

Brocade Fabric OS v2.6.1 Release Notes

May 2, 2003

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Overview

Fabric OS v2.6.1

Brocade is pleased to deliver the generally available ("GA") version of Fabric OS v2.6.1. Brocade thanks its OEM partners for their assistance during the Fabric OS v2.6.1 Beta and Qualification cycles, and for their assistance in maximizing the quality of the product.

Release Contents Summary

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

- Expanded security in the mixed fabric environment
- External Time Server Synchronization
- Enhanced code compatibility/manageability for mixed fabric environment
 - Persistent port and switch level enabling/disabling

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:

	SW 2xxx	SW 3200 & 3800	SW 3900 & 12000	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 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

SilkWorm 2xxx Scalability Limits

Exhaustive testing has demonstrated that SilkWorm 2000 family switches should not be deployed in fabrics whose size exceeds 500 user ports (device ports). Such switches will not be supported in fabrics that exceed this size, regardless of Fabric OS version.

Maximizing Fabric Availability during SW 3900 Hot Code Activation

During code activation on a SilkWorm 3900 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 (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.

Area	Description
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

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 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

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:

1.11.1.1 Configure Command Fabric Parameters			
Field	Default	Range	
Domain	110	1239	
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:

1.11.1.2 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:

1.11.1.3 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:

1.11.1.4 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:

1.11.1.5 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]	

(on, off): [on]
(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>

Outstanding Defects

This table lists open defects in Fabric OS v2.6.1.

Outstanding Defects		
Defect ID	Severity	Description
DEFECT000016384	High	Summary: Switch not sending enough LIPs to transition from AL-PA sequence to Old_Port
		Symptom: Some Loop devices may not initialize. The switch port initialization transition from open-init-state to the Old_Port State can occur for certain devices.
		Solution: The fixed was backed out since it causes some HBA not always login as F-port.
		Workaround: Setting the port as a G-Port by using portCfgGPort causes the issue to be avoided.
		Customer Impact: This issue affects a particular FC LTO tape drive. The workaround has been agreed upon between Brocade and the manufacturer of the LTO 2 tape drives.

Outstanding Defect	Outstanding Defects		
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 webserver, 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:	
		Catching the fault condition and stopping it from happening. Optimization of memory usage.	
		Workaround: Confine GUI based zoning updates to a 2.6.0j or higher version switch.	
		Customer Impact: Waived for RC2 drop There is a workaround for this issue.	
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	
		Comment: The fix for this defect is currently under test.	
DEFECT000025037	High	Summary: A zone merge with a zoning DB greater than 98232 bytes causes the 2K to clearout the defined database.	
		Symptom: When merging with a 12K switch and having a large zoning DB (greater than 98232 bytes) should cause the 2K switches to segment BUT not clear their defined zoning database.	
		Customer Impact: Waived for RC2 drop. A deferral has been requested for this defect. The issue is understood, but the fix is high risk at this point in development.	

Outstanding Defects		
Defect ID	Severity	Description
DEFECT000025310	High	Summary: ECHO not returned by switch when member not in zone
		Symptom: Storage will not receive ECHO when the storage port is not part of the zoning configuration. Can cause the storage to generate fault if this happens even when it is connect to the fabric and online
		Solution: When zoning is enabled, the asic does screening based on S_ID. Modified cfgloctl to program each port with it's own S_ID when FLOGI is received on that port.
		Workaround: Put storage port into a zoning configuration
		Comment: The fix for this defect is currently under test.
DEFECT000025404	High	Summary: HP issue: Change from E-port to F-port causes repeated looping of FLOGI/PLOGI/LOGO. Also portlink timeout
		Comment: The fix for this defect is currently under test.
DEFECT000025548	High	Summary: Loop port does not get registered in name server after disabling zoning on the switch and merge the switch back to fabric
		Symptom: A loop port did not get registered to name server after cleaning up the zoning on the switch, then merge the switch back to the fabric with zoning until additional portdiable/portenable.
DEFECT000025639	High	Summary: Two switches crashed with "Panic: FREE - free failed, ptr:"
		Symptom: Switch panic during stress test
		Solution: Still under investigation
		Workaround: Keep one WebTool session open
		Customer Impact: Avoid running Qualsys or some other network vulnerability test
		Probability: Low
DEDECT000025643	High	Summary: Loop init problem
		Symptom: switch fails to start a LISM phase following the LIP generated by the adapter.
		Solution: Under Investigation
		Workaround: None
		Customer Impact: Result of running test script to stress conditions.
		Probability: Low -Only reported by 1 customer

Outstanding Defects		
Defect ID	Severity	Description
DEFECT000025644	High	Summary: Switch reboot Reset reason 21 : Bus error
		Symptom: Switch rebooted while using Webtools to set data on the switch.
		Solution: Under Investigation
		Workaround: None
		Customer Impact: Unknown
		Probability: Low. This problem has been difficult to re-produce.
DEFECT000025645	High	Summary: problem to activate a very simple zone configuration change Symptom:
		1) zonecreate "db2c1"
		2) cfgadd "Thunder", "db2c1"
		3) cfgsave
		4) cfgenable "Thunder"
		5) cfgshow - shows the zone is in the defined configuration but not in the effective configuration.
		Solution: Under Investigation
		Workaround: None
		Customer Impact: Unknown
		Probability: Low. Tried the same set of commands and cannot reproduce.
DEFECT000012433	Medium	Summary: [fixed in 3.1 (defect 12432) FCIP: could not open switchview with some FCIP addresses setup
		Symptom: Unable to open switchview on a switch with both IP and FC addresses set.
		Workaround: The workaround is to set up environment where one launch/entry switch has both ethernet and FCIP address field set and rest of the switches using FCIP have FCIP address set, but ethernet addresses and mask set to "none". If the switches are set up to use both FCIP and ethernet, make sure that both the addresses are valid and you can telnet to the switch using both the addresses.
		Customer Impact: This defect has been deferred. Currently there does not seem to be any good solution available to fix this permanently, but there is a workaround which the user can follow and this problem should not happen.
		Probability: Low

Outstanding Defects			
Defect ID	Severity	Description	
DEFECT000019877	Medium	Summary: Pls remove " passwdDB size 12 " off on BannerShow output message	
		Symptom: bannershow command results in the following output message: passwdDB size 12. No operational impact, but can confuse the user.	
		Customer Impact: Deferred to later release. This is a cosmetic issue.	
DEFECT000020068	Medium	Summary: "Select scheme fails 7" error on backup switch	
		Symptom: Customer will see "Select scheme fails" message on the screen	
		Solution: Error happens because primary key on the switch is corrupted (SSH_CRYPTO_CORRUPTED_KEY_FPRMAT). Doing switchdisable forces the download of primary key again.	
		Workaround: If this error happens, take switch offline and then back online.	
		Customer Impact: Deferred. This defect has not been recreated in a long time.	
		Probability: Low	
DEFECT000020451	Medium	Summary: VxWorks-based switches generate predictable TCP sequence numbers	
		Symptom: TCP sequence number guessing means to guess the initial TCP sequence number of a future TCP session or an existing TCP session.	
		Customer Impact: Deferred. Wind River has accepted that this is their issue. We cannot solve it.	
DEFECT000020513	Medium	Summary: Please update help page for "configure" to reflect that VC Encoded mode cannot be set in security mode	
		Symptom: Customer should NOT set VC Encoded mode with Security enabled.	
		Workaround: Customer should NOT set VC Encoded mode with Security enabled.	
		Customer Impact: Deferred. This is a cosmetic issue that should be documented.	

Outstanding Defects		
Defect ID	Severity	Description
DEFECT000020850	Medium	Summary: Files stored in Temporary Internet Files can be copied and pasted in browser address bar thereby bypassing login.
		Symptom: Potential Security hole, affects 2.6.1, 3.1 and 4.1
		Customer Impact: Deferred. Will be addressed in maintenance release.
DEFECT000020886	Medium	Summary: No quickloop license on private host's switch, FA config is sill enable
		Symptom: FA configuration is still enabled, even if there is no quickloop license on private host's switch.
		Workaround: Disable and re-enable zoning on the switch
		Customer Impact: Deferred. There is a workaround for this issue.
DEFECT000020904	Medium	Summary: 0.0.0.0 allows all access in Telnet, SNMP, and HTTP policies
		Symptom: If Telnet_Policy, RSNMP_POLICY, WSNMP_POLICY, and HTTP_POLICY are created and activated with ip address 0.0.0.0, all the telnet, snmp, and http protocols still open and allow all the connections.
		Workaround: Do not use 0.0.0.0 for IP based Security Policy
		Customer Impact: This defect has been deferred to a future release.
DEFECT000021020	Medium	Summary: get WARNGING TS-MCAST, 3, TS multicast filed: Invalid signature in all of SW3800s
		Symptom: If a switch in a secure fabric is disabled and configured with domain ID to be the same as another switch already in the fabric. When enable the switch with "switchenable" command, the following message is displayed. "WARNING TS-MCAST, 3, TS multicast failed: Invalid signature"
		Workaround: Set time to syncronize with primary FCS.
		Customer Impact: Deferred to future release.
DEFECT000021022	Medium	Summary: When the Primary switch comes on line we get the "Failed to verify message" on all backups.
		Symptom: During secFailOver process, backup switch showed "Failed to verify message."
		Workaround: Dis-able and re-enable the switch to sync with primary FCS
		Customer Impact: Deferred to future release.

Outstanding Defect	Outstanding Defects			
Defect ID	Severity	Description		
DEFECT000021053	Medium	Summary: can't qlenable switch after FA host is removed from switch		
		Symptom: FA host and quickloop cannot co-exist on the same switch. In this test case, the FA host		
		was moved to another switch. User should be able to issue command "qlenable" for this switch.		
		Workaround: When this happens, fastboot the switch		
		Customer Impact: Deferred to future release.		
DEFECT000021082	Medium	Summary: [INCON] Need consistent security segmentation errors		
		Symptom: In mixed fabrics, error messages are not consistent and can be confusing. Confusing to user if no DB exists, providing misleading information. 3.1/4.1 Inconsistencies		
		Customer Impact: This issue has been addressed, but the fix has not completed Systems verification test.		
DEFECT000021812	Medium	Summary: FM: 49: GEN: Webserver reporting 503 Service Unavailable/Overloaded errors to FM		
		Symptom: The webserver on a switch is reporting 503 Service Unavailable errors to Fabric Manager (FM)under a test condition where 4 FM clients polling a variety of FM related switch html pages. The client poll times for these pages are on average every 15-20 secs. The switch was being disabled and re-enabled every 10 mins throughout this test and was the only switch in the 24 switch fabric that gave this problem.		
		Comment: The fix for this defect is currently under test.		
DEFECT000022416	Medium	Summary: FM:U: GEN:Details view shows SWs as unreachable but telnet works		
		Symptom: The Fabric Manager (FM) Details view shows several 2K switches as unreachable but telnet to the switch is still possible. The following exception messages are being logged in the error log: [Exception] Feb 5, 2003 5:46:09 PM Events CDPool:cow062_2250:EventDataCollector java.io.IOEx ception: Server returned HTTP response code: 503 for URL:		
		Customer Impact: The functionality is still available - just the view is impacted.		

Outstanding Defects			
Defect ID	Severity	Description	
DEFECT000023665	Medium	Summary: FM: 537 : GEN: Webserver returning incorrect wwn's in FabricInfo.html	
		Symptom: Switch wwn displays in webtools are incorrect for a few seconds, no noticeable effect. In Fabric Manager (FM), however, these are used as keys into the	
		switch display tree creating extranous entries.	
		Solution: The cause was the wwnfmt call which is not reentrant. All occurances in the WebTools code have been replaced with the reentrant function.	
		Customer Impact: A fix is available for this issue.	
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	
		Customer Impact: Issue is still under investigation.	
DEFECT000024109	Medium	Summary: Memory leak in bannerGet() - same as defect 23806 in 3.1. Also in API - GetSingleObject.	
		Comment: The fix for this defect is currently under test.	
DEFECT000024343	Medium	Summary: Referencing to the same switch twice in a single secpolicycreate command for DCC policy fails - duplicate	
		Symptom: Customer sees an unclear error message.	
		Solution: Allow for multiple switch entries with different port values. Current implementation does not allow this flexibility. In Fabric OS v3.1.0/v4.1.0 a better error message is provided if this condition is encountered.	
		Workaround: None	
		Customer Impact: Complete fix is not possible without major changes. A better error message can be provided (as in 3.1/4.1), if check in is allowed.	
		Probability: Low	

Outstanding Defects		
Defect ID	Severity	Description
DEFECT000024602	Medium	Summary: Nightly test18Mar: Switches segmented from secure fabric due to incomplete zone propagation
		Symptom: While in secure mode, clear the zoning config on the primary FCS and use configdownload to restore config across the fabric. Rarely, incomplete propagation of zoning information to one or more switches can result in segmentation of that switch from the secure fabric. It is necessary to process the isolated switch with secmodeenable/secmodedisable commands to allow it to rejoin the fabric.
		Workaround: May need to document workaround for recovering a segmented switch in a secure fabric due to an incomplete zoning propagation (however it occurs). The recovery for a customer may not be obvious depending on the affected switch.
		Customer Impact: Intermittent issue and can be worked around.
DEFECT000024666	Medium	Summary: CERT Advisory CA-2003-10 Integer overflow in Sun RPC XDR - RPC lib is used by API
		Symptom: CERT Advisory CA-2003-10 Integer overflow in Sun RPC XDR. There is an integer overflow in the xdrmem_getbytes() function distributed as part of the Sun Microsystems XDR library. This overflow can cause remotely exploitable buffer overflows in multiple applications, leading to the execution of arbitrary code.
		Customer Impact: Deferred. Documented vendor issue. For more information, please refer to the CERT advisory.
DEFECT000024816	Medium	Summary: CERT Advisory CAN-2002-0391- Integer overflow in xdr_array() function when deserializing the XDR streamstream
		Symptom: There is an integer overflow present in the xdr_array() function distributed as part of the Sun Microsystems XDR library. This overflow has been shown to lead to remotely exploitable buffer overflows in multiple applications, leading to the execution of arbitrary code.
		Customer Impact: Deferred. Documented vendor issue. For more information, please refer to the CERT advisory.
DEFECT000024899	Medium	Summary: Couldn't telnet to SW2800 after switch was reboot several times
		Symptom: After the SW2800 switch was reboot several times, user will not be able to telnet to the switch. To fix this problem, user must do soft or hard reboot the switch.
		Customer Impact: This has been determined to be a corner case and the defect will be closed.

Outstanding Defect ID	Severity	Description
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DEFECT000024902	Medium	Summary: get "fail to commit on all switches" when doing secpolicysave because one SilkWorm 12000 gets fail to verify signed data when committing DB
		Symptom: When creating a DCC policy on the primary FCS switch, secpolicysave command results in the following error: secpolicysave Fail to commit on all switches.
		Customer Impact: Will target subsequent release.
DEFECT000025017	Medium	Summary: Unable to ID private HBAs (HBA rejects fcp probe) in DCC policy.
		Symptom: Private HBAs or HBAs in QL mode rejects FCP probe from the switch. As a result, these HBAs have no registration to the name server (NS).
		Customer Impact: Some older private HBA does not respond to PLOGI from the switch. These HBA are not enforced by the DCC policy. This is a normal behavior of some HBAs.
DEFECT000025083	Medium	Summary: please implement Master mib for v4.1
		Symptom: None, a new Master mib is being implemented for Brocade SW Switches.
		Comment: The fix for this defect is currently under test.
DEFECT000025118	Medium	Summary: syslog is disabled if quiet mode is enabled
		Symptom: If quiet mode is enabled, syslog is disabled
		Workaround: In order to get syslog events, disable quietmode
		Customer Impact: Deferred.
DEFECT000025423	Medium	Summary: CLI Secure Telnet
		Symptom: secPolicyCreate command has a grammatical error in text output.
		Comment: The fix for this defect is currently under test.
DEFECT000025452	Medium	Summary: Able to download zoneset using CfgDownload
		Customer Impact: Waived for RC2 drop.
DEFECT000025552	Medium	Summary: From a 2.61 proxy, while there is an active cfg, trying to Commit after clearing FZDB would return -1000.

Outstanding Defects		
Defect ID	Severity	Description
DEFECT000025640	Medium	Summary: An entry is in the name server for a port that does not have a device logged in.
		Symptom: An entry is in the name server for a port that does not have a device logged in, otherwise the switch appears to function properly.
		Solution: Still under investigation
		Workaround: None
		Customer Impact: Unknown
		Probability: Low, due to this is the first report of such problem and not reproduced yet
DEFECT000025641	Medium	Summary: Performance Degradation in QuickLoop switch
		Symptom: The host transmits Frame A and Frame B within 1 millisecond. The switch transmits Frame B about 50 milliseconds after forwarding Frame A. The switch receives R_RDY from the storage right after forwarding Frame A Solution: Under Investigation
		Workaround: None
		Customer Impact: Unknown
		Probability: Still investigating whether it's related with a known full/half duplex mode problem.
DEFECT000025642	Medium	Summary: Turning one of two power supplies off causes switch to reboot 2800 due to HW ref guide list the power supplies backwards.
		Symptom: Switch reboot
		Solution: Defer: HW ref guide need to be updated
		Probability: Low
DEFECT000025646	Medium	Summary: "supportshow" command will display close to infinite faultTrace (very large).
		Symptom: supportshow continues to dump stack trace due to long user stack length field.
		Solution: Check on invalid filed length
		Workaround: None
		Customer Impact: Fix is going to 2.6.1a patch release
		Probability: Low.

Outstanding Defects		
Defect ID	Severity	Description
DEFECT000025648	Medium	Summary: Switch panic v2.6.0d, Sys no MEM on two switches in fabric.
		Symptom: switch panic
		Solution: Under Investigation
		Workaround: None
		Customer Impact: Unknown
		Probability: Low

Defects Closed Since Last GA Release

This table lists the defects that have been closed since the last GA release, Fabric OS v2.6.0.

Defects Clo	Defects Closed Since v2.6.0		
Defect ID	Severity	Description	
14681	Critical	Problem Area: Broadcast storm on Ethernet network causes switch to stop responding.	
		Description of Fix: Detects broadcast storm and shuts down Ethernet port.	
14827	Critical	Description of Defect: Switch lockup due to shell task running indefinitely in the case of telnet/shell out of sync	
		Description of Fix: Add taskdelays so that shelltask doesn't run indefinitely.	
18044	Critical	Description of Defect: MSA 1000 cannot login into a 2800, port shows as insync	
		Description of fix: Remove unnecessary interrupt to handle MSA behavior.	
9750	High	Problem Description: Watchdog reboot of switch when additional ISL's added to the switch.	
9948	High	Problem Description: Modified Name Server behavior to reduce I/O stoppage during the secFailOver operation.	

Defects Clo	Defects Closed Since v2.6.0				
Defect ID	Severity	Description			
10960	High	Problem Area: quickloop is changing ALPA assignment			
		Description of Fix:			
		The command qlUnmaskLipa [0 1] has been added to this patch release.			
		There are two modes of loop initialization, differentiated by setting the parameter to 0 or 1.			
		When set to 0, initializing a looplet is off.			
		When set to 1, initializing a looplet is on.			
		When the parameter is set to initializing a looplet (1), QuickLoop masks the Arbitrated Loop Physical Address (AL_PA) bits in the Loop Initialization Procedure (LIPA) frame using the LIPA bitmaps of those looplets that stay online. Setting the parameter to 1 disables the LIPA bitmap masking and opens AL_PAs for assignment to devices in the initialized looplet during the LIPA phase, thus allowing the device to claim the same AL_PA.			
11637	High	Problem Area: NS was requiring another probing to be completed before sending RSCN.			
		Description of Fix:			
		If probing has failed with NOT_SUPPORTED as the reason code, probing will discontinue and the NS will send an RSCN once the device has been registered.			
12439	High	Problem Area: GPSN_ID command, when sent to the remote switch suspends traffic on the ISL until it has completed.			
		Description of Fix: Redirect the remote request processing to a specific receive task.			
12651	High	Problem Area: "FLOGI is discarded and should be rejected with "Command not supported" when Quickloop is enabled.			
		Description for Fix: FLOGI is rejected with message "command not supported" instead of being discarded.			
12653	High	Problem Area: Interop with McData GA_NXT times out on ISL when sent from McData to Brocade switch.			
		Description of Fix: NS CAM in 2.6.x allows adjacent switches to respond to GA_NXT request.			
12916	High	Problem Area: Taking a Symm offline causes portfault errors			
		Description of Fix: Port is not hard faulted on link initialization failures.			
14016	High	Problem Area: Zoning window in Webtools takes long time to load with very large configurations.			
		Description of Fix: Loading large configurations does not take long time with the fix.			

Defects Closed Since v2.6.0				
Defect ID	Severity	Description		
14020	High	Problem Area: "Cfgtransshow" Command Fails To Show Outstanding Zoning Transactions. Shows The Effective Zone Configuration instead. Description of Fix: cfgtransshow was removed from the help menu to prevent		
		misuse.		
15040	High	Problem Description: No data capture to troubleshoot watchdog reboots of switch. Description of Fix: Instrumentation added to capture task activity on the switch at time of reboot and setTaskLogMode can be run by admin to capture further watchdog data.		
16381	High	Description of Defect: With FCP device probing turned off on the switch, Fabric controller does not send an RSCN after a target device registers with the name server with a RFT_ID		
17698	High	Description of Fix: Using a new bitmap to indicate Name Server to send RSCNs. Description of Defect: When querying of swSystem group and connUnitPortTable some memory was not freed before allocation again. When these MIB tables are queried again and again, we allocate memory every time without freeing previous memory allocated.		
		Description of fix: Freeing the memory before allocating it again in the routines which provide access to SW System and connUnitPortTable group. These routines also have a termination routine to free the memory when the snmp daemon exits.		
17817	High	Description of Defect: The Is_port_name field in the ADISC accept payload was not consistent with the values returned in the PLOGI and PDISC accept payloads when the ADISC was sent to a well-known address (e.g., Management Server). Brocade switch returns a different WWN in the ADISC Accept than the one it returns in the PLOGI Accept for the Management Server. The PLOGI and PDISC handlers take into account whether the ELS is addressed to a well-known address (e.g., Management Server) or to some other port address. The ADISC handler did not.		
		Description of fix: Changed the ADISC ELS handler to ensure that the port name field in the ADISC accept response is consistent with the PLOGI and PDISC responses.		
20229	High	Description of Defect: Following bringing a second target port online which is configured in the same zone as a target already online, continuous RSCNs are received from the switch to all target ports online within the zone.		
		Description of fix: Change implemented so that the registered COS is not overwritten by the cos in the flogi database when handling UPD_AREA message.		

Defects Clo	Defects Closed Since v2.6.0				
Defect ID	Severity	Description			
9605	Medium	Problem Area: nsshow does not display symbolic name for storage only empty brackets are displayed			
		Description of Fix: The symbolic name for the storage device is now populated correctly between the brackets in the nsShow output.			
10613	Medium	Problem Area: "Defect CRITICAL FCIU-IUBAD, 1, invalid iu 0x10de1760" error occurs			
		when connected to a HP hba (A5158A) and if PortDisable/Enable is performed.			
		Description of Fix:			
		During PLOGI retry for reject, check to make sure the probing value does not exceed the max value for reject retry. If it does, fail the FCP probing and clean up the IU.			
11360	Medium	Problem Area: Failure to re-establish ISL after long haul link reset because switch rejects the ELP.			
		Description of Fix: ISL can now be re-established after a long haul link reset.			
11763	Medium	Problem area: Admin applet fails to load after apostrophe character included in certain SNMP variables.			
		Description of Fix: Admin applet now loads apostrophe character correctly for SNMP variables containing apostrophes.			
11931	Medium	Problem Description: Telnet session from AIX host to 2800/2400 switch with FOS 2.6.0c v2.6.0x does not echo the commands that are being typed. Commands are only visible after hitting the enter key and output of command is displayed correctly			
		Description of Fix: Commands are now visible as they are being typed.			
12650	Medium	Problem area: tThad disable configure option is only available to root user			
		Description of Fix: tThad disable configuration option is now available under Admin.			
12654	Medium	Problem Area: Hyphen in the switch name in DNS disables access to zone admin and Name server windows in Web tools'			
		Description of Fix: Hyphen in switch name in DNS now can be displayed in zone admin and name server windows.			
12688	Medium	Problem Area: Switch is not discarding invalid frames at destination at hardware speed.			
		Description of Fix: Created function so invalid frames can be dropped at hardware speed.			
15889	Medium	Description of Defect: 1 port attached causes MIB queries to return incorrectly.			
		Description of fix: Required in Name Server for SNMP. SNMP returns the appropriate next object after			
		appropriate next object after connUnitLinkTable object instead of sending the same object info.			

	Defects Closed Since v2.6.0				
Defect ID	Severity	Description			
17409	Medium	Description of Defect: Configuration File Download Failure Message Incorrect;"Invalid Zoning Key" rather than "Zone DB too large".WebTools error message different than Command Line Interface. Description of Fix: WebTools error message now matches that of the Command			
1740E	Medium	Line Interface, "Zone DB too large"			
17425	Medium	Description of Defect: cfgshow command behavior has changed from 2.4.x to 2.6. This change input a page break into the cfgshow output. This is a great benefit to users viewing the data directly, however this breaks many of our customers automation scripts.			
		Description of Fix: moreEnabel/moreDisable commands made accessible to Admin user.			
18694	Medium	Description of Defect: Switch restart reboot bus error. The calls to sprintf() are violating their buffers and causing memory corruption. The root cause for this is making accesses into the topology database while it is changing. Description of fix: Serialize accesses to the domain database to make sure that we don't get intermittent values while information in the database is being			
		computed.			
18965	Medium	Description of Defect: Switch in mixed fabric suddenly rebooted. strncpy() got out of bounds/had a bad input pointer. Description of fix: Harness the memory already allocated so that a request will only require the same memory to decode that it already occupies.			
19817	Medium	Description of Defect: When a ping storm is in progress, the fabricShow command displays the message: "Fspf is calculating route, please do it later" Description of fix: Added receive frame rate throttling code to ethernet driver. The ethernet driver now does a 1 tick delay on every 10th received frame so th during high rates of received ethernet frames, tNettask will not completely monopolize the CPU.			
19818	Medium	Description of Defect: When a ping storm is initiated on a switch, the FSPF queue is exceeded and the switch displays CRITICAL MQ-QWRITE errors. Description of fix: Added receive frame rate throttling code to ethernet driver. The ethernet driver now does a 1 tick delay on every 10th received frame so th during high rates of received ethernet frames, tNettask will not completely monopolize the CPU.			
12594	Low	Problem Area: Cfgclear removes zoning configuration without warning. Description of Fix: Added warning that cfgclear removes zoning config in the entire fabric and asks user to confirm before execution.			
12652	Low	Problem Area: Erroneous high value SNMP portPerf traps received from Fabric Watch. Description of Fix: Port performance counter did not wrap correctly so the value displayed was incorrect. portPerf traps now display the correct value.			