Brocade Fabric OS 4.1.2

Release Notes

October 15th, 2003

TABLE OF CONTENTS

Overview

Brocade is pleased to deliver Fabric OS v4.1.2 to its OEM partners. Fabric OS v4.1.2 provides FICON (Fibre Connection) support on the Brocade SilkWorm 12000 (2109-M12) Director for IBM mainframe environments. It enables customers to reduce costs by standardizing platforms, increasing performance of their environment, and simplifying management. Using FICON, a protocol providing connectivity for mainframes, Brocade SilkWorm 12000 (2109-M12) customers can standardize their storage network infrastructures on a common platform for both open systems and mainframe environments.

About This Release

The previously released Fabric OS 4.1.0 and 4.1.1 contained code to allow FICON-capable hosts and storage systems to connect to the SilkWorm 12000 (2109-M12) and transmit FICON data. This functionality has now completed IBM FICON certification and qualification with this maintenance release (4.1.2). Fabric OS v4.1.2 should be considered an upgrade and replacement for Fabric OS v4.0.2, v4.1.0, and 4.1.1.

In this release:

- FICON mode has been eliminated, implementing a new requirement from IBM during the certification process.
- The in-band FICON management server, also known as CUP (Control Unit Port), is not a supported feature of Fabric OS 4.1.2. Brocade intends to support it in a future Fabric OS version.
- Fabric OS 4.1.2 is supported by the following releases of the Fabric Access API and Fabric Manager:
  - Fabric Access Layer 3.0.1 (the Fabric Access API)
  - Fabric Manager 4.1.0 and later
- As a Fabric OS maintenance release, Fabric OS 4.1.2 also incorporates fixes for critical and high-severity defects reported by customers during its development cycle. In particular, any defect fixed in a patch release (Fabric OS 4.1.1a) prior to the freezing of Fabric OS 4.1.2 for final release will be incorporated into Fabric OS 4.1.2.

Supported Switches

This release supports the SilkWorm 12000 (2109-M12) for FICON environments and SilkWorm 3900 (2109 model F32) and SilkWorm 12000 (2109-M12) for open systems environments.

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 on the serial number label, as follows

Type 2109-M12	**Type 2109-F32**
S/N PPSSSSS	**S/N PPSSSSS**

   The serial number label is located as follows:
   - *SilkWorm 2000 series (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. **World Wide Name (WWN)**
   - *SilkWorm 3900(2109-F32) and 1200 (2109-M12) switches:* Provide the license ID. Use the **licenseidshow** command to display the license ID.
   - *All other SilkWorm (2109, 3534) switches:* Provide the switch WWN. Use the **wwn** command to display the switch WWN.

New Features and Enhancements

The previously released Fabric OS 4.1.0 and 4.1.1 contained code to allow FICON-capable hosts and storage systems to connect to the SilkWorm 12000 (2109-M12) and transmit FICON data. This functionality has now completed IBM FICON certification and qualification with this maintenance release (4.1.2). All features and functionalities for this maintenance release should be the same as Fabric OS v4.1.1, with the exception of defect fixes documented later in these notes.

Information About Secure Fabric OS

Brocade 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 prior to getting started:

- *Secure Fabric OS Quick Start Guide*

Obtain more detailed product information from the *Secure Fabric OS User's Guide.*

Supporting Documentation

The primary documentation for this release is the Fabric OS 4.1.0 documentation suite. In addition, updates were made to the following manuals for FICON environments:

- *Brocade Advanced Web Tools User's Guide, v4.1.2*
- *Brocade Diagnostic and System Error Messages, v4.1.2*
- *Brocade Fabric OS Reference, v4.1.2*
- *Brocade Glossary, v4.1.2*
- *Brocade MIB Reference Manual, v4.1.2* (also supports v4.1.0, 4.0.2x, 3.1.0, 3.0.x, 2.6.x)
- Brocade Support for FICON Reference Guide, v4.1.2

Publication Updates

This section provides information on Fabric OS FICON documentation additions, updates, and deletions.

Correction to Fabric OS v4.1.1 Release Notes

In the Fabric OS v4.1.1 Release Notes, the "Important Notes" section stated the commands **moredisable** and **moreenable** were added to the Fabric OS. This should read "The commands **moredisable** and **moreenable** are not available for Fabric OS v4.x."

SilkWorm 3900 (2109-F32) Hardware Reference Manual

(publication number 53-0001595-02)

The following statement should be added to the Port Status LED information for when the port status is offline in Table 3-1, "Port-Side LED Patterns During Normal Operation," on page 3-2:

> "When a Port Status LED indicator light is off, it is possible that another hardware status is offline."

Brocade ISL Trunking User's Guide, v3.1.0/4.1.0

(publication number 53-0000520-02)

Page 1-3 of the *Brocade ISL Trunking User's Guide*, v3.1.0/4.1.0, contains the following statement:

> "... ISL Trunking does not support the "LE", "L1", or "L2" **portcfglongdistance** modes. For information about these modes and Extended Fabrics in general, refer to the *Distributed Fabrics User's Guide*."

This statement should be modified to say the following:

> "...Trunking is supported for normal E_Ports (referred to as L0 in the **portcfglongdistance** command) with LWL media up to 5km at the full speed permitted by the link. With LWL media, the throughput begins to fall off beyond 5km, due to normal latency effects. ISL Trunking does not support the "LE", "L1", or "L2" **portcfglongdistance** modes. For information about these modes and Extended Fabrics in general, refer to the *Distributed Fabrics User's Guide*."

Brocade Fabric OS Procedures Guide, v4.1

(publication number 53-0000501-02)

The following information should be added to Step 7 of the procedure "Upgrading the Firmware on the SilkWorm 12000" in Chapter 4:

> "When the v4.1.0 firmware is unzipped, it creates a folder and a set of firmware files. Use the following directory and file name when downloading this firmware to the switch: /v4.1.0/release.plist.
>
> "At the User prompt, enter a User ID that has an account on the FTP server."

The following section should be added to Chapter 16, "Guide to Port Logs":

Decoding FICON Events

FICON uses the **portlogDump** command output to measure task-execution performance and to obtain queue statistics. Use this event information to analyze the management server ELS processing during the Fibre Connection link initialization.

PortlogDump logs the following ELS entries:

- ELS RNID: 78
- ELS LIRR: 7A
- ELS QSA: 7E

Refer to the *Brocade Fabric OS Reference Manual* for more information regarding the different port log commands.

Entry Descriptions

Each FICON entry in the port log contains the following information:

Name	Description	Location in Argument
Entry log time	Time that the entry was created in the port log	
Process	msd (Management Server Daemon) – Confirms FICON thread executes FICON requests	
Event	Ficonq (FICON queue statistics)	
Port	Physical port number	
Exchange ID	Exchanged ID number	Argument 0
ELS	ELS code (1 byte)	Argument 1 – first byte
DID	Destination ID (3 bytes)	Argument 1 – 3 bytes
SID	Source ID	Argument 2
Queue age	Number of milliseconds the message was in the queue before FICON processed it (2 bytes)	Argument 3 – first 2 bytes
Queue size	Number of messages still in the queue at the time FICON starts to process the current message (2 bytes)	Argument 3 – second 2 bytes
Error code	Absolute value of return code from the processing of the ELS request (2 bytes)	Argument 4 – first 2 bytes
Wall time in seconds	Number of seconds that the current task took (2 bytes)	Argument 4 – second 2 bytes
Wall time in microseconds	Number of microseconds that the current task took (2 bytes)	Argument 5

FICON Port Log Examples

To display FICON port logs of port 43:

```
switch:admin> portlogdumpport 43 | grep ficonq

13:15:57.093   msd     ficonq  43      005c8 7effffd,00502b00,00000000,00000000,00006103
13:15:57.159   msd     ficonq  43      005c7 7affffa,00502b00,00000000,00000000,00060442
13:15:57.223   msd     ficonq  43      005d0 78fffffd,00502b00,00100000,00000000,00063014
13:15:57.236   msd     ficonq  43      005cb 7affffa,00502b00,00200000,00000000,00012720
```

Use the following table to interpret the FICON port log information:

Name	Value
Entry log time	`13:15:57.093`
Process	`msd`
Event	`ficonq`
Port	`43`
Exchange ID	`005c8`
ELS	`7e` (ELS QSA)
DID	`fffffd`
SID	`00502b00`
Queue age	`0000`
Queue size	`0000`
Error code	`0000`
Wall time in seconds	`0000`
Wall time in microseconds	`00006103`

Requirements and Compatibility

Brocade Fabric OS v4.1.2 can be installed and run on the SilkWorm 3900 and SilkWorm 12000.

The following table summarizes the versions of Brocade firmware and software that are supported in conjunction with these releases:

	2109-Sxx 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 SW 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
FICON environment	n.a.	n.a.	n.a.	4.1.2 or later	4.1.0 or later

Note: For Fabric OS v2.x or 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, refer to "Updating the Core PID Format" in the *Fabric OS Procedures Guide*.

Important Notes

This section includes the following important notes:

- Security
- Cascaded Environment
- Maximizing Fabric Availability During SilkWorm 3900 (2109-F32) Hot Code Activation
- Microsoft Internet Explorer Issue
- Interpreting Ambient and Internal Temperatures
- Other Important Notes

Security

There is a security problem in which an invalid certificate is not detected and the **secmodeenable** command completes successfully. (Copying the certificate file into itself creates the invalid certificate.)

Cascaded Environment

Secure Fabric OS is required in a cascaded environment (or a noncascaded environment using 2-byte addressing) to ensure the presence of a high-integrity fabric. Secure Fabric OS provides a FICON environment with integrity checking to confirm whether a switch in a cascaded environment is allowed to join the fabric by determining if the WWN and domain IDs are acceptable. The fabric maintains a list (Domain IDs and WWNs) of switches and ports that are allowed to join. If the integrity check fails, the switch or port attempting to join is prevented from establishing a connection.

Additionally, at link initialization, the FICON host queries the attached F_Port for its security attributes (Security Enabled, Fabric Wide Insistent Domain ID (IDID) mode set, and SCC_Policy Activated). If any of the conditions are not met, the attached F_Port is placed in the Invalid Attachment state by the host, which prevents any frame transmission over that link.

Maximizing Fabric Availability During SilkWorm 3900 (2109-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 (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 panel displays a tree of switches in your fabric. Clicking a tree node causes the right panel to refresh to the currently selected switch. However, under NT/4.0 and IE 5.0/5.5, the right panel will *not* update for the second and subsequent instance of 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&.

There are two workarounds:

- Always use a single instance of Switch Explorer on NT/4.0 and IE 5.0/5.5.
- Install IE 6.0 SP1.

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

Interpreting Ambient and Internal Temperatures

Brocade SilkWorm fabric switches are instrumented with temperature sensors to monitor the operating characteristics of the products and their environment. The following table explains how to interpret the various temperature readings that might be reported through Fabric OS v4.1.x and monitored via the Fabric Watch optional licensed firmware product. All temperatures are in Centigrade.

Sensor	Minimum	Maximum	Comments
2109-M12			
Blowers	0	40	Sensor on each blower measures inlet (ambient) air temperature.
Port blades	0	74	Each port blade has its own temperature sensor. Warning at 75°C.; blade shutdown at 80°C.
CP blades	0	74	Each CP blade has its own temperature sensor. Warning at 75°C.; CP faulted at 80°C.
2109-F32			
Switch	0	69	Switch sends warning at internal temperature of 67°C. Switch begins 2-minute controlled shutdown at 69°C.

Other Important Notes

This table lists important information you should be aware of regarding Fabric OS v4.1.x.

Area	Description
Ethernet port IP addresses	When a SilkWorm 12000 (2109-M12) fails over to its standby CP for any reason, the IP addresses for the two logical switches move to that CP blade's Ethernet port. This might cause informational ARP address reassignment messages to appear on other switches in the fabric. This is normal behavior, since the association between the IP addresses and MAC addresses has changed.
Fabric OS CLI commands, failover, and port disable	Changing port configurations during a failover might cause ports to be in a disabled state. Reissue the command after the failover is complete to bring the port online.
Fabric OS commands	**Problem:** Under the root account, issuing Fabric OS commands in parallel through scripts could cause the Kernel task to consume excessive memory. **Solution:** When using scripts to issue Fabric OS commands, it is always a good practice to wait for the command to finish before issuing another command.
Fabric OS switch beaconing	**Problem:** Switch beaconing is not preserved across a failover. If you start beaconing, a failover causes all lights to stop flashing. **Solution:** If this occurs, reissue the command to resume switch beaconing.
Fabric OS, switch reboot, and blade repair	**Problem:** Switch reboot fails in the SilkWorm 12000 (2109-M12) if there are faulty port blades. **CAUTION: Verify all blades are in working order before performing a switch reboot. Switch reboot is meant to be issued after all repairs are complete. If you perform a switch reboot and find a faulty blade, remove the blade and reboot will continue.** **Solution:** Identify and remove the faulty blade using the **slotshow** command to reboot successfully.

Area	Description
Fabric routing, Fabric Manager: domain overlap	**Problem:** Issuing **configdefault** followed by reboot or switch disable/enable causes the fabric to segment due to possible domain overlap. **Solution:** Before rebooting the fabric, ensure all switches are properly configured to avoid domain overlap between the logical switches.
Fabric Device Management Interface (FDMI)	An HBA is allowed to register even though the originating port is not in the HBA's registered port list. This is intended behavior, included to test error cases.
Firmware Download	**CAUTION: Do not attempt to power off the CP board during firmware download or you risk corrupting your flash memory.**
HA switch reboot failure	**CAUTION: Allow POST to complete before performing a switch reboot or failover or you risk a disruptive failover.**
IP addresses	**CAUTION: Do not set a switch or CP IP address for the Ethernet interface to 0.0.0.0.**
IP Addresses	Supernetting of IP addresses, also known as CIDR, is not supported in Fabric OS.
License removal	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.
LTO 2 Tape Drive Support	When using the LTO 2 tape drive, the user must issue the following command on both Fabric OS v3.x and v4.x: `switch:admin> portcfggport` *port# into which drive is plugged* This allows the tape drive to function in point-to-point mode rather than in a loop.
OS - Hardware	Bringing up port blades during a failover could cause the port cards to come up disabled. This is rare. When this happens, bring up the port blade once more after the failover on the SilkWorm 12000 (2109-M12).
Security	If HTTP_Policy is empty, you cannot log in and will receive a "Page not found" error. This is expected behavior for this policy.
Security, FCC list	Adding switches onto the FCC list does not automatically join the switches in a secure fabric. Add the switches to the FCC list and either reset the E_Ports or perform a switch disable and enable for the switches to join.
Security, PKICERT utility	Before using the PKICERT utility to prepare a 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; any CSRs that do not conform to this requirement are rejected.
Security, SLAP fail counter and two switches	The SLAP counter is designed to work when all the switches in the fabric are in secure mode. All the switches in the fabric must be in secure mode for accurate SLAP statistics.
Security, SSH login	To properly connect SSH login, wait for secure mode to complete before rebooting or performing HA failover on the SilkWorm 12000. If secure mode is enabled and a reboot occurs before secure mode completes, SSH logs in to the wrong MAC address because the active CP changes after a HA failover.
Security: empty policies	**Problem:** If telnet, API, and serial port access policies are empty, the user will not be able to connect to the switch. **Solution:** Contact switch provider for the recovery procedure.

Area	Description
Security: error counter	The telnet security error counter counts each violation as 1 plus any autoretries that the telnet software executes.
Security: secure mode	When in secure mode, if you upgrade from Fabric OS version 4.0 to 4.1 and then downgrade to Fabric OS version 4.0 and upgrade back to Fabric OS version 4.1, the system prompts the user to reset the secure mode password.
Security: secure mode, passwd telnet	**CAUTION: Using the passwd telnet command in secure mode to change the password results in all sessions using that password to be logged out, including the session that changed the session.** **This is expected behavior. The session terminates if you change the password in secure mode.**
Web Tools and CLI commands	If you use Web Tools to change the switch name, the SilkWorm 12000 (2109-M12) telnet console prompt does not update to the new name until a new telnet window is opened.
Web tools, Java bug	**Problem:** If a dialog displays from the switch admin view of Web Tools and the user selects another dialog from Web Tools, a display error occurs. **Solution:** 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 at a time or launch another switch admin session in a separate window.
WWN card FRU repair	**CAUTION: When performing a field replacement on a WWN card, complete the FRU procedure before attempting an HA failover or power cycling the chassis.**
Zoning	To use Zoning in a non-RCS (Reliable Commit Service) mode fabric (that is, a fabric containing switches with firmware version other than v2.6.x, v3.1, or v4.1), all appropriate Zoning licenses should be 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 reinstalled properly on the affected switch before attempting the **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 appears on the console or telnet session (which can also be seen by issuing **errShow** and **errDump**), indicating that zoning license was missing.
Zoning	**Problem:** Domain 0 in a zoning configuration file is invalid but was not previously enforced. **Solution:** Prior to upgrading a switch to 4.1, ensure that the fabric's zoning configuration does not contain Domain ID 0. This is specific only to 4.x switches.
FICON	**Problem:** When using fixed 1-GB channels (both G5 and FICON Express), there might occasionally be an erroneous link incident generated by the FICON host when the channels are coming online. These link incidents result in a zSeries call home event. Other than the generated link incident, the channel comes online and functions normally. **Solution:** To avoid this situation, the ports on the SilkWorm 12000 (209-M12) connected to the 1-GB channels should be configured for fixed 1-GB speed.

Area	Description
FICON	In FICON environments, you should configure Dynamic Load Sharing (DLS) to disabled on the SilkWorm 12000 (2109-M12). With DLS enabled, traffic on existing ISL ports might be affected when one or more new ISLs are added between the same two switches. Specifically, adding the new ISL might result in dropped frames as routes are adjusted to take advantage of the bandwidth provided by the new ISL. By disabling DLS, there are no dropped frames.
FICON	The following warning message might display when the SilkWorm 12000 (2109-M12) powers on or cold reboots: `0x256 (fabos) : Switch: 0, Warning MSFICON-SWITCH_NID, 3, Chassis FRU header unusable for switch NID, using defaults.` This message is only relevant for SilkWorm 12000 (2109-M12) switches connected to FICON devices. There is no impact in non-FICON fabrics. The warning message indicates that the switch has not been programmed with the proper SB-3 Node Description information in the factory and that the default Brocade Node Descriptor values will be used in the SB-3 RNID response to the FICON host.

Defect Tables

The listings of defects are separated into those unique to FICON environments and those that can occur in open systems environments. This separation is carried forward until the next major release.

Known FICON Defects in Fabric OS 4.1.2

This table lists known FICON-related defects since Fabric OS v4.1.1 that are being deferred to a future Fabric OS release.

FICON related defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000023630	High	Summary: Host Detected IC03 Link Incidents during reboot, fastReboot and haReboot process. Symptom: The FICON mainframe detected two link incidents during a non-error, user requested CP reboot process. Workaround: Use switchreboot as an alternative. No Link Incidents are generated as a result of switchreboot. Customer Impact: This defect will only be seen in a FICON environment, and the commands are only used for maintenance.
DEFECT000025718	High	Summary: slotPowerOff causes FICON host to detect and report IC03 Link Incidents Symptom: This defect will be seen in a FICON environment only. This defect will result in a call home and subsequent replacement of a FRU when the slotpoweroff command is executed. Workaround: Take the ports offline prior to issuing the slotPowerOff command. Customer Impact: The fix is being addressed in a future Fabric OS release and the command is only used for maintenance.
DEFECT000026152	High	Summary: Fixed 1 Gig channels generate a link incident during Initialization (Login) Symptom: This defect will be seen in a FICON environment only. Fixed 1 gig channels (Both G5 and FICON Express) have been noted to end-up in condition where the ports cannot be brought online through normal means. A Finisar trace revealed that the Channel initiates a LR protocol but times out waiting for response to LRR from the switch. The sequence is then repeated again, and again. This condition could only be cleared by a switchreboot or similar action. Workaround: Configure the port for fixed 1G speed when connected to 1G devices. Customer Impact: It is not possible to provide a solution for the 4.1.2 release. This problem will be fixed in the next generation platform.

FICON related defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000033935	High	Summary: Secure telnet fails to connect with two LAN cards Symptom: Using a Win2K platform with 2 LAN cards, cannot initiate a telnet session from the server. Workaround: Can be resolved by entering the switch IP address instead of the switch name. Customer Impact: This is not a common problem. A fix is being considerred for a future release of the Secure telnet application.
DEFECT000033967	High	Summary: New switch IP address does not take effect for Web Tools and Fabric Manager in time Symptom: If the IP address on a switch is changed, Fabric Manager posts a message that you need to restart Fabric MGR to pick up the changes. After re-starting Fabric Manager, it does not pick up the IP address change and retains the old IP address, causing a complete loss of communication to the switch. Customer Impact: Under heavy stress condition, need to wait a few minutes after restarting Fabric Manager for the new switch IP address to take effect.
DEFECT000033980	High	Summary: Domain RSCN sent when IP-Address of switch is changed Symptom: Causes FICON Host channels to churn unnecessarily and results in IFCC. Customer Impact: Sending the Domain RSCN follows the current standards. Changing this behavior at this point would require extensive testing to ensure backward compatibility. A solution is being investigated that will involve a proposed change to the standards.
DEFECT000034608	Medium	Summary: Switch lost an RNID entry when running a massive error injection test program. Symptom: During obscure error conditions, some RNID entries that should show up as Not Current are missing from the switch database. Customer Impact: This defect is only likely to occur when running a test program under heavy stress. A fix is currently under test in a future release. Probability: Low

Other Known Defects in Fabric OS 4.1.2

This table lists known non-FICON-related defects since Fabric OS v4.1.1 that are being deferred to a future Fabric OS release.

Other New Defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000023464	High	Summary: Zoning script causes active CP to run out of memory (kills all zoned processes) Symptom: Overnight stress test of zoning caused the zoning task to be killed by the Linux memory killer. Customer Impact: This is Stress to Fail test case. Running under standard stress conditions could not reproduce the error in a 48 hour test run.
DEFECT000024431	High	Summary: Switch (active CP) reset when switchdisable/enable script running. Symptom: Overnight stress test which involves issuing simultaneous switchdisable commands to all 34 switches of a core-edge fabric, followed by simultaneous switchenable commands to all 34 switches. Customer Impact: This is a Stress to Fail test case that requires running for long periods of time before encountering the CP reset on one of the core switches. The switch performed a fail-over, and the fabric continued to run without disruption.
DEFECT000024653	High	Summary: After running continuous loops of switchblade related commands, SYSCTRLD: received an invalid token: show up on console and ASSERT - Failed expression: em_waitfor_sysctrl(pFruObject, TRUE) == SUCCESS Symptom: Stress test in which multiple concurrent failure events are simulated in a rapid sequence. Customer Impact: Stress to Fail test that is designed to overload the CPU processing power of the switch. Probability: Low
DEFECT000025179	High	Summary: When doing AddAttribute to change Switch IP Address to "0.0.0.0", Switch Panics and Dumps core. Switch reboots continuously ... Symptom: Setting switch IP address to 0.0.0.0 during an SNMP or API management session caused the switch to panic. Customer Impact: This action would clearly disrupt any management session, and should never be done.

Other New Defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025331	High	Summary: Modifying switch and CP IP addresses caused a telnet hang. Symptom: Changing the switch IP address before changing the CP IP address will cause the CP IP address to become inaccessible on a subsequent attempt to set the switch IP address. Workaround: -When both CP and switch IP addresses need to be changed: set the CP IP address first and then the switch IP address. -When only a switch IP address needs to be changed, set the CP IP address first (keeping the current value) and then the switch IP address to its new value. -When only a CP IP address needs to be changed, there is no problem; just change the CP IP address. -If a customer gets into this scenario, telnet into the switch and set the CP IP address again, accepting the default values. Customer Impact: This behavior is identical to how the code works in 4.0.2. There is a well documented workaround.
DEFECT000025474	High	Summary: After fastbooting standby CP of the primary FCS, doing secfcsfailover before HA is in sync results in old primary FCS switch's active CP panicking. Symptom: This is multiple failure test case, on which first the standby CP of the primary FCS switch is issued a fastboot and then prior to the HA state achieving synchronization, a 'secfcsfailover' command is issued from a standby FCS switch. The old primary FCS switch is segmented out of the fabric. Workaround: Issue switchdisable, switchenable to the segmented switch to cause it to rejoin the fabric. Customer Impact: This test case demonstrates a very specific double point of failure that may cause a switch to be segmented from the fabric.
DEFECT000025747	High	Summary: Message "Oops: kernel access of bad area, sig: 11" shows up and switch reset. Symptom: Stress test involving a 34-switch fabric, on which one of the core switches is constantly being issued the hafailover command. Simultaneously, one of the edge switches is constantly having its zoning configuration updated. Comment: A fix for this defect is being considered for a future Fabric OS release.

Other New Defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025878	High	Summary: VE: Burn-in failed on the 3rd run Symptom: While running burn-in, port becomes online before initialization is done and it results in txdpath TIME-OUT errors. Customer Impact: This is a very difficult timing condition to reproduce the error. A solution is being planned for a future fabos release.
DEFECT000025890	High	Summary: Switch Status Marked As Healthy When CF (compact Flash) 100% Full With Write Errors. Symptom: Switch status does not reflect the down graded potentially critical condition of the switch Customer Impact: Request to update health status when compact flash is full will be delivered in a release following 4.1.1
DEFECT000025910	High	Summary: After changing Ethernet IP address from CLI or from WT, can not launch WT with new IP address Symptom: WebTools can not be launched with new IP address Customer Impact: Issue is being investigated, and will be targeted for a future release of Fabric OS.
DEFECT000025948	High	Summary: 147698 Switch Failed To Generate Any Event, KSWD, Core Dump Notification After RPCD Issue. Symptom: Errshow contains no event notification regarding the failed status of the switch Customer Impact: The message produced from this error condition will be improved to be more recognizable and to provide proper guidance. This issue will be targeted for delivery in a future release of the Fabric OS.
DEFECT000025949	High	Summary: v4.1.1_rc2 Firmware Download Hangs Switch After Critical SYSC-ERROR Seen. Symptom: Switch lost connectivity, services not able to support commands, firmware not able to commit until rebooted. Customer Impact: Switch was unable to close all open processes due to an error condition created prior to the firmware download. Improvements to the error detection and reporting during the hot code load are currently under development to address this issue for release in a future version of the Fabric OS.

Other New Defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000034297	High	Summary: While running API automated suite on both halves of a 12000, the switch dumped core on nsd, panic, and psd. Symptom: While running API automated stress tests on both switches in a 12K, there was a core dump on the switch. Customer Impact: This issue is being investigated and will be addressed in a future Release of Fabric OS.
DEFECT000034701	High	Summary: Name Server Daemon (Nsd) gets exception 11 and dumps core Symptom: When there are multiple devices on the same port and one of the device's ALPA is 0, then the switch dumps core on Name Server Daemon (NSD) and panics. Customer Impact: Occurs very infrequently and only with loop devices attached to the port which is not a valid FICON configuration. Probability: Low
DEFECT000021352	Medium	Summary: fruHistoryTrap is not generated or is not generated properly. Symptom: SNMP FRU history trap is not always generated as expected. Customer Impact: With the addition of the Managed WWN card Hot swap, the FRU trap mechanism does not always catch the fact that the WWN card has been replaced. However, this is not like a blower which can be hot swapped without the administrator knowing about it. Hot swap of the WWN card REQUIRES active participation by the administrator.
DEFECT000021881	Medium	Summary: no trap generated when firmwareDownload completes Symptom: No SNMP trap is generated when a firmwareDownload completes. Solution: We decided to document this problem as mentioned in NOTES section. The other solution is: We must add separate MIB objects for firmware download events. It takes some more time for implementation & testing. Customer Impact: This is a request to create a new type of SNMP trap mechanism to inform the SNMP agent upon the completion of a Hot Code Activation. This new mechanism has been implemented and verified for SW12000 systems in Fabric OS 4.1.1; however, the solution for non-bladed platforms will be targeted at a release after 4.1.1.

Other New Defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000024542	Medium	Summary: No log message is generated when one CP resets the other CP. Symptom: There is no longer any message logged or displayed when one CP resets the other CP. Solution: This message was removed in order to fix Defect 25094. Customer Impact: There will be no message printed when one CP resets the other.
DEFECT000024769	Medium	Summary: REG: EVT_TC_154 : When trunk port is disabled on 4.1 proxy switch, API is receiving an EV_STATE_CHANGE event 2 times Symptom: Fabric Access API test case in which a trunking port is disabled, but the disable event is being reported twice via the API. Customer Impact: This issue will only be seen when using the Fabric Access API. The two events being reported are "Trunking port down" followed by "Port Down". If the user did not realize they were disabling a trunking port, then the two status changes could be interpreted as confusing. This behavior will be documented in the Fabric Access API documentation
DEFECT000024773	Medium	Summary: When 4.1 Proxy Switch is disabled, switch generates lot of events saying Trunk Ports are disabled. But API is not receiving any such events. Symptom: Fabric Access API test case that causes Trunking port events to be reported to the console, but there are no events reported via the API. Customer Impact: This Trunking port console messages are the result of an end user request to have printed messages on the console port. These are not error log events, and thus are not being reported via the API. This is an RFE that is being considered for a future release.
DEFECT000024892	Medium	Summary: No sequence open on the tx queue sw1: FCPH 0. This child defect of 22412 by using Xyratex Symptom: Stress test case in which 4 loops of 120 devices each are simulated using test equipment. These four loops are further connected to all 4 ports of one quad within the ASIC. All four loop simulators then stress the system by simultaneously resetting their loops and causing loop initialization issues. Customer Impact: This is a Stress To Fail test that requires the use of fabric testing simulators.

Other New Defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000024975	Medium	Summary: when configdownload succeeded on zoneDB but failed on sec policy, primary fails to propagate zoneDB to fabric Symptom: When performing a configDownload that modifies both the zoning DB and the security DB, an error within the security DB will prevent the zoning DB from being activated in the fabric, but it will not prevent it from being loaded into the flash memory. Workaround: Correct your mistake in the Security section of the configuration file and repeat the configDownload. Do NOT reboot the FCS prior to correcting the configuration file. Customer Impact: This situation will only happen when both zoning and security DB are modified, and an error is injected into the security DB config. The root cause is well understood; however, the complexity of the required modifications to the configDownload code would have introduced significant risk to the program.
DEFECT000025156	Medium	Summary: Error related to blade- 9 and 10 were logged to switch-0 error log instead of switch-1 error log. Symptom: A faulty blade inserted into slot 9 or 10 of the switch was producing the appropriate error messages, but they were being logged under switch 0's error log instead of switch 1 as expected. Customer Impact: The logging mechanism prior to the switch being fully online is to log all errors to switch 0's error log. This is an identical mechanism to 4.0.0 and 4.0.2.
DEFECT000025216	Medium	Summary: The time stamp for firmware download from Fabric Manager/Webtools is off by 8 hours compared to time on the switch. Symptom: Users who attempt to upgrade switch firmware from Fabric Manager or Webtools, will see a time difference of 8 hours Customer Impact: There is no operational impact due to this defect.
DEFECT000025259	Medium	Summary: 4.1 switch panic and dump core during switchreboot Symptom: A switch panic was observed during a Fabric Access API test run. Customer Impact: This defect cannot be recreated and has not been seen since it was first observed. The core dump has provided the root cause of the problem and an architectural solution is currently under investigation for a future release.

Other New Defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025297	Medium	Summary: "tsd" core dump on SW3900 switch interrupted the time synchronization with Primary FCS switch Symptom: When a switch reboot or panic takes place when a Time Service update is in progress, the time server failed the synchronization with the Primary FCS switch. Customer Impact: The time service synchronization will fail only if a reboot or panic is observed concurrently with the synchronization. Re-issuing the time service command will cause the synchronization to take place. Probability: Low
DEFECT000025401	Medium	Summary: Swap 1G and 2G HBAs and haFailover, sometimes the PRLI ACC frame got dropped and then host can't see target. Symptom: swap 1G and 2G HBA (both Emulex) using Apcon and do haFailover immediately, sometimes the PRLI ACC frame get dropped and Host can't see target. Customer Impact: This is a stress to fail test case. Manually pulling the cables, and re-inserting the cables cannot reproduce this defect. This test only fails when using a script to swap cables and issue the fail-over within a time span of ms.
DEFECT000025494	Medium	Summary: WebTools display of segmented trunk ports Symptom: In the WebTools display, when a trunk group is segmented, only the trunk master is shown with a blinking light indicating an error. The other links in the trunk continue to be shown with a solid green light, suggesting no error. Customer Impact: The fix for this defect will be considered for a release following 4.1.1
DEFECT000025534	Medium	Summary: SwitchCfgTrunk leaves ports disabled if a long distance port is configured on the switch. Symptom: Activating Trunking at the switch level (switchCfgTrunk) when a long-distance port is currently configured causes the error message "No Trunking support of long distance port" to be displayed, which is correct. However, other trunk ports are then left in a disabled state. Workaround: There are 2 ways to avoid this issue 1. using command port portcfgtrunkport to enable the trunk for each port (recommended) 2. disable long distance port before issue switchcfgtrunk Customer Impact: This defect will be deferred for consideration in a future release.

Other New Defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025543	Medium	Summary: Step 9 of Firmwaredownload Completes With Error: CP1: Standby cp failed to reboot. Symptom: Standby CP failed to reboot when upgrading to 4.1.0_rc1; both CPs restore from secondary partition to correct itself. Workaround: Turning off POST prior to upgrading the FW from 4.0.2 to 4.1.0 should ensure that this error message is not displayed. Customer Impact: The firmwareDownload failed at the auto-Commit stage, however the firmwareDownload actually completed. A manual reboot of the machine resulted in the SW 12000 running properly with Fabric OS 4.1.0.
DEFECT000025580	Medium	Summary: Able to reset version time stamp when logged in as "user" Symptom: Should not be able to reset version time stamp when login as "user". An error code -224 should be returned if it is attempted. Customer Impact: This defect will be considered for a fix in a future fabos release
DEFECT000025679	Medium	Summary: Right after activated SCC policy, retrieve sec policy through API will fail Symptom: Retrieving the sec policy via the Fabric Access API, immediately after activating a new SCC policy will cause the retrieval command to fail. Customer Impact: The fix for this defect will be considered for a release following 4.1.1
DEFECT000025783	Medium	Summary: portstats do not match portperfshow Symptom: The portstats output from the Fabric Access API does not match the output from the CLI portPerfShow. Customer Impact: Issue is being investigated, and will be targeted for a future release of Fabric OS.
DEFECT000025854	Medium	Summary: Security Admin returns Error -55 after removing/adding members and Activate FCS Policy Symptom: In a large fabric containing over 26 switches. When using the Fabric Access API to remove multiple FCS members without first performing a save operation, an error is returned. Customer Impact: The fix for this defect will be considered for a release following 4.1.1. This error condition does not happen when using the CLI, or when performed after a save operation from the API.

Other New Defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025889	Medium	Summary: Receiving "hwclock: Could not update file with the clock adjustment parameters (/etc/adjtime) in it, errno=28: No space left on device." message and after a hafailover, the switch did not come up. Symptom: "No space left" message is printed in the console and after a hafailover, the CP failed to mount root directory and the switch did not come up. Customer Impact: Improvements to monitor compact flash usage will be made in a release after 4.1.1
DEFECT000025895	Medium	Summary: No Event Generated For CF(compact flash full 100% capacity error). Symptom: When the compact flash was filled 100% capacity no event was generated to alert the user of this condition. Customer Impact: Request to create a new monitor to detect compact flash capacity will be considered for a release after 4.1.1
DEFECT000025926	Medium	Summary: Switch dumps core when run HA stress testing, ASSERT - Failed expression: (portp = (fabobj_port_user(handle))) != NULL, file = switch_ha.c, line = 1868, kernel mode Symptom: Fabric Access API stress test case involving FSPF data access and ha failovers results in a core dump. Customer Impact: This defect fix is being incorporated into a future fabos release
DEFECT000025939	Medium	Summary: Spinfab command failed while running on two 12000 slots Symptom: The command "Spinfab" failed while Spinfab was running on slot2 and slot4. The error message was "No Longer Transmitting, FTX Counter Stuck At xx" Customer Impact: Issue is being investigated, and will be targeted for a future release of Fabric OS.
DEFECT000025989	Medium	Summary: Webtools shows incorrect "Current" value on the smart sfp Symptom: The output of sfpshow from the CLI and from Webtools is different. Webtools is displaying an incorrect value for the current value on smart SFPs. Customer Impact: This issue will be targeted for delivery in a future FabOS release.

Other New Defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000026016	Medium	Summary: sw0: BLOOM 4: S4,P49(14): Warn: bloomCheckBuf: invalid frontend desired buffers: 54, max_bufs 27, blm_type 0x36 Symptom: Test consisting of configuring all ports within a quad as long distance ports, thus causing an over subscription of buffers. Resetting all but one of the ports back to normal distance, and then causing an hafailover. The ports that were at one time oversubscribed will cause an error message to be displayed indicating that the desired number of buffers could not be applied. Customer Impact: This issue will be targeted for delivery in the next maintenance release.
DEFECT000026456	Medium	Summary: Portswap commands return undecipherable characters Symptom: The port swap commands, portSwapEnable, portSwapDisable, and portSwap, return undechipherable characters before the command is completed. Customer Impact: This does not affect normal operation
DEFECT000026537	Medium	Summary: FM:605: FWDL: REG: FirmwareDownload fails to a single CP 12k chassis through FM and WT Symptom: When using WebTools or Fabric Manager to upgrade firmware on a single CP, a 12k switch will fail with timeout error. Workaround: Perform firmware download through the CLI rather than using WebTools or Fabric Manager when the 12000 switch only has a single CP Customer Impact: There is a workaround in the short term. A long term solution is being investigated for a future FabOS release.
DEFECT000033049	Medium	Summary: Webtools Events are using UTC time rather than adjusted timezone time Symptom: Webtools and CLI event time are not the same when the tstimezone is configured. When the tstimezone is not configured then the event times match Customer Impact: This issue is being investigated and will be addressed in a future Release of Fabric OS.
DEFECT000033939	Medium	Summary: After segmenting a switch(via portdisable of ISLs), fdmishow information is out of date(all empty). Symptom: After segmenting a switch via portdisable of ISLs, the fdmishow command information is out of date (all empty). Customer Impact: This issue is being investigated and will be addressed in a future Release of Fabric OS.

Other New Defects in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000034047	Medium	Summary: After merging 2 secured fabric (2 sessions) with security transaction on, session object for both sessions show TRANSACTION_LOCK_SECURITY Symptom: Only one of the sessions should display TRANSACTION_LOCK_SECURITY, but when calling GetObjectByType on session object for both sessions, the display indicates TRANSACTION_LOCK_SECURITY, even when only one session owns the transaction. Customer Impact: This issue is being investigated and will be addressed in a future Release of Fabric OS.
DEFECT000034257	Medium	Summary: Switch gets into a state where all SNMP queries to ConnUnitEvent table timeout Symptom: When a port bounce (continuous disable/enable of a switch port with a delay) session is running and ITSANM is used to query the connUnitEvent table, all SNMP queries to the switch timeout. If the browser based switch management application is loaded again, it resets the timeout condition and SNMP queries work until we try to read the connUnitEvent table again. Customer Impact: This defect occurs under heavy stress conditions. It is being deferred to a future FabOS release.

FICON Defects Closed in Fabric OS 4.1.2

This table lists the FICON-related defects that have been closed in this release since 4.1.1. In this instance, these are the same defects that have been closed since 4.1.2 RC1.

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000020911	High	Summary: IDIDMode reporting should reflect the status of fabric wide IDIDmode Symptom: This defect will be seen in a FICON environment only. Two independent switches, or fabrics, with security enabled but ficonmode disabled on one of them, are allowed to merge without reporting to the attached FICON Host that IDID is not guaranteed in the fabric. Solution: The solution was to create a new "GCAP" frame to advertise the IDID setting. Each switch in the fabric reports to the other switches it's IDID setting so that every switch will have the fabric wide IDID "status". In the event that the fabric wide IDID status is different than what was reported in the QSA, the switch will do a port disable/enable to force another QSA.

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000024272	High	Summary: Switchreboot causes Host detected Link Incidents Symptom: This defect will be seen in a FICON environment only. Performing a switchreboot in a FICON environment will result in service calls due to host detected link incidents Solution: Modified switchreboot to go through the proper transmission of OLS prior to turning of light.
DEFECT000025292	High	Summary: Failure to Process ElS frames and DLIRR replication during a host Power-On-Reset procedure Symptom: This defect will be seen in a FICON environment only. Host channels end up in Control Stop state. Switch (CPs) must be rebooted and CHPIDs reset to recover Solution: Increasing the TIMEOUT value seems to fix the problem. Note: This DLIRR design was dropped in favor of the DRLIR solution, so this problem no longer occurs.
DEFECT000025319	High	Summary: CP in 'Failure to deliver RLIR' loop trying to offload RLIR from SW3900 to SW12000. Symptom: This defect will be seen in a FICON environment only. Manual intervention is required to recover the hung CP.. Solution: This problem has been fixed with the DRLIR implementation
DEFECT000025357	High	Summary: no entry in ficonshowrlir or ficonshowlinkincidents after pulling and inserting a CHPID Symptom: This defect will be seen in a FICON environment only. Pulling and inserting a CHPID fails to make entry into the ficonshowrlir. Solution: Removed AC port check when loss of sync or light is detected on a FICON port
DEFECT000025495	High	Summary: Implicit Link Incidents are no longer reported Symptom: FRU failure reporting to host and resultant call home for service will not occur. Solution: Incorrect test for implicit link incidents
DEFECT000025514	High	Summary: Bit Error Rate Threshold Exceeded LInk Incidents no longer reported Symptom: No link incident generated when the bit error rate threshold is exceeded. Solution: Changed to deliver the RLIR when there is a LIRR either on the local domain or the remote domain, and to deliver the RLIR report

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025583	High	Summary: Switch reports Link Incident IC03 when Ficon host puts a Switch Port in the OFFLINE state Symptom: A call home event will be initiated by the host that will result in replacement of a fru. Solution: Do not send FICON link failure event in case we are in the OLS receive state as specified in FC-PH Rev 4.3 section 16.5.4.2 item b.
DEFECT000025588	High	Summary: Switch Blade Implicit Incident reported through both faulted and un-faulted switch Symptom: Two Implicit Link Incidents reported for only one fault. Solution: Switch instance was not checked. Fixed to only send out the ILIR for the appropriate switch instance.
DEFECT000025619	High	Summary: A Mixed Zone in a FICON environment does not block port 1/0 Traffic Symptom: Traffic flow to an undesirable resource will be allowed. Solution: Corrected the port range check before delivering the frame to fc-driver.
DEFECT000025668	High	Summary: LF - Primitive Sequence TO due to a timeout while in NOS RCV State no longer works Symptom: The reporting of Link Failure IC05 (Primitive Sequence Time-out) due to a timeout when timing for the appropriate response while in NOS Receive state and after NOS is no longer recognized is broken. Solution: In a Ficon environment, when receiving NOS and then IDLEs the Primitive Sequence TO event was not sent. LPSM was not changed, but a change was made to detect this event and send IC05.
DEFECT000025752	High	Summary: ficonClear RLIR no longer clears the local RLIR database Symptom: Local RLIR database is not cleared using the appropriate CLI commadn (ficonClear RLIR) Solution: Fixed the ClearRLIR command so that RLIR database gets cleared upon command.
DEFECT000025774	High	Summary: ficonshow ilir not working Symptom: Missing ILIR entry for removal of power Solution: The number of registration table entries was increased for MS (FICON). Also, a log_err is called if call to sysModScnRegisterWrapper() fail.

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025788	High	Summary: FICON traffic does not restart following a zone change affecting a port that has a failed Switch RNID Symptom: This defect will be seen in a FICON environment only. Loss of traffic flow through the switch Solution: When the FICON port fails RNID, MS doesn't return it as a FICON port. Hence, NS delivers the wrong RSCN for zone change. Change the logic to always send coalesced PORT RSCN for zone change
DEFECT000025791	High	Summary: QSA returns Fabric Binding Enforcement bit ON when ficonmode is ON and Security is OFF Symptom: When ficonmode is ON and Security is OFF in a single switch fabric, the switch returns 0x3F in Enforced Security Attribute (Word 2 of payload in ACC to QSA ELS). Based on the definition of bit definitions: Solution: This problem was corrected with the removal of FICON mode.
DEFECT000025836	High	Summary: In the RLIR payload the Attached Nodes 'Node-ID Validity' field is being set to 'Not Current' Symptom: This defect will be seen in a FICON environment only. Attached node information is discarded by the operating system when presenting error messages. Solution: The 'Type' field was missing from 'ficonshow RLIR' display and the 'Node-ID validity' flags were wrong in RLIR payload. The fix was to make NID structure and NID flag definitions match FC-SB spec, and remove redundant structures.
DEFECT000025837	High	Summary: The detection scheme for Link Failure IC04 (NOS Recognized) not working Symptom: This defect will be seen in a FICON environment only. Link Failure reporting for NOS Recognized (IC04) is not working. Solution: Check in link incident timer handler for LF1 condition while sending IC05 port event. Check for BLM_LIP_NOTG condition to block sending multiple IC05 during LIP/LF2 timeout sequences

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025885	High	Summary: force hafailover during rnid after cable pull, port lost to host Symptom: This defect will be seen in a FICON environment only. If an hafailover occurs in a very narrow timing window, then the result is that a link failures are reported during a cable pull, but the path does not come back online. Solution: There were two root causes to this problem. The solutions are: 1) Class 2 end-to-end credit was not being syned to the standby CP. After failover, it becomes zero and the switch could not send class 2 frames. The fix is to add a login database recovery routine during port online recovery to restore the end-to-end credits. 2) Because the snmp takes up about 5 sec for warm recovery, the Management Server deamon missed the ficon ELS_RNID request from host which has timeout value of 2 seconds. The fix is to move the Management Server active stage before snmp active in warm boot.
DEFECT000025918	High	Summary: Host/Storage CU Node Descriptors are not maintained during Port Offline and Loss_of_Sync conditions Symptom: This defect will be seen in a FICON environment only. The Node Descriptor information is not being maintained during Port OFFLINE and Interface Cable unplug conditions. The Host and Storage CU RNID information is no longer displayed via CLI when these events occur. Solution: Add state machine logic for the RNID entries: - Set RNID entry to "Not Current" in Port Offline and Loss of Sync condition (not "Invalid") - Set RNID entry to "Invalid" for the port when the same RNID is received on another port (cable plugged into another port) Change the query of rnid database to return both "Valid" and "Not Current" entries
DEFECT000025936	High	Summary: HA fails to Sync:'FSSME-PEER_COMP_SYNCFAIL' due to error in RCS during boot up Symptom: The CPs in a 12000 fail to achieve synchronization when both the Active and Standby are booted up simultaneously. Solution: A fix was made to have Management Server do an early registration with the modules responsible for synchronization of active and standby CPs.
DEFECT000026147	High	Summary: CPs Panic following 'firmwaredownload -s -f' and simultaneous 'reboot -f' on both CPs Symptom: This defect will be seen in a FICON environment only. Performing a ' 'firmwaredownload -s -f' to an older software version, followed by a 'reboot -f' of both CPs simultaneously resulted in a panic on both CPs. Solution: Problem was determined to be a result of not removing a private build from one of the CPs

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000026154	High	Summary: TCPIP_ Address change of Active CP causes permanent disruption to MVS traffic Symptom: This defect will be seen in a FICON environment only. Changing the TCPIP address of the Active cp while MVS traffic is flowing results in the MVS system halting all activity due to IFCC (missing or timed out frames). Traces show that a Domain RSCN is sent at the time of the address change. Solution: The reason for the disruption of traffic was due to an RSCN that was sent when the IP address was changed for the CP. A change was made in the code so that the RSCN is no longer being sent under this condition. Note that an RSCN will still be sent when the IP address of either logical switches in the 12000 is changed. This is done to conform to the Standards: FC-MI (7.3.5.4) states that a Domain format RSCN shall be generated when a switch management function of the affected domain has changed (e.g., change of Interconnect Element Management address or symbolic switch name). In this case the Interconnect Element Management address may refer to the IP address used for out of band switch management. The purpose is to notify a management entity behind the Registered Nx_Port that a out-of-band management address has changed for a Domain. FC-MI-2 also states this behavior.
DEFECT000026377	High	Summary: Portswap causes F_BUSY condition to FICON I/O paths Symptom: This defect will be seen in a FICON environment only. The problem may happen when a FICON host channel has multiple logical paths configured. When F_BUSY condition occurs to one of the logical paths, the path may be marked down by the host. Solution: The frame filtering code was modified to derive the correct PID using the logical area from the physical port number that is passed by zoning.
DEFECT000033321	High	Summary: Node Descriptor information is hard coded. Need to be configurable for individual OEMs Symptom: The fields (manufacturer, plant, type#, model#) are fixed and can not be customized per OEM. Solution: Added the Node Descriptor fields to the FRU header on the WWN card so that they can be configured for each OEM using the fruInfoSet command.
DEFECT000033553	High	Summary: The RLIR should indicate separate serial numbers for each switch within the 12K Symptom: Inability to locate which of the SilkWorm 12000 switches is failing from the FICON Host Solution: The original approach for identifying the port was accepted, so this defect has been rejected.

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000033862	High	Summary: Fabric Watch flagging ports as faulty when a port is taken offline from the FICON host Symptom: Fabric Manager (SwitchStatusPolicyShow for faulty ports) reports faulty ports when a port/channel is taken offline. There should be no reported link failures when a port is taken offline, sending OLS (Offline Sequence). Solution: The LESB statistics have been changed to be standard compliant when in OL2 state.
DEFECT000019293	Medium	Summary: Incorrect data attributes in FICON rLIREntry Symptom: This defect will be seen in a FICON environment only. When displaying the RLIR database, the time stamp does not make any sense and the RLIR Format should be 0x18, according to the data in CLI response. Solution: One of the FICON routines was inadvertently returning the first entry instead of the n-th entry in the RLIR database. This was corrected.
DEFECT000020022	Medium	Summary: Switch Initiates RNID after Host Initiated RNID fails Symptom: This defect will be seen in a FICON environment only. The switch sends and RNID ELS after a failed Host Initiated RNID sequence fails. The failure occurs when the Class-2 ACC frame sent by the switch is lost (replaced with an IDLE) and no Class-2 ACKs are sent by the host to acknowledge receipt of the ACC. The switch is only suppose to Initiate an RNID exchange if the Host Initiated Exchange is successful. Solution: According the standard, the switch should be able to initiate RNID at any time, including after the Host initiated RNID failed.
DEFECT000020136	Medium	Summary: nodeRNIDProtocol in NodeRNIDEntry not implemented correctly Symptom: SNMP query returns the value of nodeRNIDProtocol as nodeRNIDProtocol.1:-->32 when only the bits 0-2 value/meaning should be displayed. Solution: Removed the mib objects nodeRNIDProtocol, nodeRNIDClass and nodeRNIDPort as the mib objects conveys the same information thru nodeRNIDParams.
DEFECT000020138	Medium	Summary: nodeRNIDClass in NodeRNIDEntry not implemented correctly Symptom: The Node RNID storage class is incorrect in SNMP retrieval. Should be "Channel path, not CTC capable" as opposed to "direct-access-storage". Solution: Removed the mib objects nodeRNIDProtocol, nodeRNIDClass and nodeRNIDPort as the mib objects conveys the same information thru nodeRNIDParams.

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000020144	Medium	Summary: nodeRNIDPort field name and description in NodeRNIDEntry are misleading Symptom: This defect will be seen in a FICON environment only. Misleading SNMP field names. Solution: Removed the mib objects nodeRNIDProtocol, nodeRNIDClass and nodeRNIDPort as the mib objects conveys the same information thru nodeRNIDParams.
DEFECT000024524	Medium	Summary: after hafailover, the 1st cable (chpid) does not present a link incident Symptom: No link incident generated after HA failover Solution: Refresh kernel registration for link incident notification after hafailover.
DEFECT000024584	Medium	Summary: after a hafailover, the 1st chpid cable pull, ficonshowlirr does not remove the entry Symptom: LIRR entry is not removed from the switch database after HA failover. Solution: A change was made to use the telnet firmwaredownload command instead of soft upgrade API. The command interface was modified to also run in non-interactive mode when used in Web Tools application.
DEFECT000024679	Medium	Summary: FICON can be enabled on a 'disabled' switch which has security 'disabled'... Symptom: This defect will be seen in a FICON environment only. The user must not be permitted to enable the FICON mode when the switch is in Disabled/Offline State and the behavior must be similar to when the user attempts to enable security while the switch is disabled. Solution: FICON Mode has been removed, so this problem no longer is applicable.
DEFECT000024788	Medium	Summary: FICON connected ports with FINISAR inline go faulted when a host varied off (taken OFFLINE) command is executed Symptom: Ports are faulted when host varied off. Solution: The problem only happens when Finisar was put in the middle. Not seen in normal operation.

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000024830	Medium	Summary: Enabling FICON does not update backend html page until after reboot Symptom: This defect will be seen in a FICON environment only. After enabling ficon from a 12k switch CLI, using 'ficonmode 1' command. The switch backend webpage /switch.html does not update the FiconStatus=false to FiconStatus=true, until after rebooting/failing over the active CP FiconStatus parameter in the /switch.html backend webpage should be dynamic. Since enabling FICON does not require a reboot the webpage should update without a reboot also. Solution: This problem has been resolved with the removal of FICON Mode.
DEFECT000024836	Medium	Summary: Events.html page is missing description for "Not operational seq. recognized" RLIR event Symptom: This defect will be seen in a FICON environment only. An RLIR event was created on a FICON enabled fabric. The first event that says "Link Failure Type: Not operational seq. recognized" appears in the switches web backend events.html, but is missing the EventDescription= from the event. Since the events.html page does not have the EventDescrption= for the above RLIR event, Fabric Manager 4.0 is unable to display the event in FM's Event Log. Solution: Added the check for that event type and made sure all other event types are also take care of.
DEFECT000024857	Medium	Summary: forcing a hafover after plogin mgt server cause lost of port Symptom: if an hafailover occurs after a PLOGI, the FICON port is 'disabled' with an Invalid Attachment Failure Solution: Fixed some problems with data structures not being replicated to standby properly.
DEFECT000025418	Medium	Summary: CHPID RNID or LIRR entry occasionally missing after firmwareDownload or switchreboot Symptom: This defect will be seen in a FICON environment only. After doing a firmware download of all switches, one of the CHPIDs does not show in RNID or LIRR entry. Solution: The problem was fixed as a result of HA data structure clean-up related to RNID.

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025419	Medium	Summary: ISL broken between SW12000 & SW3900 after FWDL Symptom: This defect will be seen in a FICON environment only. After a firmware download (with -s option) to 12K and 3900 at the same time, and a subsequent reboot to the CPs and 3900 results in the following situation - The ISL is gone. The ISL port on the 3900 shows "No Light" and the ISL port on the 12K shows "InSync". Solution: This problem only occurred once on a private build, so it is being closed.
DEFECT000025493	Medium	Summary: FICON nodeRNIDTag does not display correctly on some FICON ports Symptom: Tag field in the RNID retrieved through SNMP is not correct. Solution: Added the DISPLAY-HINT clause to the Mib object to direct the MIB browsers to show the result in Hex format. Mib browsers must support the DISPLAY-HINT feature.
DEFECT000025678	Medium	Summary: LIRR table becomes empty when switch is segmented out due to Insistent DID conflict Symptom: This defect will be seen in a FICON environment only. After a switch is segmented from the fabric due to conflicting Domain IDs, the RNID database entries are still present, but the LIRR entries, which should also be present, are missing. Solution: Changed the LIRR database structure to de-couple domain ID from the LIRR database, so the replicated LIRR data structures are inserted in the right location.
DEFECT000025719	Medium	Summary: Failed Switch Initiated RNID is not retried Symptom: Potential missing ports in Link Incident Registration list. Potential lack of switch NID information at the Host Solution: Fixed a typo that resulted in a list pointer not being set correctly.
DEFECT000025726	Medium	Summary: Incorrect 'Transaction ID' value in RLIR frame Symptom: ficonshow RLIR displays does not show an incremented Transaction ID for two consecutive link failures. Solution: The 'Transaction ID' in the word 14 of the RLIR payload was fixed to increment with each link incident (also presented as the 'Incident Count' value in the ficonshowrlir and reports)
DEFECT000025727	Medium	Summary: Invalid 'Incident Port Type' value in the RLIR payload Symptom: Results in improper display of Incident Port Type from the FICON Host Solution: Changed the Incident Port Type from x'01' (N-port) to x'81' (F-port).

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025742	Medium	Summary: RLIR payload does not conform to FC-FS and SB-3 standard Symptom: The Incident Node Descriptor(ND) and Attached ND positions in the payload are swapped. Solution: Updated the code to be compliant with the standard.
DEFECT000025744	Medium	Summary: Invalid FICON commands appear in help command output Symptom: This defect will be seen in a FICON environment only. Most of the FICON commands that are listed in the help command output do not run. When trying to run the FICON commands I receive 'rbash: ficonShowALLRLIR: command not found' error. Solution: Fixed the help so that it does not display obsoleted FICON commands. Added a new "help" description for the new "ficonShow" command. Modified "ficonShow" with more information regarding the databases that it can display.
DEFECT000025749	Medium	Summary: GREP with 'ficonshow ilir' command does not work Symptom: grep does not work in conjunction with ficonshow ilir Solution: Changed the output function to check if the character is printable before actually printing it.
DEFECT000025755	Medium	Summary: rLIRIncidentPortNumber does not return correct port number Symptom: Incorrect port number reported in RLIR Solution: Fixed FICON so that SNMP receives the port number in RLIR query. Modify the RLIR database lookup routine to return the port on which the incident occurred in the result rather than the database entry index number.
DEFECT000025759	Medium	Summary: Could not turn on FICON mode in secure fabric containing switches that are running older firmware versions Symptom: This defect will be seen in a FICON environment only. The fabric contains a mixture of 12K and 3900 switches, some of which contain older software versions that do not support FICON mode. When an attempt is made to turn on FICON mode on the SW12000, the response is that that ficon command is not supported and FICON mode is not enabled in the fabric. Solution: This problem is fixed with the removal of FICON mode.
DEFECT000025775	Medium	Summary: help ficonshow has wrong information, ficonShow instead of ficonshow Symptom: help menu incorrect for ficonshow Solution: Fixed the caps in the help menu

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025776	Medium	Summary: ficonshow RNID on a 3900 with no FICON resources returns 'Telnet command failed' message Symptom: Issuing a ficonshow RNID on a 3900 will return an error message Solution: Cleaned up the error message to indicate no RNID entries in the database.
DEFECT000025777	Medium	Summary: 'ficonClear RLIR' to Terminator w/no RLIRs returns 'FICON does not support 0 E port' message on console Symptom: When issuing the CLI command 'ficonClear RLIR' from the console port on the 3900 with no RLIR entries, an erroneous error message is displayed: 'FICON does not support 0 E port'. Solution: Remove the old error message.
DEFECT000025797	Medium	Summary: A ficonmode enabled switch with security disabled should not allow a similar configured switch to merge Symptom: This defect will be seen in a FICON environment only. With FICON mode enabled and security disabled, two switches are allowed to merge. They should be segmented. Solution: No code change was done specifically for this defect. There is no longer a FICON mode and non-secure switches are allowed to merge. The QSA response to the FICON host will indicate that Fabric Binding is not enforced.
DEFECT000025799	Medium	Summary: Mixed zone does not take effect right after cold reboot Symptom: This defect will be seen in a FICON environment only. After enabling a zoning configuration and traffic is running between host to storage (2 ports are defined in a mixed zone), and a cold reboot is done by typing "reboot" on both CPs at the same time and the CPs are in sync again, the traffic does not go through from host to storage. Solution: Made a fix to ensure that port zone members are properly established after reboot.
DEFECT000025801	Medium	Summary: lIRRIndex value should indicate an invalid index when it is not a valid listener Symptom: When a link incident occurs on a switch where there is no valid listener to accept the RLIR, there are some fields left as 0 in the RLIR. Solution: Updated the DESCRIPTION for linkRLIRFailureIncident trap in FICON mib file. Made corresponding SNMP code changes as per new requirements.

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025802	Medium	Summary: Node Descriptor Interface ID (Tag) value returned in the switch RNID is not self describing Symptom: This defect will be seen in a FICON environment only. Cannot isolate the RNID/RLIR to the port number. Solution: Made a change to report port number instead of domain number in the RNID & RLIR.
DEFECT000025811	Medium	Summary: RNID entry on port 0 drops out after failover Symptom: This defect will be seen in a FICON environment only. After a portswap is performed, and subsequently a failover is performed, the LIRR entry still exists, but the RNID entry for port 1/0 is missing. Solution: Corrected a synchronization problem between active and standby CPs for the RNID entries.
DEFECT000025821	Medium	Summary: 'Type' designation missing from 'ficonshow RLIR' response Symptom: This defect will be seen in a FICON environment only. The Type designation for the incident port is no longer included in the 'ficonshow RLIR' response even though the heading (Type) is still present. The proper designation should be 'F' for F-port (type81) and is derived from the 'Incident Port Type' field in the RLIR payload (word6 byte0). Solution: The 'Type' field was missing from 'ficonshow RLIR' display and the 'Node-ID validity' flags were wrong in RLIR payload. The fix is to make the NID structure and NID flag definitions match FC-SB spec and remove redundant structures.
DEFECT000025822	Medium	Summary: ficonshow ILIR response needs to be cleaned up Symptom: This defect will be seen in a FICON environment only. The response to the CLI command 'ficonshow ILIR' contains incomplete information on the LISTENER who received the Implicit Link Incident RLIR frame. The LISTENER information should be removed from this command. Solution: The LISTENER information has been removed from this command

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025860	Medium	Summary: Ficonmode cmd should take effect only on the local switch in a multi-switch non-secure fabric Symptom: This defect will be seen in a FICON environment only. There are two problems: 1) FICON mode should not be able to be turned on to a switch if the switch is already a member of non-secure multi-switch fabric. Currently, this is allowed. 2) FICON mode ficonmode will be turned off fabric wide even though the ficonmode command is only issued to a member of non-secure multi-switch fabric. Solution: Removed FICON Mode. Insistent domain ID is set locally only as a configuration parameter and is checked fabric wide through GCAP.
DEFECT000025907	Medium	Summary: "Failed expression" error messages show up on console after hareboot Symptom: This defect will be seen in a FICON environment only. When 'hareboot' is entered on a 12000 or 3900 switch, "failed expression" errors show up on the console. These messages look serious, but they are not an indication of any real problem. Solution: This problem was fixed as a result of changing the LIRR database structure to de-couple domain ID with the LIRR database. The LIRR database was previously maintained for the entire fabric (DLIRR), but has been changed to only contain the local LIRR entries.
DEFECT000026000	Medium	Summary: lIRRTable query returns erroneous data Symptom: This defect will be seen in a FICON environment only. When a query is done on IRRTableNumEntries, it will returns the correct number of entries. But when a query of the lIRRTable is performed, it displays the same entry 64 times. Solution: Made a change to use the proper WWN field to access the Listener Port PID
DEFECT000026179	Medium	Summary: a cable pull from one port to another port does not 'erase' the 'old' invalid RNID Symptom: This defect will be seen in a FICON environment only. A 'new' feature was added to ficonshow rnid, when a cable is pulled, the flag field goes to 0x30 , invalid. But when the same cable (port) is inserted to another port, the 'invalid' entry is not 'erased' Solution: modify msGetRNID() to include 'not current' entries from RNID db. invalidate old 'not current' entry when new valid rnid is received.

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000026180	Medium	Summary: ficonshow RLIR tables not wrapping at the '64' entry level Symptom: This defect will be seen in a FICON environment only. When executing the CLI command "ficonshow rlir", the tables sometimes wrap around at fewer than 64 entries. Solution: Cleared RLIR db on warm recovery
DEFECT000026183	Medium	Summary: z900 forced to 1 gig channels, get ic=03 link errors when vary chpid off and on Symptom: This defect will be seen in a FICON environment only. A vary off/on of CHPIDs sometimes causes an IC=03 error on the VM host Solution: Track OLS primitive received during LLI processing.
DEFECT000026335	Medium	Summary: A FICON switch without the FCS policy turned on, leaves invalid entries in ficonshow RNID. Symptom: If a switch does not have an FCS policy turned on, the FICON chipid RNID entrys are not removed from "ficonshow rnid" when the cable is moved from port to port Solution: Fixed the handling of failing rnid case in rnid deletion routine. Updated ficonshow man page with correct switchrnid display
DEFECT000026383	Medium	Summary: Ficonshow rnid command displays extraneous entry under certain condition Symptom: This defect will be seen in a FICON environment only. An extra RNID entry is displayed in RNID table when the ports in portswap operation are enabled before the physical cable swaps. Solution: Change the RNID node flag to 'invalid' as opposed to 'not current'.
DEFECT000026580	Medium	Summary: Invalid FRU Flag value contained in the 'Incident Specific Information' of the RLIR payload Symptom: This defect is seen in a FICON environment only. The FRU Flag (byte68) of the Incident-Specific Information reported in the Implicit Incident RLIR contains the wrong values according to the FC SB-3 Standard. The expected is '0000 0001'b the actual is '0100 0000'b. Solution: Corrected the endianness of FRU flag byte.
DEFECT000032943	Medium	Summary: FICON: RLIR Events level severity should be higher than Information Symptom: RLIR events are being generated and displayed inside Fabric Manager, but the Event Level is at Information. A customer may ignore these RLIR events because the level is at Information. The level should be raised to ERROR. Solution: Change RLIR event level from INFO to ERROR

FICON Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000033147	Medium	Summary: ILIR event does not get generated after non-disruptive FWDL Symptom: ILIR event does not get generated after non-disruptive FWDL or HA failover under certain circumstances. Solution: The FICON code (through Management Server) was modified so that it will re-register with sysmod during warm boot to receive the SCN.
DEFECT000034037	Medium	Summary: API still reports "not current" NodeRNID after successfully issue "ficonclear rnid" at telnet Symptom: After clearing the Not Current RNIDs from the switch database using the telnet command "ficonclear rnid", the Not Current RNIDs still show up using the call GetObjectsByType(NodeRNID). Solution: Added an API event notification when the Not Current RNID entries are cleared by using the ficonclear CLI command.
DEFECT000034038	Medium	Summary: API reports staled RLIR data after "ficonclear rlir" is issued at telnet Symptom: After clearing the RLIR database in the switch using the telnet command "ficonclear rlir", the RLIRs still show up using the call getObjectsByType(RLIR). Solution: Added an API event notification when there is any RLIR entries cleared by ficonclear CLI command. The API will then update it's cache accordingly.

Other Defects Closed in Fabric OS 4.1.2

This table lists the non-FICON-related defects that have been closed in this release since 4.1.1. In this instance, these are the same defects that have been closed since 4.1.2 RC1.

Other Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000026555	Critical	Summary: 3800 switch port is left INSYNC after a reboot of the array Symptom: While initially found on Fabric OS 3.1.1, this problem has been determined also to exist on Fabric OS 4.1.1. After an SP reboot the switch port is left in the INSYNC state. Removing and inserting the cable or disabling and enabling the switch port allows the array to login successfully. Solution: Enable the LPSM_OPEN_INIT_RCVD interrupt when appropriate, to prevent the port from hanging during port initialization.

Other Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000024941	High	Summary: FABRICd panicked and rebooted after CP0 and CP1 had both been fastbooted while a 128k zoning db is on the SW12000 switch. Symptom: Fabric Access API test case, in which the following set of steps are performed: 1) From the API, activate a maximum sized zoning config. 2) From Telnet, zoneDelete two zone definitions but don't commit the new zone definition. 3) From the API attempt to commit the zone definition, and see the appropriate error message. 4) From Telnet, fastboot both CPs 5) Wait until POST runs up to the memory checking tests and then from the API activate the zone transaction. Activating the zone transaction from the API while the switch is performing POST caused a fabric panic to be seen. Solution: Closed as not reproducible
DEFECT000024982	High	Summary: Establishing 5 sessions each to 2 4.1 switches and calling GetAllObjectsBySession core dumps msd and returns objects with -209 & -86 when fabric is stable. Symptom: Using the Fabric Access API to retrieve the current FICON mode setting via ten concurrent sessions (five on each switch) caused a core dump of the Management Server process. Solution: Corrected a circular IPC call problem and corrected a bad parameter that was being passed. This was a left-over problem from when FICON mode existed in the switch.
DEFECT000025787	High	Summary: force ha failover after flogi-f port login fails Symptom: If a fail-over occurs at a very specific point in the port initialization process (after FLOGI), the port login fails and QSA fails. Port never comes online. Solution: A mutex semaphore is now released before calling the function to configure the F-Port.
DEFECT000025892	High	Summary: Webtools Failed To Log Level 1 Kernel Software Watch Dog Errors. Symptom: CLI command: errorshow has KSWD event listed, but WebTools does not Solution: This was entered in error. It is not a defect.
DEFECT000025999	High	Summary: VE: Burnin failed on the 3rd run Symptom: When running diag systemverification, every 3rd run would cause ports to fault. Solution: The source of the problem is that diagnostics can enable ports in various modes which causes the fault1/2 counters to increment without being cleared appropriately. Fix: Reset fault1/2 counters when port are disabled.

Other Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000026578	High	Summary: Tape Drive Logout problem Symptom: This problem occurs on tape SAN. The switch is dropping LOGO's. When an HBA opens an exchange with a Drive and then the drive is power cycled, the HBA would initiate FCP-2 error recovery which means sending a ADISC to the drive to continue where it left off. The Drive would receive the ADISC but since it was power cycled it had no recollection of the exchange that was in process before. So it would send a frame back telling the HBA to logout of the drive and start over again. This packet would not be received by the HBA which would just see the ADISC timing out and then start sending ABRTS to the drive. Which in turn would have no idea what the HBA was trying to abort and keep telling the HBA to logout and start over. Solution: If all of the 3 dynamic filters are taken, other PLOGIs have to be queued until the dynamic filters time out. Currently we update the fields only if the queue is emply during the dynamic aging. This will cause some PLOGI ACC being dropped if there are more than 3 PLOGIs are queued on that port. The fix is to do single field update every time that a dynamic filter is reused.
DEFECT000032968	High	Summary: Incorrect behavior in FOS 4.0.2c after ABTS is sent to the Name Server Symptom: This problem occurs when a tape library containing many individual tape drives is power cycled to recover from failed backups. When the tape library comes up, an RSCN is sent out for each of the drives as it appears. The HBA accepts the first RSCN, then talks to the name server to get the new information. Another RSCN is then sent, which the HBA accepts and sends ABTS to the name server for the previous query. The name server accepts but then sends the reply to the query anyway. This should not happen. Solution: During frame transmitting, IU should be dropped if the sequence has been aborted.
DEFECT000032969	High	Summary: CP timeout during firmware upgrade Symptom: During the Firmware upgrade process from 4.0.2a to 4.1.1, a CP will timeout and fail to upgrade. The hashow command displays that the now failed CP is Non-Redundant with a Faulty error of 23. Solution: Use the same time window for detecting heartbeat as Fabric OS 4.0.x.
DEFECT000033177	High	Summary: Zoned coredumps after changing Domain ID Symptom: The zoning daemon crashes. Switch/fabric zoning behavior will not function properly. Solution: This problem was already fixed in defect 26508 and the fix was merged to 4.1.2 release.

Other Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000033619	High	Summary: During Time Sync: 0x6427(FABOS)Error MS_PRLIB, C:337 MS_Invalid Buffer Length; Causes Call Home. Symptom: MS invalid Buffer length message triggers a call home, even though the message is benign (no real problem exists) Solution: Removed the error message when the root cause problem does not exist. If this message occurs in the future, it will be an indication of a real problem.
DEFECT000025585	Medium	Summary: sw1: FCPH 0: input.c: wrong iu_status (0xd), iu_type (1) iu_port 59 after a reboot -f of both cps Symptom: An obscure error injection case in conjunction with a failover, results in loss of state information after the failover. Solution: Added one more type of Class 2 frames: IU_ZONED_OUT.
DEFECT000025691	Medium	Summary: add fflush in dbgflose to make sure that the data is flushed to a file Symptom: No observable customer symptom Solution: Add fflush in dbgflclose function to make sure that the modified data is flushed to a file before it is accessed by other applications.
DEFECT000025828	Medium	Summary: Occassionally, some ports are still disabled after bladeEnable, immediately followed by haFailover. Symptom: If blades are being enabled in the chassis and haFailover was initiated for some reason, at the same time, some switch port blades are marked disabled Solution: Fixed in the 4.1.2 Fabric OS Reference, see attachment.
DEFECT000025879	Medium	Summary: Incorrect failover with > 32 zone groups or > 128 devices on a quad during filter recovery Symptom: Some zone groups are lost on a CP failover. Solution: Merge corrected initialization of both cam and group bitmaps from 4.1.x_maint branch.
DEFECT000025896	Medium	Summary: Save Core #2 Option Requires Full Pathing To FTP Directory From Root. Symptom: FTP login configuration places users in a directory, should not have to list it for Savecore utility Solution: This was filed due to a user error. This was never a defect.

Other Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000025922	Medium	Summary: emd failed to refresh SWD after doing bladedisable/hafailover followed by firmwaredownload 5 hours later Symptom: SWD error observed on a firmware download after running a bladedisable/hafailover stress test. Solution: Fixed a deadlock problem in _zoneD which caused a warm boot recovery problem.
DEFECT000025932	Medium	Summary: Unable to disable/enable port on the proxy switch when directly proxy into the Non-Primary-FCS-switch. Return code is ERR_NOT_PRIMARY_FCS (-59) Symptom: User is not able to enable/disable port on the proxy switch, when the proxy is Non-Primary FCS. Solution: Root Cause was that the API host passes port wwn as target address in port related operations, but rpcd compares it to the local switch wwn to determine whether this is a local request or not. Fix: Convert port wwn to domain first and then determine whether this is local or remote.
DEFECT000025933	Medium	Summary: ISL between SW12000 and SW3900 is in "E-Port (Trunk master)" state Symptom: The ISL between SW12000 and SW3900 got into a state where the ISL E port on either side display E-Port (Trunk master) but does not show WWN and switch name on switchshow. Basically, they become 2 independent fabrics, but the E port is not segmented. Trying various methods, e.g., portdisable/enable and switchreboot can't seem to get the ISL back to normal state. Solution: This problem was not reproducible and was determined to be a configuration problem with the security certificates.
DEFECT000026028	Medium	Summary: Avoid multiple updates to area port map within pdm. Update area port map in the kernel only during active recovery. Symptom: Slightly degraded performance when port map is changed. Solution: On the standby CP, the Area port map is now downloaded only once per switch instance during active recovery. The old area port map is now discarded and freed up before new area port map is applied.
DEFECT000026036	Medium	Summary: GUI display of LEDs incorrect Symptom: The status LED (green LED) on the display are the upper one for the port in the upper row and the lower one for the port in the lower row. Solution: Updated the screen display

Other Defects Closed in Fabric OS 4.1.2		
Defect ID	**Severity**	**Description**
DEFECT000026209	Medium	Summary: "fgetLocalPort: Invalid Port number port = 32" messages show up repetitively on SW3900 console Symptom: These console messages show up every 30 seconds on SW3900 switch. No other side effects. Solution: The solution is not to call FCP to get inquiry data for a remote device.
DEFECT000026367	Medium	Summary: Try to establish session as user using FabAPI_EstablishFabricSessionEx() get -14(Invalid login) when 4.x switch is used as proxy Symptom: Cannot establish an API session using the command FabAPI_EstablishFabricSessionEx() using 4.x as a proxy. The error message "14 (Invalid_login)" is returned. Solution: Added code to return user level ID back to client instead of an access denied error code.
DEFECT000033472	Medium	Summary: Zone Admin displays incorrect port lists in Member Selection List Symptom: This problem occurs after executing the port swap function. Using WebTools (in the Zone Admin => Member Selection List view) and expanding on the slot nodes, 17 physical ports show up in a slot and the ports shown for the slots are incorrect. Solution: Webtools Zoning refresh fabric didn't update the fabric tree if a port swapping occurred. The refreshing didn't break the relationship between the slot & port. So ports swapped get replicated for certain slot. After this fix, refresh will work properly.