Brocade Fabric OS v2.6.1d

Release Notes_v1.0

January 14, 2004

Document History

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Overview

Fabric OS v2.6.1d is a patch release that contains fixes to a small number of additional issues detected. Brocade software release policy is to carry forward all fixes in patches to subsequent maintenance and feature releases of Fabric OS. Aside from these changes, it is functionally identical to the previous patch version of v2.6.1. These Release Notes will refer to "Fabric OS v2.6.1" when making statements that apply to all of Fabric OS v2.6.1x releases.

About This Release

Fabric OS v2.6.1 represents the maintenance release to the Fabric OS v2.6.0x firmware. It should be considered an upgrade and replacement for Fabric OS v2.6.0x.

Fabric OS v2.6.1d includes the following changes:

- Fixes to defects as detailed in the List Of Defects Closed Since 2.6.1c section.

Starting in November 2003, Brocade is adding versioning to all Release Notes. This is a documentation format change and does not affect the actual code

Supported Switches

Like Fabric OS 2.6.0, Fabric OS 2.6.1 supports the SilkWorm 2xxx (2109-S08/S16 and 3534-1RU) switches.

Technical Support

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

1. General Information

- Technical Support contract number, if applicable
- switch model
- switch operating system version
- error messages received
- **supportshow** command output
- detailed description of the problem and specific questions
- description of any troubleshooting steps already performed and results

2. Switch Serial Number

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

Type 2109-Sxx
S/N PPSSSSS

Type 3534-1RU
S/N PPSSSSS

The serial number label is located as follows:

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

3. Worldwide Name (WWN)

- *SilkWorm 3900 (2109-F32) and 12000 (2109-M12) switches:* Provide the license ID. Use the **licenseidshow** command to display the license ID.
- *All other SilkWorm (1RU/S08/S16/F08/F16) switches:* Provide the switch WWN. Use the **wwn** command to display the switch WWN.

Supporting Documentation

In addition to these release notes, this release is supported by the following documentation:

- *Brocade Fabric OS Reference* v2.6
- *Brocade QuickLoop User's Guide* v2.6
- *Brocade Zoning User's Guide* v2.6
- *Brocade Web Tools User's Guide* v2.6
- *Brocade Distributed Fabrics User's Guide* v2.6
- *Brocade Fabric Watch User's Guide* v2.6
- *Brocade Secure Fabric OS User's Guide* v2.6
- *Brocade MIB Reference* v2.6.1/v3.1.0/v4.1.0

Release Contents Summary

Brocade Fabric OS v2.6.1 provides the following enhancements to Fabric OS v2.6.0x:

- Expanded security in a mixed-fabric environment
- External Time Server synchronization
  - Synchronizes time among switches in the fabric
  - Fabric time can be set from a CLI session or obtained from an external NTP server
- Enhanced code compatibility/manageability for a mixed-fabric environment
  - Disabling and enabling of ports and of entire switches can now be made persistent across reboots and power cycles.

For more details of these features, please refer to the appropriate product user manuals.

Information About Secure Fabric OS

Brocade's Secure Fabric OS® is a comprehensive security product that requires some planning and specific steps to set up and configure. For this purpose, the following document should be reviewed as a minimum prior to starting:

- *Brocade Secure Fabric OS QuickStart Guide*

More detailed product information can be obtained from the *Brocade Secure Fabric OS Users Guide*.

Important Notes

This section includes the following topics:

- OS Requirements
- SilkWorm 2000 (2109-S08/S16 & 3534-1RU) Series Scalability Support
- Maximizing Fabric Availability During SW 3900 (2109-F32) Hot Code Activation
- Microsoft Internet Explorer Issue
- Other Important Notes

OS Requirements

The following table summarizes the versions of Brocade firmware and software that are supported in conjunction with this release.

	2109-S08/S16 3534-1RU	**2109-F16 3534-F08**	**2109-F32 2109-M12**	**Fabric Manager**
General compatibility	2.6.0c or later	3.0.2c or later	4.0.0c or later	3.0.2c or later
With Secure Fabric OS enabled	2.6.1 or later	3.1.0 or later	4.1.0 or later	3.0.2c or later
Recommended adjacent to SW 3900s (2109-F32) running 4.1.0 or later	2.6.1 or later	3.1.0 or later	4.1.0 or later	3.0.2c or later

Note: For the Fabric OS v2.x switches or Fabric OS v3.x switches, the Core Switch PID Format must be enabled (that is, set to 1) using the **configure** command before it can interconnect with the SilkWorm 3900 (2109-F32) and SilkWorm 12000 (2109-M12). For more information regarding the Core Switch PID Format, please refer to "Updating the Core PID Format" in the *Fabric OS Procedures Guide*.

For more information about configuring SilkWorm 2000 series (2109-S08/S16 & 3534-1RU), SilkWorm 3000 series or the SilkWorm 6400 integrated fabric to inter-operate in the same fabric with the SilkWorm 3900 and SilkWorm 12000 switches, contact your switch provider.

SilkWorm 2000 Series (2109-S08/S16 & 1RU) Scalability Support

Exhaustive testing has demonstrated that SilkWorm 2000-series (2109-S08/S16 &3534-1RU) switches should not be deployed in fabrics that exceed 728 SAN devices.

Maximizing Fabric Availability During SW3900 (F32) Hot Code Activation

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

Microsoft Internet Explorer Issue

There is an issue with Microsoft Internet Explorer 5.0 and 5.5 running on Windows NT 4.0. Normally, when you launch a copy of the Switch Explorer applet, the left panel displays a tree of switches in your fabric. Clicking a tree node causes the right panels to refresh to the currently selected switch; however, under NT/4.0 and IE 5.0/5.5, the right panel does *not* update the second and subsequent instances of Switch Explorer.

Microsoft addresses the issue at: http://support.microsoft.com/default.aspx?scid=KB;en-us;242167&.

There are two workarounds:
1. Always use a single instance of Switch Explorer on NT/4.0 and IE 5.0/5.5
2. Install IE 6.0 SP1

Alternatively, you could obtain a workaround directly from Microsoft. Contact Microsoft support and supply them the information in the defect, as described in the previous URL.

Other Important Notes

This table lists important information you should be aware of regarding Fabric OS v2.6.1.

Area	Description
Code download	**NOTE**: Starting with Fabric OS v2.6.1c, a different compression algorithm is used to create a smaller image of the Fabric OS v2.6.x final code for downloading into the flash memory. This compression algorithm does not change the functionality of the code in anyway after boot up. There will be a small incremental boot up time observed of approximately 10 seconds
License removal	**NOTE:** When a user removes a license from the switch, the feature is not disabled until the switch is rebooted or a switch disable/enable is performed.
Security, PKICERT utility	**NOTE:** Before using the PKICERT utility to prepare a Certificate Signing Request (CSR), ensure that there are no spaces in the switch names of any switches in the fabric. The Web site that processes the CSRs and generates the digital certificates does not accept switch names containing spaces, and any CSRs that do not conform to this requirement will be rejected.
Web tools, Java bug	**Problem:** If a dialog box is displayed from the switch admin window of the Web Tools and the user selects another dialog box from Web Tools, this causes a windows display error. **NOTE:** This is a known defect in Java 1.3 documented at www.java.sun.com, bug ID 4763605. To avoid the display error, open only one dialog box at a time or launch another switch admin session in a separate window.
Zoning	**NOTE:** To use Zoning in a non-RCS (Reliable Commit Service) mode fabric, that is, in a fabric containing switches with firmware version other than v2.6.x, v3.1 and v4.1, it is recommended that all appropriate Zoning licenses are installed on all the switches in the fabric before attempting to bring a switch in to the fabric. Furthermore, if the Zoning license is to be removed, the user must make sure it is re-installed back properly on the affected switch before attempting **cfgenable** zoning operation. Failure to follow these steps can cause inconsistency of Zoning configuration on the affected switches should a zoning operation be attempted from a remote switch in the fabric. On the affected switches an error message will appear on the console or telnet session (can also be seen by issuing **errShow**, **errDump**) indicating that the zoning license was missing.

Documentation Updates

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

Brocade Fabric OS v2.6.1 and v2.6.1a Release Notes

- In Fabric OS v2.6.1 and v2.6.1a Release Notes, "SilkWorm 2xxx Scalability Limit (S08/S16/1RU)" specifies that fabrics containing Fabric OS v2.6.1 or later should not exceed 500 user (non-ISL) ports or devices. Brocade has increased to 728 devices the maximum number of devices supported in fabrics that include SilkWorm 2000-series (S08/S16/1RU) switches running Fabric OS v2.6.1 or later. This is only a change to the documentation; there is no change to the Fabric OS.
- A new command, **cfgSize**, was supported in Fabric OS v2.6.1 but was not in the previous Release Notes. For details on this command, please see "New Commands Introduced in 2.6.1".

SilkWorm 2800 Hardware Reference Manual

(Publication number 53-0001485-03)

Figure 1-1 on page 1-1 of the *SilkWorm 2800 Hardware Reference Manual* has mislabeled callouts. The power supplies 1 and 2 are reversed; they should be labeled as follows:

New Commands Introduced in v2.6.1

CfgSize

Displays size details of the zone database.

SYNOPSIS cfgSize [integer]

AVAILABILITY all users

DESCRIPTION

This command with no parameter (or parameter 0) displays the size details of the zone database.

The size details include zone database max size, committed size, and transaction size. All sizes are in bytes.

Zone DB max size is the upper limit for the defined configuration, determined by the amount of flash memory available for storing the defined configuration. This is smaller than the overall flash size because of additional information about the database that needs to be stored.

Committed size is the size of the defined configuration currently stored in flash.

Transaction size is the size of the uncommitted defined configuration. This value will be non-zero if the defined configuration is being modified by telnet, API, and so on; otherwise, it is 0.

If a nonzero integer is specified as the parameter, the size of the flash memory allocated for the zone database is displayed. The zone database includes both the defined and effective configurations. This size is in kilobytes.

See **cfgShow** for a description of defined and effective configurations.

Note: When security is enabled, this command can only be issued on all the switches in the fabric.

OPERANDS The following operand is optional:

Integer

EXAMPLE

To display size details of the Defined configuration:

```
Sw5:user> cfgsize

Zone DB max size - 98232 bytes
        committed - 2439
         transaction – 0
```

To display size details of the defined configuration:

```
Sw5:user> cfgsize 1

Zone DB flash size - 98304 bytes
```

SEE ALSO

cfgShow

shellFlowControlDisable

Disables XON/XOFF flow control to the shell task.

SYNOPSIS shellFlowControlDisable

AVAILABILITY admin

DESCRIPTION

This command allows an administrator to disable XON/XOFF flow control to the shell task. Disabling XON/XOFF flow control is the recommended behavior for the switch. Flow control will be disabled for both serial port and telnet access into the command shell.

Once disabled, even in the event of a power boundary, the switch will boot up with XON/XOFF flow control disabled.

LIMITATIONS None.

OPERANDS None.

EXAMPLE

```
admin> shellFlowControlDisable

Committing configuration...done.
```

SEE ALSO

ShellFlowControlEnable

shellFlowControlEnable

Enables XON/XOFF flow control to the shell task.

SYNOPSIS shellFlowControlEnable

AVAILABILITY admin

DESCRIPTION

This command allows an administrator to enable XON/XOFF flow control to the shell task. Disabling XON/XOFF flow control is the recommended behavior for the switch; however, if it becomes necessary to enable XON/XOFF flow control, it can be done with this command. Flow control will be enabled for both serial port and telnet access into the command shell.

Once enabled, even in the event of a power boundary, the switch will boot up with XON/XOFF flow control enabled.

LIMITATIONS None.

OPERANDS None.

EXAMPLE

admin> shellFlowControlEnable

Committing configuration...done.

SEE ALSO

ShellFlowControlDisable

Modified Command Introduced in v2.6.1

configure

Modify system configuration settings.

SYNOPSIS **`configure`**

AVAILABILITY admin

DESCRIPTION

This command changes system configuration settings, including:

- Arbitrated loop settings
- Switch fabric settings
- System services settings
- Virtual channel settings
- Portlog events disable/enable settings

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

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

Press **Enter** to use the default value (refer to “Special Inputs,” later in this command description).

Arbitrated Loop Settings

The following table defines changeable settings affecting Fibre Channel Arbitrated Loops.

Field	Type	Default	Range
Send FAN frames?	Boolean	1	0 or 1
Always send RSCN?	Boolean	0	0 or 1

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

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

Switch Fabric Settings

There are a number of settings that control the overall behavior and operation of the fabric. Some of these values, such as the domain, are normally assigned automatically by the fabric and can be different from one switch to another in the fabric. However, other parameters, such as the buffer-to-buffer credit or the time out values, can be changed to suit particular applications or operating environments, but must be in agreement among all switches. The following table defines changeable settings affecting the fabric.

Field	Type	Default	Range
Domain	Number	1	Varies
BB Credit	Number	16	1 to 16
R_A_TOV	Number	10000	E_D_TOV * 2 to 120000
E_D_TOV	Number	2000	1000 to R_A_TOV / 2
Data Field Size	Number	2112	256 to 2112
Sequence Level Switching	Boolean	0	0 or 1
Disable Device Probing	Boolean	0	0 or 1
Unicast-only Operation	Boolean	0	0 or 1
VC Encoded Address Mode	Boolean	0	0 or 1
Disable Translative Mode	Boolean	0	0 or 1
Per-frame Route Priority	Boolean	0	0 or 1
Long Distance Fabric	Boolean	0	0 or 1

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

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

R_A_TOV	The Resource Allocation Time Out Value (R_A_TOV) displays in milliseconds. This variable works with the variable E_D_TOV to determine the switch's actions when presented with an error condition. Allocated circuit resources with detected errors are not released until the timeout value has expired. If the condition is resolved prior to the time out, the internal time out clock resets and waits for the next error condition.
E_D_TOV	Error Detect Time Out Value (E_D_TOV) displays in milliseconds. This timer flags a potential error condition when an expected response is not received (an acknowledgment or reply in response to packet receipt, for example) within the set time limit. If the time for an expected response exceeds the set value, then an error condition is met.
Data Field Size	This specifies the largest possible value, in bytes, for the size of a type 1 (data) frame. The switch advertises this value to other switches in the fabric during construction of the fabric, as well as to other devices when they connect to the fabric. Setting this value smaller than 2112 can result in decreased performance.
Sequence Level Switching	When set to 1, frames of the same sequence from a particular source transmit as a group. When set to 0, frames transmit in multiple sequences. Under normal conditions, Sequence Level Switching should be disabled for better performance. However, some host adapters have performance issues when receiving interleaved frames from multiple sequences. When there are such devices attached to the fabric, Sequence Level Switching should be enabled.
Disable Device Probing	When set, devices that do not register themselves with the Name Server will not be present in the Name Server database. Set this mode only if the switch's N_Port discovery process (PLOGI, PRLI, INQUIRY) causes some attached device to fail.
VC Encoded Address Mode	When set, frame source and destination addresses utilize an address format compatible with some first-generation switches. Set this mode only if the fabric includes such switches. **Note:** VC Encoded Address mode cannot be set in security mode. Also, when this mode is set, security mode cannot be enabled.
Disable Translative Mode	The setting is only relevant if VC Encoded Address Mode also is set. This feature, when set, disables translative addressing to achieve explicit address compatibility with some first-generation switches. Set this feature only if hardware or software systems are attached to the fabric that explicitly relies on a specific frame address format.
Per-frame Route Priority	In addition to the eight virtual channels used in frame routing priority, support also is available for per-frame based prioritization when this value is set. When set, the virtual channel ID will be used in conjunction with a frame header to form the final virtual channel ID.
Long Distance Fabric	When this mode is set, ISLs in a fabric can be up to 100 km long. The exact distance level is determined by the per-port configuration on the E_Ports of each ISL. Both E_Ports in an ISL must be configured to run the same long-distance level; otherwise, the fabric will segment. The Extended Fabric License is required to set this mode.

System Services Settings

Field	Type	Default	Range
rstatd	Boolean	Off	On or Off
rusersd	Boolean	Off	On or Off

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

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

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

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

Virtual Channel Settings

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

The default virtual channel settings have already been optimized for switch performance. Changing the default values, if properly selected, might improve switch performance somewhat but also can severely degrade performance. You should not change these settings without fully understanding the effects of those changes.

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

VC Link Control — Specifies the virtual channel used for N_Port-generated, class 2 link control frames (ACKs, P_BSYs, P_RJTs). Forces N_Port-generated link control frames to be sent

	using a class 2 data virtual channel when set to 0. When set to 1, the control frames are sent using a virtual channel normally reserved for fabric-internal traffic. This setting is configurable only when VC Encoded Address Mode is set.
VC Class 2	Specifies the virtual channel used for class 2 frame traffic. This setting is configurable only when VC Encoded Address Mode is set.
VC Class 3	Specifies the virtual channel used for class 3 frame traffic. This setting is configurable only when VC Encoded Address Mode is set.
VC Multicast	Specifies the virtual channel used for multicast frame traffic. This setting is configurable only when VC Encoded Address Mode is set.
VC Priority	Specifies the class of frame traffic given priority for a virtual channel.

Portlog Events Disable/Enable Settings

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

Special Inputs

Carriage return	When entered alone at a prompt without any preceding input, accepts the default value (if applicable) and moves to the next prompt.
Interrupt	Aborts the command immediately and ignores all changes made.
End-of-file	When entered alone at a prompt without any preceding input, terminates the command, saving any changes made.

OPERANDS none

EXAMPLE

```
switch:admin> configure
Configure...

Fabric parameters (yes, y, no, n): [no] y
Domain: (1..239) [1]
BB credit: (1..16) [16]
R_A_TOV: (4000..120000) [10000]
E_D_TOV: (1000..5000) [2000] 5000
Data field size: (256..2112) [2112]
Sequence Level Switching: (0..1) [0] 1
Disable Device Probing: (0..1) [0]
VC Encoded Address Mode: (0..1) [0]
Disable Translative Mode: (0..1) [0]
Per-frame Route Priority: (0..1) [0]

Virtual Channel parameters (yes, y, no, n): [no] y
VC Link Control: (0..1) [0]
VC Class 2: (2..5) [2]
VC Class 3: (2..5) [3]
VC Multicast: (6..7) [7]
VC Priority 2: (2..3) [2]
VC Priority 3: (2..3) [2]
VC Priority 4: (2..3) [2]
VC Priority 5: (2..3) [2]
VC Priority 6: (2..3) [3]
VC Priority 7: (2..3) [3]

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

Send FAN frames?: (0..1) [1]
Always Send RSCN?: (0..1) [0]

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

rstatd (on, off): [off] on
rusersd (on, off): [off] on
```

```
Portlog events enable (yes, y, no, n): [no]
ioctl (a port I/O control is executed)(on, off): [on] off
Tx (a frame is transmitted)(on, off): [off]

Committing configuration...done.
```

SEE ALSO

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

Defects Closed in Fabric OS v2.6.1d

Defects Closed In Fabric OS v2.6.1d		
Defect ID	**Severity**	**Description**
DEFECT000034949	High	Summary: System performance tune-up in order to avoid SNMP timeouts when using ITSANM Symptom: SNMP timeouts when using ITSANM polling every 15 seconds. Solution: Added delays to zoning transactions when there are too many zoning entries to give other lower priority task a chance to run. Service Request# RQST00000024030
DEFECT000036138	High	Summary: Server lost connection to device Symptom: Storage is not visible after reboot of switch when upgraded to FABOS v2.6.1 Solution: Simply pace (add delays) the secure install certificate process a bit during the first time certificate is generated Workaround: portdisable and portenable the port connected to the storage device. Service Request# RQST00000025483

Defects Closed in Fabric OS v2.6.1c

Defects Closed In Fabric OS v2.6.1c		
Defect ID	**Severity**	**Description**
DEFECT000034532	High	Summary: Switch gets into hung state via telnet/shell interaction v2.6.1. Solution: Telnet/shell interactions had synchronization problems. It was possible to get the shell into a loop that would not allow communications to continue. Also, a 'double exit' internally on telnet may exist which would crash the shell, and cause flash corruption. This is fixed in this release. Brocade strongly suggests that users who have high telnet usage upgrade to this release.

Defects Closed in Fabric OS v2.6.1b

Defects Closed In Fabric OS v2.6.1b		
Defect ID	**Severity**	**Description**
DEFECT000026245	Critical	Summary: Fabric 2 Reboot - StorOS Agent stopped Symptom: The SilkWorm 2800 reboots after 13 hours with SYS-NOMEM error when using BrocadeAgent running on a Solaris management station to poll the switches. Solution: While a command is in progress and is interrupted, memory could be lost as the command ungracefully aborts. This fix allows completion and de-allocation of resources before shutting the session down.
DEFECT000026553	Critical	Summary: 3800 (F16) switch port is left INSYNC after a reboot of the array Symptom: When a loop capable device negotiates to the F-port briefly, and NOS happens, the switch port does not complete port initialization at LIP phase. The port is left in the IN_SYNC state. Solution: Enable the LPSM_OPEN_INIT_RCVD interrupt when appropriate, to prevent the port from hanging during port initialization.
DEFECT000009734	High	Summary: switch encounter MQ-QWRITE in the ms_q when running I/O using 8x6x8 fabric Symptom: The switch encounters MQ-QWRITE in the ms_q when running I/O using 8x6x8 fabric. This error occurred while testing v2.6.0. It has been on tracking list to monitor. The probability of occurrence is low. Solution: This issue has been on tracking list to monitor from Fabric OS v2.6.0. The fix was in 2.6.1 and is now moved to closed status in 2.6.1b.

Defects Closed In Fabric OS v2.6.1b		
Defect ID	**Severity**	**Description**
DEFECT000017699	High	Summary: System hangs for a few minutes, then comes back with the error: INFO SYS-BOOT, 4, Restart reason: Fault" Symptom: System can hang for a few minutes, then comes back with the error "INFO SYS-BOOT, 4, Restart reason: Fault". Solution: The problem was caused by a relatively large amount of data written to the web server, for example, through a zoning operation. A request for memory was made which was not satisfied. This resulted in the fault. The fix is twofold: 1) Catching the fault condition and stopping it from happening. 2) Optimization of memory usage. This fix was in 2.6.1 and is now moved to closed status in 2.6.1b
DEFECT000024109	Medium	Summary: Memory leak in bannerGet() - same as defect 23806 in 3.1. Also in API - GetSingleObject. Symptom: When establish an API session; issue a GetObjects on the switch, and shutdown the API session, a memory leak is observed. Solution: The fix for this defect was in Fabric OS v2.6.1 but was in testing status when Fabric OS v2.6.1 was released. It is now moved to closed status in v2.6.1b.
DEFECT000024389	Medium	Summary: linkUp trap Symptom: The switch sends the linkUp trap twice after the bootup process. The "specific-trap" field of the first linkup trap is always set to "0" for the first interface and the same field of second linkup trap is always set to "1" for the second interface. Solution: The linkUp/linkDown traps were using specific trap fields for 'ifIndex', which was not correct. Code has been modified to bind the ifIndex to linkUp & linkDown traps to correct this behavior. If ifIndex starts from 0 at bootup process, it will start from 1 later on. This fix was in 2.6.1 and now is moved to closed status in 2.6.1b.

Defects Closed in Fabric OS v2.6.1a

Defects Closed In Fabric OS v2.6.1a		
Defect ID	**Severity**	**Description**
DEFECT000018559	High	Summary: LIP HDS9900 Symptom: Loop initialization between the SANRISE 2800 disk array and Silkworm (2109 & 3534) switches can get stuck in an infinite loop and the port doesn't initialize. Solution: Allow LIPs to be received if by chance the single device was in bypass mode all this time and will wake up only later
DEFECT000025310	High	Summary: ECHO not returned by switch when member is not in zone Symptom: Storage will not receive ECHO when the storage port is not a part of the zoning configuration. Even when connected to the fabric and online, the storage can generate fault. Solution: When zoning is enabled, the asic does screening based on S_ID. Modified cfgIoctl to program each port with it's own S_ID when FLOGI is received on that port. When an FLOGI is received, set up each port to allow it to receive requests from itself.
DEFECT000025676	High	Summary: Cannot execute secmode cmds reliably after modifying and activating FCS policy. Fabric segments after a while. Symptom: Cannot execute secmode commands (secmodeshow, secfabricshow) from the primary FCS switch reliably. Sometime the commands return valid output and sometime they print the message "Can not execute this command. Retry Later". After sometime the fabric segmented. Solution: Disable buffer sharing on the embedded port to throttle traffic originating from the embedded port.

Defects Closed In Fabric OS v2.6.1a		
Defect ID	**Severity**	**Description**
DEFECT000025702	High	Summary: ql zoning in secure fabric mode when disabled, should log a warning log message to warn user that all QL devices can see each other now. Symptom: This is a limitation of QuickLoop in specific cases where there is shared access to a QuickLoop device with no pure QuickLoop zones present. In a zoning configuration which contains one or more zones that have both QuickLoop devices and fabric devices, fabric devices can access the QuickLoop devices in the same zone, and all QuickLoop devices in the same QuickLoop can access to each other. It is possible that during user configuration changes (i.e. adding/removing private hosts or storage, qldisabling a port, changing the zoning configuration, or adding/removing switches either by connecting or removing ISLs either explicitly or due to a device or ISL outage), there may be cases where QuickLoop zoning can be disabled. Solution: Added a warning log message whenever QuickLoop zoning is disabled in a secure fabric environment. Add a WARNING log whenever QuickLoop zoning is disabled. This change in a secure fabric environment implies that QuickLoop devices will be able to see each other in the QuickLoop.
DEFECT000025865	High	Summary: add Qloop zoning mesg Symptom: Need a warning message in Web Tools when disable/enable QuickLoop zoning. Solution: Added a warning log message in Web Tools and pop up an event alert window whenever QuickLoop zoning is disabled in a secure fabric environment. Afterward, when QuickLoop zone is enabled, Event Alert Window will update message that QuickLooop zone is enabled.
DEFECT000012103	Medium	Summary: change telnet timeout default to 10 minutes in v4.0, v3.0.2c, 2.6.0.c Symptom: No default telnet timeout may result in an unattended telnet session to be opened indefinitely. Solution: Set default timeout to 10 minutes
DEFECT000015475	Medium	Summary: passwddefault command will be executable in the backup switch Symptom: In secure mode, passwddefault should only be issued only on the primary switch. Solution: Disable the passwdefault command in secure mode

Defects Closed In Fabric OS v2.6.1a		
Defect ID	**Severity**	**Description**
DEFECT000023954	Medium	Summary: HPUX hosts with A5158 and 6795 HBAs don't see STK tape drives connected to a 2.6 switch Symptom: When a STK tape drive 9940A,9940B or 9840A is connected to a 2.6 switch (2.6.1 or 2.6.0), HPUX hosts with A5158A (1g) and 6795 (2g) HBAs don't see the tape drive in secure as well as non secure mode Solution: The problem is between the HBA and the Tape devices and not switch related. No code change
DEFECT000025646	Medium	Summary: "supportshow" command will display close to infinite faultTrace (very large). Solution: The fix will be part of 2.6.1a patch, check for valid user stack length