or later	Latest v5.0.x[3]
SilkWorm 12000	v4.1.0	v4.2.0 or later	Latest v5.0.x[3]
SilkWorm 2000 series	v2.6.1	v2.6.1 or later	v2.6.2d[3]
SilkWorm 3200 and 3800	v3.1.0	v3.1.2 or later	v3.2.1b[3]
SilkWorm 3250, 3850, 3900, and 24000	v4.1.0	v4.2.0 or later	v5.1.1 or later
SilkWorm 4900 and 7500	v5.1.0	v5.1.0 or later	v5.1.1 or later
SilkWorm 200E and 48000	v5.0.1 [2]	v5.0.1 or later [2]	v5.1.1 or later [2]
SilkWorm 4100	v4.4.0c	v4.4.0c or later	v5.1.1 or later
Fabric Manager	See the Fabric Manager Release Notes		

1. Fabric OS v5.0.2 is supported only on the SilkWorm 4020. Attempts to load this software version on Brocade switches other than the SilkWorm 4020 will result in File-Not-Found errors.
2. If you are using the FR4-18i blade in a SilkWorm 48000 director, you must use Fabric OS v5.1.0 or later.
3. Fabric OS v5.1.0 does not support this platform.

Firmware Upgrades and Downgrades

Brocade does not support upgrading from more than two previous releases, for example, upgrading from Fabric OS v4.4.0 to v5.1.x is supported but upgrading from Fabric OS v4.2.0 or a previous release directly to v5.1.x is not. In other words, to upgrade a switch from Fabric OS v4.2.0 or a previous release to v5.1.0 requires a two-step process: first upgrade to v4.4.0 or v5.0.1 and then upgrade to v5.1.0.

In addition, the following conditions must be met before upgrading Fabric OS v4.4.x or v5.0.x to v5.1.0:

- 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 SilkWorm 48000; see the "SilkWorm 48000 Chassis Configuration Options" table for details.

NOTE: If the SilkWorm 48000 has an FR4-18i blade installed, you cannot downgrade below Fabric OS v5.1.0. If you wish to do so, you must remove FC-FC Routing Service-related configuration and power off the FR4-18i blade using the **slotPowerOff** command.

Standards Compliance

This software 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*

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
  FT00X0054E9
```

The serial number label is located as follows:

- SilkWorm 3014—Top of the chassis, under the insertion arm

- SilkWorm 3016, 4012, and 4024 —Bottom of the switch module

- SilkWorm 4016 and 4018— Top of the switch module

- SilkWorm 4020—Side of the switch module

- SilkWorm 200E, 3200, 3250, and 3850—Bottom of the chassis

- SilkWorm 3800 and 3900—Nonport side of the chassis

- SilkWorm 4100, 4900, and 7500—On the switch ID pull-out tab located inside the chassis on the port side on the left

- SilkWorm 12000, 24000, and 48000—Inside the chassis next to the power supply bays

- SilkWorm Multiprotocol Router Model AP7420—Bottom of the chassis and on the back of the chassis.

3. **World Wide Name (WWN)**

- SilkWorm 200E, 3014, 3016, 3250, 3850, 3900, 4012, 4016, 4018, 4020, 4024, 4100, 4900, and 7500 switches
  and SilkWorm 12000, 24000, and 48000 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—Provide the switch WWN. Use the **wwn** command to display the switch WWN.

FR4-18i Blade and SilkWorm 7500

The FR4-18i blade for the SilkWorm 48000 director provides a number of new features, such as compression, multi-tunnel support, and encryption readiness. It provides 16 4-Gbit/sec FC routing ports and 2 GbE ports for FC-IP support and LSAN support enabled by Brocade's FC-FC Routing Service. Note the following:

- The FR4-18i blade works only with chassis configuration option 5, as described in the table, "SilkWorm 48000 Chassis Configuration Options."

- The FR4-18i blade provides up to eight virtual tunnels per physical GbE port.

- Compression is turned off by default and can be enabled on a per tunnel basis.

- Do not insert the FR4-18i blade into a SilkWorm 48000 before the director is upgraded to Fabric OS v5.1.0.

- Secure Fabric OS is not supported in the backbone fabric.

The SilkWorm 7500, second generation of the multiprotocol router, now comes with 16 4-Gbit/sec FC routing ports and 2 GbE routing ports (VE_Ports and VEX_Ports) for superior FC-IP capabilities, such as multi-tunnel support and compression, and encryption readiness. The

SilkWorm 7500 is a 1U standalone unit with N+1 power supplies and fans. The routing capabilities are now part of Fabric OS v5.1.0 for tight integration with the SilkWorm family. The SilkWorm 7500 offers the standard Fabric OS features and new and improved LSAN routing and FC-IP capabilities.

Both the FR4-18i blade and the SilkWorm 7500 share the same hardware and have exactly the same feature set, that is, 18 physical ports:

- 16 FC ports, which can be configured as routing ports or have layer-2, 4-Gbit/sec FC capabilities.

- 2 GbE ports, which are labeled "GE0" and "GE1," can have up to eight virtual tunnels each with VE_Port or VEX_Port capabilities. Since they are IP ports and have different capabilities, there are noticeable differences which are discussed below.

NOTE: When the SilkWorm AP7420 Multiprotocol Router is present in the metaSAN, you must deactivate the Platform Database on all other switches in the SAN using the **msPLMgmtDeactivate** command.

Port Types

The FR4-18i blade and the SilkWorm 7500 support the following port types:

- FC ports—F_Port, FL_Port, E_Port, and EX_Port
- GbE ports—VE_Port and VEX_Port (virtual E_Port and EX_Port)

F_Ports, FL_Ports, E_Ports

There are 16 regular 4-Gbit/sec F_Ports, FL_Ports, and E_Ports, with the same level of support as in previous releases:

- Frame-level trunking (not supported for EX_Ports in Fabric OS v5.1.0, DPS will be automatically used for load balancing)
- Speed settings (1 Gbit/sec, 2 Gbit/sec, 4 Gbit/sec, and Auto)
- Long distance (VC_RDY)
- L_Port lockdown
- G_Port lockdown
- ISL R_RDY mode

EX_Ports

EX_Ports connect a router to an edge fabric. If you consider a switch in an edge fabric, an EX_Port is virtually indistinguishable from an E_Port and follows FC standards as do all other Brocade E_Ports. However, the router *terminates* EX_Ports rather than allowing different fabrics to merge as would happen on a switch with regular E_Ports. Each EX_Port presents a set of translation phantom domains representing remote fabrics, each phantom domain with "attached" proxy devices representing devices on those fabrics.

If a port is configured as an EX_Port:
- Frame-based trunking, which is typically enabled automatically or configured manually using the **portCfgTrunkPort** command, is not supported.
- However, DPS (Dynamic Path Select), or exchange-based load-balancing, is supported on equal cost links whether they are E_Ports, EX_Ports, VE_Ports, or VEX_Ports. (Note that you can disable DPS using the **aptPolicy** command.)

NOTE: You cannot connect the E_Port of a switch running Fabric OS v2.x to an EX_Port on a SilkWorm 7500 or FR4-18i blade.

GbE_Ports

Several new commands have been added to support GbE_Ports and several existing commands will not work with the GbE_Ports (see "Unsupported Commands" in the "Important Notes" section). Frame-based trunking is not supported over GbE_Ports, but DPS (exchange-based load-balancing) is supported and is always on. GbE_Ports or tunnels are as long as the cost paths are the same. (Note that you can disable DPS using the **aptPolicy** command.)

The following are features of GbE_Ports:

- The GbE_Ports are set to 1-Gbit/sec speed and duplex settings cannot be changed.

- Neither Fabric Watch nor Advanced Performance Monitoring is supported on GbE_Ports, nor are they supported on the virtual tunnel VE_Ports and VEX_Ports.

- For each FC-IP tunnel, two TCP connections are established between the end points. The first, running at TCP port, 3225 carries all Fibre Channel Class F (control) traffic. The second, running on TCP port 3226, carries all Fibre Channel Class 2 and 3 (data) traffic.

VE_Ports and VEX_Ports (over GbE)

VE_Ports and VEX_Ports are virtual ports (that represent each FC-IP tunnel, up to eight per GbE_Port) over the physical GbE link. VE_Ports are essentially tunneled E_Ports over an IP network via FC-IP. VEX_Ports are routed VE_Ports, just as EX_Ports are routed E_Ports. VE_Ports and VEX_Ports have the same behavior and functionality.

NOTE: At this time, you cannot connect both a VEX_Port and an EX_Port to the same edge fabric.

FICON/CUP Support

The 4-Gbit/sec FC ports have the same level of support as in the previous release, Fabric OS v5.0.1. As with all other port blades, if FR4-18i is in slot 10, port 14 on the slot will be disabled when CUP is enabled.

NOTES:

- FICON is not supported over EX_Ports, VE_Ports, or VEX_Ports. Although an FR4-18i blade can be installed in a FICON-enabled director, FICON on the FR4-18i is not supported.

- FICON is not supported on the SilkWorm 7500.

SilkWorm 4900

As the latest addition to the SilkWorm family of switches, the SilkWorm 4900 provides midrange capabilities for customers who are either deploying their first SAN or expanding their current SAN with lower-cost access to SAN technology that is easy to manage The SilkWorm 4900 provides the highest performance with half-a-terabit in 2U and lowest cost for 32- to 64-port switch available; allowing you to experience the benefits of SAN solutions with the option to scale to larger fabrics on a "pay-as-you-grow" basis.

The simplicity and ease-of-use features of the SilkWorm 4900 help increase administrator productivity and lower the cost of management, which can especially benefit organizations with limited IT expertise. In addition, the SilkWorm 4900 leverages industry-leading 4-Gbit/sec Fibre Channel technology to provide extremely high performance.

Delivering 32, 48, or 64 ports in a 2U form factor, the SilkWorm 4900 enables substantial cost savings-from capital and operating expenses to overall management. It extends the Brocade modular "building block" approach to developing storage networks. This approach has been widely adopted by storage networking vendors and is the *de facto* standard in the storage networking industry. The SilkWorm 4900 can stand up to any mission-critical test and offer significant business and performance advantages to SMBs and mid-range customers as they develop and grow.

FICON Support

FICON on the SilkWorm 4900 is not supported; if you wish to use it, set the routing policy to port-based using the **aptPolicy** command.

Important Notes

This section lists information that you should consider before you use Fabric OS v5.1.0.

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.

Unsupported Commands

The **slotOff** and **slowOn** commands are now obsolete; use **slotPowerOff** and **slotPowerOn** instead. The **portLogPortShow** command is also now obsolete.

SilkWorm 7500

Silkworm 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.

SilkWorm 48000

CP Failover/Replacement

Before moving the slider UP on a CP 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.

FDMI Hostname Support

If you have HBAs that support FDMI exposure of host names in a fabric you will need v3.2.0a and v4.4.0d to ensure that the host names are properly propagated to v5.1.0 switches.

Power-cycling

The additional ports (128 to 255) require updates to certain Fabric OS versions:
a) when you are running **PID-2 format** with a SilkWorm 4800 in the fabric and
b) for a **Secure Fabric OS fabric** with a SilkWorm 48000 in the fabric and port numbers higher than 127 specified in DCC policies.

The minimum Fabric OS requirements are: v2.6.2d, v3.2.0a, and v4.4.0d.

Proxy Switches

If you are using a Fabric OS v4.x switch as in 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.

Fabric OS

Diagnostics backport Test

The backport test passes only in a) a pure SilkWorm 24000 director or b) a SilkWorm 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 SilkWorm 24000 director (only CP2 and FC-16 blades)

• Pure SilkWorm 48000 director, option 5

• Pure SilkWorm 48000 director, option 5 (with FC4-16 blades)

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

• Mixed SilkWorm 24000 director (with either CP4 or FC4-16 blades)

• Pure SilkWorm 48000, option 1

"Pure SilkWorm 48000" refers to a director with CP4 and FC4-16 blades only.

Other Notes

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

Issue	Action
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.
FW_FRU_INSERTED message is displayed twice when a power supply FRU is inserted and powered on.	No functional impact.
Scalability: MS Platform Database not supported in large fabrics.	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 **msPLMgmtDeactivate** command.
Performance Monitor behavior in Fabric OS v5.1.0.	If the user tries to save move than 512 monitors using the **perfCfgSave** command, some of the monitors may be lost.
Scalability: When the cfgDisable command is executed, access is enabled between all devices. This can cause issues with some HBAs.	We recommend that default zoning is enabled using the **defzone --noaccess** command.
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.
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 **haFailover**	Ensure that there are no segmented ports before upgrading firmware.

Issue	Action
When you use the diagnostic commands **systemVerification** and **diagSetBurnin**, the switch or blade will fault when the burn-in error log is full.	Clear the burn-in log before running **systemVerification** or **diagSetBurnin.**
No offline diagnostics command are HA safe.	All offline diagnostics commands should be used only when the switch is disabled.
SFPs should not be inserted while running Power-On Self Test (POST)	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.
Password policies should be changed before downgrading to versions previous to Fabric OS 5.1.0	Remove any password enforced expiration of admin or root accounts before downgrading firmware to 5.0.1 or lower versions.
fcrDisable command behavior when AP7420 is present in the backbone fabric.	If an AP7420 is present in the backbone fabric, the command **fcrDisable** may take up to 8 minutes to complete. If the AP7420 is replaced by a FR4-18i or a SilkWorm 7500, the command completes immediately.
Spinfab issues with E_Ports	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 **spinfab**.
If a switch running Fabric OS v5.2.x is connected to the edge of a fabric with LSAN zones configured, any switch in that edge fabric running a Fabric OS release prior to v5.2.x will not be able to commit to any zoning transactions.	If a fabric contains switches running, for example, Fabric OS v4.4.0, v5.1.1 and v5.2.1 and LSAN zones are configured, all zone changes need to originate from the switch running the latest Fabric OS release. In this case v5.2.1. This action is required whether or not the Access Domain feature is enabled.

Documentation Updates

This section provides information on last-minute additions and corrections to the documentation. The most recent Fabric OS version 5.1.0 documentation manuals are available on the Brocade Partner Network: *http://partner.brocade.com/*

Fabric OS Secure Fabric Operating System Administrator's Guide
(Publication number 53-1000048-01)

On page 3-23, add the following note:
Proxy device access cannot be managed using a DCC policy in a secure fabric. Proxy devices are always granted full access, even if the DCC policy has an entry that restricts or limits access of a proxy device.

On page 3-1, add the following note:
Secure Fabric OS cannot be enabled in a BB fabric when FC-FC Routing Services are being used.

SilkWorm 24000 Hardware Reference Manual
(Publication number 53-0000619-01)

On page 5-21 under the heading "Replacing the Power Supply and Filler Panel," replace step 1 with the following:

1. Determine whether power adequate to keep the chassis operating will be available throughout the replacement. If adequate power will not be consistently available, shut down the SilkWorm 24000 gracefully as follows:

a. Log in to the active CP.

b. If your SilkWorm 24000 is dual domain, log in to either switch 0 or 1.

c. Enter the **sysShutdown** command to ensure a graceful shutdown of the switch, and verify the command has completed.

SilkWorm 48000 Hardware Reference Manual
(Publication Number: 53-0000645-01)

On page 6-7 under the heading "Disconnect from Network and Fabric," replace step 1 with the following:

1. Shut down the SilkWorm 48000.

a. Verify which CP is the active CP, and log in to the active CP using a serial console connection.

b. Enter the **sysShutdown** command to ensure a graceful shutdown of the switch, and verify the command has completed.

Add the following section to the end of appendix B, "Diagnostics and Troubleshooting":

Powering Off the SilkWorm 48000

To power off the SilkWorm 48000 gracefully:

1. Verify which CP is the active CP, and log in to the active CP using a serial console connection.

2. Enter the **sysShutdown** command to ensure a graceful shutdown of the switch, and verify the command has completed.

FR4-18i Blade Hardware Reference Manual
(Publication Number 53-100030-02)

The part number is listed incorrectly in the footers of the document as 53-1000026-02.
The part number should be 53-1000030-02.

Fabric OS Administrator's Guide
(Publication Number: 53-1000043-01)

In any list of supported hardware platforms (title page, page xviii, etc.), remove the SilkWorm 4016 and 4020.

On page xviii, Remove the following bullet from the list at the top of the page:

• The glossary defines terms used in this document.

On page xxii, replace the following paragraph
For information about how to use Fabric OS features in a SAN solution, refer to the *Brocade SilkWorm Design, Deployment, and Management Guide*. You can obtain this guide through the Brocade Connect Web site:

   http://www.brocadeconnect.com

with this paragraph:
For information about how to use Fabric OS features in a SAN solution, refer to the *Principles of SAN Design (*ISBN 0-7414-2824-5), available from the SAN Administrator's Bookshelf. You can find out how to order the book and view a sneak preview of a chapter:
   http://www.brocade.com/products/sanadmin_bookshelf/index.jsp

On page 7-3, after this paragraph:
If even one switch in the fabric delivers out-of-order exchanges, then exchanges are delivered to the target out of order, regardless of the policy configured on other switches in the fabric.

Add this note:
Note: Certain devices do not tolerate out-of-order exchanges; port-based policy should be used in a fabric with these types of devices.

In Table 9-2, on page 9-14, replace the HCP default setting from "1 (on)" to "0 (off)".

On page 9-14, in Table 9-2, replace the HCP default setting from "1 (on)" to "0 (off)".

On page 12-18, remove the following:
"Refer to the *Brocade PortlogDump Reference Guide* for detailed information about decoding a portLogDump."

On page 15-1, change the heading "SilkWorm 4012, 4100, 4900, and 48000 (FC4-16 and FC4-32 Port Blades)" to "SilkWorm 4100, 4900, 7500 and 48000 (FC4-16, FC4-32 and FR4-18i Port Blades)"

Also on page 15-1, replace the first paragraph under "SilkWorm 4012, 4100, 4900, 7500 and 48000 (FC4-16, FC4-32 and FR4-18i Port Blades)" with the following:

For the SilkWorm 4100, 4900, 7500 and 48000 director using FC4-16, FC4-32, or FR4-18i port blades, buffer credits are used by all ports on chip. Buffer-limited port technology allows all ports to remain operational, even when extended links are in use.

On page 15-4, in Table 15-2, SilkWorm 200E Extended ISL Modes (Goldeneye ASIC), change the LE Mode value for buffer 4Gbit/sec from 31 to 26.

On page 15-6, in Table 15-4, SilkWorm 200E, replace the "n/a" listed for 1 Gbit/sec at 250 km with "1 port."

On page 15-6, add the following new section/table:

SilkWorm 48000 (FR4-18i blades)

For the FR4-18i blade, long distance settings are applicable only to the physical FC_Ports (ports 0-15). Long distance settings are not applicable to virtual FC_Ports (ports 16-31). The number of ports that can be configured at various distances is summarized in Table 15-12.

Table 15-12 SilkWorm 48000 (FR4-18i blades)

Speed (Gbit/sec)	Number of Ports Allowed at Distance (km)					
	10 km	25 km	50 km	100 km	250 km	500 km
1	16 ports	16 ports	16 ports	16 ports	6 ports	2 ports
2	16 ports	16 ports	16 ports	8 ports	2 ports	n/a
4	16 ports	16 ports	8 ports	4 ports	n/a	n/a

On page 16-2 replace two references as follows:

Replace:
Cable lengths for participating links should differ by no more than 400 meters.

with:
Cable lengths for participating links should differ by no more than 30 meters.

On page 16-3 replace:
Cable lengths for participating links should differ by no more than 550 meters.

with:
Cable lengths for participating links should differ by no more than 30 meters.

On page A-2, remove the following paragraph:

You can find more details on the impact of PID changes in the following publications, which are available on the Brocade partner Web site. If you do not have access to this site, ask your support provider for these documents:

• *Brocade SilkWorm Design, Deployment, and Management Guide* (Publication Number: 53-0000366)

• *Brocade SAN Migration Guide* (Publication Number: 53-0000360)

On page A-5, remove the following paragraph:

In addition to this section, refer to the *Brocade SilkWorm Design, Deployment, and Management Guide* for information on evaluating the fabric.

Fabric OS Command Reference Manual
(Publication Number: 53-1000044-01)

For the following commands, see the online help, which was updated after the publication of the *Fabric OS Command Reference Manual*:

- backPlaneTest
- backport
- cfgShow
- haFailover
- portCfgDefault
- portCfgShow
- portcfg
- portShow
- secPolicyAdd
- sfpShow
- switchShow
- supportShow

On **configure**, add the following parameter definitions to the "Description" section:

Disable RLS probing - Enables or disables the read link status (RLS) probing. Performed by the FCP daemon, RLS probing reads the link error block from the device. This extended link services command is defined by the FC standards. Refer to the FC standards for information. This parameter is enabled by default.

HTTP Attributes - The HTTP attributes include HTTP Enabled and Secure HTTP Enabled, which are defined as follows:

- HTTP Enabled - Enables or disables the HTTP service. Disabling HTTP affect any client using the HTTP service, such as Web Tools and Fabric Manager.

- Secure HTTP Enabled - Enables or disables the HTTPS protocol support. This parameter requires the installation of a HTTPS certificate on the switch.

RPCd attributes - Enables or disables the remote procedure calls daemon (RPCd).

Web Tools attributes - The Web Tools attributes include Upfront Login Enabled and Basic User Enabled parameters, which are defined as follows:

- Upfront Login Enabled - Enables or disables the upfront login feature. When enabled, users log in to Web Tools once and are not prompted to log in again when accessing protected modules such as switch admin, zoning, HA, and so forth. When disabled, users are not prompted to log in to Web Tools initially and must login each time a protected module is accessed.

- Basic User Enabled - When enabled, the Web Tools EZ module opens instead of the standard Web Tools for the SilkWorm 3250, 4100, and 200E platforms. When disabled, the standard Web Tools module is displayed.

On **linkCost**, remove the reference to 10-Gbit/sec ISL from Table 2-16 in the "Description" section.

On **supportShow**, change the following groups in the "Description" section as follows:

- FCIP (DISABLED by default)

    o **portShow fciptunnel ge1 all**
    o **portShow fciptunnel 1/ge1 all**

On page 2-351, for **perfMonitorShow**, replace the example output in which you "…display end-to-end monitors on a port at an interval of every 6 seconds" with the following:

```
switch:admin> perfmonitorshow --class EE 2 6
Showing EE monitors 2, 6: Tx/Rx are # of bytes
     0
  -------
  Tx    Rx
  =======
   0    0
   0    0
   0    0
   0    0
   0    0
   0    0
   0    0
   0    0
   0    0
   0    0
   0    0
   0    0
   0    0
   0    0
   0    0
     0
```

On page 2-352, for **perfMonitorShow**, replace the example output in which you "…display filter-based monitors on a port at an interval of every 6 seconds" with the following:

```
switch:admin> perfmonitorshow --class FLT 5 6
 Showing filter monitor 5, 6
    0        1        2        3        4        5        6
  #Frames  #Frames  #Frames  #Frames  #Frames  #Frames  #Frames
  --------------------------------------------------------------
    0        0        0        0        0        0        0
   26k      187      681      682      682      494      187
   26k      177      711      710      710      534      176
   26k      184      734      734      734      550      184
   26k      182      649      649      649      467      182
   26k      188      754      755      755      567      184
   26k      183      716      716      717      534      183
   26k      167      657      656      655      488      167
   26k      179      749      749      749      570      179
   26k      164      752      752      752      588      164
   26k      190      700      700      700      510      190
   26k      181      701      701      701      520      181
   26k      200      750      750      751      550      201
   26k      180      692      692      691      512      179
   26k      179      696      696      696      517      179
   26k      187      720      720      720      533      187
   26k      200      722      722      722      522      200
   26k      204      717      717      717      513      204
```

On page 2-357, for **perfShowEEMonitor**, replace the example output in which you "…display end-to-end monitor frame traffic on a port at an interval of every 6 seconds" with the following:

```
switch:admin> perfshoweemonitor 4/5 6
Showing EE monitors 5, 6: Tx/Rx are # of bytes and crc is # of crc errors
         0                 1                 2                 3                 4
   -------------     -------------     -------------     -------------     -------------
   crc   Tx   Rx     crc   Tx   Rx     crc   Tx   Rx     crc   Tx   Rx     crc   Tx   Rx
   =============     =============     =============     =============     =============
   0    0    0       0    0    0       0    0    0       0    0    0       0    0    0
   0   53m  4.9m     0   53m  4.9m     0   53m  4.9m     0   53m  4.9m     0   53m   0
   0   53m  4.4m     0   53m  4.4m     0   53m  4.4m     0   53m  4.4m     0   53m   0
   0   53m  4.8m     0   53m  4.8m     0   53m  4.8m     0   53m  4.8m     0   53m   0
   0   53m  4.6m     0   53m  4.6m     0   53m  4.6m     0   53m  4.6m     0   53m   0
   0   53m  5.0m     0   53m  5.0m     0   53m  5.0m     0   53m  5.0m     0   53m   0
   0   53m  4.8m     0   53m  4.8m     0   53m  4.8m     0   53m  4.8m     0   53m   0
   0   53m  4.5m     0   53m  4.5m     0   53m  4.5m     0   53m  4.5m     0   53m   0
   0   52m  4.5m     0   52m  4.5m     0   52m  4.5m     0   52m  4.5m     0   52m   0
   0   52m  5.0m     0   52m  5.0m     0   52m  5.0m     0   52m  5.0m     0   52m   0
   0   52m  4.5m     0   52m  4.5m     0   52m  4.5m     0   52m  4.5m     0   52m   0
   0   52m  4.6m     0   52m  4.6m     0   52m  4.6m     0   52m  4.6m     0   52m   0
```

On page 2-360, for **perfShowFilterMonitor**, replace the example output in which you "…display filter monitor traffic on a port at an interval of every 6 seconds" with the following:

```
switch:admin> perfshowfiltermonitor 5, 6
Showing filter monitors 5, 6
0          1          2          3          4          5          6
 #Frames    #CMDs      #CMDs     #Frames    #Frames     #CMDs      #CMDs
-----------------------------------------------------------------------
   0          0          0          0          0          0          0
  26k        187        681        682        682        494        187
  26k        177        711        710        710        534        176
  26k        184        734        734        734        550        184
  26k        182        649        649        649        467        182
  26k        188        754        755        755        567        184
  26k        183        716        716        717        534        183
  26k        167        657        656        655        488        167
  26k        179        749        749        749        570        179
  26k        164        752        752        752        588        164
  26k        190        700        700        700        510        190
  26k        181        701        701        701        520        181
  26k        200        750        750        751        550        201
  26k        180        692        692        691        512        179
  26k        179        696        696        696        517        179
  26k        187        720        720        720        533        187
  26k        200        722        722        722        522        200
  26k        204        717        717        717        513        204
```

On page 2-384, for **portCfgLPort**, add the following to the end of the "Description" section:

For Bloom ASIC-based platforms, a device port configured as an L_Port supports E_Ports; however, this configuration is not recommended. In later ASIC designs, this configuration is no longer supported.

On page 2-554, for **sfpShow**, replace the "Synopsis" section with the following:

sfpshow [[*slotnumber*/[**ge**]*portnumber*] | **-all**]

On page 2-557, also for **sfpShow**, add the following example:

```
switch:user> sfpshow ge1


Identifier:  3    SFP
Connector:   7    LC
```

```
Transceiver: 050c402000000000 100,200_MB/s M5,M6 sw Inter_dist
Encoding:    1    8B10B
Baud Rate:   21   (units 100 megabaud)
Length 9u:   0    (units km)
Length 9u:   0    (units 100 meters)
Length 50u:  30   (units 10 meters)
Length 62.5u:13   (units 10 meters)
Length Cu:   0    (units 1 meter)
Vendor Name: FINISAR CORP.
Vendor OUI:  00:90:65
Vendor PN:   FTRJ-8519-3-2.5
Vendor Rev:  X1
Wavelength:  0    (units nm)
Options:     0012 Loss_of_Sig,Tx_Disable
BR Max:      0
BR Min:      0
Serial No:   H112T79
Date Code:   010420
```

Fabric OS MIB Reference Guide
(Publication Number 53-1000045-01)

On page 1-6, replace Table 1-1 with the following table:

Fabric OS Supported SNMP Versions			
Firmware	**SNMPv1**	**SNMPv2**	**SNMPv3**
Fabric OS v2.6.2 and previous	Yes	No[1]	No
Fabric OS v3.2.0 and previous	Yes	No[1]	No
Fabric OS v4.2.0 and previous	Yes	No[1]	No
Fabric OS v4.4.0	Yes	No[1]	Yes[2]
Fabric OS v5.x	Yes	No[1]	Yes[2]

Note
[1] The corresponding Fabric OS has SNMPv2 capabilities, but it is not officially supported by Brocade.
[2] Fabric OS v4.4.0 and v5.x support SNMPv3-USM MIB (snmpUsmMIB), which is available as RFC 3414.

On page 2-4, in the section "SilkWorm 48000 Director," delete the first paragraph and replace it with the following:
Figure 2-2 shows an example of the Web Tools Switch Explorer for a SilkWorm 48000 director.

On page 7-7, in the table in Figure 7-4, "IP Routes Tab for GigE Ports," in the column headings, "Destination IP" should be "Gateway IP" and "Gateway IP" should be "Source IP."

On page 7-7, step 6 of the procedure, "To add a new IP route," should be:

6. Click **Add** in the task bar.
   Type the gateway IP address, subnet mask, source IP address, and metric for the new IP route.

On page 7-8, at the end of the procedure, "To delete an IP route," add the following note:

Note: To delete an IP route automatically, first delete the IP tunnel and then delete the IP address.

On page 10-2, add the following note after the terminology section:

Note: Devices on edge fabrics that are connected to a SilkWorm AP7420 Multiprotocol Router cannot communicate with devices in the backbone fabric.

On page 10-3, in the section "Setting Up FC-FC Routing," replace steps 1 and 2 with the following:

1. Ensure that the backbone fabric ID of the FC router is the same as that of other FC routers in the backbone fabric. Refer to "Configuring the Backbone Fabric ID" on page 10-10.

2. On the FC router, ensure that the ports to be configured as EX_Ports are either not connected or are disabled.

On page 10-3, in the section "Setting Up FC-FC Routing," delete step 5.

On page 10-9, delete the first paragraph:

Zones on the backbone and on multiple edge fabrics that share the same "LSAN_" prefixed names are recognized as constituting a single multi-fabric LSAN zone, and devices in these zones can communicate with each other across fabric boundaries.

On page 10-9, in the section "Viewing LSAN Devices," change the second sentence in the first paragraph from this:

A proxy device represents a real device in a foreign fabric.

To this:

A proxy device represents a real device in a remote fabric.

On page 10-10, in the section "Configuring the Backbone Fabric ID," change the second paragraph from this:

The fabric ID for a backbone fabric must be different than the fabric IDs of all other LSAN fabrics; otherwise, a fabric ID conflict error might occur.

To this:

The fabric ID for a backbone fabric must be different than the fabric IDs of all other edge fabrics; otherwise, a fabric ID conflict error might occur.

On page 17-3, add the following entry to Table 17-1, Web Tools Limitations:

Problem Area	Details
Performance Monitor	For SilkWorm 24000 and 48000 directors, while monitoring the performance, if one or all the blades turn Faulty or if they are powered off or on, then the behavior of various monitoring graphs is as follows: The Switch Aggregate and Blade Aggregate graphs will freeze without any updates (about the traffic). **Workaround:** Close and relaunch the graphs. The Switch Throughput Utilization, Switch Percent Utilization, and Port Snapshot Error graphs will show the faulty/powered off slot node in the Y-Axis of the graph. **Workaround:** Launch any port selection dialog and load the graphs accordingly.

Fabric OS System Error Message Reference Manual
(Publication Number: 53-1000046-01)

The following messages have been modified:

BL-1031
Message
<timestamp>, [BL-1031], <sequence-number>,, CRITICAL, <system-name>, Link timeout in internal port (slot <slot_num>, port <port_num>) resulted in blade fault. Use slotpoweroff/slotpoweron to recover the blade

Probable Cause
Indicates that link timeout occurred in one of the backend internal ports.

Recommended Action
Power cycle the blade or run the slotPowerOff and slotPowerOn commands.

Severity
CRITICAL

BM-1007
Message
<timestamp>, [BM-1007], <sequence-number>,, INFO, <system-name>, Clearing EX/VEX port configuration for all ports for blade in slot <Slot number>

Probable Cause
The new blade requires these port configurations to be cleared.
The blade was detected for the first time after a FR4-18i was previously configured in the same slot.

Recommended Action
 No action is needed.

Severity
INFO

FCMC-1001
Message
<timestamp>, [FCMC-1001], <sequence-number>, FFDC, CRITICAL, <system-name>, System is low on memory and has failed to allocate new memory

Probable Cause
Indicates that the switch is low on memory and failed to allocate new memory for an information unit (IU).

Recommended Action

A non-bladed switch will automatically reboot. For a bladed switch, the active CP blade will automatically fail over and the standby CP will become the active CP.

Severity
CRITICAL

FLOD-1001

Message
<timestamp>, [FLOD-1001], <sequence-number>, FFDC, WARNING, <system-name>, Unknown LSR type: pt <port number>, type <LSR header type> xid:0x<Oxid | Rxid> com:0x<FSPF Command> fc_type|df_ctl:0x<FC Frame Type | Data Field Control> opt hdr:0x<Optional Header Pointer> opt hdr sz:<Optional Header Size> Advertiser:<Advertising switch> Link State ID:<Link State ID>

Probable Cause
Indicates that the link state record (LSR) type is unknown. The following two LSR header types are the only known types: 1 - Unicast and 3 - Multicast.

Recommended Action
No action is required. The record is discarded.

Severity
WARNING

FCR-1068

Message
<timestamp>, [FCR-1068], <sequence-number>,, INFO, <system-name>, The FC Routing service is disabled

Probable Cause
Indicates that the FC Routing service is disabled. This is caused by either fcrdisable, configdefault, or a configdownload with the fcrState set to 2 (disabled). Note that the FC Routing service is disabled by the factory.

Recommended Action
No action is required

FCR-1069

Message
<timestamp>, [FCR-1069], <sequence-number>,, INFO, <system-name>, The FC Routing service is enabled

Probable Cause
Indicates that the FC Routing service is enabled. This is caused by either fcrenable, or a configdownload with the fcrState set to 1 (enabled). Note that the FC Routing service is disabled by the factory.

Recommended Action
No action is required

Severity
INFO

FCR-1070 is removed.

SYSC-1003

Message
<timestamp>, [SYSC-1003], <sequence-number>, FFDC, CRITICAL, <system-name>, Chassis config option <Option number read from the chassis option storage device> is not supported by CP Blade with ID <Blade ID (platform) number from the Active CP>. Change the chassis configuration <Steps to change chassis cofiguration>

Probable Cause
Indicates that on system startup, the option configuration file corresponding to the chassis config option read could not be found. This indicates that that option is not supported on this platform running this version of the firmware.
It could also indicate that the current option number could not be read from the chassis option storage device (the WWN card).
This message occurs only on the SilkWorm 24000 and 48000.

Recommended Action
Run the chassisConfig command to change to one valid on this platform running this firmware. Note that chassisconfig option 1 should be valid for all platforms running any valid firmware.

Severity
CRITICAL

Firmware Download Best Practices Notes
(Publication Number: 53-1000039-03)

On page 23, add the following note to end of the section entitled "Troubleshooting Firmware Downloads":

Note: Fabric OS v4.4.2 allows an upgrade to Fabric OS v5.1.0 into an unsupported chassis configuration (modes 3 or 4). When upgrading from Fabric OS v4.4.2 to Fabric OS v5.1.0 make sure to change the **chassisconfig** mode to 1 prior to executing the **firmwareDownload** command.

Closed Defects in Fabric OS v5.1.1b

The table below lists the defects newly closed in this version of Fabric OS.

v5.1.1 Patch b		
Defect ID	**Severity**	**Details**
DEFECT000082112	High	Summary: Modifying an FCIP tunnel on a SilkWorm 7500 or an FR4-18i running Fabric OS v5.1.1 or 5.1.1a may trigger a switch or blade fault Symptom: When modifying an FCIP tunnel on a SilkWorm 7500 or an FR4-18i running Fabric OS v5.1.1 or 5.1.1a, VE ports are sequentially set to portdisable and portenable. The portdisable/portenable sequence can potentially trigger a switch fault on the SilkWorm 7500 or a blade fault on the FC4-18i. This was seen when a switch loaded with Fabric OS v5.1.1a was connected to a switch loaded with an internal future release. The fault is possible, but rarely occurs, when both switches are loaded with Fabric OS v5.1.1x. Solution: The code was modified to correctly free the TCP control block during TCP connection shutdown. Risk of Fix: Low Reported in Release: V5.1.1a
DEFECT000082917	High	Summary: Products running Fabric OS v5.1.1a can potentially trigger a port FAULT after rebooting. Symptom: All 4Gbit/sec products (SilkWorm 200E, 4100, 4900, 5000, 7500, and 48000) running Fabric OS v5.1.1a can potentially trigger a port FAULT after rebooting. If the port is an internal port, it could result in a blade or switch fault. This occurs more frequently on the SilkWorm 7500 and the FR4-18i. It rarely occurs on other platforms. Solution: The code was modified to disable primitive interrupts during port debounce. This prevents the generation of an excessive number of interrupts. This potential fault condition only exists on switches running Fabric OSv5.1.1a. Risk of Fix: Medium Service Request# RQST00000057533 Reported in Release: V5.1.1a

Closed Defects in Fabric OS v5.1.1a

The table below lists the defects newly closed in this version of Fabric OS.

v5.1.1 Patch a		
Defect ID	**Severity**	**Details**
DEFECT000073567	High	Summary: During testing with a vendor's new 4Gb HBA, a port on a SilkWorm 200E does not come up. Symptom: After the port reaches the active state, it goes off line for 10 seconds. This has been observed with this particular HBA and the SilkWorm 200E, not with other platforms. Solution: When there are too many link level errors during link initialization with this particular HBA, avoid faulting the port too soon by disabling the primitive interrupts for a short period of time. Risk of Fix: Low Reported in Release: V5.1.0
DEFECT000075449	High	Summary: Switch panic or CP failover when a kernel process is spawned by a non-root user. Symptom: "free_uid()" is on the console log backtrace. This problem applies to all platforms. Solution: Applies a Linux kernel patch to allow correct tracking of the root process. Risk of Fix: Low Service Request# RQST00000051415 Reported in Release: V5.0.3
DEFECT000076931	Medium	Summary: Inserting an unsupported FC4-48 blade into a pre-Fabric OS v5.2 chassis causes FAULTY(1) error that will not clear with blade removal. Symptom: HA sync will be lost and removal of the blade will not recover the HA sync. An active CP reboot is required to recover. Solution: Detects and faults the unknown blade, allowing HA to re-gain sync once the unknown blade is removed and the standby CP is rebooted. Workaround: Schedule window to perform reboot of the active CP. Probability: Medium Risk of Fix: Low Reported in Release: V5.0.5