Brocade Fabric OS v2.6.1b

Release Notes

August 15, 2003

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General Information

Fabric OS 2.6.1b 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 Fabric OS 2.6.1a. These Release Notes will refer to "Fabric OS 2.6.1" when making statements that apply to all of Fabric OS 2.6.1x releases.

Overview

About This Release

Fabric OS 2.6.1 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 v2.6.1b includes the following changes:

- Fixes to defects as detailed in Defects Closed In v2.6.1b section.
- Correction to Fabric OS v2.6.1 Release Notes. The Documentation Addendum section of this document lists the changes. This is not a code change but a documentation correction only.
    - New command cfgSize is supported starting Fabric OS v2.6.1
    - Documentation correction for scalability support limit for fabrics containing Fabric OS v2.6.1. This limit changes from 500 devices to 728 devices.

Supported Switches

Like Fabric OS 2.6.0, Fabric OS 2.6.1 supports the 2109-S08/S16 and 3534-1RU.

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-S16	**Type 2109-S08**	**Type 3534-1RU**
S/N PPSSSSS	**S/N PPSSSSS**	**S/N PPSSSSS**

The serial number label is located as follows:

- *2109 model S16 switch:* Bottom of chassis
- *2109 model S08 switch:* Bottom of chassis
- *3534 model 1RU managed hub:* Bottom of chassis

3. Worldwide Name (WWN)

- *2109-F32 and 2109-M12 switches:* Provide the license ID. Use the **licenseidshow** command to display the license ID.
- *All other switches:* Provide the switch WWN. Use the **wwn** command to display the switch WWN.

Documentation

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

You can download these documents at: http://www.storage.ibm.com/ibmsan/products/2109/library.html

Release Contents Summary

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

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

For more details of these features, please refer to the 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 of preparation prior to getting started:

- *Secure Fabric OS Quick Start Guide*

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

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	4.0.2 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	4.1.0 or later	3.0.2c or later
Recommended adjacent to 2109-F32s running 4.1.0 or later	2.6.1 or later	3.1.0 or later	4.1.0 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 2109-F32 and 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*.

2109 Model S16 and S08 Scalability Support

Exhaustive testing has demonstrated that S16 and S08 switches should not be deployed in fabrics that exceed 728 SAN devices.

Maximizing Fabric Availability during 2109-F32 Hot Code Activation

During code activation on a 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 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 Fabric OS Procedures manual.

Microsoft Internet Explorer Issue

An issue has been identified with Microsoft Internet Explorer 5.0 and 5.5 running on Windows NT 4.0. The problem is as follows. Normally, when you launch a copy of the Switch Explorer applet, the left hand panel displays a tree of switches in your fabric. Clicking on a tree node will cause the right hand panels to refresh to the currently selected switch. However, under NT/4.0 and IE 5.0/5.5, the right hand panel will NOT update for the 2nd and subsequent instance of the Switch Explorer. Only the first instance works.

This issue has been identified and confirmed by Microsoft. For details, see the URL http://support.microsoft.com/default.aspx?scid=KB;en-us;242167&.

Workaround: There are 2 workarounds for this:

1. Always use a single instance of the SwitchExplorer on NT/4.0 and IE 5.0/5.5
2. Install IE 6.0 SP1

Alternatively, it is possible that you can obtain a workaround directly from Microsoft for this problem. Please contact Microsoft support and supply them the information in the defect as described in the URL http://support.microsoft.com/default.aspx?scid=KB;en-us;242167&.

Other Important Notes:

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

Area	Description
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), please 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 doing **errShow**, **errDump**) indicating that zoning license was missing.

Documentation Addendum

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

- In Fabric OS v2.6.1 and v2.6.1a Release Notes, the 2109-S08/S16 Scalability Limit section specifies that fabrics containing Fabric OS v2.6.1 or later should not exceed 500 user (non-ISL) ports or devices. Brocade has increased to 728 devices as the maximum number of devices supported in fabrics. 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 the New Commands Introduced In 2.6.1 section of this document.

SilkWorm 2800 (2109-S16) Hardware Reference Manual

(publication number 53-0001485-03)

Figure 1-1 on page 1-1 of the *SilkWorm 2800 Hardware Reference Manual*, has mis-labeled call-outs. The power supplies 1 and 2 are reversed, and should be labeled as follows:

New commands introduced in v2.6.1

CfgSize

Display 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 (a) zone database max size, (b) the committed size, and (c the transaction size. All sizes are in bytes.

The '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 flash size because of additional information about the database that needs to be stored.

The 'committed size' is the size of the Defined configuration currently stored in flash.

The '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 etc; otherwise it is 0.

If a non-zero 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 may 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

Use this command to change the following system configuration settings:

- Fabric parameters
- Virtual channel settings
- Zoning Operation parameters
- RSCN Transmission Mode
- NS Pre-zoning Mode
- Arbitrated Loop parameters
- System services
- Portlog events enable

Note: Do not run this command on an operational switch. First disable the switch using the switchdisable command.

The **configure** command is navigated using a series of menus. Top level menus, and associated submenus consist of a text prompt, a list of acceptable values, and a default value (in brackets). Use the following options to control input:

Return

When entered at a prompt with no preceding input, accepts the default value (if applicable) and moves to the next prompt.

Interrupt (control-C)

Aborts the command immediately and ignores all changes made. This keystroke is common on many computers, but can be different on your system.

End-of-file (control-D)

When entered at a prompt with no preceding input, terminates the command and saves changes made. This keystroke is common on many computers, but may be different on your system.

Fabric Parameters

There are a number of settings which control the overall behavior and operation of the Fabric. Some of these values, such as the domain, are assigned automatically by the Fabric and may differ from one switch to another in the fabric. Other parameters, such as the BB credit, can be changed for specific applications or operating environments, but **must** be in agreement among all switches to allow formation of the fabric.

The Fabric parameters are as follows:

1.1..1.1.1 Configure Command Fabric Parameters

Field	Default	Range
Domain	110	1..239
BB Credit	16	1 to 27
R_A_TOV	10000	4000 to 120000
E_D_TOV	2000	1000 to 5000
WAN_TOV	0	1000 to 120000
Data Field Size	2112	256 to 2112
Sequence Level Switching	0	0 or 1
Disable Device Probing	0	0 or 1
Suppress Class F Traffic	0	0 or 1
Sync IO Mode	0	0 or 1
VC Encoded Address Mode	0	0 or 1
Core Switch PID Format	1	0 or 1
Per-frame Route Priority	0	0 or 1
Long Distance Fabric	0	0 or 1

Descriptions of the switch fabric setting fields are as follows:

Domain — The domain number uniquely identifies the switch in a Fabric. This value is automatically assigned by the Fabric. The range of valid values varies depending on the switch model and other system parameter settings (refer to VC Encoded Address Mode).

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

R_A_TOV — The Resource Allocation Time Out Value (R_A_TOV) is displayed in milliseconds. This variable works with the variable E_D_TOV to determine switch actions when presented with an error condition.

Allocated circuit resources with detected errors are not released until the time value has expired. If the condition is resolved prior to the 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) is displayed in milliseconds. This timer is used to flag 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 occurs.

WAN_TOV — Wide Area Network Time Out Value (R_A_TOV) is displayed in milliseconds. Valid values are 1000 to 120000.

Data Field Size — The data field size specifies the largest possible value, in bytes, and advertises this value to other switches in the fabric during construction of the fabric as well as to other devices when they connect to the fabric. Setting this to a value smaller than 2112 may result in decreased performance.

Sequence Level Switching

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

Under normal conditions, Sequence Level Switching should be disabled for better performance. However, some host adapters have performance issues when receiving interleaved frames from multiple sequences. When there are such devices attached to the fabric, Sequence Level Switching should be enabled.

Disable Device Probing

When Disable Device Probing is set to 1, devices that do not register with the Name Server are not present in the Name Server data base. Set this mode only if the switch N_Port discovery process (PLOGI, PRLI, INQUIRY) causes an attached device to fail.

Suppress Class F Traffic

When this mode is set to 1, all class F interswitch frames are transmitted as class 2 frames. This is to support remote fabrics which involve ATM gateways which don't support class F traffic.

Sync IO Mode — When Sync IO mode is set to 1, FSPF frames are sent in synchronous mode (expecting ACKs back from the other side for every frame) which helps in detecting the failures in the link between the ATM gateways in remote fabrics.

VC Encoded Address Mode

When VC Encoded Address Mode is set to 1, frame source and destination address utilize an address format compatible with SilkWorm 1000 switches. Set this mode only if the fabric includes this type of switch. VC Encoded Address mode cannot be set in security mode. Also, when this mode is set, security mode cannot be enabled.

Core Switch PID Format

This is used to set the 256 port PID format that is used for core switches. This option enables single Domain port density higher than 16. This parameter must be set the same on all switches in the fabric. If your fabric contains 2000 series switches disable Core Switch PID format. By default Fabric OS 4.x switches have this PID format enabled.

VC Encoded Address Mode and Core Switch PID Format are mutually exclusive. They cannot both be enabled at the same time.

When interoperability mode is enabled, the "core switch PID format" parameter is set automatically. This enables a switch to work with other manufacturer's switches, as well as with core switches that have more than 16 ports. If a switch needs to be in the same fabric with other manufacturer's switches as well as with other switches that do not support 256-port PID format, that is, those before v2.4.1f, the "core switch PID format" parameter can be turned off using the configure command after the interopmode command is used to enable interoperability.

When interoperability mode is disabled, the "core switch PID format" parameter is automatically set to the opposite of the "VC Encoded Address Mode" parameter value. These two parameters are mutually exclusive and should not both be enabled. Make sure they are not both enabled inadvertently using the configure command. For more information on **interopmode** refer to the *Fabric OS Procedures Guide*.

Per-frame Route Priority

In addition to the eight virtual channels used in frame routing priority, support is also available for per-frame based prioritization when this value is set. When Per-frame Route Priority is set to 1, the virtual channel ID is used in conjunction with a frame header to form the final virtual channel ID.

Long Distance Fabric

When this mode is set to 1, ISLs in a fabric can be up to 100Km 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 be segmented. The Extended Fabric License is required to set this mode.

Virtual Channel Settings

The switch enables fine tuning for a specific application, by configuring the parameters for eight virtual channels. The first two virtual channels are reserved for switch internal functions and are not available for modification.

The default virtual channel settings have already been optimized for switch performance. Changing the default values can improve switch performance, but can also degrade performance. Do not change these settings without fully understanding the effects of the changes.

The Virtual Channel Setting fields are as follows:

1.1..1.1.2 Configure Command Virtual Channel Settings

Field	Default	Range
VC Priority 2	2	2 to 3
VC Priority 3	2	2 to 3
VC Priority 4	2	2 to 3
VC Priority 5	2	2 to 3
VC Priority 6	3	2 to 3
VC Priority 7	3	2 to 3

Descriptions of the Virtual Channel Setting fields are as follows:

VC Priority Specifies the class of frame traffic given priority for a Virtual Channel.

Zoning Operation Parameters

The Zoning Operation Parameter fields are as follows:

Disable NodeName Zone Checking

Specify 1 to disable using Node WWN when specifying nodes in the zone database, or specify 0 to enable using Node WWN when specifying nodes in the zone data. The default value is 0. This value must be set to 1 for interoperability.

RSCN Transmission Mode

The RSCN Transmission Mode fields are as follows:

End-device RSCN Transmission Mode

Specify 0 for RSCN with single PID, 1 for RSCN with multiple PIDs, or 2 for Fabric RSCN. The default value is 0.

NS Operation Parameters

The NS Pre-zoning Mode fields are as follows:

Pre-zoned responses Mode

Specify 0 for Standard Mode, or 1 for Pre-zoning On. The default value is 0.

Arbitrated Loop Parameters

The Arbitrated Loop Setting fields are as follows:

1.1..1.1.3 Configure Command Arbitrated Loop Settings

Field	Default	Range
Send FAN frames?	0	0 or 1
Always send RSCN?	0	0 or 1
Enable CLOSE on OPEN received?	0	0 through 4

Descriptions of the Arbitrated Loop Parameter fields are as follows:

Send FAN frames?

Specifies that fabric address notification (FAN) frames be sent to public loop devices to notify them of their node ID and address. When set to 1, frames are sent; when set to 0 frames are not sent.

Always send RSCN?

Following the completion of loop initialization, a remote state change notification (RSCN) is issued when FL_Ports detect the presence of new devices or the absence of pre-existing devices. When set, a RSCN is issued upon completion of loop initialization, regardless of the presence or absence of new or preexisting devices.

Enable CLOSE on OPEN received?

If this is set, a CLS is returned immediately to an OPN if no buffers are available. This is required for TachLite.

System Services

The System Services fields are as follows:

1.1..1.1.4 Configure Command System Services Parameters

Field	Default	Range
rstatd	Off	On/Off
rusersd	Off	On/Off
rapid	On	On/Off
thad	On	On/Off
Disable RLS probing	On	On/Off

Descriptions of the system service setting fields are as follows:

rstatd — Dynamically enables or disables a server that returns information about system operation information through remote procedure calls (RPC). The protocol provides for a wide-range of system statistics.

The retrieval of this information is supported by a number of operating systems which support RPC. Most UNIX-based systems (HP-UX, Irix, Linux, Solaris, etc.) use the rup and rsysinfo commands to retrieve the information. See your local system documentation for the appropriate usage of the these or equivalent commands.

rusersd — Dynamically enables or disables a server that returns information about the user logged into the system through remote procedure calls (RPC). The information returned includes user login name, the system name, 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 which support RPC. On most UNIX-based systems (HP-UX, Irix, Linux, Solaris, etc.) the command to retrieve the information is rusers. See your local system documentation for the appropriate usage of this or equivalent command.

rapid — Dynamically enables or disables a service that handles RPC requests for the API server.

thad — Dynamically enables or disables the threshold monitor.

Disable RLS probing — This disables Read Link Error Status probing of the ALPAs.

Portlog Events Enable

Use these parameters to specify which events create an entry in the port log. The Portlog Events fields are as follows:

1.1..1.1.5 Configure Command Portlog Events parameters

Field	(Valid Values) Default Value
start: a switch start or re-start event	(on, off): [on]
disable: a port is disabled	(on, off): [on]
enable: a port is enabled	(on, off): [on]
ioctl: a port I/O control is executed	(on, off): [on]
Tx: a frame is transmitted	(on, off): [on]
Tx1: a frame is transmitted, class 1	(on, off): [on]
Tx2: a frame is transmitted, class 2	(on, off): [on]
Tx3: a frame is transmitted, class 3	(on, off): [on]
Rx: a frame is received	(on, off): [on]
Rx1: a frame is received, class 1	(on, off): [on]
Rx2: a frame is received, class 2	(on, off): [on]
Rx3: a frame is received, class 3	(on, off): [on]
stats: port status or statistics	(on, off): [on]
scn: a state change notification	(on, off): [on]
pstate: a port changes physical state	(on, off): [on]
reject: a received frame is rejected	(on, off): [on]
busy: a received frame is busied	(on, off): [on]
ctin: a CT based request is received	(on, off): [on]
ctout: a CT based response is transmitted	(on, off): [on]
errlog: a message is added to the error log	(on, off): [on]
loopscn: a loop state change notification	(on, off): [on]
create: a task is created	(on, off): [on]
debug: generic debug info	(on, off): [on]
nbrfsm: neighbor state transition	(on, off): [on]

timer: timer	(on, off): [on]
sn: speed negotiation state	(on, off): [on]
nsRemQ: inter-sw NS query	(on, off): [on]
nsRemR: inter-sw NS response	(on, off): [on]
rscn: RSCN	(on, off): [on]
reconf: fabric reconfiguration	(on, off): [on]
LR1: LR2	(on, off): [on]

OPERANDS None.

EXAMPLE

To set the configuration parameters for a switch:

```
switch:admin> configure

Configure...

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

Domain: (1..239) [14] 50
BB credit: (1..27) [5]
R_A_TOV: (4000..120000) [10000]
E_D_TOV: (1000..5000) [2000]
WAN_TOV: (1000..120000) [0]
Data field size: (256..2112) [2112]
Sequence Level Switching: (0..1) [0]
Disable Device Probing: (0..1) [0]
Suppress Class F Traffic: (0..1) [0]
SYNC IO mode: (0..1) [0]
VC Encoded Address Mode: (0..1) [0]
Core Switch PID Format: (0..1) [1]
Per-frame Route Priority: (0..1) [0]
Long Distance Fabric: (0..1) [0]


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

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

Zoning Operation parameters (yes, y, no, n): [no] n
RSCN Transmission Mode (yes, y, no, n): [no] n
NS Operation Parameters (yes, y, no, n): [no] n
Arbitrated Loop parameters (yes, y, no, n): [no] n
System services (yes, y, no, n): [no] n
Portlog events enable (yes, y, no, n): [no] n
Committing configuration...done.
```

switch:admin>

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 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

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 2109-S16 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: 2109-F32 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 two fold: 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.