Brocade Fabric OS v6.4.3c Release Notes v1.0

November 2, 2012

Document History

Document Title	Summary of Changes	Publication Date
Brocade Fabric OS v6.4.3c Release Notes v1.0	Initial Release	November 2, 2012

Contents

Quick Look

Fabric OS (FOS) v6.4.3c is a patch release based on FOS v6.4.3. All hardware platforms and features supported in FOS v6.4.3 are also supported in FOS v6.4.3c.

In addition to the fixes listed in the defect tables at the end of this document, FOS v6.4.3c also includes support for the features introduced in FOS v6.4.3.

Overview

Resolution of Important Defects

FOS v6.4.3c includes fixes for the following important defects:

420758 Upgrade to FOS v6.4.3x/v7.0.2x/7.0.1a or later is resulting in errors on ports that have media validation issues

Features & Support

In addition to fixes for defects, the new features introduced in FOS v6.4.3 are also supported in FOS v6.4.3c. For your convenience, the new features that were introduced in FOS v6.4.3 are listed below.

- Bottleneck detection enhancements - Decoupling of latency and congestion alerts

  Prior to FOS v6.4.3 when users enabled bottleneck alerts, it would enable alerting for both congestion and latency bottleneck conditions. Starting with FOS v6.4.3 users can choose to enable alerts only for latency bottleneck while not enabling alerts for congestion bottleneck or vice versa. Users still have the option to enable alerts for both congestion and latency bottleneck conditions.

- Longer port name support

  Starting from FOS v6.4.3 users can assign longer port names up to 128 characters. Pre-FOS v6.4.3 releases restricted port name length to 32 characters.

- SFTP support

  FOS supports SFTP starting from FOS v6.4.2b. This provides users with an option to securely transfer files during firmwaredownload, configupload, configdownload, supportsave and supportftp operations.

Optionally Licensed Software

Optionally licensed features in Fabric OS v6.4.3 include:

- **Brocade Ports on Demand** — Allows customers to instantly scale the fabric by provisioning additional ports via license key upgrade (applies to select models of switches).
- **Brocade Extended Fabrics** — Provides greater than 10km of switched fabric connectivity at full bandwidth over long distances (depending on platform this can be up to 3000km).
- **Brocade ISL Trunking** — Provides the ability to aggregate multiple physical links into one logical link for enhanced network performance and fault tolerance. Also includes Access Gateway ISL Trunking on those products that support Access Gateway deployment.
- **Brocade Advanced Performance Monitoring** — Enables performance monitoring of networked storage resources. This license includes the TopTalkers feature.
- **High Performance Extension over FCIP/FC** (formerly known as "FC-IP Services") (For the FR4-18i blade and Brocade 7500) — This license key also includes the FC-FastWrite feature and IPsec capabilities.

- **Brocade Accelerator for FICON** – This license enables unique FICON emulation support for IBM's Global Mirror (formerly XRC) application (including Hitachi Data Systems HXRC and EMC's XRC) as well as Tape Pipelining for all FICON tape and virtual tape systems to significantly improve XRC and tape backup/recovery performance over virtually unlimited distance for 7500, upgraded 7500E and FR4-18i.
- **Brocade Fabric Watch** — Monitors mission-critical switch operations. Fabric Watch also includes Port Fencing capabilities.
- **FICON Management Server** — Also known as "CUP" (Control Unit Port), enables host-control of switches in Mainframe environments.
- **ICL 16-link, or Inter Chassis Links** – This license provides dedicated high-bandwidth links between two Brocade DCX chassis, without consuming valuable front-end 8Gb ports. Each chassis must have the 16-link ICL license installed in order to enable the full 16-link ICL connections. (Available on the DCX only, previously known as simply the "ICL License" for DCX.)
- **ICL 8-Link, or Inter Chassis Links** – This license activates all eight links on ICL ports on a DCX-4S chassis or half of the ICL bandwidth for each ICL port on the DCX platform by enabling only eight links out of the sixteen links available. This allows users to purchase half the bandwidth of DCX ICL ports initially and upgrade with an additional 8-link license to utilize the full ICL bandwidth at a later time. This license is also useful for environments that wish to create ICL connections between a DCX and a DCX-4S, the latter of which cannot support more than 8 links on an ICL port. Available on the DCX-4S and DCX platforms only (This license replaces the original ICL license for the DCX-4S).
- **Enhanced Group Management** — This license, available only on the DCX, DCX-4S and other 8G platforms, enables full management of the device in a datacenter fabric with deeper element management functionality and greater management task aggregation throughout the environment. This license is used in conjunction with Brocade's Data Center Fabric Manager (DCFM) application software.
- **Adaptive Networking** — Adaptive Networking provides a rich framework of capability allowing a user to ensure high priority connections obtain the network resources necessary for optimum performance, even in congested environments. The QoS SID/DID Prioritization and Ingress Rate Limiting features are the first components of this license, and are fully available on all 8G platforms.
- **Integrated Routing** — This license allows ports in a DCX, DCX-4S, 5300, 5100, VA-40FC (in switch mode), 7800 or Brocade Encryption Switch to be configured as EX_Ports or VEX_Ports supporting Fibre Channel Routing. This eliminates the need to add an FR4-18i blade or use the 7500 for FCR purposes, and also provides double the bandwidth for each FCR connection (when connected to another 8G-capable port).
- **7500E Upgrade** (For the Brocade 7500E only) — This license allows customers to upgrade a 4-port (2 FC ports and 2 GE ports) 7500E base to a full 18-port (16 FC ports and 2 GE ports) 7500 configuration and feature capability. The upgraded 7500E includes the complete High Performance Extension license feature set.
- **Encryption Performance Upgrade** — This license provides additional encryption processing power. For the Brocade Encryption Switch or a DCX/DCX-4S, the Encryption Performance License can be installed to enable full encryption processing power on the BES or on all FS8-18 blades installed in the DCX/DCX-4S chassis.
- **DataFort Compatibility** — This license is required on the Brocade Encryption Switch/DCX/DCX-4S with FS8-18 blade(s) to read & decrypt NetApp DataFort-encrypted disk and tape LUNs. DataFort Compatibility License is also required on the Brocade Encryption Switch or DCX/DCX-4S Backbone with FS8-18 Encryption Blade(s) installed to write & encrypt the disk and tape LUNs in NetApp DataFort Mode (Metadata & Encryption Algorithm) so that DataFort can read & decrypt these LUNs. DataFort Mode tape encryption and compression is supported beginning with the FOS v6.2.0 release. Availability of the DataFort Compatibility license is limited; contact your vendor for details.
- **Server Application Optimization** — When deployed with Brocade Server Adapters, this license optimizes

overall application performance for physical servers and virtual machines by extending virtual channels to the server infrastructure. Application specific traffic flows can be configured, prioritized, and optimized throughout the entire data center infrastructure. This license is not supported on the Brocade 8000.

- **FCoE** — This license enables Fibre Channel over Ethernet (FCoE) functionality on the Brocade 8000. Without the FCoE license, the Brocade 8000 is a pure L2 Ethernet switch and will not allow FCoE bridging or FCF capabilities. This license should always be installed with the 8000 FC Ports on Demand license.
- **8000 FC Ports on Demand** — This license enables all eight FC ports on the Brocade 8000. This license should always be installed with the FCoE license.
- **7800 Port Upgrade** — This license allows a Brocade 7800 to enable 16 FC ports (instead of the base four ports) and six GbE ports (instead of the base two ports). This license is also required to enable additional FCIP tunnels and also for advanced capabilities like tape read/write pipelining.
- **Advanced Extension** – This license enables two advanced extension features: FCIP Trunking and Adaptive Rate Limiting. The FCIP Trunking feature allows multiple IP source and destination address pairs (defined as FCIP Circuits) via multiple 1GbE or 10GbE interfaces to provide a high bandwidth FCIP tunnel and failover resiliency. In addition, each FCIP circuit supports four QoS classes (Class-F, Hi, Medium and Low Priority), each as a TCP connection. The Adaptive Rate Limiting feature provides a minimum bandwidth guarantee for each tunnel with full utilization of the available network bandwidth without impacting throughput performance under high traffic load. This license is available on the 7800 and the DCX/DCX-4S for the FX8-24 on an individual slot basis.
- **10GbE FCIP** – This license enables the two 10GbE ports on the FX8-24. With this license, two additional operating modes (in addition to 10 1GbE ports mode) can be selected:
    - 10 1GbE ports and 1 10GbE port, or
    - 2 10GbE ports

  This license is available on the DCX/DCX-4S for the FX8-24 on an individual slot basis.
- **Advanced FICON Acceleration** – This licensed feature uses specialized data management techniques and automated intelligence to accelerate FICON tape read and write and IBM Global Mirror data replication operations over distance, while maintaining the integrity of command and acknowledgement sequences. This license is available on the 7800 and the DCX/DCX-4S for the FX8-24 on an individual slot basis.

Some models offer bundles that include 2 or more optionally licensed features. These bundles are defined for each unique product, and are outside the scope of this release note document.

Temporary License Support

The following licenses are available for 45-day temporary use, with a maximum of two temporary licenses per feature and per switch (90 days maximum):

- Fabric (E_Port) license
- Extended Fabric license
- Trunking license
- High Performance Extension license
- Advanced Performance Monitoring license
- Adaptive Networking license
- Fabric Watch license

- Integrated Routing license
- Server Application Optimization license
- Advanced Extension license
- Advanced FICON Acceleration license
- 10GbE FCIP license

Note: Temporary Licenses for features available on a per slot basis enable the feature for any and all slots in the chassis.

Universal Temporary License Support

The following list of licenses are available as Universal Temporary licenses, meaning the same license key can be installed on any switch running FOS v6.3 or later that supports the specific feature. Universal Temporary license keys can only be installed once on a particular switch, but can be applied to as many switches as desired. Temporary use duration (the length of time the feature will be enabled on a switch) is provided with the license key. All Universal Temporary license keys have an expiration date upon which the license can no longer be installed on any unit.

- Fabric (E_Port) license
- Extended Fabric license
- Trunking license
- High Performance Extension license
- Advanced Performance Monitoring license
- Adaptive Networking license
- Fabric Watch license
- Integrated Routing license
- Server Application Optimization
- Advanced Extension license
- Advanced FICON Acceleration license
- 10GbE license
- FICON Management Server (CUP) license

Supported Switches

Fabric OS v6.4.3 supports the Brocade 300, 5410/5424/5450/5460/5470/5480/NC-5480, 4100, 4900, 5000, 5100, 5300, VA-40FC, 7500/7500E, 7600, 48000, Brocade Encryption Switch (BES), DCX/DCX-4S, 8000, and the 7800. All supported products are qualified for Native Connectivity in interopmodes 2 and 3 for deployment in M-EOS fabrics with the exception of the Brocade 4100 and 8000 and DCX/DCX-4S with one or more FCOE10-24 blades.

Access Gateway mode is also supported by Fabric OS v6.4.3, and is supported on the following switches: the Brocade 300, 5100, VA-40FC, 8000, 5450, 5460, 5470, 5480, NC-5480 and M5424.

Note: Although Fabric OS v6.4.3 can be installed on any of the switches noted above, always check your SAN, storage or blade server product support page or document to verify before installing on your switch. Use only FOS versions that are specified by the provider to ensure full support of your switch.

Standards Compliance

This software conforms to the Fibre Channel Standards in a manner consistent with accepted engineering practices and procedures. In certain cases, Brocade might add proprietary supplemental functions to those specified in the standards. For a list of FC standards conformance, visit the following Brocade Web site: *http://www.brocade.com/sanstandards*

The Brocade 8000 and FCOE10-24 blade conform to the following Ethernet standards:

- IEEE 802.1D Spanning Tree Protocol
- IEEE 802.1s Multiple Spanning Tree
- IEEE 802.1w Rapid reconfiguration of Spanning Tree Protocol
- IEEE 802.3ad Link Aggregation with LACP
- IEEE 802.3ae 10G Ethernet
- IEEE 802.1Q VLAN Tagging
- IEEE 802.1p Class of Service Prioritization and Tagging
- IEEE 802.1v VLAN Classification by Protocol and Port
- IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
- IEEE 802.3x Flow Control (Pause Frames)

The following draft versions of the Converged Enhanced Ethernet (CEE) and Fibre Channel over Ethernet (FCoE) Standards are also supported on the Brocade 8000 and FCOE10-24 blade:

- IEEE 802.1Qbb Priority-based Flow Control
- IEEE 802.1Qaz Enhanced Transmission Selection
- IEEE 802.1 DCB Capability Exchange Protocol (Proposed under the DCB Task Group of IEEE 802.1 Working Group)
- FC-BB-5 FCoE (Rev 2.0)

Technical Support

Contact your switch supplier for hardware, firmware, and software support, including product repairs and part ordering. To expedite your call, have the following information immediately available:

1. General Information
    - Technical Support contract number, if applicable
    - Switch model
    - Switch operating system version
    - Error numbers and messages received
    - **supportSave** command output and associated files
        - For dual CP platforms running FOS v6.2 and above, the supportsave command gathers information from both CPs and any AP blades installed in the chassis
    - Detailed description of the problem, including the switch or fabric behavior immediately following the problem, and specific questions
    - Description of any troubleshooting steps already performed and the results
    - Serial console and Telnet session logs
    - Syslog message logs
2. Switch Serial Number

    The switch serial number is provided on the serial number label, examples of which are shown here:

    FT00X0054E9

The serial number label is located as follows:

- Brocade 4100, 4900, and 7500/7500E — On the switch ID pull-out tab located inside the chassis on the port side on the left
- Brocade Encryption Switch, VA-40FC, 300, 5000, 5100, and 5300 — On the switch ID pull-out tab located on the bottom of the port side of the switch
- Brocade 7600 — On the bottom of the chassis
- Brocade 7800 — On the pull-out tab on the front left side of the chassis underneath the serial console and Ethernet connection and on the bottom of the switch in a well on the left side underneath (looking from front)
- Brocade 8000 — On the switch ID pullout tab located inside the chassis on the port side on the left and also on the bottom of the chassis
- Brocade 48000 — Inside the chassis next to the power supply bays
- Brocade DCX — Bottom right of the port side
- Brocade DCX-4S — Back, upper left under the power supply

3. World Wide Name (WWN)

   When the Virtual Fabric feature is enabled on a switch, each logical switch has a unique switch WWN. Use the **wwn** command to display the switch WWN.

   If you cannot use the **wwn** command because the switch is inoperable, you can get the primary WWN from the same place as the serial number, except for the Brocade DCX/DCX-4S. For the Brocade DCX, access the numbers on the WWN cards by removing the Brocade logo plate at the top of the non-port side. The WWN is printed on the LED side of both cards.

4. License Identifier (License ID)

   There is only one License Identifier associated with a physical switch or director/backbone chassis. This License Identifier is required as part of the ordering process for new FOS licenses.

   Use the **licenseId** command to display the License Identifier.

FOS Migration Considerations

This section contains important details to consider before migrating to or from this FOS release.

TSBs - Critical Issues to Consider Prior to Installing This FOS Release

Technical Support Bulletins (TSBs) are produced to provide detailed information about high priority defects or issues present in FOS releases. The following sections specify all current TSBs that have been identified as being a risk to or resolved with this specific version of Fabric OS. Please review carefully and refer to the complete TSB for relevant issues prior to migrating to this version of code. TSBs can be found at http://my.brocade.com under the "*Technical Documentation*" section of the "*documentation*" tab.

TSB Issues Outstanding in FOS v6.4.3

Issues in the following list of TSBs are known to be potential risks to using FOS v6.4.3 and should be considered carefully prior to using this release of code:

TSB	Summary

TSB Issues Resolved in FOS v6.4.3

Issues in the following list of TSBs are known FOS v6.4.x risks that are not exposures in FOS v6.4.3. Note that the issues addressed in this list of TSBs may also be resolved in other FOS releases. Refer to the specific Release Notes for each release to verify resolution details.

TSB	Summary
TSB 2010-088-A	If an 8Gb/sec capable Fibre Channel port is configured for long distance (*portcfglongdistance* command) in either LD or LS distance level mode (requires the Extended Fabrics license) with a dynamically calculated or statically configured distance setting in excess of the values specified below, the link will experience constant timeouts and Link Resets (LR).
TSB 2010-094-A	A firmware incompatibility between Fabric OS v6.3.x and Fabric OS v6.4.0b and v6.4.0c has been identified for Encryption Groups made up of BES and FS8-18 switches running under different Fabric OS code bases.
TSB 2010-095-A	Brocade 48000 directors may fail to upgrade when upgrading to Fabric OS v6.3.x or v6.4.x when an FR4-18i blade is present and at least one GE port is persistently disabled.
TSB 2010-096-A	Switches running with Fabric OS v6.3.1b, v6.3.1c, v6.3.2, v6.4.0, v6.4.0a, or v6.4.0b could experience a CP failover, a faulted blade or a faulted switch condition upon detection of a specific back-end link error.
TSB 2010-097-A	After a reboot or WAN issue that causes an FCIP circuit to bounce, performance of the Brocade 7800 and FX8-24 may be degraded because of limited throughput on FCIP circuits. This is due to reduced TCP window size. Enabling IPsec on these platforms increases the probability of encountering degraded performance.
TSB 2010-098-A	One or more fans go into a faulted state on the DCX backbone even though the fans are operating properly.
TSB 2010-099-A	Any 8G blade or 8G switch running with FOS v6.4.0, v6.4.0a, v6.4.0b, v6.4.0c and v6.4.1 could observe a loss of connectivity on a port or trunked ISL causing all traffic entering the switch or the blade to be dropped.

TSB	Summary
TSB 2011-108-A	Upon upgrading a Fabric switch to v6.4.1. or 6.4.1a, F_Port trunking used to connect any Access Gateways will not be allowed if the Fabric switch does not have a SAO (Server Application Optimization) license installed. This will eventually result in connectivity loss between the AG and switch if attached via F_Port trunks.
TSB 2011-109-A	Brocade has identified an issue associated with DCFM or Brocade Network Advisor polling for configured containers on a Brocade Encryption Switch or FS8-18 running FOS version v6.4.1 or v6.4.1a. When this issue is encountered BES/FS8-18 will be faulted.
TSB 2011-110-A	Traffic routed through shared area ports comprising a trunk of an FC8-48 or FC8-64 blade to the F_Port on the corresponding shared area port on the same blade in a DCX operating most versions of Fabric OS v6.x.x code may be misrouted back out the trunk.
TSB 2011-111-A	Brocade has identified issues within customer fabrics when specific external applications that perform very high levels of polling or communication with the switch are used. These external applications are capable of causing extremely high levels of CPU load, which are having side effects on the overall system.
TSB 2012-134-A	If F_Port trunk area configuration is initially performed while running FOS v6.1.x and additional F_Port trunks are configured when running with FOS v6.2.x or v6.3.x, the configuration introduced during FOS v6.2.x or v6.3.x may be lost when upgrading to FOS v6.4.0x, v6.4.1x or v6.4.2x.

Recommended Migration Paths to FOS v6.4.3

Migrating from FOS v6.3.x

For units currently operating at FOS v6.3.x, there are no special steps required to migrate to FOS v6.4.3.

FOS Upgrades and Downgrades

Non-disruptively upgrading to Fabric OS v6.4.3 is only allowed from Fabric OS v6.3. This policy to support only one-level non-disruptive migration, which began with FOS v6.0.0, provides more reliable and robust migrations for customers. By having fewer major changes in internal databases, configurations, and subsystems, the system is able to perform the upgrade more efficiently, taking less time and ensuring a truly seamless and non-disruptive process for the fabric. The one-release migration policy also reduces the large number of upgrade/downgrade permutations that must be tested, allowing Brocade to spend more effort ensuring the supported migration paths are thoroughly and completely verified.

Disruptive upgrades to Fabric OS 6.4 are allowed and supported from FOS 6.2and 6.3 (up to a two-level migration).

If there are multiple node EGs (encryption groups) in a fabric, please complete firmwaredownload on one node at a time before downloading on another node.

The Brocade 8000 does not support non-disruptive hot code loads (HCL). Upgrading the Brocade 8000 to FOS v6.4 will be disruptive to the IO through the switch.

A code load of DCX or DCX-4s with one or more FCOE10-24 blades will disrupt the traffic going through those FCOE10-24 blades.

Disable the ports in DCX Logical Switches that **use 10 bit addressing mode that have 8 bit areas in the range 0x70-0x8F before upgrading to FOS v6.4.x from 6.3.x.**. Otherwise firmware upgrade will fail with an error message. This step is necessary even if users do not plan to use FC8-64 blades after performing firmware upgrade to FOS v6.4. However, if areas 0x70-0x8F are not in use this step is not necessary. Please use portAddress CLI to find out the areas in use within a Logical Switch.

If **Bottleneck detection feature is currently enabled** on the switch running FOS v6.3.x, you must **disable it before upgrading to FOS v6.4**; otherwise, frame drops may occur due to increased Hot Code Load (HCL) time.

7800 platform and FX8-24 blade must be power cycled after upgrading from FOS v6.3 to FOS v6.4. This is necessary to load the new FPGA image that enables IPv6 capability for FCIP links to 7800 and FX8-24 blade. This step is mandatory even if IPv6 will not be used on the FCIP ports. Not performing this step will result in unpredictable behaviors on the FCIP links. Please note that in the case of FX8-24, only the FX8-24 blade needs to be power cycled and not the entire DCX/DCX-4S chassis.

Note:

Firmware downgrade from FOS v7.x to FOS v6.4.3 will be blocked if a configured port name is longer than 32 characters even though FOS v6.4.3 supports a port name longer than 32 characters.

Important Notes

This section contains information that you should consider before you use this Fabric OS release.

DCFM Compatibility

FOS v6.4 is compatible with Brocade's Data Center Fabric Manager (DCFM) v10.4 management software. DCFM is a comprehensive SAN management application that enables end-to-end management of Brocade Data Center Fabrics. It is the next-generation successor product to legacy Brocade management products (Brocade Fabric Manager (FM) and Brocade Enterprise Fabric Connectivity Manager (EFCM)).

DCFM 10.4 is available in three editions:

- ***DCFM Professional:*** a fabric management application that is ideally suited for small-size businesses that need a lightweight management product to manage their smaller fabrics. It manages one FOS fabric at a time and up to 1,000 switch ports. It provides support for Brocade FC switches, Brocade HBAs / CNAs, and Fibre Channel over Ethernet (FCoE) / Converged Enhanced Ethernet (CEE) switches.
- ***DCFM Professional Plus***: a SAN management application designed for medium-size businesses or departmental SANs for managing up to four physical or virtual fabrics (FOS, M-EOS and Mixed fabrics) and up to 2,560 switch ports. It supports Brocade backbone and director products (DCX-4S, 48Ks, etc.), FC switches, Fibre Channel Over IP (FCIP) switches, Fibre Channel Routing (FCR) switches/ Integrated Routing (IR) capabilities, Fibre Channel over Ethernet (FCoE) / Converged Enhanced Ethernet (CEE) switches, and Brocade HBAs / CNAs.
- ***DCFM Enterprise***: a management application designed for enterprise-class SANs for managing up to 24 physical or virtual fabrics and up to 9,000 switch ports. DCFM Enterprise supports all the hardware platforms and features that DCFM Professional Plus supports, and adds support for the Brocade DCX Backbone and Fiber Connectivity (FICON) capabilities.

DCFM 10.4 now includes introductory support for FOS switches or fabrics using Administrative Domains (ADs). These details and more about DCFM's new enhancements can be found in the DCFM 10.4 Release Notes, DCFM 10.4 User Guide, and DCFM 10.4 Installation, Migration, & Transition Guide.

EFCM and Fabric Manager Compatibility

With the introduction of DCFM, both EFCM and Fabric Manager (FM) have been put into sustaining mode. Consequently, **neither EFCM nor FM are qualified or supported for management of switches operating with FOS v6.3 and later firmware versions**. Very basic evaluation has shown that there are significant compatibility issues between FM and FOS v6.3, including (but not limited to) compromised functionality in the zoning dialog and performance graphs, port enabling/disabling, and the FICON wizard. Similar issues are anticipated to be present when managing FOS v6.4 with FM.

WebTools Compatibility

FOS v6.4 is qualified and supported only with JRE 1.6.0 Update 16.

SMI Compatibility

- FOS v6.4 is supported with SMI-S agent 120.11.0.
- FOS v6.4 is supported with SMI-S Agent integrated with DCFM 10.4

Fabric OS Compatibility

The following table lists the earliest versions of Brocade software supported in this release, that is, the *earliest* supported software versions that interoperate. Brocade recommends using the *latest* software versions to get the greatest benefit from the SAN.

To ensure that a configuration is fully supported, always check the appropriate SAN, storage or blade server product support page to verify support of specific code levels on specific switch platforms prior to installing on your switch. Use only FOS versions that are supported by the provider.

When using the Virtual Fabrics feature, it is highly recommended that all switches participating in a fabric with a logical switch use the latest firmware available for those switches. All switches must be operating at minimum firmware levels noted in the FOS Interoperability table below.

For a list of the effective end-of-life dates for all versions of Fabric OS, visit the following Brocade Web site:

http://www.brocade.com/support/end_of_life.jsp

Supported Products and FOS Interoperability	
Brocade 2000-series switches	Not supported, end of support (December 2007)
Brocade 3200, 3800	Not supported
Brocade 3000	v3.2.1c [1 6 7]
Silkworm 3016, 3250, 3850 and Brocade 3900, 4100, 4900, 24000, 7500, 7500E, 5000, 200E, 48000	v5.3.2 (2G and 4G platforms) and v6.1.0e and later [5] (4G platforms only)
Silkworm 12000	v5.0.x [7] (Direct E_Port connections are not supported – must use FCR)
Brocade 4012, 4016, 4018, 4020, 4024, 4424	v5.3.1b, v6.1.0e and later [5]
Brocade 5470	v6.3.1 and later
Brocade 5410, 5480, 5424	v6.2.0 and later
Brocade 8000	v6.1.2_CEE1 or later
Brocade 7800, DCX and DCX-4S with FCOE10-24 or FX8-24 blades	v6.3 and later
Brocade DCX and DCX-4S with FC8-64 blade	v6.4
Brocade DCX, 300, 5100, 5300	v6.1.0e and later [5]
VA-40FC	v6.2.1_vfc, v6.2.2, v6.3.1, v6.4
Brocade DCX-4S	v6.2.0 and later
Brocade DCX with FS8-18 blade(s), Brocade Encryption Switch	v6.1.1_enc and later
Brocade DCX/DCX-4S/48000 with FA4-18 blade(s), Brocade 7600	v5.2.x or later (DCX requires v6.0.x or later, DCX-4S requires 6.2.x or later)

Supported Products and FOS Interoperability	
Mi10k, M6140, ED-6064, ES-3232, ES-4300, ES-4400, ES-4500, ES-4700 (McDATA Fabric Mode and Open Fabric Mode) [2] [4]	M-EOS v9.9.5 or later [3]
McDATA ED-5000 32-port FC director	Not Supported
Multi-Protocol Router interop	
Brocade 7420	XPath v7.4.1 [8]
Brocade 7500 and FR4-18i blade	v5.1.0 and higher [8]
McDATA SANRouters 1620 and 2640	Not Supported

Table Notes:

[1] All zoning and fabric operations performed in a fabric with products running older versions of FOS should be done via interfaces to products running the latest version of FOS. This is particularly important for Brocade 3XXX series switches that do not support zoning configuration for newer products.

[2] Other M-EOS models may participate in a fabric with FOS v6.4, but may not be directly attached via E_Port to any products running FOS v6.4. The McDATA ED-5000 director may not participate in a mixed M-EOS/FOS fabric.

[3] It is highly recommended that M-EOS products operate with the most recent version of M-EOS released and supported for interoperability. M-EOS 9.7.2 is the minimum version of firmware that is supported to interoperate with FOS 6.4. For support of frame redirection in McDATA Fabric Mode (interopmode 2), M-series products must use M-EOS v9.8 or later. For support of frame redirection in McDATA Open Fabric Mode (interopmode 3), M-series products must use M-EOS v9.9 or later. Only the ES-4400, ES-4700, M6140, and Mi10k may have devices directly attached that are having data encrypted or unencrypted.

[4] When routing to an M-EOS edge fabric using frame redirection, the M-EOS fabric must have a FOS-based product in order to configure the frame redirection zone information in the edge fabric.

[5] When directly attached to a Host or Target that is part of an encryption flow.

[6] Products operating with FOS versions less than v5.3.1b or v6.1.0e may not participate in a logical fabric that is using XISLs (in the base fabric).

[7] These platforms may not be directly attached to hosts or targets for encryption flows.

[8] McDATA 1620 and 2640 SANRouters should not be used with XPath or FOS-based routing (FCR) for connections to the same edge fabric. A switch running FOS v6.4 should not be connected to an E-port on an AP7420. A switch in interopmode 0 (Brocade Native Mode) with FOS v6.4 should not be connected to an EX_Port on an AP7420. Please see important notes for additional details.

Blade Support

Fabric OS v6.4 software is fully qualified and supports the blades for the 48000 platform noted in the following table:

48000 Blade Support Matrix	
Port blade 16, 32 and 48-port 4Gbit blades (FC4-16, FC4-32, FC4-48), 16, 32 and 48-port 8Gbit blade (FC8-16, FC8-32, FC8-48), and the 6-port 10G FC blade (FC10-6)	Supported with any mix and up to 8 of each. No restrictions around intermix. The 48000 must run Fabric OS v6.0 or later to support the FC8-16 port blade and Fabric OS v6.1 or later to support the FC8-32 and FC8-48 port blades. **Note:** FC8-64 is not supported on 48000.

48000 Blade Support Matrix	
Intelligent blade	Up to a total of 4 Intelligent blades (includes iSCSI, FCIP/FCR and Application blade), FC4-16IP, FR4-18i, and FA4-18 respectively. See below for intermix limitations, exceptions, and a max of each blade.
iSCSI blade (FC4-16IP)	Up to a maximum of 4 blades of this type.
FC-IP/FC Router blade (FR4-18i)	Up to a maximum of 2 blades of this type. This can be extended under special circumstances but must be approved by Brocade's Product Team. Up to 8 FR4-18i blades can be installed if they are used only for FC FastWrite or FCIP without routing.
Virtualization/Application Blade (FA4-18)	Up to a maximum of 2 blades of this type.
Encryption Blade (FS8-18), Extension Blade (FX8-24), FCoE/CEE Blade (FCOE10-24)	Not supported.

Fabric OS v6.4 software is fully qualified and supports the blades for the DCX/DCX-4S noted in the following table:

DCX/DCX-4S Blade Support Matrix	
16, 32, 48 and 64-port 8Gbit port blades (FC8-16, FC8-32, FC8-48, FC8-64) and the 6-port 10G FC blade (FC10-6)	16, 32 and 48-port blades are supported with FOS v6.0 and above, 64-port blade is supported starting with FOS v6.4.0, with any mix and up to 8/4 of each. No restrictions around intermix.
Intelligent blade	Up to a total of 8/4 intelligent blades. See below for maximum supported limits of each blade.
FC-IP/FC Router blade (FR4-18i)	Up to a maximum of 4 blades of this type. This can be extended under special circumstances, but must be approved by Brocade's Product Team. Up to 8 FR4-18i blades can be installed in a DCX if they are used only for FC FastWrite or FCIP without routing.
Virtualization/Application Blade (FA4-18)	Up to a maximum of 4 blades of this type.
Encryption Blade (FS8-18)	Up to a maximum of 4 blades of this type.
Extension Blade (FX8-24)	Up to a maximum of 4 blades of this type.
FCoE/CEE Blade (FCOE10-24)	Up to a maximum of 2 blades of this type. Cannot be used in a chassis with other intelligent blades (can only be installed concurrently with FC8-XX and/or FC10-6 blades). Cannot be used in a DCX/DCX-4S chassis with FC8-64 blade in FOS v6.4.

Note: the iSCSI FC4-16IP blade is not qualified for the DCX/DCX-4S.

Power Supply Requirements for Blades in 48k and DCX/DCX-4S Chassis					
Blades	**Type of Blade**	**48K** @200-240 VAC (Redundant configurations)	**DCX/DCX-4S** @110 VAC (Redundant configurations)	**DCX/DCX-4S** @200-240 VAC (Redundant configurations)	**Comments**
FC4-16, FC 4-32, FC4-48, FC8-16, FC8-32	Port Blade	2 Power Supplies	2 Power Supplies	2 Power Supplies	• Distribute the Power Supplies evenly to 2 different AC connections for redundancy.
FC10-6, FC8-16, FC8-32, FC 8-48, *FC8-64*[1]	Port Blade	4 Power Supplies	Not Supported	2 Power Supplies	
FR4-18i, FC4-16IP[2], FA4-18	Intelligent Blade	4 Power Supplies	Not Supported	2 Power Supplies	
FS8-18, FX8-24, FCOE10-24	Intelligent Blade	N/A	Not Supported	DCX: 2 or 4 Power Supplies DCX-4S: 2 Power Supplies	• For DCX with three or more FS8-18 Blades, (2+2) 220VAC Power Supplies are required for redundancy. • For DCX with one or two FS8-18 Blades, (2) 220VAC Power Supplies are required for redundancy. • For DCX-4S, (2) 220VAC Power Supplies provide redundant configuration with any number of FS8-18 Blades. • For both DCX and DCX-4S with FX8-24 blades, (1+1) 220VAC Power Supplies are required for redundancy.

[1] FC8-64 is not supported on 48K

[2] FC4-16IP is not supported on DCX/DCX-4S

FOS Feature Compatibility in Native Connectivity Modes

Some FOS features are not fully supported when operating in the native connectivity modes for deployment with M-EOS based products. All Brocade models that are supported by Fabric OS v6.4 support both interopmodes 2 and 3 with the exception of the Brocade 4100 and 8000 and DCX/DCX-4S with one or more FCOE10-24 blades.

The following table specifies the support of various FOS features when operating in either interopmode 2 (McDATA Fabric Mode) or interopmode 3 (Open Fabric Mode) with Fabric OS v6.4.

FOS Features (supported in interopmode 0)	**FOS v6.4**	
IM = Interopmode	**IM 2**	**IM 3**
L2 FOS Hot Code Load	Yes	Yes
FOS Hot Code Load with FCR	Yes	Yes
Zone Activation Support	Yes	Yes[11]
Traffic Isolation Zones[1]	Yes	No
Frame Redirection (devices attached to FOS)[1]	Yes	Yes[11]
Frame Redirection (devices attached to M-EOS) [1]	Yes	Yes[11]
Frame Redirection over FCR[10]	Yes	Yes[11]
FCR Fabric Binding (route to M-EOS fabric with Fabric binding) [9]	Yes	Yes
L2 Fabric Binding	Yes	No*
DCC policies	No	No
SCC policies	Yes[4]	No*
E/EX_Port Authentication	Yes	Yes
ISL Trunking (frame-level)	Yes[2]	Yes[2]
Dynamic Path Selection (DPS, exchange based routing)	Yes[3]	Yes[3]
Dynamic Load Sharing (DLS, port based routing)	Yes	Yes
Virtual Channels (VC RDY)	Yes[2]	Yes[2]
FICON Management Server (Cascading)	Yes	No*
FICON MIHPTO	Yes	No*
Full Scalability (to maximum M-EOS fabric limits)	Yes	Yes
Adaptive Networking: QoS	No	No
Adaptive Networking: Ingress Rate Limiting	No*	No*
Advanced Performance Monitoring (APM)	No*	No*
APM: TopTalkers	No*	No*
Admin Domains	No	No
Secure Fabric OS[5]	N/A	N/A
Fabric Watch	Yes	Yes
Ports on Demand (POD)	Yes	Yes
NPIV	Yes	Yes
Timer Server function (NTP)	No	No
Open E_Port[6]	N/A	N/A
Broadcast Zoning	No	No
FDMI	No	No
Remote Switch	No	No
Port Mirroring	Yes	Yes
Extended Fabrics	Yes	Yes[7]
Alias Server	No	No
Platform Service	No	No

FOS Features (supported in interopmode 0)	FOS v6.4	
IM = Interopmode	IM 2	IM 3
FCIP (VE_Ports)	Yes	Yes
IPFC (IP over FC)	Yes[8]	Yes[8]
M-EOS ALPA 0x13 configuration	Yes	Yes
VE to VEX Port	Yes	Yes
Integrated Routing[9]	Yes[9]	Yes
Domain Offset Support	Yes	Yes
239 Domain Support (available on Mi10k only)	N/A	Yes
Masterless F_PORT Trunking (AG connect to FOS switches only)	Yes	Yes
FC10-6-to-FC10-6 ISL	Yes	Yes
RASLOG Events on duplicate WWNs	Yes	Yes
Virtual Fabrics	Yes	Yes
Logical Fabric using LISLs (XISLs in Base Fabric)	No	No
Port Fencing	Yes	Yes
Bottleneck Detection	Yes	Yes
Lossless DLS	No	No

* indicates the feature is available but not officially tested or supported

1. Requires M-EOS 9.7 or later for redirection between devices attached to FOS switches, M-EOS 9.8 for redirection between devices attached to M-EOS switches, M-EOS 9.9 for use in McDATA Open Fabric Mode. Supported M-EOS platforms include M4400, M4700, M6140, and Mi10k.
2. Only allowed between FOS-based switches.
3. DPS is supported outbound from FOS-based switches. (M-EOS can provide reciprocal load balancing using OpenTrunking).
4. SCC policies only supported in conjunction with L2 Fabric Binding support.
5. Not supported in FOS 6.0 or later.
6. Mode 3 only qualified with M-EOS switches.
7. Not on FCR.
8. Only supported locally within the FOS switch.
9. All routers (EX_Ports) must reside in a backbone fabric running in interopmode 0 only. Only edge fabrics with devices imported to the backbone fabric or other edge fabrics may be operating in IM2 or IM3.
10. To support Frame Redirection to an edge M-EOS fabric, there must be at least one FOS switch in the edge fabric to configure Frame Redirection Zones.
11. Only Frame Redirection Zones may be configured on FOS platforms and sent to fabrics operating in McDATA Open Fabric Mode (interopmode 3). M-EOS 9.9 is required to support FR Zones in McDATA Open Fabric Mode.

Note: FICON Cascaded CUP with M-EOS and FOS qualified only on select platforms.

SAS Version Requirements for FA4-18 and Brocade 7600

SAS firmware version 3.4.3 is compatible with FOS v6.4.3.

Scalability

All scalability limits are subject to change. Limits may be increased once further testing has been completed, even after the release of Fabric OS. For current scalability limits for Fabric OS, refer to the *Brocade Scalability Guidelines* document, available under the *Technology and Architecture Resources* section at http://www.brocade.com/compatibility

Other Important Notes and Recommendations

Management Server Platform Capability support changes in FOS v6.4

FOS v6.4 no longer automatically enables the Management Server (MS) Platform capability when a switch attempts to join a fabric that has these services enabled. This prevents a FOS v6.4 switch from joining such a fabric, and ISL will be disabled with a RAS log message. To allow a FOS v6.4 switch to join such fabrics msPlMgmtActivate command should be used to enable the Management Server platform services explicitly.

FCIP, FCIP Trunking and High Bandwidth (Brocade 7800 and FX8-24)

- IPsec is not supported on XGE0 of FX8-24 blade starting with FOS v6.4. IPsec is supported on XGE1 and GE0 through GE9.
- IPsec is supported on FCIP tunnels that use only IPV4 connections.
- FICON networks with FCIP tunnels do not support DPS (aptpolicy 3) configurations. This applies to both emulating and non-emulating FCIP tunnels.
- The maximum supported MTU size for the Brocade 7800/FX8-24 is 1500.
- FCIP connections are supported only between the Brocade 7800/FX8-24 and another 7800/FX8-24. FCIP tunnels are not supported between the 7800/FX8-24 and the previous generation Brocade 7500/FR4-18i platforms.
- When multiple FCIP tunnels are present on a switch and additional circuits (and the network bandwidth provided by those circuits) are added to an already active tunnel, there may be a short period of time where some frame loss can occur due to the process to re-fresh the internal FC frame routing tables in the switch. Therefore, additional circuits should only be added during low I/O periods utilizing the FCIP Tunnel being modified. In addition, if the circuit operation (addition/deletion) to the tunnel increases/decreases the total tunnel bandwidth, an FCIP Tunnel (VE port) disable/enable sequence should be performed after the addition/deletion of the circuit. This will allow the switch to adjust the internal routes to utilize the new bandwidth fully.
- Switching modes between 10G and 1G is disruptive for FCIP traffic.
- Keep alive timeout (milliseconds) - Valid range is 500ms to 7,200,000ms (inclusive). FOS default value is 10000ms (10 seconds). If FICON is configured the recommended value is 1000 ms (1 second), otherwise the recommended value is the default of 10 seconds. For impairment networks with 100ms latency and 0.5% packet loss, keep-alive time out should be configured as 30seconds. If the local and remote circuit configurations' Keep Alive Timeout values do not match, the tunnel will use the lower of the two configured values.
- In order to perform the following operations it is necessary to delete the FCIP configuration on the affected ports first:
    - Switching modes between 1G/10G/Dual.
    - Moving VE/GE port between logical switches.
- ARL (Adaptive Rate Limiting) is not supported on 10G tunnels.
- "Inband Management" is not supported on the Brocade 7800.
- FOS v6.4 only supports up to four 1 Gig Circuits per VE/FCIP Tunnel for the 1 gig interfaces. A VE/FCIP Tunnel created over the 10 Gig Interfaces will be limited to 10 circuits created using IPIFs on the same 10 GbE port (and no more than 1G per circuit).As a recommended best practice, the VE tunnel shouldn't be over-subscribed (e.g. 8G FC traffic over 500Mbps tunnel). General guidelines are 2:1 subscription without compression and 4:1 with compression.
- Non-disruptive firmware activation will disrupt I/O traffic on FCIP links.

- Differences between the Brocade 7800/FX8-24 platforms and previous generation 7500/FR4-18i platforms include:
    - On the 7800, the GbE port does not directly correlate to a VE port
    - On the FX8-24, GbE ports 0-9 or 10GbE port 1 (xge1) correspond to VE ports 12-21, and 10 GbE port 0 (xge0) corresponds to VE ports 22-31
    - The CLI syntax for the 7800/FX8-24 varies from the 7500/FR4-18i. Please refer to the *Brocade Fabric OS Command Reference* document for FOS v6.4 for details
- Under Traffic Isolation Zone, configurations with fail over enabled, Non-TI zone traffic will use the dedicated path if no other E or VE paths through the fabric exist, or if the non-dedicated paths are not the shortest paths. (A higher bandwidth tunnel with multiple circuits will become shortest path compared to a single tunnel).
- A VE/VEX Tunnel and E/EX FC port cannot connect to the same domain at the same time.
- The recommended Keep Alive Timeout must be the same on tunnel/circuits on the switches on both sides of a link.
- Latency measurements supported on FCIP Tunnels:
    - 1GbE - 200ms round trip time and 1% Loss
    - 10GbE – 100ms round trip and 0.1% Loss
- Brocade 7800 supports Optical and Copper Media types on GE0 and GE1 interfaces. Copper Media type is default on GE0/GE1 ports and does not support auto-sense functions.
- After inserting a 4G SFP in GE ports of an FX8-24 blade or 7800 switch, sometimes "sfpshow" output might display "Cannot read serial data!". Removing and re-inserting the SFP should resolve this issue. It is recommended that users perform sfpshow immediately after inserting the SFP and ensure SFP is seated properly before connecting the cables.
- When running FOS v6.4.0 or later, if any of the following features are enabled in the FCIP configuration, a downgrade operation below FOS v6.4.0 will be blocked until the features are removed from the FCIP config:
    - IPv6
    - IPSec on the FX8-24
    - DSCP Markings
    - Advanced Compression options 2 and 3 on the FX8-24
    - VEX ports on the FX8-24

FCIP (Brocade 7500 and FR4-18i)

- When configuring an FCIP Tunnel to use VLAN tagging on a 7500 or FR4-18i, a static ARP entry must be configured on the 7500/FR4-18i GE interface for the local gateway. Also a static ARP entry must be added in the local gateway for the 7500/FR4-18i GE port.

FCoE/CEE (Brocade 8000 and FCOE10-24)

- The Brocade 8000 balances the FCoE bandwidth across all six port groups (each port group contains four ports). To get optimum performance for FCoE traffic it is recommended that the user distribute server CNA connections across these six port groups.
- Hot plugging a CP with firmware level less than FOS v6.3.0 into a DCX or DCX-4S with an active FCOE10-24 blade will result in the new standby CP not coming up.
- Brocade recommends that Converged Mode be enabled on all interfaces connected to CNAs.

- When operating in Converged Mode, tagged traffic on the native VLAN of the switch interface is processed normally. The host should be configured not to send VLAN tagged traffic on the switch's native VLAN.
- When operating in Converged Mode, tagged frames coming with a VLAN tag equal to the configured native VLAN are dropped.
- The Converged Network Adapter (CNA) may lose connectivity to the Brocade 8000/FCOE10-24 if the CNA interface is toggled repeatedly over time. This issue is related to the CNA and rebooting the CNA restores connectivity.
- Although the Brocade 8000 and FCOE10-24 support the configuration of multiple CEE maps, it is recommended to use only one CEE map on all interfaces connected to CNAs. Additionally, CEE maps are not recommended for use with non-FCoE traffic. QoS commands are recommended for interfaces carrying non-FCoE traffic.
- It is recommended that Spanning Tree Protocol and its variants be disabled on CEE interfaces that are connected to a server.
- The Fabric Provided MAC Address (FPMA) and the Fibre Channel Identifier (FCID) assigned to a VN_Port cannot be associated with any single front-end CEE port on which the FLOGI was received.
- LLDP neighbor information may be released before the timer expires when DCBX is enabled on a CEE interface. This occurs only when the CEE interface state changes from active to any other state. When the DCBX is not enabled, the neighbor information is not released until the timer expires, irrespective of the interface state.
- The FCoE Login Group Name should be unique in a fabric wide FCoE Login Management Configuration. The merge logic is designed to modify the Login Group Name during merge when Login group names in participating configurations conflict with each other. The current OUI of 00051E is being used by Brocade, while assigning the WWNs to 8000s, DCXs and DCX4Ss, which would make only the last 3 bytes as different for any two 8000s, DCXs or DCX4Ss. Considering this assignment method, the merge logic would rename the login group by including the last 3 bytes of WWN in the login group name, so that they are unique in the merged configuration.
- For switches having different OUI indices from the 8 assigned to Brocade (for ex: 00051E and 006069), WWNs can differ in more than 3 bytes. In this case, after normal merge and a rename as per above described logic, login group names can be the same for WWNs differing only in OUIs. The merge logic would drop one of the Login Groups to satisfy the requirement to keep the Login Group Name unique in the fabric wide configuration.
- Ethernet switch services must be explicitly enabled using the command *"fosconfig –enable ethsw"* before powering on an FCOE10-24 blade. Failure to do so will cause the blade to be faulted (fault 9). Users can enable ethsw after upgrading firmware without FC traffic interruption.
- The Brocade 8000 does not support non-disruptive hot code loads (HCL). Upgrading the Brocade 8000 to FOS 6.4 or downgrading from v6.4 is disruptive to the IO through the switch.
- A code load on a DCX or DCX-4s with one or more FCOE10-24 blades will disrupt the traffic going through those FCOE10-24 blades.
- HA Failover of CP blades in DC*X* or DCS-4s will also result in disruption of traffic through the FCOE10-24 blades.
- Connecting a Brocade 8000 to an FCR-capable switch with fcrbcast config enabled will cause a storm of broadcast traffic resulting in termination of iswitchd.
- When rebooting a DCX or DCX-4S with an FCOE10-24 blade, Qlogic CNA and LSAN zoning, the switch will become very unresponsive for a period of time. This is due to the CNA sending excessive MS queries to the switch.

- An FCOE10-24 blade installed in the highest numbered slot of a DCX or DCX-4S chassis does not send out FIP unsolicited advertisements. Therefore, it does not support FCoE functionality when installed in this slot.
- The Brocade 8000 and FCOE10-24 can handle 169 small FCoE frames in bursts. If you are using the Brocade 8000 or FCOE10-24, and you delete a large number of v-ports with HCM, some of the v-ports may not appear to be deleted. To correct this, disable and re-enable FCoE with the following CLI commands:

  switch:admin>**fcoe –disable**

  switch:admin>**fcoe –enable**
- On a platform running FOS 6.4.x, if a user creates multiple CEE maps with same names but only differing in combinations of uppercase/lowercase alphabets, "show running-config" will merge all of them into a single CEE map. Hence it is recommended that users use a distinct name for each CEE map.

Virtual Fabrics

- On Virtual Fabrics capable platforms, the Virtual Fabrics feature must be enabled in order to utilize the related capabilities including Logical Switches and Logical Fabrics. On units that ship with FOS v6.3 installed, the Virtual Fabrics feature is enabled by default on capable platforms.
- When creating Logical Fabrics that include switches that are not Virtual Fabrics capable, it is possible to have two Logical Switches with different FIDs in the same fabric connected via a VF incapable switch. Extra caution should be used to verify the FIDs match for all switches in the same Logical Fabric.
- A switch with Virtual Fabrics enabled may not participate in a fabric that is using Password Database distribution or Administrative Domains. The Virtual Fabrics feature must be disabled prior to deploying in a fabric using these features.
- Virtual Fabrics is not supported on Brocade 7800.
- VF dedicated ISLs are supported on FX8-24 blade. XISLs are not supported.

Licensing Behavior

- When operating a switch with Fabric OS v6.3, some licenses may display as “Unknown.” This is due to changes in licensing requirements for some features that no longer require a license key that may still be installed on a switch.
- If a Universal temporary license is enabled for a slot-based license feature, the license expiration date displays as “NA” in Web Tools. Use the **licenseshow** command to display the correct expiration date.

Encryption Behavior for the Brocade Encryption Switch (BES) and FS8-18

- Configuration limits when using IBM’s Tivoli Key Lifecycle Manager V2 (TKLM):
  - Maximum of 6 Encryption nodes per Windows/Linux TKLM server.
  - Maximum of 10 Encryption nodes per AIX TKLM server.
  - Maximum of 16 tape sessions per Encryption node.
  - Minimum of 180 second timeout for tape hosts.
- Disk Encryption Rekey: Configupload/download does not retain the auto rekey value. The first auto rekey after configdownload will occur based on the previously configured key life. The newly configured key life value (as part of configdownload) will be used after the first auto rekey. (Defect 315174)
- Disk encryption is not support for IBM iSeries (AS/400) hosts.

- 3Par Session/Enclosure LUNs to CTCs are now supported. Session/Enclosure LUNs (LUN 0xFE) used by 3Par InServ arrays must be added to CryptoTarget (CTC) containers with LUN state "cleartext", encryption policy "cleartext". No enforcement will be performed.
- The "*cryptocfg –manual_rekey –all*" command should not be used in environments with multiple encryption engines (FS8-18 blades) installed in a director-class chassis when more than one encryption engine has access to the same LUN. In such situations, use the "*cryptocfg –manual_rekey <CTC> <LUN Num> <Initiator PWWN>*" command to manually rekey these LUNs.
- When adding Nodes to an Encryption Group, ensure all Node Encryption Engines are in an Enabled state.
- When host clusters are deployed in an Encryption environment, please note the following recommendations:
    - If two EEs (encryption engines) are part of a HAC, configure the host/target pair such that they form a multipath from both EEs. Avoid connecting both the host/target pairs to the same EE. This connectivity does not give full redundancy in case of EE failure resulting in HAC failover.
    - Since quorum disk plays a vital role in keeping the cluster in sync, please configure the quorum disk to be outside of the encryption environment.
- The "–key_lifespan" option has no effect for "cryptocfg –add –LUN", and only has an effect for "cryptocfg --create –tapepool" for tape pools declared "-encryption_format native". For all other encryption cases, a new key is generated each time a medium is rewound and block zero is written or overwritten. For the same reason, the "Key Life" field in the output of "cryptocfg --show -container -all –stat" should always be ignored, and the "Key life" field in "cryptocfg --show –tapepool –cfg" is only significant for native-encrypted pools.
- The Quorum Authentication feature requires a compatible DCFM release (DCFM 10.3 or later) that supports this feature. Note, all nodes in the EG must be running FOS v6.3.0 or later for quorum authentication to be properly supported.
- The System Card feature requires a compatible DCFM release that supports this feature. Note, all nodes in the EG must be running FOS v6.3.0 or later for system verification to be properly supported.
- The Brocade Encryption switch and FS8-18 blade do not support QoS. When using encryption or Frame Redirection, participating flows should not be included in QoS Zones.
- When using Brocade Native Mode, in LKM installations, manual rekey is highly recommended. If auto rekey is desired, the key expiry date should be configured only when the LUN is created. Never modify the expiry date after configuring a LUN. If you modify the expiry time, after configuring the LUN the expiration date will not update properly.
- SKM is supported with Multiple Nodes and Dual SKM Key Vaults. Two-way certificate exchange is supported. Please refer to the Encryption Admin Guide for configuration information. If using dual SKMs on BES/FS8-18 Encryption Group, then these SKM Appliances must be clustered. Failure to cluster will result in key creation failure. Otherwise, register only one SKM on the BES/FS8-18 Encryption Group.
- For dual LKM configuration on the Brocade Encryption Switch (BES) or a DCX/DCX-4S with FS8-18 blades as the primary and secondary key vaults, these LKM appliances must be clustered (linked). Failure to cluster will result in key creation failure. Otherwise, register only one LKM on the BES/FS8-18 Encryption Group. Please refer to the Encryption Admin Guide for configuration information.
- The RKM Appliance A1.6, SW v2.7 is supported. The procedure for setting up the RKM Appliance with BES or a DCX/DCX-4S with FS8-18 blades is located in the Encryption Admin Guide.
- Support for registering a 2nd RKM Appliance on BES/FS8-18 is blocked. If the RKM Appliances are clustered, then the virtual IP address hosted by a 3rd party IP load balancer for the RKM Cluster must be registered on BES/FS8-18 in the primary slot for Key Vault IP.

- With Windows and Veritas Volume Manager/Veritas Dynamic Multipathing, when LUN sizes less than 400MB are presented to BES for encryption, a host panic may occur and this configuration is not supported in the FOS v6.3.1 or later release.
- HCL from FOS v6.3.x to v6.4 is supported. Cryptographic operations and I/O will be disrupted but other layer 2 traffic will not.
- Relative to the BES and a DCX with FS8-18, all nodes in the Encryption Group must be at the same firmware level of FOS v6.2 or later before starting a rekey or First Time Encryption operation. Make sure that existing rekey or First Time Encryption operations complete before upgrading any of the encryption products in the Encryption Group. Also, make sure that the upgrade of all nodes in the Encryption Group completes before starting a rekey or First Time Encryption operation.
- To clean up the stale rekey information for the LUN, follow one of the following two methods:

  Method 1:

  1. First, modify the LUN policy from "encrypt" to "cleartext" and commit. The LUN will become disabled.
  2. Enable the LUN using "cryptocfg --enable –LUN". Modify the LUN policy from "clear-text" to "encrypt" with "enable_encexistingdata" to enable the first time encryption and do commit. This will clear the stale rekey metadata on the LUN and the LUN can be used again for encryption.

  Method 2:

  1. Remove the LUN from Crypto Target Container and commit.
  2. Add the LUN back to the Crypto Target Container with LUN State="clear-text", policy="encrypt" and "enable_encexistingdata" set for enabling the First Time Encryption and commit. This will clear the stale rekey metadata on the LUN and the LUN can be used again for encryption.
- TEMS key vault support troubleshooting tips:
  - Regarding TEMS key vault (KV) communication with a Brocade encryption group, the default communication port setting for the TEMS KV is 37208, however, the Brocade encryption members and leader use 9000 so this needs to be reset on NCKA. Additionally, the following is a checklist of things to review if the initial attempt to connect to the KV fails:
    - Check physical and logical connection via a ping on port 9000, this should be the first check.
    - For the group leader node, the kac client cert and the kv cert files are to be identical.
    - For group member nodes the kv file is to be the same as the kv file on the group leader node.
    - Crosscheck to ensure the private key file corresponds to the kac public cert file on any node.
- When disk and tape CTCs are hosted on the same encryption engine, re-keying cannot be done while tape backup or restore operations are running. Re-keying operations must be scheduled at a time that does not conflict with normal tape I/O operations. The LUNs should not be configured with auto rekey option when single EE has disk and tape CTCs.
- Gatekeeper LUNs used by SYMAPI on the host for configuring SRDF/TF using in-band management must be added to their containers with LUN state as "cleartext", encryption policy as "cleartext" and without "-newLUN" option.
- For new features added to encryption in FOS v6.4.0, such as, disk device decommissioning, combined disk-tape encryption support on the same encryption engine, and redundant key ID metadata option for replication environments, all the nodes in the encryption group must be running

FOS v6.4.0 or higher versions of FOS. Firmware downgrade will be prevented from FOS v6.4.0 to a lower version if one or more of these features are in use.

- Special Notes for HP Data Protector backup/restore application
    - Tape Pool encryption policy specification:
        - On Windows Systems, HP Data Protector can be used with tape pool encryption specification only if the following pool label options are used:
            - Pick from Barcode
            - User Supplied – Only 9 characters or less

          For other options, behavior defaults to Tape LUN encryption policy.
        - On HP-UX systems, HP Data Protector cannot be used with tape pool encryption specification for any of the pool options. The behavior defaults to Tape LUN Encryption Policy.
    - Tape LUN encryption policy specification:
        - No restrictions, tape LUN encryption policy specification can be used with HP Data Protector on HP-UX and Windows systems.
- For multi-pathed disk LUNs, the same key life period must be set for all LUN paths otherwise, auto rekey may be initiated earlier than expected (defect 319097). Also when adding LUNs with multiple paths to the same EE, ensure that the identical key life period is used for all the paths to the LUN and that modifications of this value after initially set is avoided (defect 316100).
- Adding LUNs to a crypto target container that has already been committed will require a host to re-discover the LUN to see it (defect 318425).

Adaptive Networking/Flow-Based QoS Prioritization

- When using QoS in a fabric with 4G ports or switches, FOS v6.0 or later must be installed on all products in order to pass QoS info. E_Ports from the DCX to other switches must come up AFTER FOS v6.0 is running on those switches.
- Flow based QoS is NOT supported on FC8 blades in the Brocade 48000.
- Any products that are not capable of operating with FOS 6.0 may NOT exist in a fabric with Flow based QoS. Major problems will occur if previous generation 2G products exist in the fabric.

Access Gateway

- When running Adaptive Networking in AG mode note the following:
    - QoS takes precedence over ingress rate limiting
    - Ingress Rate Limiting is not enforced on trunked ports
- Users who want to utilize Access Gateway's Device-based mapping feature in the ESX environments are encouraged to refer to the SAN TechNote GA-TN-276-00 for best implementation practices. Please follow these instructions to access this technote:
    - Log in to http://my.brocade.com
    - Go to Documentation > Tech Notes.
    - Look for the Tech Note on Access Gateway Device-Based Mapping in VMware ESX Server.

Bottleneck Detection

- Due to memory constraints, when using Bottleneck Detection on the Brocade 48000, a maximum of 100 ports should be configured and enabled for monitoring at any time.

FCR

- IPFC over FCR is now disabled by default. Switches that are upgraded to FOS v6.3 will retain their configuration settings for IPFC over FCR. The change to the default configuration only applies to new units shipping with FOS v6.3 or units running v6.3 that are reset to a default configuration. Use *fcrbcast - - enable* to explicitly enable IPFC over FCR.
- Broadcast frame forwarding is not supported in an FCR fabric with a Brocade 8000. By default, broadcast frame forwarding is disabled on the FC router. If your edge fabric includes a Brocade 8000, do not enable broadcast frame forwarding on the FC router because this can degrade FCR performance when there is excessive broadcast traffic.
- With FC8 blades, the switch must be disabled to change the backbone fabric ID.
- With routing and dual backbone fabrics, the backbone fabric ID must be changed to keep the IDs unique.
- When using FC Routing in a backbone to edge configuration with an Mi10K in the edge fabric, users may experience slow throughput for hosts attached to the Mi10K. Users may encounter this following a bounced IFL connection between the backbone and edge fabric. This slowdown can be resolved by disabling/enabling the Mi10K ports for the hosts that are impacted.
- Mi10K Directors operating with firmware prior to M-EOSn v9.9.5 may experience repeated system faults when attached as an FCR edge switch to a Brocade 7800 EX Port. To avoid this, ensure that the Mi10K is operating with M-EOSn v9.9.5 or later when in an edge fabric that will be attached to a Brocade 7800 FCR Backbone.
- VEX edge to VEX edge device sharing will not be supported.

FC FastWrite

- When an FC FastWrite Initiator is moved to a port that doesn't have FC FastWrite enabled, I/O will recover and revert to the slow path route (non FC FastWrite). This is a behavioral change from FOS v6.2.x.

Traffic Isolation over FCR

- All switches and Fibre Channel Routers both in edge and backbone fabrics must be running FOS v6.1.0 or later in order to support this feature.
- In order for Traffic Isolation over FCR to function properly, the associated TI zones in each fabric (both edge fabrics and backbone fabric) need to have failover ENABLED.
- TI over FCR is only supported in edge-to-edge configurations. There is no support for TI in backbone to edge routing configurations.

Integrated Routing

- To allow Hot Code Load on a Brocade 5100 when using Integrated Routing, the edge switch connected to the 5100 must be running Fabric OS v6.1 or later code.
- Integrated Routing EX_Ports are only supported in the base switch on a switch with VF enabled.
- Integrated Routing and TopTalkers (Fabric Mode) are not concurrently supported. To use Integrated Routing, be sure to disable Fabric Mode TopTalkers prior to configuring EX_Ports first.

Native Connectivity

- FOS-based platforms operating in interopmodes 2 or 3 should never be deployed in a fabric without at least one M-series switch. FOS switches in interopmode 3 (McDATA Open Fabric Mode) do not support configuration of zoning without an M-series switch in the fabric. When migrating from M-series to B-series switches, all B-series switches should be configured to interopmode 0 (Brocade Native mode) once the last M-series switch has been removed from the fabric.

- M-EOSc switches may exhibit a behavior where they block all attached devices with a reason indication of "Blocked Temporarily, Internal". Users that experience this may have power cycled the M-series switch while it was participating in a fabric with Frame Redirection zoning, a capability used for FOS-based application or encryption services . If the switch is still participating in the fabric with Frame Redirection, issue the "cfgsave" command from a Brocade FOS-based switch with the Frame Redirection zone in its defined zone database. If the M-EOS switch is no longer attached to the fabric with Frame Redirection zoning, issue the "Config.Zoning.deleteSplZoneSet" command via CLI to the M-EOS switch.

FCAP

- If VF is enabled on a switch, HTTPS and FCAP certificates should always be imported in the Default Switch. Certificates imported in a non-Default Switch will not be available after hafailover operation.
- The pkicert (1.06) utility may cause evm errors, so each new switch should be isolated from the fabric and placed in non-vf mode to install new certificates.

FICON

- Refer to *Appendix: Additional Considerations for FICON Environments* for details and notes for deployment in FICON environments.

FL_Port (Loop) Support

- The FC8-48 and FC8-64 blade support attachment of loop devices in the DCX and DCX-4S.
- Virtual Fabrics must be enabled on the chassis and loop devices may only be attached to ports on a 48-port or 64-port blade assigned to a non-Default Logical Switch operating with the default 10-bit addressing mode (they may not be in the default Logical Switch).
- A maximum of 144 ports may be used for connectivity to loop devices in a single Logical Switch within a chassis in 10-bit dynamic area mode on DCX-4S.
- A maximum of 112 ports may be used for connectivity to loop devices in a single Logical Switch within a chassis in 10-bit dynamic area mode on DCX.
- Loop devices continue to be supported when attached to ports on the FC8-16, FC8-32, FC4-16 and FC4-32 blades with no new restrictions.

Port Mirroring

- On the Brocade 5300, the port mirroring feature has a limitation where all port mirror resources must stay within the same ASIC port group. The resources are the configure mirror port, Source Device, and Destination Device or ISL, if the Destination Device is located on another switch. The ASIC port groups are 0-15, 16-31, 32-47, 48-63, and 64-79. The routes will be broken if the port mirror resources are spread across multiple port groups.
- Port Mirroring is not supported on the Brocade 7800.

10G Interoperability

- 10G interop between FC10-6 and McDATA blades is not supported due to a HW limitation, however the FC10-6 is supported in a chassis running in Interopmode 2 or 3 (FC10-6 to FC10-6 connections only). An FC10-6 blade will not synchronize with a McDATA 10G blade. However, the inability to synchronize will not negatively impact the system.

Port Fencing

- The state changes counter used by Fabric Watch in FOS v6.3 has been updated to ignore any toggling of F-ports due to planned internal mechanisms such as throttling and trunking. There are some FOS CLI commands such as portcfgspeed, portCfgTrunkPort etc that implicitly disable/enable ports after configuration.

- The Port Fencing feature is not supported for Loss of Sync (LOS) and Link Failure (LF) areas of Port/F-port/E-port classes. State change area can be used in place of LOS/LF areas for Port Fencing.

Zoning

- If the default zoning mode is set to All Access and more than 120 devices are connected to the fabric, you cannot enable All Access.
- Beginning with the FOS v6.2.0 release, all WWNs containing upper-case characters are automatically converted to lower-case when associated with a zone alias and stored as part of a saved configuration on a switch. For example, a WWN entered as either "AA.BB.CC.DD.EE.FF.GG.HH" or "aa.bb.cc.dd.ee.ff.gg.hh" when associated with a zone alias will be stored as "aa.bb.cc.dd.ee.ff.gg.hh" on a switch operating with FOS v6.2.0 or later.

  This behavioral change in saved zone alias WWN members will not impact most environments. However, in a scenario where a switch with a zone alias WWN member with upper case characters (saved on the switch with pre-FOS v6.2.0 code) is merged with a switch with the same alias member WWN in lower case characters, the merge will fail, since the switches do not recognize these zoning configurations as being the same.

  For additional details and workaround solutions, please refer to the latest FOS Admin Guide updates or contact Brocade Customer Support.

ICLs

- If a DCX with an 8-link ICL license is connected to a DCX with a 16-link license, the DCX with the 16-link license will report enc_out errors. The errors are harmless, but will continue to increment. These errors will not be reported if a DCX with a 16-link license is connected to a DCX-4S with only 8-link ICL ports.
- If ICL ports are disabled on only one side of an ICL link, the enabled side may see enc_out errors.

AP 7420 Interoperability (refer to Defect 307117)

- A switch running FOS v6.4 cannot connect to an E_Port on an AP7420.
- An AP7420 can form a direct ISL connection with a switch running FOS v6.3 or lower version of FOS firmware. A switch running FOS v6.4 can still participate in a fabric with an AP7420 as long as the AP7420 is not directly connected to the FOS v6.4 switch.
- A switch running FOS v6.4 in InteropMode 0 (Brocade Native Mode) cannot connect to an EX_Port on an AP7420. A switch running FOS v6.4 in InteropMode 2 or InteropMode 3 can be connected to EX ports on an AP7420.

Extended Fabrics and R_RDY Flow Control

Beginning with Fabric OS v5.1, Brocade supported the Extended Fabrics feature in conjunction with R_RDY flow control (R_RDY flow control mode can be enabled via portCfgISLMode command). R_RDY flow control mode that uses IDLE primitives does not support Brocade frame-based Trunking for devices such as Time Division Multiplexor (TDM.) In order to overcome this limitation and provide support for frame-based Trunking with Extended Fabrics, Fabric OS v6.2.0 and later has been enhanced to support interoperability with these distance extension devices.

Fabric OS v6.3.1 allows Extended Fabrics E_Ports to operate in VC_RDY mode using either ARB or IDLE primitives as fill words. This allows frame-based Trunking to be supported on Extended Fabrics E-ports even when IDLE primitives are configured for these ports when operating in native VC_RDY mode. Prior to this change, frame-based Trunking was supported only when ARB primitives were used in VC_RDY mode. With Fabric OS v6.2 or later, frame-based Trunking is supported on Extended Fabrics E_Ports regardless of whether IDLE or ARB primitives are used when operating in native VC_RDY mode.

Implementation

The portcfglongdistance CLI parameter "VC Translation Link Init" is now overloaded to specify if the long distance link should use IDLE or ARB primitives. By default, vc_init is enabled. If vc_init is enabled, the long distance link will use ARB primitives. If vc_init is disabled, the link will use IDLE primitives.

Note:

Buffer to Buffer Credit Recovery feature is not supported on Extended Fabrics E_Port when it is configured to use IDLE primitives. The user must disable buffer to buffer credit recovery feature using the command portcfgcreditrecovery and specifying the disable option; otherwise, the link will continuously reset.

The Adaptive Networking SID/DID Traffic Prioritization QoS feature is not supported on Extended Fabrics E_Ports when IDLE primitives are configured on these ports. This is because in this mode only data Virtual Channels are available while QoS related virtual channels are not available.

When connecting to an extension device that does not support ARB primitives (such as some TDM products), the following configuration must be used:

portcfgqos -disable <port>
portcfgcreditrecovery –disable <port>
portCfgLongDistance <port> <LD|LD> 0 <distance>

The fabric parameter "fabric.ops.mode.longdistance" is now deprecated and should not be used.

Miscellaneous

- When ports on a 5470 embedded switch are configured for 8G, Emulex HBAs may not login in time and cause boot over SAN failures. Setting the port to auto-negotiate allows these HBAs to log in correctly at 8G.
- POST diagnostics for the Brocade 5100 have been modified beginning with FOS v6.3.1b and v6.4.0 to eliminate an "INIT NOT DONE" error at the end of an ASIC diagnostic port loopback test. This modification addresses BL-1020 Initialization errors encountered during the POST portloopbacktest. (Defect 263200)
- It is recommended that no more the 50 F_Port Top Talkers be enabled on a 48000 director in a large fabric (>4000 devices).
- It is recommended that for directors with more than 300 E_Ports, the switch be disabled prior to executing the "switchCfgTrunk" command (used to disable or enable trunking on the switch).
- During non-disruptive firmware upgrades, E_Ports in R-RDY mode may cause some frame drops on the E-port links.
- The ***portCfgFillWord*** command, applicable to 8G-capable ports, has been enhanced with FOS v6.3.1 and v6.4 to provide two new configuration options (Modes 2 and 3). The available settings include:

  Mode Link Init/Fill Word

  Mode 0 – IDLE/IDLE

  Mode 1 – ARBF/ARBF

  Mode 2 – IDLE/ARBF

  Mode 3 – If ARBF/ARBF fails use IDLE/ARBF

  Although this setting only affects devices logged in at 8G, changing the mode is disruptive regardless of the speed the port is operating at. The setting is retained and applied any time an 8G device logs in. Upgrades to FOS v6.3.1 or v6.4 from prior releases supporting

only modes 0 and 1 will not change the existing setting, but switches or ports reset to factory defaults with FOS v6.3.1 or v6.4 will be configured to Mode 0 by default. The default setting on new units may vary by vendor. Please use portcfgshow CLI to view the current portcfgfillword status for that port.

Modes 2 and 3 are compliant with FC-FS-3 specifications (standards specify the IDLE/ARBF behavior of Mode 2 which is used by Mode 3 if ARBF/ARBF fails after 3 attempts). For most environments, Brocade recommends using Mode 3, as it provides more flexibility and compatibility with a wide range of devices. In the event that the default setting or Mode 3 does not work with a particular device, contact your switch vendor for further assistance.

- For the configure command, in FOS v6.4, the default value that displays for Maximum Logins per switch is different than the value that displays in FOS v6.3.x. The default value has not changed; it was displayed incorrectly in FOS v6.3.x, and is now corrected.
- The serdestuneMode command Changes or displays serdestunemode.
    - SYNOPSIS

      serdestunemode –set
      serdestunemode –reset
      serdestunemode –show
      serdestunemode --help
    - DESCRIPTION

      Use this command to display or change the serdes tuning mode for FC8-16 blades on a switch. When serdes tuning mode is enabled, new serdes values are allocated on certain ports in FC8-16 blades in slot 2 and 7 and its peer ports, provided the core blade is CR4S-8. Use this feature, if you notice CRC errors increasing on FC8-16 ports 0, 1, 4, 5 in slot 2 and port 1 in slot 7. Serdes tuning mode set/reset can be changed on the fly. Enabling serdes tuning mode will change the serdes values on certain ports in FC8-16 in slot 2 and 7 along with its peer ports, provided the peer is CR4S-8. You will be prompted if FC8-16 blade is not present in slot 2 or 7. Also you will be prompted if the core blade is not CR4S-8.
    - NOTES

      The execution of this command is subject to Virtual Fabric or Admin Domain restrictions that may be in place. For details on command availability, refer to the Fabric OS Command Reference, Appendix A. This command is only supported on the Brocade FC8-16 blades in a DCX-4S chassis. Also these FC8-16 is expected to be present only in slot 2 or 7 or both along with its peer blade CR4S-8.
    - OPERANDS

      This command has the following operands:

      -set

      Enables serdes tuning mode and sets new serdes values on FC8-16 blades in slot 2 and 7 and on peer ports in the CR4S-8 blade.

      – reset

      Clears serdes tuning mode and resets the old serdes values on the FC8-16 blades in slot 2 and 7 and on peer ports in CR4S-8 blade.

      – show

      Displays whether the serdes tuning mode is enabled or disabled.

      – help

      Displays the serdestunemode command usage.

Defects

Closed with Code Change in Fabric OS v6.4.3c

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of September, 2012 in Fabric OS v6.4.3c.

Defect ID: DEFECT000357943	**Technical Severity:** High
Summary: Trackchanges is not generating TRK-1003 for SSH logout.	
Symptom: With a Trackchanges setting of 1,1, the track changes feature is not generating the TRCK-1003 message when a SSH session is logged out.	
Probability: High	
Feature: FOS Security	**Function:** Authentication
Reported In Release: FOS6.4.1	**Service Request ID:** 631887

Defect ID: DEFECT000383577	**Technical Severity:** High
Summary: CRC with good EOF detected on ICL ports	
Symptom: Observed CRC with good EOF on multiple ICL ports between a DCX and DCX-4S.	
Probability: Low	
Feature: FOS Software	**Function:** ASIC Driver
Reported In Release: FOS6.4.2	**Service Request ID:** 693593,693593

Defect ID: DEFECT000396825	**Technical Severity:** Medium
Summary: SFP shows "No Module" on switches connected through a DWDM	
Symptom: A port connected to a third party DWDM goes into ‘no module’ mode during DWDM failover test.	
Workaround: Disable and re-enable ports.	
Probability: Low	
Feature: Infrastructure	**Function:** Other
Reported In Release: FOS6.4.2	

Defect ID: DEFECT000407000	**Technical Severity:** High
Summary: Loop port comes up "In_Sync" after port bounce	
Symptom: 3rd party storage was unable to connect to Brocade switch with In_Sync after user executed switchenable/switchdisable for configuration change	
Probability: Low	
Feature: FOS Software	**Function:** Fabric Services
Reported In Release: FOS6.4.2	**Service Request ID:** 744343

Defect ID: DEFECT000411481	**Technical Severity:** Medium
Summary: Switch drops ADISC requests from a third party HBA.	
Symptom: With session based zoning, customer is unable to configure storage properly on servers with a third party HBA.	
Probability: Low	
Feature: FOS Software	**Function:** ASIC Driver
Reported In Release: FOS6.4.2	**Service Request ID:** 753595

Defect ID: DEFECT000412938	**Technical Severity:** Medium
Summary: Fabric Watch erroneously reporting a "build fabric"	
Symptom: On a busy switch, Fabric Watch falsely reports "build fabric" event.	
Probability: Low	
Feature: FOS Software	**Function:** System Performance
Reported In Release: FOS6.4.1	**Service Request ID:** 756411

Defect ID: DEFECT000413879	**Technical Severity:** Medium
Summary: Unreachable switches are seen as Brocade 200E in Brocade Network Advisor dashboard.	
Symptom: When a switch is unreachable from BNA , BNA shows the switch type as 200E regardless of the actual switch type. When the switch becomes reachable, then it will show the actual switchType in BNA.	
Probability: Medium	
Feature: UNDETERMINED	**Function:** Other
Reported In Release: FOS6.4.1	**Service Request ID:** 756759

Defect ID: DEFECT000414360	**Technical Severity:** High
Summary: "Redirect zone update failed" when issuing 'cryptocfg --commit'	
Symptom: After adding initiator to target container is performed, executing the 'cryptocfg --commit' command results in the following failure: "Operation succeeded. Commit operation completed successfully, Redirect zone update failed. Please retry commit operation." Additional attempts at commit do not result in redirect zone creation success, and container remains offline.	
Probability: Medium	
Feature: Data Security	**Function:** Disk Encryption
Reported In Release: FOS7.1.0	

Defect ID: DEFECT000414491	**Technical Severity:** High
Summary: Switch panic during hafailover with Failed expression: (area == sw->sw_pt[port]->full_fmt_area	
Symptom: After user had performed port address binding in the past, a HAfailover caused a panic on new active CP during taking over and triggered disruption	
Probability: Medium	
Feature: FOS Software	**Function:** Panic / OOM
Reported In Release: FOS6.4.2	**Service Request ID:** 759663

Defect ID: DEFECT000415047	**Technical Severity:** Medium
Summary: Busy buffer stuck caused blades to be faulted	
Symptom: While diag is running on port blade, toggle slider on core blade can trigger busy buff stuck with traffic issue on blade or blade fault.	
Probability: Low	
Feature: FOS Software	**Function:** ASIC Driver
Reported In Release: FOS6.4.2	**Service Request ID:** 761781

Defect ID: DEFECT000415165	**Technical Severity:** Medium
Summary: A fast FLOGI frame comes in before the port state has changed to AC (Active online) caused various switch problems.	
Symptom: In a mainframe setup, many Nport are bounced at the same time and some hosts cannot see storage.	
Workaround: Bounce the Fport using portdisable and then portenable to recover.	
Probability: Low	
Feature: FOS Software	**Function:** Fabric Services
Reported In Release: FOS6.4.2	**Service Request ID:** SR 763577

Defect ID: DEFECT000415731	**Technical Severity:** High
Summary: Detected termination of process cnmd panic when executing security scans against directors	
Symptom: Switch panics when being aggressively scanned by security software	
Probability: High	
Feature: Data Security	**Function:** Encryption Group
Reported In Release: FOS7.1.0	

Defect ID: DEFECT000417440	**Technical Severity:** High
Summary: Detected termination of name server daemon (NSD) during CLI "nodefind" execution.	
Symptom: CLI "nodefind" triggers switch panic when there are two devices present in NS for the same WWN.	
Workaround: Avoid executing "nodefind" CLI command under conditions noted.	
Probability: Low	
Feature: FOS Software	**Function:** Panic / OOM
Reported In Release: FOS7.0.0	**Service Request ID:** 1034213

Defect ID: DEFECT000418678	**Technical Severity:** High
Summary: FOS memory leak triggered through Storage Application Services with mis-configured zone.	
Symptom: A high rate of failing “Frame Redirect Zone Creation” requests causes switch panics.	
Workaround: Remove frame redirect and recreate binding.	
Probability: High	
Feature: 4G Platform Services	**Function:** FOS Kernel Drivers
Reported In Release: FOS6.4.3	**Service Request ID:** 1033861

Defect ID: DEFECT000419620	**Technical Severity:** High
Summary: An hafailover, hareboot or firmwaredownload may cause offline ports with a ASIC register being zeroed out	
Symptom: If frames are queued to the offline ports, credit is permanently lost and observe busy buffer condition on the port	
Probability: Low	
Feature: 8G ASIC Driver	**Function:** C2 ASIC driver
Reported In Release: FOS7.0.0	**Service Request ID:** 1033850

Defect ID: DEFECT000420758	**Technical Severity:** High
Summary: Upgrade to FOS v6.4.3x/v7.0.2x/7.0.1a or later is resulting in errors on ports that have media validation issues	
Symptom: After upgrade, ENC, CRC and other errors occurred on some ports. ISL ports were affected to the point of causing fabric interruption. No errors were noted prior to the upgrade.	
Workaround: To avoid the issue, prior to upgrading firmware: issue an sfpshow –f to every port and then run hasyncstop / hasyncstart; Or To recover after upgrade: issue sfpshow -f <port#> to every port and then run hasyncstop; hasyncstart; and portdisable/enable problem ports.	
Probability: Low	
Feature: System Controls/EM	**Function:** PCI/I2C
Reported In Release: FOS6.4.3	**Service Request ID:** 1032635,1032537

Defect ID: DEFECT000421694	**Technical Severity:** High
Summary: CP panic's when running agshow command after observing stale AG entries	
Symptom: Repeated CP faults due to msd panicing after upgrade to FOS v6.4.3b. This applies only to customers who had stale AG entries as a result of defect 387013 noted in FOS v6.4.3b release notes.	
Probability: Low	
Feature: FOS Software	**Function:** Panic / OOM
Reported In Release: FOS6.4.3	**Service Request ID:** 1092403

Closed with Code Change in Fabric OS v6.4.3b

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of September, 2012 in Fabric OS v6.4.3b.

Note: Fabric OS 6.4.3b supersedes v6.4.3a which was not released and is not available.

Defect ID: DEFECT000285745	**Technical Severity:** High
Summary: Kernel watchdog timer expired when pulling Ethernet cable or connected to an unstable link	
Symptom: Switch kernel watchdog panics with BR5100 and BR5300 occasionally	
Probability: Low	
Feature: OS Services	**Function:** Linux Kernal
Reported In Release: FOS6.2.0	**Service Request ID:** 423329

Defect ID: DEFECT000341715	**Technical Severity:** Medium
Summary: Daemon cnmd crashed on GL node when rebooted membernode	
Symptom: Switch panic due to a race condition between node departure and resending join request.	
Probability: Medium	
Feature: Data Security	**Function:** HA Cluster
Reported In Release: FOS6.4.1	

Defect ID: DEFECT000347173	**Technical Severity:** Medium
Summary: HAfailover on the Brocade 48000 with FC8-xx blades installed may encounter rare race condition	
Symptom: If this rare condition is encountered, a reset of the port blades may result causing temporary traffic disruption	
Probability: Low	
Feature: FOS Software	**Function:** Panic / OOM
Reported In Release: FOS6.1.2	**Service Request ID:** 595467

Defect ID: DEFECT000383300	**Technical Severity:** High
Summary: Shared memory segments are used up by name server	
Symptom: Unable to manage switch: application gets shmInit: shmget failed: No space left on device	
Workaround: avoid running nsaliasshow	
Probability: Low	
Feature: FOS Software	**Function:** Fabric Services
Reported In Release: FOS6.4.1	**Service Request ID:** 698729

Defect ID: DEFECT000383577	**Technical Severity:** High
Summary: CRC with good EOF detected on ICL ports	
Symptom: Observed CRC with good EOF on multiple ICL ports between a DCX and DCX-4S.	
Probability: Low	
Feature: FOS Software	**Function:** ASIC Driver
Reported In Release: FOS6.4.2	**Service Request ID:** 693593,693593

Defect ID: DEFECT000387013	**Technical Severity:** Medium
Summary: Stale AG entry remains present in management server database after the removal of AG.	
Symptom: Switch stays in manageability view even after it is physically removed from fabric.	
Probability: Low	
Feature: FOS Software	**Function:** Access Gateway
Reported In Release: FOS6.2.2	**Service Request ID:** 699581

Defect ID: DEFECT000387536	**Technical Severity:** Medium
Summary: Perfttmon only seems to output ingress values when egress is chosen	
Symptom: In NPIV setup, unable to get valid data for running perfttmon.	
Probability: High	
Feature: FOS Software	**Function:** ASIC Driver
Reported In Release: FOS7.0.1	**Service Request ID:** 693225

Defect ID: DEFECT000387601	**Technical Severity:** Medium
Summary: Embedded platform with internal CU port turned into G Port	
Symptom: Server lost access to the devices when internal CU port connected to HBA turned into G_Port.	
Probability: Medium	
Feature: 8G ASIC Driver	**Function:** ASIC Driver
Reported In Release: FOS7.0.1	

Defect ID: DEFECT000389391	**Technical Severity:** Medium
Summary: CLI portname -i 0-79 -f will cause the switch to panic	
Symptom: When user enters an index range with larger value than is actually present with portname -i -f command, the switch panics.	
Probability: Low	
Feature: FOS Software	**Function:** Panic / OOM
Reported In Release: FOS6.4.2	**Service Request ID:** 711133

Defect ID: DEFECT000394217	**Technical Severity:** Medium
Summary: Onboard Administrator is not reporting correct IP address for BR5480 after FWDL to v6.4.x when using DHCP	
Symptom: After upgrading embedded Brocade SAN switch to FOS v6.4.0 and above, the management IP address is shown as 0.0.3.0	
Workaround: Reboot switch after firmwaredownload	
Probability: High	
Feature: Embedded Platform Services	**Function:** Bulova
Reported In Release: FOS6.4.2	**Service Request ID:**

Defect ID: DEFECT000394917	**Technical Severity:** Medium
Summary: Slow CLI response time running FOS v7.x	
Symptom: User may notice the slowness when run a script with many commands; individual command response time is still within second.	
Probability: Medium	
Feature: FOS Software	**Function:** OS: Linux
Reported In Release: FOS7.0.0	**Service Request ID:** 721373

Defect ID: DEFECT000397402	**Technical Severity:** Medium
Summary: Soft parity errors causing disruption on BES/FS8-18	
Symptom: If a parity error occurs in the encryption path, frames may be transmitted to the destination carrying an incorrect payload and without being marked with an error. If a parity error occurs in the decryption path, the frame data might not be decrypted successfully.	
Probability: Low	
Feature: FOS Software	**Function:** Fabric Services
Reported In Release: FOS6.4.2	**Service Request ID:** 722589

Defect ID: DEFECT000399130	**Technical Severity:** Medium
Summary: Switch ports report CRC with Good EOF Errors.	
Symptom: Large number of CRC with good EOF errors on DCX system when an FC8-64 is installed in slot 1,3,9	
Probability: Low	
Feature: 8G ASIC Driver	**Function:** C2 ASIC driver
Reported In Release: FOS6.4.2	**Service Request ID:** 721423

Defect ID: DEFECT000399142	**Technical Severity:** High
Summary: PortPerfShow showing bandwidth utilization being reported as 0	
Symptom: No throughput visible with portperfshow.	
Workaround: HA failover	
Probability: Low	
Feature: FOS Software	**Function:** ASIC Driver
Reported In Release: FOS6.4.1	**Service Request ID:** 724189,733703

Defect ID: DEFECT000399885	**Technical Severity:** Medium
Summary: weblinker file descriptor on CEE platform leaks when monitored by BNA	
Symptom: Customer will experience asserts and weblinker terminations & restarts. This is non disruptive to customer traffic.	
Probability: High	
Feature: FOS Software	**Function:** FCoE
Reported In Release: FOS7.0.1	**Service Request ID:** 719205

Defect ID: DEFECT000400194	**Technical Severity:** High
Summary: Selected switch configuration accessible without authenticating	
Symptom: Able to query switch via HTTP for information without authenticating with a username/password	
Probability: High	
Feature: FOS Software	**Function:** Security
Reported In Release: FOS6.0.0	**Service Request ID:** 732065

Defect ID: DEFECT000401218	**Technical Severity:** Medium
Summary: RNID responses are dropped under load and session based zoning.	
Symptom: Disk replication fails when response to RNID is discarded.	
Probability: Low	
Feature: FOS Software	**Function:** ASIC Driver
Reported In Release: FOS6.4.2	**Service Request ID:** 724603

Defect ID: DEFECT000401869	**Technical Severity:** Medium
Summary: Flood of FLOGIs with duplicate WWN will cause CP panic and reboots.	
Symptom: Misbehaving device generate hundreds of FLOGIs with dup WWN within 300 ms. Switch was busy processing these FLOGIs and caused Daemons to timeout and CP panic in a loop.	
Workaround: Disable misbehaving port.	
Probability: Low	
Feature: FOS Software	**Function:** Management Services
Reported In Release: FOS6.4.3	**Service Request ID:** 735211

Defect ID: DEFECT000403214	**Technical Severity:** High
Summary: On Encryption platforms, high frequency of Test Unit Ready (TUR) etc commands results in DataBase out of sync	
Symptom: Unable to re-key Luns after moving Lun from clear text to encrypted state.	
Probability: Low	
Feature: FOS Software	**Function:** Encryption
Reported In Release: FOS7.0.1	**Service Request ID:** 733487

Defect ID: DEFECT000403616	**Technical Severity:** High
Summary: Brocade 5640 posts hundreds of LF and LOS during firmwaredownload and power on.	
Symptom: Internal ports encounter errors after server blade power cycle.	
Probability: Low	
Feature: FOS Software	**Function:** Firmware Download
Reported In Release: FOS7.0.1	**Service Request ID:** 729803

Defect ID: DEFECT000403996	**Technical Severity:** Medium
Summary: Enhancement needed to link credit loss recovery on 8G platforms	
Symptom: Frame drops encountered on 8G platforms when credit loss is detected.	
Workaround: Reseat the blade	
Probability: Low	
Feature: 8G ASIC Driver	**Function:** C2 ASIC driver
Reported In Release: FOS6.4.0	

Close with Code Change in Fabric OS v6.4.3b

Defect ID: DEFECT000405501	**Technical Severity:** Medium
Summary: Brocade 5460 POST timeout, takes over 60 secs to complete	
Symptom: Third party management module timeout and reset.	
Probability: Low	
Feature: Embedded Platform Services	**Function:** Other
Reported In Release: FOS6.4.3	**Service Request ID:** 706711

Defect ID: DEFECT000406655	**Technical Severity:** High
Summary: Switch experiences panic during firmwaredownload and CPs loose HA sync	
Symptom: While managing switch via SMI-A and when SMI-A sends management server request "MS_GPORT_NG command" during code upgrade, switch panics	
Probability: Medium	
Feature: FOS Software	**Function:** Management Services
Reported In Release: FOS6.4.3	**Service Request ID:** 743601,757155,775877

Defect ID: DEFECT000406671	**Technical Severity:** Medium
Summary: Update severity level for raslog	
Symptom: Monitor software cannot trigger on INFO message and FSSM-1004 INFO message is upgraded to Warning	
Probability: Low	
Feature: RAS	**Function:** RAS Log
Reported In Release: FOS6.4.3	

Defect ID: DEFECT000407005	**Technical Severity:** High
Summary: BR5470 cannot negotiate to 8Gb with an OEM specific chassis mid-plane.	
Symptom: BR5470 will only negotiate to 4Gb.	
Probability: High	
Feature: 8G Platform Services	**Function:** Other
Reported In Release: FOS6.4.2	

Defect ID: DEFECT000408553	**Technical Severity:** Medium
Summary: Kernel panic during upgrade to FOS v6.4.3 and v7.0.1b or later.	
Symptom: With more than 2 VE ports configured on a FX8-24 blade, switch could panic during hafailover if there are ELS frames coming in. This only applies to FOS v6.4.3, v7.0.1b and later.	
Workaround: Try to avoid any discovery frame during HA/firmware-download	
Probability: Medium	
Feature: 8G ASIC Driver	**Function:** C2 ASIC driver
Reported In Release: FOS6.4.2	**Service Request ID:** 748441

Defect ID: DEFECT000410075	**Technical Severity:** Medium
Summary: CRC with Good EOF errors detected on DCX	
Symptom: Observe CRC with Good EOF errors on 5/139 link when FC8-32 card installed in slot 3 and on 5/100 link when FX8-24 card installed in slots 4. These errors could impact traffic.	
Probability: Low	
Feature: 8G ASIC Driver	**Function:** C2 ASIC driver
Reported In Release: FOS6.4.2	**Service Request ID:** 731361

Close with Code Change in Fabric OS v6.4.3b

Defect ID: DEFECT000410424	**Technical Severity:** Medium
Summary: Turn off serdes transmitter for unlicensed ports on Brocade 300 and 5300	
Symptom: Hardware tool shows serdes is still on and generate signals on ports without POD license cause EMI issue.	
Workaround: Run portdisable CLI on ports without POD license	
Probability: Low	
Feature: 8G ASIC Driver	**Function:** C2 ASIC driver
Reported In Release: FOS6.4.0	

Defect ID: DEFECT000412089	**Technical Severity:** Medium
Summary: FICON Emulation Error	
Symptom: Observe backup and restore stopping and waiting timeouts.	
Probability: Medium	
Feature: FOS Software	**Function:** FCIP
Reported In Release: FOS6.4.2	**Service Request ID:** 755461

Closed with Code Change in Fabric OS v6.4.3

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of April 18, 2012 in Fabric OS v6.4.3.

Defect ID: DEFECT000381736	**Technical Severity:** Critical
Summary: switch domain changed and the change was not synced into configuration DB	
Symptom: After fabric rebuild and merge event come very close together, domain goes out of sync. New device will have wrong PID and inaccessible to others.	
Feature: Field Escalation	**Function:** Fabric Services
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 694959

Defect ID: DEFECT000390650	**Technical Severity:** Critical
Summary: Device does not register FC4 type and path unable to failover	
Symptom: Device is not failing over to its alternate port if that alternate port happens to be on the upper part of the FC8-64 port blade such as port indexes 868 to 884	
Workaround: Use port indexes 239-254	
Feature: Field Escalation	**Function:** Fabric Services
Probability: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 712525

Defect ID: DEFECT000300321	**Technical Severity:** High
Summary: When the master port of a trunk goes offline during a hareboot, recovery steps are missed	
Symptom: RNID/PLOGI routed from channel attached to switch gets F_RJT Login Required	
Feature: 8G Platform Services	**Function:** Routing
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000315371	**Technical Severity:** High
Summary: Various frame drop, SCSI LUN command being trapped to CPU	
Symptom: Traffic loss after enabling multiple features that utilize filters and routing tables in combination with devices doing frequent PLOGIN. Customer observers ASIC stats counter type1/type6 miss increases or end to end class3 frames show up in portlog and being rejected	
Feature: 4G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.4.0	

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000339004	**Technical Severity:** High
Summary: Keeping nameserver and zoneadmin open through WebTools with 2MB cfg in 20mins, session became unusable	
Symptom: WebTools becomes unusable and session expires	
Workaround: CLI	
Feature: WebMgmt	**Function:** Name Server
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000344595	**Technical Severity:** High
Summary: Creating logical switch instance and LISL links causes config file corruption resulting in asserts and kernel panic	
Symptom: switch panic when expanding LISLs into a logical without any regular FC ports	
Feature: ConfigMgmt	**Function:** PDM/PortCfg
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000346292	**Technical Severity:** High
Summary: Host cannot discover the targets even though the edge is connected with VEX ports	
Symptom: Host in VEX connected edge fabric is unable to see the targets in EX connected edge fabric	
Feature: 4G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000348112	**Technical Severity:** High
Summary: CSR key generation not working to generate certificates	
Symptom: Command works on default context and fails on logical context.	
Feature: FOS Security	**Function:** Certificate Management
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000348489	**Technical Severity:** High
Summary: Kernel Panic during firmwaredownload	
Symptom: On a switch with VF enabled and EE performance monitor installed, firmware download failed with switch panic	
Feature: Performance Monitor	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000352764	**Technical Severity:** High
Summary: Remote data replication application fails with multiple paths (multiple port pairs between arrays) when FastWrite is enabled on the FCIP tunnel.	
Symptom: With FastWrite enabled on an FCIP tunnel, and two data replication port pairs, the application commands to move data between the arrays will fail. With only a single port pair or with FastWrite disabled, everything works fine.	
Feature: FCIP	**Function:** Emulation
Probability: High	
Found in Release: FOS7.0.0	
Where Else Fixed: FOS7.0.0 b PATCH	

Defect ID: DEFECT000353341	**Technical Severity:** High
Summary: When XISL Use is disabled in VF, it leaves a condition that can trigger route problem.	
Symptom: Connectivity lost across VF w/ integrated routing, large numbers of c3_other_discards.	
Feature: Field Escalation	**Function:** FC Layer 2 Routing
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 626039 690279

Defect ID: DEFECT000356094	**Technical Severity:** High
Summary: IDLE not being sent after NOS - results in other issues and eventually causes G_Port.	
Symptom: Customer notices that one side of the ISL becomes a G_Port, while the peer remains an E_Port.	
Feature: Field Escalation	**Function:** Fabric Services
Probability: Low	
Found in Release: FOS6.2.2	**Service Request ID:** 602057

Defect ID: DEFECT000356964	**Technical Severity:** High
Summary: When Loop port(JBOD) and EX port are in same chip and LSAN is in place, Loop port drops PLOGI Accept to the Host	
Symptom: PLOGI Accept will be dropped and Device discovery will Fail	
Feature: 8G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000357193	**Technical Severity:** High
Summary: C2-1012 Between DCX-4S Core and FX8-24 Blade	
Symptom: Credit loss on DCX-4S backend ports between Core Blade in slot 3 and FX8-24 Blade in slot 7.	
Feature: 8G ASIC Driver	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000358972	**Technical Severity:** High
Summary: Port is negotiating to 16G even though optic is only capable of 8G	
Symptom: Customer will see multiple problems with I/O.	
Workaround: bounce the problem port with this kind of mismatch speed setting.	
Feature: 16G Platform Services	**Function:** FOS Kernel HA
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000359338	**Technical Severity:** High
Summary: CR8 blade in DCX went offline, but routes are not removed if the PCI scan finds an inconsistency in power state of a blade.	
Symptom: After CR8 blade in DCX failed, I/O was persistently interrupted until CR8 blade was replaced.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.3.2	**Service Request ID:** 636753

Defect ID: DEFECT000360527	**Technical Severity:** High
Summary: An FCIP Tunnel in an FCR Backbone may lose buffer credits and go down if FastWrite is enabled.	
Symptom: FCIP Tunnel in an FCR backbone fabric goes down due to credit loss.	
Workaround: Disable FCIP FW.	
Feature: FCIP	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	
Where Else Fixed: FOS7.0.0 b PATCH	

Defect ID: DEFECT000366749	**Technical Severity:** High
Summary: switch panic, auto-reboot when run “portloopbacktest” with “lb_mode” value 1	
Symptom: BR5100 panics if using 8G speed while running portloopback with loopback cables.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS7.0.1	

Defect ID: DEFECT000368746	**Technical Severity:** High
Summary: Traffic drops to zero when ingress EX link included in TI Failover enabled Zone is disabled	
Symptom: Traffic drops to zero if one of the EX links is disabled	
Workaround: Re enable the EX link.	
Feature: 8G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS7.0.1	

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000369703	**Technical Severity:** High
Summary: Host could not Link up on 8G FC port when the port is configured at a fixed speed of 4G or 8G.	
Symptom: After switch reboot, or slotpoweroff/slotpoweron, a port may sometimes not gain sync and also fail to recover using portdisable/portenable. This may occur when an 8G port is configured at fixed speed of 4G or 8G, and the remote end is configured to auto negotiate, and it is the only port connected to the remote end. This problem is not observed when more than 1 port is connected to the remote end.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.2.2	**Service Request ID:** 672599

Defect ID: DEFECT000370943	**Technical Severity:** High
Summary: Network scanning application causing high CPU utilization by CNM daemon.	
Symptom: Possible module timeouts seen during processing intensive operations such as SupportSave.	
Feature: Data Security	**Function:** HA Cluster
Probability: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 123606

Defect ID: DEFECT000371934	**Technical Severity:** High
Summary: Host loses encryption configured LUNS when Host target separated by FCIP tunnel.	
Symptom: Cryptocfg scan LUNs fails.	
Feature: FC Services	**Function:** Name Server
Probability: Low	
Found in Release: FOS7.0.1	

Defect ID: DEFECT000373075	**Technical Severity:** High
Summary: Linux kernel module load bug causing panic on switch	
Symptom: Kernel panic and reboot of switch	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 680849

Defect ID: DEFECT000374065	**Technical Severity:** High
Summary: During hafailover, if there are too many timed-out and un-routable frames being forwarded to the CPU, there is potential for a port to lose credits.	
Symptom: Switch encountered many timeouts and destination unreachable frames due to a rare configuration error. A HA fail-over while in this state resulted in hosts losing access to targets.	
Feature: Field Escalation	**Function:** High Availability
Probability: Low	
Found in Release: FOS6.3.2	**Service Request ID:** 664775

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000375295	**Technical Severity:** High
Summary: F_Port stuck in Disabled (N-Port Offline for F-Port) after AG reboot	
Symptom: F_Ports on some access gateways are stuck in F_Port Disabled state (N-Port Offline for F-Port) and observe raslog reports: [AG-1005], FDISC response was dropped.	
Feature: Field Escalation	**Function:** Access Gateway
Probability: Low	
Found in Release: FOS6.2.2	**Service Request ID:** 684505

Defect ID: DEFECT000379840	**Technical Severity:** High
Summary: fabric with ETIZoning, data stops flowing when switching zoning enforcement "Hard-Port" <--> "Hard-Wwn"	
Symptom: changing zoning enforcement from wwn <--> D,I <--> session based will cause some traffic to stop flowing. lasers must be toggled to correct the issue	
Workaround: User can toggle the port (disable/enable) to correct the issue.	
Feature: FC Services	**Function:** Name Server
Probability: High	
Found in Release: FOS7.0.1	

Defect ID: DEFECT000381305	**Technical Severity:** High
Summary: Fabric Watch messages reporting TX/RX values above 100%	
Symptom: Fabric Watch messages reporting TX and RX performance values above 100%: 2011/12/06-19:29:58, [FW-1190], 1425, SLOT 6 | FID 128, INFO, FOP Port#3/30,TX Performance, is above high boundary(High=85, Low=0). Current value is 137 Percentage(%)/minute.	
Feature: Field Escalation	**Function:** Management Services
Probability: Low	
Found in Release: FOS6.3.2	**Service Request ID:** 693491,683501

Defect ID: DEFECT000381655	**Technical Severity:** High
Summary: switch panic after code upgrading and device re-login	
Symptom: Switch panic upon detect duplicated WWN - sometimes false positive detection due to race condition. When a duplicate is detected by NS, the NS-1006 RASLOG is already generated. It is at this time that the fix will force the newer local device to be disabled. This is done in an effort to avoid the code that generates the ASSERT. The port is disabled with reason "Duplicate WWN"	
Workaround: Full duplicate WWN detection is supported in FOS7.0 and above, upgrade if possible. In AG environment, use "ag --persistentalpaenable 1 -f" setting to reduce this condition.	
Feature: Field Escalation	**Function:** NPIV
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 694821,706745

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000383769	**Technical Severity:** High
Summary: Switch clears all pending exchange upon receive busy status with "abort task set" causing missing blocks on tape.	
Symptom: Missing blocks on tapes written when tape pipelining is enabled.	
Feature: FCIP	**Function:** Emulation
Probability: Low	
Found in Release: FOS6.4.1_fcoe	**Service Request ID:** 682259

Defect ID: DEFECT000384682	**Technical Severity:** High
Summary: Downgrade from FOS v7.0.x to v6.4.x leads to F port connectivity loss. It does not recover with bouncing the port and requires a switch power cycle.	
Symptom: After downgrade from FOS v7.0.x to FOS v6.4.x with "-s" in certain sequence, preinstall script may fail and leave switch in a state Storage device loses connectivity to fabric and does not reconnect. Switch port stays stuck at G-port and requires switch reset to regain connectivity.	
Workaround: Don't do firmwaredownload with -s option by default	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: High	
Found in Release: FOS6.4.2	**Service Request ID:** 699169

Defect ID: DEFECT000386528	**Technical Severity:** High
Summary: Switch panic upon detecting SRAM parity error on 7500 and FR4-18i	
Symptom: Parity error in ASIC is very rare and may be observed after a long up time. This specific parity error in 7500/FR4-18i SRAM cannot be recovered by software refresh, thus the attempted refresh generated switch panic.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 705301,704563,721929

Defect ID: DEFECT000388762	**Technical Severity:** High
Summary: Switch upgraded from FOS 6.3.x to 6.4.x in IM2/IM3 mode over run zone daemon memory space.	
Symptom: Zoned panic after upgrade, when a remote domain goes out of fabric.	
Workaround: To avoid this problem the customer can just do a hafailover when the firmware is completely upgraded.	
Feature: Field Escalation	**Function:** Fabric Services
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 709913

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000394458	**Technical Severity:** High
Summary: FCIP tunnel failure and reboot due to processing exception in FICON Emulation Abort processing	
Symptom: Channel detected errors and loss of path, FCIP Tunnel bounce (when the complex rebooted).	
Workaround: Disable FICON emulation on the FCIP Tunnel	
Feature: FCIP	**Function:** FCIP CP
Probability: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 718879

Defect ID: DEFECT000286556	**Technical Severity:** Medium
Summary: trunkshow of EX_Port trunks on DCX4XS/FX8-24 show duplicate remote ports	
Symptom: Trunkshow of EX_Port trunks may show duplicate remote ports.	
Feature: 8G FCR	**Function:** FCR Daemon
Probability: High	
Found in Release: FOS6.3.1	

Defect ID: DEFECT000299540	**Technical Severity:** Medium
Summary: The manual_rekey -all command will not function in director-class chassis when multiple EEs are present with access to the same LUN	
Symptom: Manual rekey fails when there are DEK cluster LUNs hosted by both EEs from same chassis.	
Feature: Data Security	**Function:** Disk Encryption
Probability: Low	
Found in Release: FOS6.3.0	

Defect ID: DEFECT000333181	**Technical Severity:** Medium
Summary: RADIUS timeouts evaluate incorrectly	
Symptom: When a configured RADIUS server becomes unavailable, lower priority authentication (subsequent RADIUS servers or local users) may take longer than expected to sign in. If the aggregate timeouts for all unavailable RADIUS server is sufficiently high, all authentication requests (including local user IDs) may time out and fail. Under these circumstances the switch may be entirely inaccessible.	
Feature: FOS Security	**Function:** Radius
Probability: High	
Found in Release: FOS7.0.0	

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000337419	**Technical Severity:** Medium
Summary: FCoE traffic wouldn't flow through when the ISL is set to Long Distance mode with VC translation=0	
Symptom: FCoE traffic wouldn't flow through when Long Distance mode enabled (either, LD,LE or LS) with VC translation set to 0.	
Workaround: configure Long distance with vc_init flag (1)	
Feature: 8G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000341719	**Technical Severity:** Medium
Summary: SNMP - Various trap, query issues	
Symptom: The user will not see the correct VF ID in the trap with BD-MIB, user will see unknown value 7 when queries SW-MIB	
Feature: Mgmt Embedded - SNMP	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000343773	**Technical Severity:** Medium
Summary: EE monitors are not getting updated after hafailover/hareboot	
Symptom: After hafailover/hareboot, EE monitor counters (both RX and TX) are not getting updated, shows 0.	
Feature: Performance Monitor	**Function:** EE monitor
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000346554	**Technical Severity:** Medium
Summary: When devices send LOGO and then FLOGI, without a port toggle, the route is not set up, causing PLOGIs to peer device to be dropped.	
Symptom: Devices unable to communicate with peer devices after logout/login sequence.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 567863

Defect ID: DEFECT000347206	**Technical Severity:** Medium
Summary: SNMP should be throttled if the requests exceed certain thresholds	
Symptom: If SNMP polling by management application is to frequent, CPU may become overloaded resulting in other operational failures not directly related to this functionality	
Feature: Mgmt Embedded - SNMP	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	
Where Else Fixed: FOS6.3.2 c	

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000351796	**Technical Severity:** Medium
Summary: Duplicate E_Port SCN from Port... error messages seen after an HAFailover.	
Symptom: Duplicate E_Port SCN error messages being seen after an HAFailover	
Feature: FC Services	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.2	
Where Else Fixed: FOS7.0.0 b PATCH	

Defect ID: DEFECT000357181	**Technical Severity:** Medium
Summary: During switch/blade initialization, FX8-24 blades forward BDPU broadcast frames	
Symptom: If STP/BDPU guard is enabled on an Ethernet switch port, in some cases during a reboot of 7800/FX8-24 customer will see their Ethernet switch ports fenced offline due to rx'ing a BDPU packet.	
Feature: Field Escalation	**Function:** FCIP
Probability: Medium	
Found in Release: FOS6.4.0	**Service Request ID:** n/a

Defect ID: DEFECT000357707	**Technical Severity:** Medium
Summary: FICON XRC processing is not correctly reporting RRS Sequence Validation failures (via 0x0F52 command reject) in all cases.	
Symptom: FICON XRC is suspended and LOGREC entries with Command Rejects seen with reason code 0x0F61 against a 0xFF command.	
Feature: FCIP	**Function:** Emulation
Probability: Medium	
Found in Release: FOS6.4.0	**Service Request ID:** 703661
Where Else Fixed: FOS7.0.0 b PATCH	

Defect ID: DEFECT000359287	**Technical Severity:** Medium
Summary: Access Gateway crashes upon receiving bad frame(s) from devices.	
Symptom: switch panic when device send ELS_LOGO with SID 0 and DID as Login server.	
Workaround: Avoid sending LOGO with SID 0 to AG.	
Feature: Access Gateway Services	**Function:** Daemon
Probability: Low	
Found in Release: FOS6.3.2	

Defect ID: DEFECT000359611	**Technical Severity:** Medium
Summary: msd not freeing resources after RPL/DPL queries.	
Symptom: Switch panic or failover due to out of resource	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 641499

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000361822	**Technical Severity:** Medium
Summary: FastWrite is clearing the F_CTL priority bit resulting in CS_CTL values not being maintained/used	
Symptom: Configured CS_CTL values are no longer valid on write data frames (F_CTL priority bit disabled) once frames are carried over FCIP links with FastWrite enabled.	
Feature: FCIP	**Function:** Emulation
Probability: Medium	
Found in Release: FOS7.0.0	
Where Else Fixed: FOS7.0.0 b PATCH	

Defect ID: DEFECT000364382	**Technical Severity:** Medium
Summary: Executing CMSH through telnet or SSH causes switch panic	
Symptom: Telnet or SSH to BR8000, then starting CMSH will cause switch reboot. No problem when connecting through console, then CMSH.	
Workaround: Telnet/SSH from same subnet or connect from console	
Feature: CEE-MANAGEABILITY	**Function:** CONFIGURATION MANAGER INTERFACE
Probability: High	
Found in Release: FOS6.4.2	**Service Request ID:** 657425

Defect ID: DEFECT000365403	**Technical Severity:** Medium
Summary: AG details is not present if one of the AG is incorrectly registered	
Symptom: Switches become not manageable through DCFM or BNA when attempting to fix highlighted manageability issue. The affected switches remain installed and operational but cannot be discovered	
Feature: Access Gateway Services	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 651811

Defect ID: DEFECT000365651	**Technical Severity:** Medium
Summary: On an embedded switch, when doing port disable/enable host will not log back in and stays "No_Sync"	
Symptom: When performing a port disable then enable, the host will not log back in.	
Feature: 8G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS7.0.1	

Defect ID: DEFECT000366323	**Technical Severity:** Medium
Summary: FICON - IEBCOPY job fails during read pipelining on the Brocade 7800/FX8-24 blade.	
Symptom: IEBCOPY may fail when read pipelining is enabled. Other tape jobs will not be impacted	
Feature: FCIP	**Function:** Emulation
Probability: High	
Found in Release: FOS6.4.0	**Service Request ID:** 658691

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000366776	**Technical Severity:** Medium
Summary: Fabric Watch may not monitor every SNMP event	
Symptom: With High=0 and Low=0, Fabric watch does not monitor every SNMP event.	
Feature: Field Escalation	**Function:** SNMP
Probability: Low	
Found in Release: FOS6.3.0	**Service Request ID:** 664803

Defect ID: DEFECT000366834	**Technical Severity:** Medium
Summary: Cleanup of crypto stat files fails in error scenarios like rsync failures due to low memory	
Symptom: After rsync failure between BP and CP, cyrpto stat files cannot be cleaned up.	
Feature: Data Security	**Function:** Tape Encryption
Probability: Low	
Found in Release: FOS7.0.1	**Service Request ID:** 662425

Defect ID: DEFECT000367446	**Technical Severity:** Medium
Summary: diagshow displays incorrect speed value for ports on FCOE10-24 blades	
Symptom: diagshow displays the backend 4G ports. customer is expecting to see the front end 10G ports instead	
Feature: Diagnostics	**Function:** Other
Probability: High	
Found in Release: FOS6.4.1	**Service Request ID:** 668999

Defect ID: DEFECT000367452	**Technical Severity:** Medium
Summary: Using "switchcfgpersistentdisable/enable" can result is subsequent issues with zoning distribution.	
Symptom: Zone DB distribution fails to reach all domains in the fabric.	
Feature: Field Escalation	**Function:** Management Embedded
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 665233

Defect ID: DEFECT000367920	**Technical Severity:** Medium
Summary: Port Auto Disable is not triggered on master port in trunk	
Symptom: Port Auto Disable (PAD) is not triggered on Master port in Trunk. PAD does trigger on slave port in trunk.	
Feature: FABRIC WATCH	**Function:** PORT FENCING
Probability: Medium	
Found in Release: FOS6.4.2	

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000368909	**Technical Severity:** Medium
Summary: AG is not registering descriptor and creating /var/log/ag_desc.txt	
Symptom: Switch experiences excessive CF usage due to generation of /var/log/ag_desc.txt.	
Feature: Field Escalation	**Function:** Management Services
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 671597

Defect ID: DEFECT000369660	**Technical Severity:** Medium
Summary: Enhanced SERDES tuning to address CRC with good EOF	
Symptom: CRC with good EOF reported with following platform, blade, port combination. On DCX, when FC8-48 in slot 3, 3/55<->5/18 On DCX-4s, When FC8-48 in slot2, 3/56 <->2/40 On DCX, with FC8-64 in slot12, 5/151<->12/33 On DCX-4S, with FC8-16 in slot1, slot2 On DCX, with FC8-64 in slot2, 8/80 <->2/155	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Medium	
Found in Release: FOS6.4.2	**Service Request ID:** 663795

Defect ID: DEFECT000370106	**Technical Severity:** Medium
Summary: Enabling track changes in native mode keeps feature active when AG mode is enabled but CLI no longer works	
Symptom: Customer enabled track changes using trackchangesset 1 when switch was in native mode. When switch mode is changed from native to AG, track change stays enabled but trackchange CLIs no longer works in AG mode.	
Feature: Field Escalation	**Function:** Access Gateway
Probability: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 673067

Defect ID: DEFECT000371485	**Technical Severity:** Medium
Summary: Switch Ethernet port sends frame with invalid MAC address on Brocade 300E, 5100, 6510 and 7800	
Symptom: Switch Ethernet port sometimes sends frames with invalid Ethernet MAC address. There is no functional impact due to TCP/IP retransmit frame successfully; However, if there is security software monitor each frame, it will trigger alarms upon detect invalid MAC address.	
Workaround: Use 100 Half duplex instead of Full Duplex mode.	
Feature: Field Escalation	**Function:** Web Management
Probability: Low	
Found in Release: FOS6.2.0	**Service Request ID:** sr676355

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000373854	**Technical Severity:** Medium
Summary: BES does not do LOCATE to the correct position after PI does a PLOGI/PRLI during restore	
Symptom: Tape restore job keeps waiting for data even after read is done and would eventually fail.	
Feature: Data Security	**Function:** Tape Encryption
Probability: Low	
Found in Release: FOS7.0.1	

Defect ID: DEFECT000373880	**Technical Severity:** Medium
Summary: Issue observed with perfcfgrestore command	
Symptom: If a number of rwmonitors are created for a particular port using 'perfaddrwmonitor' command and these are deleted, then in some situations the 'perfcfgrestore' will not restore all of the monitors previously created.	
Feature: Field Escalation	**Function:** System Performance
Probability: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 680497

Defect ID: DEFECT000377420	**Technical Severity:** Medium
Summary: ifmodeset to default after fw upgrade	
Symptom: Customer upgraded from v6.3.2a to v6.4.2a and their management ports went down.	
Feature: Field Escalation	**Function:** Firmware Download
Probability: Low	
Found in Release: FOS6.3.2	**Service Request ID:** 683983

Defect ID: DEFECT000377806	**Technical Severity:** Medium
Summary: restoring snmp configurations over writing AAA LDAP Settings	
Symptom: When trying to replicate SNMP settings alone from one switch to another switch using BNA, AAA settings also getting replaced.	
Feature: Field Escalation	**Function:** OS: Configuration
Probability: High	
Found in Release: FOS6.4.1	**Service Request ID:** FromPM

Defect ID: DEFECT000378374	**Technical Severity:** Medium
Summary: F_Port trunk area configuration may be lost in switches when upgrading to FOS 6.4.x	
Symptom: If there were F_Port trunk configured during switch running at FOS v6.1, Then selected F_Port trunk configuration performed when FOS v6.2.x/v6.3.x was installed may be lost after an upgrade from FOS v6.2.x/v6.3.x to FOS v6.4.x.	
Feature: Field Escalation	**Function:** Fabric Services
Probability: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 689353

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000379613	**Technical Severity:** Medium
Summary: spinFab does not work from switches running FOS v6.4.x to switches with FOS v6.2.x	
Symptom: spinfab reports FAIL	
Feature: Diagnostics	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.2	

Defect ID: DEFECT000380162	**Technical Severity:** Medium
Summary: F-Port trunk lost connectivity after hafailover	
Symptom: When a hafailover occurs on a fabric switch with F-port trunks, the fabric ID is not updated on the slave ports of the F-port trunks. This causes the slave ports to have a possibly incorrect fabric ID. If the entire F-port trunk goes down and a previous slave port becomes the trunk master of the F-port trunk, this incorrect fabric ID is used and cause ACL check to fail and frame cannot go through.	
Feature: Field Escalation	**Function:** Access Gateway
Probability: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 691443

Defect ID: DEFECT000381270	**Technical Severity:** Medium
Summary: switch panic during SFP validation	
Symptom: While running diagnostics, an unsuccessful read at low level or bad SFP/media itself can trigger switch panic	
Feature: Field Escalation	**Function:** Diagnostics
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 499697

Defect ID: DEFECT000381361	**Technical Severity:** Medium
Summary: After hareboot on B5460, internal ports go offline/online with warm recovery	
Symptom: FOS version of 6.4.2 and before, traffic will be disrupted during HCL on B5460 due to Defect 381361. This issue cannot be resolved without a FPGA upgrade. FOSv6.4.3 contains upgrade of FPGA code. For the fix to be effective, please schedule window on upgrade: 1. Upgrade to FOS v6.4.3 2. Run fpga_update after upgrade 3. and then power-cycle the switch to apply the fix. After that, HCL to the future releases will be non-disruptive	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: High	
Found in Release: FOS6.4.2	**Service Request ID:** 678557

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000381459	**Technical Severity:** Medium
Summary: FCIP FastWrite: SRDF cannot handle busy response to commands	
Symptom: Customer may get data corruption on SRDF replication with FCIP FastWrite enabled.	
Workaround: Disable emulation	
Feature: Field Escalation	**Function:** FCIP
Probability: Medium	
Found in Release: FOS6.4.1	**Service Request ID:** 694909

Defect ID: DEFECT000382643	**Technical Severity:** Medium
Summary: CP panicked during core blade reseat	
Symptom: During core blade replacement, a race condition caused a removed blade object being access by routing module. Customer observed unintended Hafailover.	
Feature: Field Escalation	**Function:** Fabric Services
Probability: Medium	
Found in Release: FOS6.4.1	**Service Request ID:** 695027

Defect ID: DEFECT000386010	**Technical Severity:** Medium
Summary: Device does re-FLOGI with a different WWN cause stale entry in Flogin DataBase	
Symptom: switch reports duplicate WWN and panic.	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Medium	
Found in Release: FOS6.4.2	**Service Request ID:** 700637,722117

Defect ID: DEFECT000386559	**Technical Severity:** Medium
Summary: Good EOF CRC errors	
Symptom: Customer is seeing C2-1006 and C2-1010 messages reporting internal link errors without hardware fault. The issue are associated with Good EOF CRC errors: This defect tracks seders tuning for FS8-18 in DCX on slot 12, FC8-32 with BR48000 in slot3, FC8-16 on DCX4s in slot1,2, 7…	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 704947

Defect ID: DEFECT000387237	**Technical Severity:** Medium
Summary: FOS Nameserver is returning wrong value for GFF_ID (0x01F).	
Symptom: Not impact I/O but it affects the ability to quickly establish the session with Initiators. With GFF_ID wrong output we have to assume everything as a target.	
Feature: Field Escalation	**Function:** Fabric Services
Probability: High	
Found in Release: FOS6.4.0	**Service Request ID:** 705133

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000387287	**Technical Severity:** Medium
Summary: OUI information changed for a specific OEM	
Symptom: Updated OEM specific OUI name, no functional impact	
Feature: OS Services	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000388283	**Technical Severity:** Medium
Summary: zoned caused switch panic	
Symptom: During rename zone, add new zone name in list and then remove the old zone name, switch panic.	
Feature: Field Escalation	**Function:** Fabric Services
Probability: Low	
Found in Release: FOS6.3.2	

Defect ID: DEFECT000389202	**Technical Severity:** Medium
Summary: After changing F-port buffers via WebTools On 7800 cannot set buffers back to 8 (Default)	
Symptom: Customer set F-port buffer credits to 16 using WebTools > port admin (advanced mode) > F-port BB credit. Brocade recommended customer set the buffers back to 8 (default) state but customer was unable to do so and get the following error message:"Error when performing specified action for port 1 - F-Port BB credits with value less than 9 is not allowed.	
Feature: Field Escalation	**Function:** Web Management
Probability: Low	
Found in Release: FOS7.0.0	**Service Request ID:** 710385

Defect ID: DEFECT000389307	**Technical Severity:** Medium
Summary: DCX (FS8-18) reporting FSS error in the RAS log after a "cryptocfg --commit" command	
Symptom: Posting of FSS-1001 message with "(cvlmd) dropping HA data update" This can affect CP to CP communications.	
Workaround: The recovery procedure for the customer would be: - Rebooting the standby CP	
Feature: Field Escalation	**Function:** Encryption
Probability: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 709375

Close with Code Change in Fabric OS v6.4.3

Defect ID: DEFECT000389661	**Technical Severity:** Medium
Summary: WT Login : VeriSign Code Signing Certificate update for Web Tools	
Symptom: WT will be consider as UN-trusted application to the user. After the code fix, when launch WT first time with the updated certificate in FOS v7.0.1a, a warning dialog will be displayed. User can verify the certificate details (Issuer/Validity/Subject) by clicking "More information" in dialog. Once user selects the checkbox "Always trust content…." and click on Run button, warning message will not display in further login since it is consider as trusted application.	
Feature: WebMgmt	**Function:** Login / Session Management
Probability: High	
Found in Release: FOS7.0.1	

Defect ID: DEFECT000389731	**Technical Severity:** Medium
Summary: FICON Emulation is not handling IU pacing updates properly	
Symptom: Customer would see aborts on the fabric, and the customer reports that they went down because they were not getting frames fast enough from the 7500's.	
Feature: Field Escalation	**Function:** FICON
Probability: Medium	
Found in Release: FOS6.4.2	**Service Request ID:** 684047

Defect ID: DEFECT000380987	**Technical Severity:** Low
Summary: portStatsShow tim_txcrd_z value counter wraps at 171k on 4G switches	
Symptom: Stats counter wraps too quickly for debug purpose. After fix, new max counter value is 3.1G	
Feature: FOS Software	**Function:** ASIC Driver
Probability: Medium	
Found in Release: FOS6.4.0	

Closed with Code Change in Fabric OS v6.4.2b – GA September 20, 2011

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of September 20, 2011 in Fabric OS v6.4.2b.

Defect ID: DEFECT000326023	**Technical Severity:** High
Summary: Switch hafailover in IPFC setup.	
Symptom: With IPFC configuration, run IPFC Broadcast frames with multi frames in sequence, observe switch fails over or hareboot after some run time.	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 487819

Defect ID: DEFECT000329676	**Technical Severity:** High
Summary: On FOS v6.4.0a or later, unstable link triggered continuous timeout/discard frame/un-routable frame tracing to CPU for processing.	
Symptom: CPs cold recovery when continuous frame trapped to CPU and makes CPU too busy. This is reported on 4G directors and is less likely to be triggered on 8G switch/directors. Note: FOS 6.4.2 had improvement, and additional change is back ported from FOS7.0.0GA to FOS6.4.2b in this area to throttle further.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 501279
Where Else Fixed: FOS6.4.2, FOS7.0.0 GA	

Defect ID: DEFECT000333231	**Technical Severity:** High
Summary: Weblinker terminated and caused FFDC	
Symptom: Weblinker crash. GUI hangs until reboot but is still able to use CLI. This happens when weblinker received the newswitch.html request and the switch has more than 4 IPv6 address configured.	
Feature: Field Escalation	**Function:** Management Embedded
Probability: Medium	
Found in Release: FOS6.3.1	**Service Request ID:** 514459
Where Else Fixed: FOS7.0.0 GA	

Defect ID: DEFECT000346914	**Technical Severity:** High
Summary: Brocade 8000 on v6.4.x does not respond to FLOGI from third-party CNA	
Symptom: Third-party CNA does not come on line when connected to a Brocade 8000.	
Feature: CEE-FCOE	**Function:** FCOE PROTOCOL
Probability: Medium	
Found in Release: FOS6.4.1	**Service Request ID:** 588925

Close with Code Change in Fabric OS v6.4.2b

Defect ID: DEFECT000351152	**Technical Severity:** High
Summary: Name server assert triggered switch panic	
Symptom: Switch reboot or hafailover observed when Admin Domain (AD) database was not in sync and there was port offline event on local/remote switch.	
Feature: Field Escalation	**Function:** Fabric Services
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 618539

Defect ID: DEFECT000353445	**Technical Severity:** High
Summary: Name server panic in frame redirection environment.	
Symptom: Multiple name server panic observed. It's most likely to be triggered by SMI applications which performs GXX_ID (such as GCS_ID) queries via out of band (through RPC)	
Workaround: Avoid GXX_ID (like GCS_ID) queries via out of band (through RPC) querying with ID of device that is part of frame redirection	
Feature: Field Escalation	**Function:** Fabric Services
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 627097

Defect ID: DEFECT000356468	**Technical Severity:** High
Summary: Switch running in AG mode does not clean up fabric channel frame exchange properly. It happens when FLOGI/FDISC comes in from different ports together with same exchange ID (OX-ID).	
Symptom: 3rd party application reports migration failure between servers.	
Feature: Field Escalation	**Function:** Access Gateway
Probability: Medium	
Found in Release: FOS6.3.2	**Service Request ID:** 629273

Defect ID: DEFECT000357780	**Technical Severity:** High
Summary: Excessive encoding out errors on Brocade 300 ISL ports running at 8G	
Symptom: Customer may notice excessive port errors (enc out) on Brocade 300 ISL ports in a configuration consisting of a mix of 4G user ports interconnected via 8G ISLs.	
Feature: 4G Platform Services	**Function:** ASIC Driver
Probability: Medium	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS7.0.0 b PATCH	

Close with Code Change in Fabric OS v6.4.2b

Defect ID: DEFECT000359245	**Technical Severity:** High
Summary: The NS contains stale entries after a bad disk is removed from a loop attached device.	
Symptom: When a disk is removed from a loop attached device, the PID still shows up in the name server.	
Workaround: port bounce where the device connected.	
Feature: FC Services	**Function:** Name Server
Probability: Medium	
Found in Release: FOS6.3.2	**Service Request ID:** 641021
Where Else Fixed: FOS7.0.0 b PATCH	

Defect ID: DEFECT000363675	**Technical Severity:** High
Summary: The Brocade 8000 stops passing IP traffic upon upgrading from v6.3.2d v6.4.2	
Symptom: IP traffic cannot flow, SRDF fails.	
Feature: CEE-LAYER2	**Function:** L2 SUBSYSTEM
Probability: High	
Found in Release: FOS6.4.2	**Service Request ID:** 658649

Defect ID: DEFECT000364443	**Technical Severity:** High
Summary: Compact Flash became 100% full on BES	
Symptom: BES crashed and rebooted and left a large corefile which is copied CF to fill up CF space. Customer ran "cleanup" script to clean the CF space.	
Feature: Field Escalation	**Function:** OS: Linux
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 660833

Defect ID: DEFECT000334543	**Technical Severity:** Medium
Summary: Processes started during telnet session do not end when session abruptly ends	
Symptom: If fwmailcfg is executed and the management session is abruptly ended, the fwmailcfg binary continues to run on the switch taking up large amounts of CPU cycles.	
Feature: Field Escalation	**Function:** OS: Ethernet/Mgt Interface
Probability: High	
Found in Release: FOS6.2.2	**Service Request ID:** 505051
Where Else Fixed: FOS7.0.0 GA	

Defect ID: DEFECT000347173	**Technical Severity:** Medium
Summary: HAfailover on the Brocade 48000 with FC8-xx blades installed may encounter rare race condition	
Symptom: If this rare condition is encountered, a reset of the port blades may result causing temporary traffic disruption	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Low	
Found in Release: FOS6.1.2	**Service Request ID:** 595467

Close with Code Change in Fabric OS v6.4.2b

Defect ID: DEFECT000347751	**Technical Severity:** Medium
Summary: Support for SFTP on FOS platforms	
Symptom: Enhancement to support SFTP	
Feature: Infrastructure	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000348516	**Technical Severity:** Medium
Summary: Switch failed to go active after initialization	
Symptom: 4G Switch/blade may fail chip initialization. This is observed more often with BR5100 under higher temperature with portloopback test.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 590691

Defect ID: DEFECT000354137	**Technical Severity:** Medium
Summary: User cannot config TE interface after ceeportloopbacktest	
Symptom: Cannot config TE interface after running ceeportloopbacktest Following message is displayed: "% Error: Invalid input detected at '^' marker."	
Feature: Man Pages	**Function:** Edit/Correct
Probability: High	
Found in Release: FOS6.4.2	**Service Request ID:** 629643
Where Else Fixed: FOS7.0.0 b PATCH	

Defect ID: DEFECT000354157	**Technical Severity:** Medium
Summary: Brocade FCOE LACP PDU length is non-standard	
Symptom: Nonstandard size LACP PDUs being discarded at the remote end and Brocade switch could not form a dynamic LAG with a 3rd party switch.	
Feature: CEE-LAYER2	**Function:** LACP
Probability: Low	
Found in Release: FOS6.3.1_dcb	

Defect ID: DEFECT000354750	**Technical Severity:** Medium
Summary: Unable to access the boot prom on an BR5480 when it is installed in an embedded server chassis	
Symptom: Unable to access the boot prom on a Brocade 5480.	
Feature: Field Escalation	**Function:** EMBEDDED DRIVER
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 589577
Where Else Fixed: FOS7.0.0 b PATCH	

Close with Code Change in Fabric OS v6.4.2b

Defect ID: DEFECT000356778	**Technical Severity:** Medium
Summary: Kernel panic following insertion/removal of SFP on B8000	
Symptom: Kernel panic following rapidly insertion/removal of SFP in 10Gbit port on B8000.	
Workaround: Please avoid reseating the SFPs in a quick succession.	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 634985

Defect ID: DEFECT000356933	**Technical Severity:** Medium
Summary: configdownload fails with specific timezones	
Symptom: config download fails with the following error message: configDownload: Invalid Time Zone tz = (Asia/Tokyo) Process function of configdownload failed for filter ts, lrc = -1	
Feature: Field Escalation	**Function:** OS: Configuration
Probability: Low	
Found in Release: FOS7.0.0	**Service Request ID:** 635015
Where Else Fixed: FOS7.0.0 b PATCH	

Defect ID: DEFECT000358533	**Technical Severity:** Medium
Summary: Cold recovery observed when devices that are not LSAN zoned but sending ELS frames.	
Symptom: This is observed under rare conditions, in FCR fabrics. Devices that are not LSAN zoned somehow know the PROXY ID of the other device. ELS frames sent between the devices that are not LSAN zoned are not properly freed.	
Workaround: Use LSAN zone or make sure devices not statically remember old proxy IDs	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: High	
Found in Release: FOS6.4.2	**Service Request ID:** 638173

Defect ID: DEFECT000358765	**Technical Severity:** Medium
Summary: Switchshow displayed the GE port of BR7500/FR4-18i as "FCIP Copper"	
Symptom: BR7500 and FR4-18i has optical SFP in GbE port; not copper, but switchshow displayed it as "Copper" and no other functional impact.	
Workaround: Run the portcfgdefault CLI on the GE ports	
Feature: Legacy FCIP (7500/FR4-18i)	**Function:** FCIP CLI
Probability: High	
Found in Release: FOS6.4.2	**Service Request ID:** 629097

Close with Code Change in Fabric OS v6.4.2b

Defect ID: DEFECT000359160	**Technical Severity:** Medium
Summary: Not able to enable NPIV on FCoE ports.	
Symptom: If NPIV had been disabled on FCoE ports prior to upgrading to v7.0, NPIV cannot be enabled on those FCoE ports.	
Feature: Field Escalation	**Function:** FCoE
Probability: Low	
Found in Release: FOS7.0.0	**Service Request ID:** 639985
Where Else Fixed: FOS7.0.0 b PATCH	

Defect ID: DEFECT000359729	**Technical Severity:** Medium
Summary: The Brocade 8000 running v6.4.2 does not display LLDP neighbor Port Description when interoperating with another vendor's switch	
Symptom: LLDP does not display neighbor Port Description	
Feature: CEE-LAYER2	**Function:** LLDP
Probability: Medium	
Found in Release: FOS6.4.2	**Service Request ID:** 642141

Defect ID: DEFECT000360537	**Technical Severity:** Medium
Summary: Certain traffic configuration cause back end CRC errors on FC8-64 blades in slots 3 and 9 of a DCX	
Symptom: CRC errors with good EOF are reported when FC8-64 blades are installed in slots 3 or 9 of a DCX. A reinitialization (reseat/power cycle) of blade is needed for the change to be effective.	
Feature: 16G Platform Services	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	
Where Else Fixed: FOS7.0.0 b PATCH	

Defect ID: DEFECT000363608	**Technical Severity:** Medium
Summary: Parity error detected on FCOE switch during supportsave collection	
Symptom: Switch might fault during supportsave when non-significant parity errors were detected. This only impacts FCOE switches	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.3.2	

Close with Code Change in Fabric OS v6.4.2b

Defect ID: DEFECT000364788	**Technical Severity:** Medium
Summary: Unreliable speed negotiation may be encountered when BR5470 Cu ports are connected to a 3rd party HBA.	
Symptom: 3rd party HBA's are not properly negotiating to the correct speeds	
Feature: 8G ASIC Driver	**Function:** PORT
Probability: Medium	
Found in Release: FOS6.3.2	

Closed with Code Change in Fabric OS v6.4.2a – GA July 22, 2011

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of July 22, 2011 in Fabric OS v6.4.2a.

Defect ID: DEFECT000300506	**Technical Severity:** High
Summary: Observed routing problem after switch running in fmsmode (FICON) changed FID assignment	
Symptom: Connectivity problems in the fabric after changing FID assignment, switch in fabric reported [RTWR-1002] and [RTWR-1003] RAS log messages	
Workaround: Reboot or power cycle the affected switch or switches	
Feature: 8G ASIC Driver	**Function:** C2 ASIC driver
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000342905	**Technical Severity:** High
Summary: FX8-24 missing route to active F port in that logical switch after FCIP Tunnel Bounce. All frames after port bounce to that destination are dropped as non-routable	
Symptom: Connectivity to a device could be lost after FCIP tunnel bounce	
Feature: Striker/Spike Platform Services	**Function:** Routing
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000344506	**Technical Severity:** High
Summary: Port fenced during supportsave	
Symptom: Port without errors are fenced during supportsave	
Feature: FABRIC WATCH	**Function:** PORT FENCING
Probability: High	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000345665	**Technical Severity:** High
Summary: During aptpolicy change, routing mask is not being set correctly when changing from exchange to port based routing, leading to out of order frames.	
Symptom: If this unlikely issue is encountered, I/O errors will result from out of order delivery of frames within a sequence	
Feature: 8G ASIC Driver	**Function:** C2 ASIC driver
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 589543

Close with Code Change in Fabric OS v6.4.2a

Defect ID: DEFECT000346417	**Technical Severity:** High
Summary: On BES: Seeing message [CVLC-1009], 818598, FID 128, ERROR, FEN_BES_01, Wrong device type: should be tape, found disk.	
Symptom: BES switch is hanging/going faulty and stopping all tape backup operations	
Feature: Field Escalation	**Function:** Encryption
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 585157

Defect ID: DEFECT000346532	**Technical Severity:** High
Summary: Disabling or shutting down a Brocade Encryption Switch (BES) causes 3rd party storage to go offline.	
Symptom: Storage nodes go offline after a BES is disabled or powered off. The storage reboots several times before it toggles between offline and services mode.	
Workaround: Restart storage with VI/VT members (BES) online.	
Feature: FC Services	**Function:** Name Server
Probability: High	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000348660	**Technical Severity:** High
Summary: After FCIP bounces, FCR is not forwarding all PLOGIs, and appears to be sending frames without SID/DID translations	
Symptom: Customer cannot access device after the FCIP links had bounced multiple times. Frames with same SID/DID were sent to device after proxy translation failed in a backbone to edge FCR setup.	
Feature: Field Escalation	**Function:** FCR
Probability: Low	
Found in Release: FOS6.2.2	**Service Request ID:** 602521
Where Else Fixed: FOS6.3.2 c	

Defect ID: DEFECT000348682	**Technical Severity:** High
Summary: 3rd party stress test suite reported data corruption on the encrypted LUN.	
Symptom: Data corruption only reported when the LUN is encrypted. It only happened with a specific 3rd party stress test case.	
Feature: Data Security	**Function:** Disk Encryption
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000349150	**Technical Severity:** High
Summary: BES set to faulty, due to I/O sizes greater than 512KB starting at LBA 0 for a encrypted LUN	
Symptom: BES goes faulty without clear indication of the reason	
Feature: Data Security	**Function:** Disk Encryption
Probability: Low	
Found in Release: FOS7.0.0	

Close with Code Change in Fabric OS v6.4.2a

Defect ID: DEFECT000350457	**Technical Severity:** High
Summary: Access Gateway N-port stuck in G-port after firmware upgrade with QoS enabled on attached Fabric switch	
Symptom: AG N_Port could be stuck in G_Port after firmware upgrade.	
Workaround: If this issue is encountered, disable QoS on the Fabric switch for the impacted link.	
Feature: Field Escalation	**Function:** Access Gateway
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 610119
Where Else Fixed: FOS6.3.2 c	

Defect ID: DEFECT000356351	**Technical Severity:** High
Summary: Frame drops are observed after changing the FCR backbone domain ID.	
Symptom: Hosts lost access to storage after changing FCR backbone domain ID on a DCX/DCX-4S Backbone with FC8-64 and FC8-48 blades. Frame drops happen on the FC8-64/FC8-48 backend ports.	
Feature: Field Escalation	**Function:** FC Layer 2 Routing
Probability: Medium	
Found in Release: FOS6.4.1	**Service Request ID:** 628477

Defect ID: DEFECT000280643	**Technical Severity:** Medium
Summary: "Token freed on wrong logical port" message encountered and switch experienced panic.	
Symptom: Under session based zoning with large number of devices, observe switch panic when there are many special frames being sent to CPU for process such as PLOGI/RNID/FDISC/ADISC etc.	
Workaround: Avoid session based zoning and avoid enabling the default all access with large number of attached devices	
Feature: FC Services	**Function:** Zoning
Probability: Low	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS7.0.0 GA	

Defect ID: DEFECT000325598	**Technical Severity:** Medium
Summary: BR8000 does not update optics digital diagnostic data during runtime.	
Symptom: 'show media' command did not show TX/RX power value correctly after user disconnects and connects the optical cable	
Feature: CEE-Infrastructure	**Function:** IFM
Probability: High	
Found in Release: FOS6.4.1	**Service Request ID:** 485631
Where Else Fixed: FOS7.0.0 GA	

Close with Code Change in Fabric OS v6.4.2a

Defect ID: DEFECT000328463	**Technical Severity:** Medium
Summary: Switch View: Port status not getting updated for FAULTY blades	
Symptom: Port status not getting updated for FAULTY blade in switch view	
Feature: WebMgmt	**Function:** Switch Explorer/Switch View
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000331430	**Technical Severity:** Medium
Summary: SNMP: SW-MIB: As per RFC 2578, swFwClassesAreas should not have variables with hyphen character	
Symptom: The user will find SwFwClassesAreas defined with illegal hyphen character which is not compliant to the RFC	
Feature: Mgmt Embedded - SNMP	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000334074	**Technical Severity:** Medium
Summary: Port throughput graph for an E port trunk group is not showing any data on some slot position.	
Symptom: Customer sees no throughput though there is traffic running	
Feature: Port Statistics	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000335240	**Technical Severity:** Medium
Summary: Added a new configurable parameter to optimize i2c driver access	
Symptom: Customer may observe Temporary laser fault with SFP, or other I2c access retries during heavy load. Added configurable parameter to enhance i2c access for site with high CPU load: the configurechassis CLI command,system attributes / i2cTurboCnfg parameter has following options: 0 = disable i2cturbo 1 = enable i2cTurbo for SFPs only 2 = enable i2cTurbo for all. By default, it's set to 0 on FOS v6.3.x/6.4.x and 1 for FOS v7.0.0	
Feature: System Controls/EM	**Function:** PCI/I2C
Probability: Low	
Found in Release: FOS7.0.0	
Where Else Fixed: FOS6.3.2 c	

Close with Code Change in Fabric OS v6.4.2a

Defect ID: DEFECT000335811	**Technical Severity:** Medium
Summary: RFE: Brocade 5450 switches crashed when latest version of management SW was used.	
Symptom: Brocade 5450 platform may panic if used with newer version of MMB that uses new ISMIC block which was previously not supported.	
Workaround: Use initial qualified MMB version.	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Low	
Found in Release: FOS6.2.0	**Service Request ID:** 530085

Defect ID: DEFECT000342738	**Technical Severity:** Medium
Summary: Enhancement to BE credit loss detection and recovery	
Symptom: When BE credit is lost, customer needs to reseat blade to recover. This release added options to generate link reset, port re-init, and blade fault depends on user configuration upon defect BE credit lose. Refer to bottleneck on man page: bottleneckmon --cfgcredittools -intport –recover [off | onLrOnly | onLrThresh]	
Feature: 8G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS7.0.0	
Where Else Fixed: FOS6.3.2 c	

Defect ID: DEFECT000343097	**Technical Severity:** Medium
Summary: Allow Multiple Fabric Name Monitoring (MFNM) to be disabled on the Brocade 8000 when operating in AG mode	
Symptom: Currently, MFMN is hard enabled on the Brocade 8000, and cannot be disabled by the customer. This results in warning messages being generated every few minutes if the Brocade 8000 is connected to multiple fabrics.	
Feature: Access Gateway Services	**Function:** Daemon
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000344331	**Technical Severity:** Medium
Summary: ceeportloopbacktest failed with 'comparison failed" on BR8000	
Symptom: Multiple command options to cerrportloopbacktest fail on the B8000 switch, such as: ceeportloopbacktest -lb_mode 1 -spd_mode 0 -nframes 3600 ceeportloopbacktest -spd_mode 0 -nframes 3600 ceeportloopbacktest -nframes 3600 ceeportloopbacktest -lb_mode 7 -nframes 3600	
Feature: Field Escalation	**Function:** Diagnostics
Probability: High	
Found in Release: FOS6.4.1	**Service Request ID:** 574089
Where Else Fixed: FOS7.0.0 GA	

Close with Code Change in Fabric OS v6.4.2a

Defect ID: DEFECT000347807	**Technical Severity:** Medium
Summary: New diagnostic command pterrshow to display ASIC back-end errors	
Symptom: For backend ports, there is no easy way to diagnostic backend link level errors. This new command will support 8G ASIC first. There is no functional impact to customer.	
Feature: 8G ASIC Driver	**Function:** C2 ASIC driver
Probability: Medium	
Found in Release: FOS6.4.2	
Where Else Fixed: FOS6.3.2 c	

Defect ID: DEFECT000348806	**Technical Severity:** Medium
Summary: Rekey operation hangs due to unexpected ABTS received from the target port	
Symptom: Rekey operation may become "stuck", and not retried if this unlikely timing condition is encountered	
Feature: Field Escalation	**Function:** Encryption
Probability: Low	
Found in Release: FOS6.4.1	

Defect ID: DEFECT000348910	**Technical Severity:** Medium
Summary: Ports may fail to auto-negotiate to 8G speed.	
Symptom: Ports cannot negotiate at 8G speed with GE2 based platforms: Brocade 300, 5300, 5410, M5424, 5450, 5460, 5470, 5480, M8428-k, 8470, 7800	
Feature: 8G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS7.0.0	
Where Else Fixed: FOS6.3.2 c	

Defect ID: DEFECT000348926	**Technical Severity:** Medium
Summary: A mismatch of the reference count between RTE and ASIC occurs after HA failover.	
Symptom: Issuing hafailover command on may result in internal routing related errors for ICL ports.	
Workaround: Run the commands "portdisable" and then "portenable" on the affected ICL ports.	
Feature: 8G ASIC Driver	**Function:** Routing
Probability: Low	
Found in Release: FOS7.0.0	
Where Else Fixed: FOS6.3.2 c	

Close with Code Change in Fabric OS v6.4.2a

Defect ID: DEFECT000349440	**Technical Severity:** Medium
Summary: Creating an Encryption Group with 15 characters corrupts the name and displays the encryption group name differently on the switch telnet session, switch's CP console log session and from Brocade Network Advisor	
Symptom: Will result in misleading EG name data when interrogating different management interfaces	
Feature: Data Security	**Function:** Encryption Group
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000350270	**Technical Severity:** Medium
Summary: FICON Tape Pipelining Channel aborts I/O after presenting pending Attention status	
Symptom: Channel aborts I/O after channel detected errors. Could lead to failed tape jobs in a FCIP FICON Emulation configuration.	
Workaround: Disable FICON Tape pipelining	
Feature: FCIP	**Function:** Emulation
Probability: Medium	
Found in Release: FOS6.4.2	

Defect ID: DEFECT000351021	**Technical Severity:** Medium
Summary: Enhance tunings to improve CRC error with various blade/platforms	
Symptom: CRC errors on following type of blades and platforms: 1. Port 7/0 detected CRC error with good EOF when FC8-16 is placed in DCX-4s Slot7. For the solution to be effective, one must execute: serdestunemode --set; 2. Port 7/0, 7/10 detected CRC error when FX8-24 is placed in DCX-4s slot7. May also see CRC error on corresponding core blade backend port 3/10 6/30. Solution is effective upon upgrade, hafailover or re-init of blade 3. 5100 experience CRC error with 3rd party tape device. 4. FC10-6 in DCX detects backend port with stuck VC after link level error	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Medium	
Found in Release: FOS6.4.2	

Defect ID: DEFECT000351973	**Technical Severity:** Medium
Summary: Brocade 5470 - clear the invalid ordered counters and encoding out counters after link initialization on the server ports	
Symptom: Presence of High Invalid Ordered and enc out on some server ports error during Link Init on Brocade 5470	
Feature: Embedded Platform Services	**Function:** ASIC Driver
Probability: Medium	
Found in Release: FOS6.3.1	
Where Else Fixed: FOS6.3.2 c	

Close with Code Change in Fabric OS v6.4.2a

Defect ID: DEFECT000352773	**Technical Severity:** Medium
Summary: Customer is experiencing CRC errors on large data transfers using 3rd party Tape Drives on encryption products	
Symptom: Customers have experienced intermittent CRC errors when performing large data reads from 3rd party tape drives which may result in data read failures.	
Feature: FC Services	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000354560	**Technical Severity:** Medium
Summary: Failed tape jobs encountered on the 7800 or FX8-24 with tape pipelining enabled when utilizing a FICON to ESCON converter	
Symptom: Failed tape jobs maybe intermittently encountered in this configuration	
Workaround: Disable tape pipelining	
Feature: Field Escalation	**Function:** FCIP
Probability: Medium	
Found in Release: FOS6.4.2	

Closed with Code Change in Fabric OS v6.4.2 – GA April 7, 2011

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of April 7, 2011 in Fabric OS v6.4.2.

Defect ID: DEFECT000317586	**Technical Severity:** Critical
Summary: Fabric alias names were lost in IM2 mode.	
Symptom: Fabric alias names sometimes are deleted from zone configuration when operating in IM2 mode during configUpload	
Feature: Field Escalation	**Function:** Fabric Services
Probability: Low	
Found in Release: FOS6.2.2	**Service Request ID:** 449029

Defect ID: DEFECT000297809	**Technical Severity:** High
Summary: EVMD panics due to message queue full on standby CP during logical switch creation	
Symptom: Customer may experience hafailover, but no functionality disruption	
Workaround: Create logical switches with SMIA disabled.	
Feature: Field Escalation	**Function:** Management Services
Probability: Low	
Found in Release: FOS6.3.0	**Service Request ID:** 423387

Defect ID: DEFECT000311510	**Technical Severity:** High
Summary: Path loss encountered by servers in VF enabled environment.	
Symptom: Connectivity between servers and devices may be lost after add new ISL or other events that triggers route change.	
Feature: Field Escalation	**Function:** FC Layer 2 Routing
Probability: Low	
Found in Release: FOS6.2.1	**Service Request ID:** 444867

Defect ID: DEFECT000318466	**Technical Severity:** High
Summary: Corruption occurs in zoned when copying all zonesets from one AD to another using "zone --copy <AD_NUM>.". Subsequent zoning related operations can result in zoned termination	
Symptom: May result in switch reboot	
Workaround: Instead of copying all zonesets from one AD to another at one shot (using zone --copy <AD_NUM>.), copy zonesets one by one using zone --copy <AD_NUM>.<source_zoneset>. This will avoid the corruption code flow.	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Medium	
Found in Release: FOS6.4.0	**Service Request ID:** 450367

Close with Code Change in Fabric OS v6.4.2

Defect ID: DEFECT000321051	**Technical Severity:** High
Summary: Brocade 7800 data path processor panic occurred during tunnel bounce testing	
Symptom: Temporary FCIP traffic disruption will result if this issue is encountered.	
Feature: FCIP	**Function:** FCIP Port
Probability: Low	
Found in Release: FOS6.4.1_fcoe	

Defect ID: DEFECT000322703	**Technical Severity:** High
Summary: Access Gateway is not displayed by DCFM client when utilizing EOS seed switch	
Symptom: Unable to see AG in DCFM client on EOS-based fabric.	
Workaround: switch offline/online or restart AG.	
Feature: Field Escalation	**Function:** Access Gateway
Probability: High	
Found in Release: FOS6.3.2	

Defect ID: DEFECT000325475	**Technical Severity:** High
Summary: FCIP trunking limits the available bandwidth to 50% of committed rate on the Brocade 7800 for FCP/SCSI traffic	
Symptom: Only half of the bandwidth is available for tape traffic - 3 GE circuits using one tunnel.	
Feature: FCIP	**Function:** FCIP Performance
Probability: High	
Found in Release: FOS6.3.2	**Service Request ID:** 481655

Defect ID: DEFECT000329676	**Technical Severity:** High
Summary: On FOS v6.4.0a or later, unstable link triggered continuous timeout/discard frame/un-routable frame tracing to CPU for processing.	
Symptom: CPs cold recovery when continuous frame trapped to CPU and makes CPU too busy. This is reported on 4G directors and is less likely to be triggered on 8G switch/directors.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 501279

Defect ID: DEFECT000330165	**Technical Severity:** High
Summary: F port trunking: Unable to launch “Port throughput” and “Port Error” graphs for any ports in the edge switch, when F port trunk is configured.	
Symptom: User cannot launch "port throughput" and "port error" graphs for any ports in the switch.	
Feature: WebMgmt	**Function:** F Port Trunking
Probability: High	
Found in Release: FOS7.0.0	

Close with Code Change in Fabric OS v6.4.2

Defect ID: DEFECT000332542	**Technical Severity:** High
Summary: Fault occurs during switchdisable/switchenable script testing.	
Symptom: It's unlikely to happen, but hafailover of a director or reboot of a switch will result if this issue is encountered.	
Feature: FOS-Infrastructure	**Function:** FOS-RTE
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000334095	**Technical Severity:** High
Summary: Setting portthconfig to action of “none” disables Port fencing	
Symptom: Port fencing can be unintentionally disabled	
Feature: FABRIC WATCH	**Function:** PORT FENCING
Probability: High	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000334966	**Technical Severity:** High
Summary: Resource contention on performance monitor daemon	
Symptom: Switch panic/director hafailover due to psd panic when TopTalker is monitoring traffic flows.	
Feature: Performance Monitor	**Function:** Top Talker
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000336412	**Technical Severity:** High
Summary: Switch panic happened when setting IP/netmask/gateway to 0.0.0.0	
Symptom: Switch panic or hafailover happens when removing ipv4 address or setting ip/netmask/gateway to 0.0.0.0 with raslog [KSWD-1002] on process "cnmd"	
Feature: Data Security	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000336460	**Technical Severity:** High
Summary: Replication device port fails (panic) when FCIP FastWrite is used on 7800 tunnels.	
Symptom: When FCIP FastWrite is in use, attached device adapters panic intermittently.	
Feature: Field Escalation	**Function:** FCIP
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 543689

Close with Code Change in Fabric OS v6.4.2

Defect ID: DEFECT000337355	**Technical Severity:** High
Summary: Switches running FOS v6.4.x lose manageability from WebTools/DCFM, all LED's on switch are amber.	
Symptom: After upgrading switches to FOS v6.4.x, Snmpd is not running after system resource depleting. Customer may notice that all LED's on the switch are amber and/or a message from webtools/DCFM that chassis is not ready for management now, try again later. CLI still works fine and traffic is NOT disrupted. This does not impact directors.	
Workaround: Reboot switch through CLI to recover.	
Feature: Field Escalation	**Function:** Management Embedded
Probability: High	
Found in Release: FOS6.4.0	**Service Request ID:** 534167

Defect ID: DEFECT000342235	**Technical Severity:** High
Summary: CVCL crashes on a node in the EG and switch turns faulty with auto-rekey enabled on DEK cluster running on different time zones	
Symptom: Encryption traffic through the blade/BES stops when auto rekey is enabled in replication mode.	
Feature: Data Security	**Function:** Infrastructure
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000263565	**Technical Severity:** Medium
Summary: LDAP roles mapping not retained when upgrading from 6.2.x -> 6.3	
Symptom: LDAP roles can be reset upon upgrade	
Feature: Field Escalation	**Function:** Security
Probability: Medium	
Found in Release: FOS6.3.0	

Defect ID: DEFECT000268021	**Technical Severity:** Medium
Summary: FAN frames are not being sent by the switch to loop devices after LIP when fcAL.fanFrameDisable is set to 0	
Symptom: No data sent on the loop for extended period of time.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Medium	
Found in Release: FOS6.2.1	

Defect ID: DEFECT000283089	**Technical Severity:** Medium
Summary: SNMP: IF-MIB: ifTable excludes entries of port indices greater than port index of Logical ISL	
Symptom: The user will not be able to get the ports which are having index greater than port index of Logical ISL	
Feature: Mgmt Embedded - SNMP	**Function:** Other
Probability: Medium	
Found in Release: FOS6.4.0	

Close with Code Change in Fabric OS v6.4.2

Defect ID: DEFECT000288974	**Technical Severity:** Medium
Summary: After enabling https, a failover will cause the active CP to still be running http	
Symptom: Customer will not have https services after a failover.	
Workaround: Issue another hafailover to cause both CPs to reset the web services.	
Feature: Mgmt Embedded - HTTP	**Function:** Other
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000301281	**Technical Severity:** Medium
Summary: DCX Mgmt port speed of 1000Mbps, shows up on WebTools tooltip as 10Mbps	
Symptom: Incorrect port speed is displayed.	
Feature: Field Escalation	**Function:** Web Management
Probability: High	
Found in Release: FOS6.2.2	**Service Request ID:** 424607

Defect ID: DEFECT000301956	**Technical Severity:** Medium
Summary: Inconsistent behavior between v6.3.0 and v6.4.0a on "Link reset(F/FL Port (Optical) class)" under “fwconfigure” command.	
Symptom: End user may be confused by change in behavior.	
Feature: FABRIC WATCH	**Function:** CLI
Probability: High	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000301989	**Technical Severity:** Medium
Summary: In WebTools BR4100,BR4900,BR5000,BR300 has different switch icons, but BR8000 and BR5100 has same switch icon	
Symptom: Customer could be mislead by switch icons if both a BR8000 and BR5100 are present in the same deployment.	
Feature: WebMgmt	**Function:** Switch Explorer/Switch View
Probability: High	
Found in Release: FOS6.3.1	**Service Request ID:** 431623

Defect ID: DEFECT000302912	**Technical Severity:** Medium
Summary: Importing a windows 2003 DER encrypted SSL cert will not allow secure rpcd to start	
Symptom: After install a valid certificate with seccertutil walk-through option, secure RPCd generates error message after switch boot.	
Feature: Field Escalation	**Function:** Security
Probability: Low	
Found in Release: FOS6.3.0	**Service Request ID:** 434955

Close with Code Change in Fabric OS v6.4.2

Defect ID: DEFECT000307484	**Technical Severity:** Medium
Summary: Unable to initiate TPERF session	
Symptom: User may not be able to initiate a TPERF session under certain circumstances	
Feature: FCIP	**Function:** FCIP CLI
Probability: Medium	
Found in Release: FOS6.4.1_fcoe	

Defect ID: DEFECT000308715	**Technical Severity:** Medium
Summary: Need new OUI translation added to WebTools	
Symptom: OUI 00:24:ff is not being translated in the WWN Company ID of the WebTools Name Server window and zoning window.	
Feature: WebMgmt	**Function:** Other
Probability: Medium	
Found in Release: FOS6.4.0	**Service Request ID:** 442105

Defect ID: DEFECT000308770	**Technical Severity:** Medium
Summary: "fwconfigure --disable --port" command is not working for ports that are online	
Symptom: There are multiple symptoms: • After disabling the port from being monitored by Fabric Watch, it does not show up when we run "fwshow --disable --port" to verify • fwshow could not show the Threshold status correctly when user disabled the thresholds associated port by fwconfigure	
Feature: Fabric Infrastructure	**Function:** Fabric Watch
Probability: Low	
Found in Release: FOS6.3.2	**Service Request ID:** 442019

Defect ID: DEFECT000308833	**Technical Severity:** Medium
Summary: IPv4 and IPv6 show different WebTools behavior in Fabric Tree. WebTools should not be able to be launched from Fabric Tree when using IPv6	
Symptom: WebTools can be launched from Fabric Tree when using auto configured IPv6 address when it shouldn't be.	
Feature: WebMgmt	**Function:** IPV6
Probability: High	
Found in Release: FOS6.1.2	**Service Request ID:** 443373
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000311542	**Technical Severity:** Medium
Summary: User cannot create Certificate Signing Request (CSR) files with seccertutil command	
Symptom: On a switch with only IPv6 Address configured, creating Certificate Signing Request (CSR) fails.	
Workaround: Add an IPv4 address to switch configuration.	
Feature: Field Escalation	**Function:** Security
Probability: Low	
Found in Release: FOS6.2.2	**Service Request ID:** 445003

Close with Code Change in Fabric OS v6.4.2

Defect ID: DEFECT000313440	**Technical Severity:** Medium
Summary: Command reject, Core hang on FICON Emulation I/O in an XRC or FICON tape pipelining configuration	
Symptom: Multiple symptoms could be observed, such as Abort IO, IFCC, path failure, XRC suspension with Brocade 7500, 7800 or FX8-24, FR4-18i	
Feature: FCIP	**Function:** FCIP I/O
Probability: High	
Found in Release: FOS6.4.1_fcoe	

Defect ID: DEFECT000318163	**Technical Severity:** Medium
Summary: Configdownload failed due to "filter FCOE, lrc = -471604253" after FCOE10-24 blade removed	
Symptom: Configdownload may fail if FCOE10-24 blade is removed from chassis	
Workaround: Re-insert FCOE10-24 blade	
Feature: CEE-FCOE	**Function:** Other
Probability: Medium	
Found in Release: FOS6.4.1_fcoe	

Defect ID: DEFECT000319248	**Technical Severity:** Medium
Summary: ifmodeset set to default on standby CP after firmware download	
Symptom: If Ethernet settings have been customer configured via ifmodset, they may be reset to default values after firmware upgrade.	
Workaround: Reset Ethernet port parameters using ifmodeset command	
Feature: Field Escalation	**Function:** OS: Ethernet/Mgt Interface
Probability: Medium	
Found in Release: FOS6.2.2	**Service Request ID:** 450463

Defect ID: DEFECT000319370	**Technical Severity:** Medium
Summary: WebTools could not display IPv6 address of switch management port	
Symptom: If customer has configured management port as IPv6 auto-configuration only, WebTools will not be able to properly display IPv6 address	
Feature: Mgmt Embedded - HTTP	**Function:** Login / Session Management
Probability: Medium	
Found in Release: FOS6.2.2	**Service Request ID:** 451575

Defect ID: DEFECT000319686	**Technical Severity:** Medium
Summary: Routing imbalance may occur under certain trunking configuration changes	
Symptom: Routing may become unbalanced, thus may result in throughput degradation	
Feature: 8G Platform Services	**Function:** Routing
Probability: Medium	
Found in Release: FOS6.4.1_fcoe	

Close with Code Change in Fabric OS v6.4.2

Defect ID: DEFECT000320772	**Technical Severity:** Medium
Summary: Class three frame discards observed when supportshow is executed	
Symptom: Customer may observe SCSI/IO errors when supportsave is executed on specific platforms such as the Brocade 300 or 5300	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Medium	
Found in Release: FOS6.1.1	**Service Request ID:** 450351

Defect ID: DEFECT000323113	**Technical Severity:** Medium
Summary: cald software verify errors	
Symptom: Customer may notice core files and RAS messages generated due to these verify errors	
Feature: Mgmt Embedded - CAL	**Function:** Other
Probability: Medium	
Found in Release: FOS6.3.1	**Service Request ID:** 458229

Defect ID: DEFECT000323132	**Technical Severity:** Medium
Summary: The low rpm threshold for the fans in Brocade 8000 is set too high	
Symptom: Customer may experience false fan related errors on Brocade 8000.	
Feature: CEE-PLATFORM	**Function:** SYSTEM CONTROL
Probability: Low	
Found in Release: FOS6.4.1	

Defect ID: DEFECT000324395	**Technical Severity:** Medium
Summary: WebTools Switch Status Policy has various functions such as "sort" that don't work	
Symptom: On the Switch Status Policy window of WebTools, the following two functions don't operate correctly. 1. "Sort Ascending" and "Sort Descending". 2. "Select ALL"	
Feature: WebMgmt	**Function:** Web Tools EZ
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 472633

Defect ID: DEFECT000324990	**Technical Severity:** Medium
Summary: FCIP Port based routing not utilizing all VTNs available for FICON traffic.	
Symptom: Lower than expected throughput in a 3-4 Gigabit tunnel.	
Feature: FCIP	**Function:** FCIP I/O
Probability: Medium	
Found in Release: FOS6.4.0	

Close with Code Change in Fabric OS v6.4.2

Defect ID: DEFECT000325588	**Technical Severity:** Medium
Summary: Status of fwfrucfg and trackchangesset are not overwritten by configDownload	
Symptom: If customer has updated FRU config status or trackchangeset status, then uploaded the config file, followed by a configdefault, the status will not be restored upon download of the config file.	
Feature: FABRIC WATCH	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 482441

Defect ID: DEFECT000325591	**Technical Severity:** Medium
Summary: Various configuration status are not reflected to configFile	
Symptom: If the “ap” option in aptpolicy is modified by customer, and is uploaded via configUpload, the resulting configFile will not reflect the updated aptpolicy option. Same is true for configName and others.	
Feature: Field Escalation	**Function:** FC Layer 2 Routing
Probability: High	
Found in Release: FOS6.4.1	**Service Request ID:** 482445

Defect ID: DEFECT000326252	**Technical Severity:** Medium
Summary: Encryption group having more than one node, cryptocfg commit hangs if the configuration to be committed is having more than 560 LUNs in a single container.	
Symptom: Adding/Configuring more than 560 LUNs into a CTC followed by “cryptocfg commit” to commit the configuration across an Encryption Group results in the operation hanging.	
Feature: Data Security	**Function:** Infrastructure
Probability: Medium	
Found in Release: FOS6.4.1	

Defect ID: DEFECT000326785	**Technical Severity:** Medium
Summary: Can't make Enhanced TI zones on BR8000.	
Symptom: Enhanced TI Zones are not allowed to be created when BR8000 is in the fabric. With FOS v6.4.2, the restriction is removed. When user configures TI/ETIZones that includes ports on BR8000, user needs to be careful to only include FC ports in the zone. Otherwise undefined behavior will occur.	
Feature: FC Services	**Function:** Zoning
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 480041

Defect ID: DEFECT000328166	**Technical Severity:** Medium
Summary: SNMP-1008 messages and traps stop while port is bouncing every 20 minutes	
Symptom: SNMP traps and related RASLOGs may not be generated as expected	
Feature: Mgmt Embedded - SNMP	**Function:** Informs
Probability: Medium	
Found in Release: FOS6.3.1	**Service Request ID:** 445043

Close with Code Change in Fabric OS v6.4.2

Defect ID: DEFECT000329521	**Technical Severity:** Medium
Summary: FICON MIB traps missing .21 in their OID	
Symptom: This will result in a mismatch between FICON link incident MIB trap OID prefix sent from a switch with the actual OID values for these traps as per the MIB definition and MIB reference manual.	
Feature: Field Escalation	**Function:** SNMP
Probability: High	
Found in Release: FOS6.4.1	

Defect ID: DEFECT000330511	**Technical Severity:** Medium
Summary: Kernel panic encountered while accessing compact flash	
Symptom: When writes to compact flash timeout, software reset recovery results in access to a bad pointer to triggering switch panic. This will result in a switch reboot, though the probability of this occurring is very low.	
Feature: Field Escalation	**Function:** OS: Linux
Probability: Low	
Found in Release: FOS6.2.1	**Service Request ID:** 492295

Defect ID: DEFECT000332040	**Technical Severity:** Medium
Summary: On the Brocade 8000, RX_COUNT does not increment if port 0 is included in eemonitor.	
Symptom: RX_Count is misleading/invalid on the Brocade 8000 when including port 0	
Feature: Field Escalation	**Function:** Management Services
Probability: High	
Found in Release: FOS6.4.1	**Service Request ID:** 509089

Defect ID: DEFECT000333412	**Technical Severity:** Medium
Summary: FCP/SCSI tape I/Os failing when server and tape device connected over FCIP link between Brocade 7800s	
Symptom: Customer may experience I/O failures to tape over FCIP tunnel running near max committed rate.	
Feature: FCIP	**Function:** FCIP I/O
Probability: High	
Found in Release: FOS6.4.1	**Service Request ID:** 492061

Defect ID: DEFECT000333569	**Technical Severity:** Medium
Summary: The data read from SFP through i2c might not be ready after reset.	
Symptom: Customer may encounter erroneous port faults due to invalid SFP validation failures.	
Feature: System Controls/EM	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Close with Code Change in Fabric OS v6.4.2

Defect ID: DEFECT000333616	**Technical Severity:** Medium
Summary: IPv6 named Certificate Signing Request (CSR) files may not be FTP'd to some Windows based ftp servers	
Symptom: Windows servers do not accept ":" character in the filename which is present in IPv6 CSR filenames, thus transfer will fail.	
Feature: Field Escalation	**Function:** Security
Probability: Low	
Found in Release: FOS6.3.2	**Service Request ID:** 445003

Defect ID: DEFECT000334327	**Technical Severity:** Medium
Summary: As per sysmonitor man page, sysmonitor command line : usage error message is incorrect .	
Symptom: User cannot set cpu monitor to 1%, but 2% is accepted	
Workaround: use value of 2 > sysMonitor --config cpu -limit 2	
Feature: Field Escalation	**Function:** Management Services
Probability: High	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000334491	**Technical Severity:** Medium
Summary: DCX-4S is experiencing a high rate of internal CRC errors on select links	
Symptom: Detect CRC error with good EOF when FC8-16 is placed in DCX-4s Slot 2 and Slot7. For the solution to be effective, one must execute: serdestunemode --set	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000334654	**Technical Severity:** Medium
Summary: Brocade 7800 generates C2-1011 raslog errors when portloopbacktest is run	
Symptom: Spurious raslog messages may be generated during portloopbacktest	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: High	
Found in Release: FOS6.4.1	**Service Request ID:** 522357

Defect ID: DEFECT000335196	**Technical Severity:** Medium
Summary: Errdump logging TS-1006 messages every 20 minutes since FOS 6.4.0b upgrade on Interop Fabric	
Symptom: Spurious raslog messages are generated when DCX is operating in Interop mode	
Workaround: To avoid TS-1009 message, please have FOS switch as a principal switch in interop mode.	
Feature: Field Escalation	**Function:** RAS Logging / Tracing
Probability: High	
Found in Release: FOS6.4.0	**Service Request ID:** 495965

Close with Code Change in Fabric OS v6.4.2

Defect ID: DEFECT000335302	**Technical Severity:** Medium
Summary: FOS v6.4.1a has SWBD folder of unsupported embedded switch type.	
Symptom: Could result in unpredictable platform behavior after FW download	
Feature: Infrastructure	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.1	

Defect ID: DEFECT000336270	**Technical Severity:** Medium
Summary: IP address field in fabricshow is not updated after running "ipaddrset -chassis"	
Symptom: After changing remote switch's IP address, the old address may be displayed via fabricShow if operating in IM2 mode	
Workaround: Bounce all E-Port to trigger fabric rebuild and exchange ESS.	
Feature: Field Escalation	**Function:** OS: Ethernet/Mgt Interface
Probability: Medium	
Found in Release: FOS6.3.0	**Service Request ID:** 508881

Defect ID: DEFECT000336933	**Technical Severity:** Medium
Summary: Switch sends ELP to device after device sends FLOGI after power up sequence	
Symptom: When connected to 4G switch, after a 3rd party device power up sequence, host cannot see target.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.1.2	**Service Request ID:** 444823

Defect ID: DEFECT000337320	**Technical Severity:** Medium
Summary: AN-1010 messages logged on R_RDY ports when interoperating with M-Series switches	
Symptom: Customer is observing AN-1010 messages on ports that are connected to M-Series switches	
Workaround: The workaround on this one is to use the "portcfgislmode slot/port 1" in setting the E-Port in McDATA rdy mode, so that bottleneck detection will not monitor it for traffic congestion.	
Feature: Field Escalation	**Function:** RAS Logging / Tracing
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 527509

Defect ID: DEFECT000337433	**Technical Severity:** Medium
Summary: Newly replaced device on Loop port does not registered with name server properly.	
Symptom: After replacing a drive on an FL_Port, the initiator cannot discover the device.	
Feature: Field Escalation	**Function:** Fabric Services
Probability: Low	
Found in Release: FOS6.3.0	**Service Request ID:** 537479

Close with Code Change in Fabric OS v6.4.2

Defect ID: DEFECT000340526	**Technical Severity:** Medium
Summary: rpcd killed and restarted	
Symptom: Termination of rpcd daemon and HA state out of sync.	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 559825

Defect ID: DEFECT000341260	**Technical Severity:** Medium
Summary: Detected hard zone miss and other discards following hafailover	
Symptom: In VF setup, several F-Ports detected 4-6 hard zone miss frames and 4-7 other discards on both F-Ports and E-Ports following user induced hafailover on directors.	
Feature: 8G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000341613	**Technical Severity:** Medium
Summary: With BES or FS8-18, the command “cryptocfg –initEE” may fail to execute successfully	
Symptom: cryptocfg --initEE fails with following error message, "Operation failed: Encryption Engine (EE) not zeroized"	
Feature: Data Security	**Function:** Security Processor
Probability: Medium	
Found in Release: FOS6.4.1	

Defect ID: DEFECT000343841	**Technical Severity:** Medium
Summary: Resource are lost when circuit is down for long periods of time.	
Symptom: Complete FCIP Circuit and Tunnel failures after buffer pool resources depleted. Tunnel recovers after switch/blade reboot. This applies to 7800 and FX8-24	
Feature: FCIP	**Function:** FCP TCP/IP Stack
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000344796	**Technical Severity:** Medium
Summary: Decommissioning a multi-path LUN from a chassis-based membernode following CP hafailover, results in the LUN getting stuck in "Disabled (Data Decommissioning - commit in progress)"	
Symptom: Running decommission operation after CP failover on chassis-based membernode fails with error "An outstanding transaction in EG". Sometimes decommission CLI may return success but internal commit can fail. In this case, LUN state will be "Disabled (Data Decommissioning - commit in progress)" .	
Feature: Data Security	**Function:** Infrastructure
Probability: Low	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v6.4.1b – GA March 2, 2011

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of March 2, 2011 in Fabric OS v6.4.1b.

Defect ID: DEFECT000283566	**Technical Severity:** High
Summary: Continuous SNMPd FFDC observed on switch during SNMP queries	
Symptom: SNMPd FFDC will occur if a rare race condition is encountered	
Feature: Field Escalation	**Function:** Management Embedded
Probability: Low	
Found in Release: FOS6.1.1	**Service Request ID:** 421557

Defect ID: DEFECT000324135	**Technical Severity:** High
Summary: Frames received on shared area port trunks are improperly routed.	
Symptom: Frame drop caused traffic issue when there are trunks configured on shared area ports on a FC8-48 port blade in a DCX. It usually happens after the remote trunk master went offline and comes back online.	
Feature: Field Escalation	**Function:** FC Layer 2 Routing
Probability: Medium	
Found in Release: FOS6.4.0	**Service Request ID:** 464647

Defect ID: DEFECT000324940	**Technical Severity:** High
Summary: Connectivity issues when 8G port is operating in FL mode	
Symptom: In an 8 Gig Switch fabric, on a looped connection with several devices on the loop, user may experience connection issues such as hosts not able to see its targets, timeouts on GNN_FT/GA_NXT name server requests etc.	
Workaround: Configure a FL port in such a way that the number of buffers > the number of devices in loop.	
Feature: Field Escalation	**Function:** Scimitar / Sabre Layer-2
Probability: Medium	
Found in Release: FOS6.3.1	

Defect ID: DEFECT000324969	**Technical Severity:** High
Summary: Unequal traffic load distribution when multiple tunnels of equal bandwidth are configured on the Brocade 7800	
Symptom: Data path throughput is not optimal	
Feature: 8G Platform Services	**Function:** Routing
Probability: Medium	
Found in Release: FOS7.0.0	

Close with Code Change in Fabric OS v6.4.1b

Defect ID: DEFECT000327226	**Technical Severity:** High
Summary: After executing shut/no shut on port-channel member, sync is not regained preventing port from coming back online	
Symptom: Link member is lost from trunk group	
Feature: CEE-Infrastructure	**Function:** ANVIL DRIVER
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000327375	**Technical Severity:** High
Summary: Brocade 7500/FR4-18i faults due to backend link timeouts when GE cable is pulled and link is active	
Symptom: Switch or blade must be reset to bring it back online and restore functionality	
Feature: 4G ASIC Driver	**Function:** ASIC Driver
Probability: Medium	
Found in Release: FOS6.4.1	**Service Request ID:** 492575

Defect ID: DEFECT000328773	**Technical Severity:** High
Summary: With 2 DCXs configured as FCRs on a common backbone and connected via FCIP tunnels, edge devices cannot be discovered after enabling FastWrite	
Symptom: Edge devices are no longer accessible after enabling FastWrite in this configuration	
Workaround: Disable FastWrite	
Feature: FCIP	**Function:** FCIP Port
Probability: High	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000332988	**Technical Severity:** High
Summary: SNMP trap test indicates that trap information for the LinkDown & LinkUp is not assigned properly for CEE ports of the Brocade 8000	
Symptom: SNMP trap information for CEE ports will be incorrect as it is not assigned to the correct fields.	
Feature: CEE-MANAGEABILITY	**Function:** SNMP INTERFACE
Probability: High	
Found in Release: FOS6.4.0	**Service Request ID:** 496687

Defect ID: DEFECT000338044	**Technical Severity:** High
Summary: When DCFM polls the container configuration hosted on a BES or FS8-18, it exposes a resource contention condition. Eventually this results in the BES/FS8-18 faulting,	
Symptom: BES or FS8-18 faulted with v6.4.1 or v6.4.1a. This issue is exposed when DCFM is configured to monitor the BES or FS8-18 blade or CLI continual polling of configuration and statistics from the command line interface. If DCFM is not used in the environment, it is unlikely the customer will encounter the issue.	
Feature: Field Escalation	**Function:** Encryption
Probability: High	
Found in Release: FOS6.4.1	**Service Request ID:** 548739

Close with Code Change in Fabric OS v6.4.1b

Defect ID: DEFECT000288021	**Technical Severity:** Medium
Summary: Unable to login to the switch with accounts that are present in the switch database.	
Symptom: User unable to launch Web Tools with user account from switch database when user configured LDAP/Radius as primary and switch database as secondary for validation.	
Workaround: Use CLI or Use LDAP/Radius account.	
Feature: FOS Security	**Function:** Radius
Probability: Medium	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1_fcoe	

Defect ID: DEFECT000306455	**Technical Severity:** Medium
Summary: Disabled port thresholds in FabricWatch become re-enabled after port bounce	
Symptom: Fabric Watch port threshold control via Web Tools does not function properly	
Feature: Fabric Infrastructure	**Function:** Fabric Watch
Probability: Medium	
Found in Release: FOS6.3.1	**Service Request ID:** 439863

Defect ID: DEFECT000310683	**Technical Severity:** Medium
Summary: After device performs a LOGO, followed by port offline and online events, switch route is not properly re-established	
Symptom: Host cannot discover target.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.2.2	**Service Request ID:** 442467

Defect ID: DEFECT000319548	**Technical Severity:** Medium
Summary: ceeportloopbacktest and ceeportledtest does not properly process all parameters on the Brocade 8000	
Symptom: Customer cannot utilize all options of the CEE port diagnostic tests	
Feature: Diagnostics	**Function:** Other
Probability: High	
Found in Release: FOS6.4.0	**Service Request ID:** 451771

Defect ID: DEFECT000321714	**Technical Severity:** Medium
Summary: LSAN zone binding is not removed after removing/applying the modification	
Symptom: Customer will not know why devices aren't imported.	
Workaround: Reboot the backbone FCRs.	
Feature: FC Services	**Function:** Other
Probability: Medium	
Found in Release: FOS6.4.1_fcoe	

Close with Code Change in Fabric OS v6.4.1b

Defect ID: DEFECT000323031	**Technical Severity:** Medium
Summary: Removal of FCR binding may cause backbone to edge host/target discovery issues	
Symptom: Not likely to encounter, however if it occurs, customer will not be able to execute backbone to edge IO.	
Workaround: Reboot the backbone FCRs.	
Feature: FC Services	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.1_fcoe	

Defect ID: DEFECT000335650	**Technical Severity:** Medium
Summary: When trunk switch running FOS v6.2 in AG mode to FOS 6.4.1, FOS v6.4.1 requests license for N-Port trunking	
Symptom: Trunk a switch running FOS v6.2.x or lower in AG mode with a fabric switch running FOS v6.4.1 or above, the N-Port trunk cannot form, ports turns into G-port, and FOS v6.4.1 switch reports SAO license is needed	
Workaround: Have SAO license installed on switch when connecting AG running < 6.3 version and to form F-Port trunking.	
Feature: FC Services	**Function:** Fabric
Probability: High	
Found in Release: FOS6.4.1	

Defect ID: DEFECT000340104	**Technical Severity:** Medium
Summary: Encryption Group state and EE state issue with DCX as group leader	
Symptom: There are 2 possible symptoms, when DCX is group leader 1. Addition of member node to the encryption group may fail. 2. Display of member node EE state from group leader may with error "EE detection aborted: No EE Detected."	
Workaround: Reboot of both the CPs of group leader DCX chassis will resolve the issue.	
Feature: Data Security	**Function:** HA Cluster
Probability: Low	
Found in Release: FOS6.4.1	

Closed with Code Change in Fabric OS v6.4.1a - GA December 14, 2010

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of December 14, 2010 in Fabric OS v6.4.1a.

Defect ID: DEFECT000322036	**Technical Severity:** Critical
Summary: Brocade 7800 Tape read pipelining not working due to SILI and variable length settings	
Symptom: Read throughput does not improve after enabling read tape pipelining	
Feature: FCIP	**Function:** Emulation
Probability: Medium	
Found in Release: FOS6.4.0	**Service Request ID:** 452977
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000301127	**Technical Severity:** High
Summary: After an i2c reset, switch FC ports report "Mod_Val" state rather than "Online"	
Symptom: Switchshow displays port state as "Mod_Val" rather than "Online" after switch reboot test, and ISL fails to form. This change applies to all platforms except embedded switches, Brocade 300, 5100 and BR-VA40FC.	
Feature: System Controls/EM	**Function:** PCI/I2C
Probability: Low	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1_fcoe, FOS6.3.2 b, FOS6.4.1 a	

Defect ID: DEFECT000301128	**Technical Severity:** High
Summary: Management Server (MS) main thread is blocking on SNMP notification calls, preventing other pending Extended Link Service commands in the MS message queue from completing within the timeout interval.	
Symptom: After a power on reset of a mainframe server, some CHPIDs are in an Invalid Attachment state in the FICON setup.	
Feature: FICON	**Function:** MS-FICON
Probability: Low	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000302929	**Technical Severity:** High
Summary: Proxy PID in ACC payload to a TAPE REC command is not translated. This causes tape backups to fail intermittently	
Symptom: When there are multiple FCRs connected to the same edge fabric, server aborts tape operation(s) and tape backup fails. Tape backup has to be restarted.	
Feature: Legacy FCR (7500/FR4-18i)	**Function:** FCR Daemon
Probability: Low	
Found in Release: FOS6.2.1	**Service Request ID:** 436037
Where Else Fixed: FOS6.4.1_fcoe, FOS6.3.2 b, FOS6.4.1 a	

Close with Code Change in Fabric OS v6.4.1a

Defect ID: DEFECT000303239	**Technical Severity:** High
Summary: Observed fspf daemon termination when performing portenable of E-ports in a FCR setup with FCIP VEX links.	
Symptom: After port disable/enable or cable pull disruptive testing, observe some switches are not present in fabricshow, some VEx ports remain disabled (Switch not ready for EX_Ports)	
Feature: FC Services	**Function:** FSPF
Probability: Medium	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1_fcoe, FOS6.4.1 a	

Defect ID: DEFECT000315822	**Technical Severity:** High
Summary: SNMPd is killed and not restarted	
Symptom: When the configured trap IP address does not match configured access control list, SNMP is killed after some run time and it is not restarted.	
Feature: Mgmt Embedded - SNMP	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.1_fcoe	
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000318549	**Technical Severity:** High
Summary: FCIP tunnel bounces during hafailover	
Symptom: While performing hafailover testing with heavy traffic load, occasionally observed frame drops and FCIP tunnel bounce caused by setting of GE mode during hafailover	
Feature: FCIP	**Function:** FCIP HA
Probability: Medium	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000319007	**Technical Severity:** High
Summary: CRC errors reported on Brocade 8000 internal chip-to-chip links.	
Symptom: CRC errors on internal links might occur when jumbo frames are transmitted under certain traffic loads below the full line rate. If extensive CRC errors occur, traffic might stop and require disabling and enabling to restore affected user ports.	
Feature: CEE-Infrastructure	**Function:** ANVIL DRIVER
Probability: Low	
Found in Release: FOS6.3.1	
Where Else Fixed: FOS6.3.2 b, FOS6.4.1 a	

Close with Code Change in Fabric OS v6.4.1a

Defect ID: DEFECT000319033	**Technical Severity:** High
Summary: Observed memory allocated to TSD was increasing over time which could potentially impact switch over an extended duration	
Symptom: Standby CP may reboot, and under some situations the active CP may fail and an HA Fail-over may be observed	
Feature: Fabric Infrastructure	**Function:** Time Server
Probability: Low	
Found in Release: FOS6.4.1_fcoe	
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000320335	**Technical Severity:** High
Summary: Host receiving "port type not detected" when in AG mode with policy of "auto"	
Symptom: Enabled AG mode on the switch with AG policy of "auto", port on the switch then gets the error "port type not detected".	
Feature: Access Gateway Services	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.1	
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000321597	**Technical Severity:** High
Summary: Detected termination of process lfmd followed by kernel panic while performing supportsave	
Symptom: The lfmd daemon is terminated while gathering supportsave and then kernel panic occurs. This happens when there is large number of LISL configurations with virtual fabrics.	
Feature: Logical Fabric	**Function:** LFMD
Probability: Low	
Found in Release: FOS6.4.1_fcoe	
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000322367	**Technical Severity:** High
Summary: PLOGI through VEX port of FCIP link were not being routed properly in a E2E topology.	
Symptom: Host cannot see target in a E2E topology through VEX port of FCIP link.	
Feature: FCIP	**Function:** FCIP Port
Probability: Medium	
Found in Release: FOS6.4.1_fcoe	
Where Else Fixed: FOS6.4.1 a	

Close with Code Change in Fabric OS v6.4.1a

Defect ID: DEFECT000322883	**Technical Severity:** High
Summary: Brocade 48000 running FOS v6.2.0x are unable to upgrade to v6.3.x when a GE port is present and is persistently disabled.	
Symptom: After a firmware download from FOS 6.2 to FOS 6.3, active CP may fail to come online completely. After rebooting CP to recover, if CP is downgraded to FOS v6.2 code again, the CP is left with an invalid configuration. The invalid configuration prevents the CP from successfully upgrading again. A good CP with a valid configuration could be affected by the misconfigured CP if it is HA synced with this CP. This applies to FR4-18i only.	
Workaround: Enable all persistently disabled GE port prior to the first upgrade. If a downgrade is performed already, configuremove the configuration and download a valid configuration to restore the CP.	
Feature: Field Escalation	**Function:** FCIP Flipper/ASIC
Probability: Medium	
Found in Release: FOS6.2.0	**Service Request ID:** 446263
Where Else Fixed: FOS6.3.2 b, FOS6.4.1 a	

Defect ID: DEFECT000323542	**Technical Severity:** High
Summary: SFP polling period for GE ports is too frequent, and not releasing size 64 byte buffers	
Symptom: Switch panic triggered after some run time when there are GE port with SFP installed on FC8-24 and Brocade 7800.	
Feature: Striker/Spike Platform Services	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.1_fcoe	
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000324115	**Technical Severity:** High
Summary: Switch route module (RTE) failures.	
Symptom: Switch experiences different flavor of RTE failure: customer could see switch panic, or traffic issues caused by route adding programming failure.	
Workaround: No	
Feature: Field Escalation	**Function:** FC Layer 2 Routing
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 461425
Where Else Fixed: FOS6.4.1_fcoe, FOS6.3.2 b, FOS6.4.1 a	

Close with Code Change in Fabric OS v6.4.1a

Defect ID: DEFECT000324848	**Technical Severity:** High
Summary: Any 8G blade or 8G switch running with FOS 6.4.0, 6.4.0a, 6.4.0b, 6.4.0c and 6.4.1 could observe a loss of connectivity on a port or trunked ISL causing all traffic entering the switch or the blade to be dropped.	
Symptom: When there is a trunk consisting of 2 or more ports, other ports on the same ASIC chip are improperly programmed with the same table entry in ASIC routing table as trunk ports. . Customer observes symptom such as frame rejects on trunked ISLs for SCSI commands when a host on a different port in the same ASIC reboots. The defect will also only affect 8G platforms and 8G blades. 4G blades inserted into a DCX or DCX-4S are not affected, but 8G blades inserted into a Brocade 48000 can be affected.	
Feature: Field Escalation	**Function:** FC Layer 2 Routing
Probability: Medium	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000325021	**Technical Severity:** High
Summary: C3 (Class 3) frame discards due to destination unreachable are incremented when supportshow/supportsave command is run after a fastboot.	
Symptom: SCSI timeout may be seen on the following platforms: Brocade300, 5300, 7800 and 8G embedded platforms during supportsave. There is a very small number of frames dropped and most of the time, the server will retry SCSI traffic and will not experience any functional impact.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 472849
Where Else Fixed: FOS6.3.2 b, FOS6.4.1 a	

Defect ID: DEFECT000325477	**Technical Severity:** High
Summary: High speed, highly utilized FCIP Tunnel may bounce without packet loss occurring in the IP network.	
Symptom: In rare cases, on a highly utilized high-speed FCIP Tunnel connection, the FCIP Tunnel may bounce without any packet loss occurring in the IP network.	
Feature: FCIP	**Function:** FCP TCP/IP Stack
Probability: High	
Found in Release: FOS6.4.1	**Service Request ID:** 457635
Where Else Fixed: FOS6.4.1 a	

Close with Code Change in Fabric OS v6.4.1a

Defect ID: DEFECT000281918	**Technical Severity:** Medium
Summary: Switch report VERIFY - Failed expression: ag_descp != NULL,file = ms_telnetcmds.c, line = 525, user mode args = 140, 0"	
Symptom: With AG fabric, DXFM/FM/SMI proxy switch will send GAGI request to another switch in the fabric with Brocade_AG query. Sometime it triggers verify and floods the raslog. The continuous verify could cause other side effects such as high cpu load and/or switch panic.	
Feature: Fabric Infrastructure	**Function:** MANAGEMENT SERVER
Probability: Low	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.3.2 b, FOS6.4.0 b, FOS6.4.1 a	

Defect ID: DEFECT000296843	**Technical Severity:** Medium
Summary: Roundtrip time is not correct in TCP due to delayed ACKs.	
Symptom: Round Trip Times reported in TCP can be higher than the actual latency of the network, especially on connections that are mostly idle. This delayed ACK processing can lead to occasional slow retransmits in TCP.	
Feature: FCIP	**Function:** FCIP Port
Probability: Medium	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1_fcoe, FOS6.4.1 a	

Defect ID: DEFECT000297399	**Technical Severity:** Medium
Summary: rpcd terminated and restarted when multiple RPC connections are initiated in response to a manageability request	
Symptom: On switch with busy management applications, when more than one RPC connection gets established simultaneously, a race condition may cause multiple connections to free a shared object twice and trigger rpcd panic.	
Feature: Field Escalation	**Function:** Management Services
Probability: Medium	
Found in Release: FOS6.2.1	**Service Request ID:** 420195
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000301629	**Technical Severity:** Medium
Summary: fabric.ops.longdistance setting in the default switch causes a credit imbalance on the ISL to a 2G switch on different logical switch	
Symptom: fabric.ops.longdistance is deprecated since FOS v6.1.x. In virtual fabric setup, If user mistakenly enables that configuration on a logical switch, it creates a credit model inconsistency on the ISL with other logical switches configured on the same switch. Credits are returned to the incorrect VC and customer will observe link resets.	
Workaround: With the fix, allow fabric.ops.longdistance setting to work when logical switch is configured on per slot bases	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 430875
Where Else Fixed: FOS6.4.1 a	

Close with Code Change in Fabric OS v6.4.1a

Defect ID: DEFECT000301856	**Technical Severity:** Medium
Summary: Boot Over SAN fails with switch port set to 8GB on Brocade 5470.	
Symptom: A 3rd party device connected to a Brocade 5470 takes a long time to come online and boot over SAN can fail.	
Feature: Embedded Platform Services	**Function:** BR 5470 Integration
Probability: Low	
Found in Release: FOS6.3.1	
Where Else Fixed: FOS6.3.2 b, FOS6.4.1 a	

Defect ID: DEFECT000305690	**Technical Severity:** Medium
Summary: Access Gateway trace data does not contain complete enough information for path loss debugging. AG tracing needs to be improved to allow path loss traces to be gathered properly.	
Symptom: None, other than that the AG trace data does not contain complete debugging information.	
Feature: Field Escalation	**Function:** Access Gateway
Probability: High	
Found in Release: FOS6.2.2	**Service Request ID:** 429507
Where Else Fixed: FOS6.2.2 d, FOS6.4.1 a	

Defect ID: DEFECT000308933	**Technical Severity:** Medium
Summary: Additional port counters/statistics available in SW MIB need to be exposed via SNMP.	
Symptom: SW MIB counters such as Link Error State Block, Port Level Performance/Error, and other similar objects are available through CLI but not through SNMP.	
Feature: Mgmt Embedded - SNMP	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.2.2 d, FOS6.3.2 b, FOS6.4.1 a	

Defect ID: DEFECT000311542	**Technical Severity:** Medium
Summary: User cannot create Certificate Signing Request (CSR) files with seccertutil command	
Symptom: On a switch with only IPv6 Address configured, creating Certificate Signing Request (CSR) fails.	
Workaround: Add an IPv4 address to switch configuration.	
Feature: Field Escalation	**Function:** Security
Probability: Low	
Found in Release: FOS6.2.2	**Service Request ID:** 445003

Close with Code Change in Fabric OS v6.4.1a

Defect ID: DEFECT000312579	**Technical Severity:** Medium
Summary: zoned panic during hafailover during firmwaredownload on Brocade 48000 in IM2 mode	
Symptom: When upgrading from Fabric OS v6.3.x to v6.4.x, the switch experienced a panic on zoned after the initial failover with the new CP at v6.4.x with a cold recovery of the switch. This only impacts Brocade 48000 running IM2 mode.	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: High	
Found in Release: FOS6.4.0	**Service Request ID:** 445873
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000314056	**Technical Severity:** Medium
Summary: Due to incorrect internal counter logic, PORT-1003 port faults are being reported in the RASLOG when they shouldn't be.	
Symptom: After a long switch uptime, if there are greater than 50 link down events before a switch is rebooted (as opposed to within 2 minutes), the port is faulted with a PORT-1003 being reported in the RASLOG.	
Feature: Diagnostics	**Function:** Other
Probability: Low	
Found in Release: FOS5.3.0	**Service Request ID:** 443043
Where Else Fixed: FOS6.2.2 d, FOS6.4.1 a	

Defect ID: DEFECT000314717	**Technical Severity:** Medium
Summary: Fabric Watch reports TX/RX Performance over 100%.	
Symptom: Shortly after executing the statsclear command, fabric watch reports a TX/RX performance over 100%.	
Workaround: Use the slotstatsclear command instead of the statsclear command.	
Feature: 8G Platform Services	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 447457
Where Else Fixed: FOS6.3.2 b, FOS6.4.1 a	

Defect ID: DEFECT000315478	**Technical Severity:** Medium
Summary: After enabling SCC policy on edge switch, F_Ports get disabled	
Symptom: After configuring the SCC Policy only on edge switch, then removing the front domains of the FCR from the SCC followed by disabling/enabling of the edge switch, the F_Ports get disabled with the following message: 2010/08/20-16:19:45, [SEC-1187], 1433, FID 128, INFO, T5300_161, Security violation: Unauthorized switch 20:00:00:05:1e:0a:54:ca tries to join fabric.	
Feature: FC Services	**Function:** Fabric
Probability: High	
Found in Release: FOS6.4.1_fcoe	
Where Else Fixed: FOS6.4.1 a	

Close with Code Change in Fabric OS v6.4.1a

Defect ID: DEFECT000316023	**Technical Severity:** Medium
Summary: After hareboot/hafailover, LED for trunked F ports turns off	
Symptom: LED transitions from steady green to off for online trunked F-ports after hareboot/hafailover or code upgrade.	
Feature: 4G ASIC Driver	**Function:** ASIC Driver
Probability: Medium	
Found in Release: FOS7.0.0	
Where Else Fixed: FOS6.3.2 b, FOS6.4.1 a	

Defect ID: DEFECT000316203	**Technical Severity:** Medium
Summary: Port statistic counters are not 64 bit counters for GE ports	
Symptom: The counters such as TX/RX wrap quickly on GE ports on 7800 and FC8-24 for both portstats command and SNMP MIB output.	
Feature: Striker/Spike Platform Services	**Function:** DPBlaster Driver
Probability: Medium	
Found in Release: FOS6.3.2	
Where Else Fixed: FOS6.4.1_fcoe, FOS6.3.2 b, FOS6.4.1 a	

Defect ID: DEFECT000318117	**Technical Severity:** Medium
Summary: Modification of IP address doesn't appear in fabricshow until after switch is added/removed from the fabric	
Symptom: In Interop Mode 2, fabricshow still displayed the old ip address when ipaddress was changed.	
Feature: Field Escalation	**Function:** Fabric Services
Probability: High	
Found in Release: FOS6.3.1	**Service Request ID:** 448715
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000318480	**Technical Severity:** Medium
Summary: IPv6 enhancement	
Symptom: Disable IPv6 interface when duplicate address is detected.	
Feature: OS Services	**Function:** IPV6
Probability: Low	
Found in Release: FOS6.3.1	
Where Else Fixed: FOS6.4.1 a	

Close with Code Change in Fabric OS v6.4.1a

Defect ID: DEFECT000320157	**Technical Severity:** Medium
Summary: firmwarecommit component of firmwaredownload takes significantly longer when the switch does not have ipv4 address configured.	
Symptom: On a switch with ipv6 address only, firmwarecommit alone (following firmwaredownload through the ipv6 interface) takes 20+ minutes. Now if you add a ipv4 address to the switch, but continue to use the ipv6 addressing/interface to do firmwaredownload, the commit takes only 2 minutes.	
Feature: Field Escalation	**Function:** SNMP
Probability: Medium	
Found in Release: FOS6.4.0	**Service Request ID:** 451611
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000321862	**Technical Severity:** Medium
Summary: DCFM encryption center support is not reporting correct target status for an HAC failed over crypto target container	
Symptom: Target status is displayed as "No Status", it should be "Failed Over".	
Feature: Data Security	**Function:** HA Cluster
Probability: Medium	
Found in Release: FOS6.4.1	
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000321866	**Technical Severity:** Medium
Summary: Download configuration to switch fails	
Symptom: Configdownload fails and generates core file on various keys, such as webtools.performance.config fcoed.fcmap.<vlanid>:<fcmap>, where <vlanid> is not the FCoE vlan in the current running-config. etc	
Workaround: Remove "webtools.performance.config" key before download the configuration.	
Feature: Field Escalation	**Function:** OS: Infrastructure
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 451711
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000323132	**Technical Severity:** Medium
Summary: The low rpm threshold for the fans in Brocade 8000 is set too high	
Symptom: Customer may experience false fan related errors on Brocade 8000.	
Feature: CEE-PLATFORM	**Function:** SYSTEM CONTROL
Probability: Low	
Found in Release: FOS6.4.1	

Close with Code Change in Fabric OS v6.4.1a

Defect ID: DEFECT000323250	**Technical Severity:** Medium
Summary: Blade fault observed during heavy tape IO stress for DataFort compatible tapes.	
Symptom: DataFort compatible tapes under heavy stress tape I/O jobs may lead to faulty Brocade encryption blade or Brocade encryption switch.	
Feature: Data Security	**Function:** Tape Encryption
Probability: Low	
Found in Release: FOS6.3.2	
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000323352	**Technical Severity:** Medium
Summary: "Web Tools attributes" parameters in configure are inconsistent	
Symptom: Web Tools attributes appear in configupload, but not in configshow. The changes made to the Web Tools attributes are not updated when the configuration file is modified and downloaded back to the switch.	
Feature: Mgmt Embedded - HTTP	**Function:** Other
Probability: Medium	
Found in Release: FOS6.4.1	**Service Request ID:** 460053
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000323771	**Technical Severity:** Medium
Summary: Superping needs to determine exact route for each echo frame sent out when stuck VC occurs on one of the outgoing ISLs	
Symptom: Superping is not correctly reporting ISL path	
Feature: Fabric Infrastructure	**Function:** FC PING
Probability: Low	
Found in Release: FOS6.4.1	
Where Else Fixed: FOS6.4.1 a	

Defect ID: DEFECT000324307	**Technical Severity:** Medium
Summary: portcmd --ping fails with timeout after portcmd --traceroute command is cancelled.	
Symptom: When running a traceroute command over a GE port on a 7800 or FX8-24, if the traceroute command is cancelled with a ctrl+C from the command line, additional ping and traceroute commands may timeout over the GE ports.	
Feature: FCIP	**Function:** Other
Probability: High	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1 a	

Close with Code Change in Fabric OS v6.4.1a

Defect ID: DEFECT000326252	**Technical Severity:** Medium
Summary: Encryption group having more than one node, cryptocfg commit hangs if the configuration to be committed is having more than 560 LUNs in a single container.	
Symptom: Adding/Configuring more than 560 LUNs into a CTC followed by “cryptocfg commit” to commit the configuration across an Encryption Group results in the operation hanging. This is due to a limitation in the design of the data structure handling the request.	
Feature: Data Security	**Function:** Infrastructure
Probability: Medium	
Found in Release: FOS6.4.1	

Defect ID: DEFECT000328279	**Technical Severity:** Medium
Summary: Manual re-key started but did not complete.	
Symptom: Customer started manual re-key but re-key is stuck on LBA 1 with status "waiting for host cmd completion".	
Feature: Data Security	**Function:** Re-key
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 487273
Where Else Fixed: FOS6.4.1 a	

Closed with Code Change in Fabric OS v6.4.1 - GA October 7, 2010

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of October 7, 2010 in Fabric OS v6.4.1.

Defect ID: DEFECT000319291	**Technical Severity:** Critical
Summary: In a dual Inter-fabric Link (IFL) FCR fabric with LSAN Matrix configured and LSAN binding enabled, disabling the EX_Port for one of the IFLs causes all FCR devices to be removed from the name server database.	
Symptom: In an FCR fabric with LSAN Matrix configured, if there are two IFLs from a FCR to one edge fabric and LSAN binding is enabled, then when one of the EX_Ports is disabled, all imported devices corresponding to this edge fabric are dropped from name server.	
Feature: 8G FCR	**Function:** FCR Daemon
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 451063
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000319434	**Technical Severity:** Critical
Summary: Originator source ID sent by FCR in the header and in the body of the TAPE REC command frame do not match. This causes the command to fail.	
Symptom: The Tape REC command fails in an FCR environment, causing corrupted data on the tape.	
Feature: 8G FCR	**Function:** FCR Daemon
Probability: High	
Found in Release: FOS6.4.0	**Service Request ID:** 450651
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000319598	**Technical Severity:** Critical
Summary: Functional fans are flagged as bad with error code "[PLAT-5042], FAN I2C reset" messages in the Raslog.	
Symptom: One or more fans may go into a faulted state on the DCX chassis even though the fans are operating properly. This does not impact any other platforms.	
Workaround: reseat the fan to recover it from faulty state.	
Feature: System Controls/EM	**Function:** Infrastructure
Probability: Medium	
Found in Release: FOS6.4.0	**Service Request ID:** 451479
Where Else Fixed: FOS6.4.1	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000269222	**Technical Severity:** High
Summary: 8G switches, and directors with an 8G blade in slot 1, see frame drops in the fabric when there are Ex/VEx ports configured	
Symptom: If there is an Ex/VEx port configured in the same ASIC chip as an F/E port with EGID 0, hosts cannot see the targets and customer may observe poor performance in the fabric.	
Workaround: User can identify a fabric has this problem by running "sloterrshow 1"on directors or sloterrshow on switch, and "type6_miss" counter should be seen continuously incrementing during traffic load on backend port/E_Port. Avoid configuring an EX_Port or a VEx_Port near an F/E port with an EGID of 0. To identify a port with an EGID of 0, login in as root and run "bladeportmap [1]". The first port where "Upt" is not -1 uses EGID 0. Once the problem occurs, the user must make the F/E port into an EX_Port and then configure it back to an F/E port to fix the problem port. Execute the following instructions. 1) Disable the F/E port 2) Configure the F/E port as an EX_Port for a valid FID 3) Connect a link between the FID and the EX port (IFL) 4) Enable the port 5) Verify that the link is online. Then disable the port 6) Disable the EX_Port configuration 7) Connect the host/ISL back to the F/E port 8) Enable the port	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.2.0	**Service Request ID:** 401939
Where Else Fixed: FOS6.3.2, FOS6.4.1, FOS6.2.2 c	

Defect ID: DEFECT000278024	**Technical Severity:** High
Summary: If a PLOGI is received right before hafailover / hot code load on a Brocade 48000 with FC4-48 blades installed, and the PLOGI has zone misses for devices communicating through the primary shared area port, it faults the CP and generates EM-1051 messages.	
Symptom: After upgrading a Brocade 48000 with FC4-48 blades installed, the FC4-48 blade faults and traffic through the blade is disrupted. External RASLOG messages EM-1051 are seen reporting a slot inconsistency detected.	
Feature: 4G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.3.0	**Service Request ID:** SR415643
Where Else Fixed: FOS6.4.1, FOS6.3.2 a	

Defect ID: DEFECT000282352	**Technical Severity:** High
Summary: Login database gets corrupted after several switch enable/disable transitions. This happens when misbehaving devices bouncing offline/online don't participate in LIP to acquire a valid AL_PA and then later try to login with an invalid AL_PA	
Symptom: Kernel panic occurs after several switch disable/enable transitions.	
Feature: FC Services	**Function:** Fabric
Probability: Low	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000284426	**Technical Severity:** High
Summary: Due to firmware being out of synch with the FPGA version, a Brocade 5470 may get extremely high enc out errors on ports connected to 3rd party HBAs, which may cause link related problems to that HBA.	
Symptom: High "enc out" errors show up in the counters when running the porterrshow CLI command. These errors may also cause link related errors on the link connected to the HBA as well as errors reported in the HBA logs.	
Feature: Embedded Platform Services	**Function:** BR 5470 Integration
Probability: High	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.3.2, FOS6.4.1, FOS6.3.1 b	

Defect ID: DEFECT000285644	**Technical Severity:** High
Summary: Brocade 200E, 40XX, 4424, 4X00, 5000, 7500 or 7600 switch, or the standby CP in a 48000 director remains in a perpetual reboot state after upgrading from FOS v6.1.x to FOS v6.2.x due to inconsistency between SSL certificate and http.enabled setting	
Symptom: After upgrading from FOS v5.3.1x to FOS v6.2.x, switch or standby CP on Brocade 48000 ends up in a panic loop.	
Workaround: Manually ensure that http.enabled matches with SSL certificate by "configshow http.enabled' as admin user. If it's inconsistent with SSL Certificate requirement, please execute /fabos/libexec/webdconfigure as root to set "HTTP Enable" to yes. Or schedule a window, disable switch and configdownload a file with "http.enabled:1 [end]" when switch is at FOSv5.3.x or v6.1.x to correct the configuration. If the switch is already stuck in a reboot loop, login as root via serial console, copy & paste the following command string into console as one line before the next reboot: sed 's/http.enabled:0/http.enabled:1/g' < /etc/fabos/fabos.0.conf > tmp;cp tmp /etc/fabos/fabos.0.conf;cp tmp /mnt/etc/fabos/fabos.0.conf;rm tmp	
Feature: Field Escalation	**Function:** Web Management
Probability: Low	
Found in Release: FOS6.2.0	**Service Request ID:** 420655
Where Else Fixed: FOS6.3.2, FOS6.4.1, FOS6.2.2 c	

Defect ID: DEFECT000286396	**Technical Severity:** High
Summary: On Brocade 7600 or FA4-18 blade, when running SAS application, received RSCNs result in a Name Server memory leak and switch panic	
Symptom: In SAS environment with Brocade 7600 or FA4-18 blade, switch panics causing errors in storage appliance.	
Feature: FA4-18 Platform Services	**Function:** Blade FOS SW
Probability: Low	
Found in Release: FOS6.1.0	**Service Request ID:** 423487
Where Else Fixed: FOS6.3.2, FOS6.4.1, FOS6.2.2 c	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000288870	**Technical Severity:** High
Summary: Converged Network Adapter (CNA) cannot login during shut/no shut operation	
Symptom: CNA is not able to log in to Brocade 8000 / FCOE10-24 blade.	
Feature: CEE-FCOE	**Function:** FCOE DRIVER
Probability: Low	
Found in Release: FOS6.3.1_cee	
Where Else Fixed: FOS6.3.2, FOS6.4.1	

Defect ID: DEFECT000289212	**Technical Severity:** High
Summary: During long-running stress test that involves repeated ISL and I/O synch link disabling, rekey for a LUN appeared stuck	
Symptom: Rekey gets stuck	
Feature: Data Security	**Function:** Re-key
Probability: Low	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000289315	**Technical Severity:** High
Summary: Storage ports can get stuck as an N_Port with status "Disabled (Fabric Login Failed)" in AG mode with Auto Policy enabled	
Symptom: Some devices are unable to login because the port on AG is locked as N_Port. There is no CLI to "unlock" the port configuration, so the devices are never able to login.	
Workaround: Re-boot AG switch	
Feature: Access Gateway Services	**Function:** Platform Other
Probability: Medium	
Found in Release: FOS6.2.2	
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000289847	**Technical Severity:** High
Summary: FC4-16IP "iscsicfg --commit all" hangs switch telnet session.	
Symptom: When trying to commit any iSCSI configuration, the operation will not finish, telnet session will hang. A hafailover is needed to recover from this. This only applies to FC4-16IP blades.	
Feature: Field Escalation	**Function:** ISCSI
Probability: High	
Found in Release: FOS6.3.0	**Service Request ID:** 420861
Where Else Fixed: FOS6.3.2, FOS6.4.1	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000296266	**Technical Severity:** High
Summary: When Auto Port Configuration is enabled on an Access Gateway, switch will lock the port as an N_Port if no FLOGI received within timeout period, then disable it after receiving ELS rejects	
Symptom: On a Brocade 5480 with the Auto Port Configuration (APC) feature enabled, ports will become locked down as N_Ports if there is no FLOGI sent by an attached device within the timeout period. This can happen if using Boot over SAN during the period when the HBA has no firmware loaded yet.	
Workaround: Use default AG -PG policy	
Feature: Access Gateway Services	**Function:** Embedded Platforms
Probability: Medium	
Found in Release: FOS6.3.0	**Service Request ID:** 420895
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000300183	**Technical Severity:** High
Summary: RPCD panic and subsequent switch cold recovery occurs due to internal memory synchronization and corruption issues when changing security settings	
Symptom: Cold recovery of the CP can happen when a user changes their security configuration (certificates or rpc secret) through webtools while there is an active RPC connection from SMI-A.	
Workaround: Customers that experience this problem can stop using their SMI based application until the code upgrade complete.	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Medium	
Found in Release: FOS6.3.0	**Service Request ID:** 432349
Where Else Fixed: FOS6.3.2, FOS6.4.1	

Defect ID: DEFECT000300195	**Technical Severity:** High
Summary: When two asynchronous entities (SMI-A and DCFM) are managing the switch at the same time it exposes a race condition, causing switch panic	
Symptom: Switch panics when being managed by both DCFM and SMI-A management applications.	
Feature: Field Escalation	**Function:** Management Services
Probability: Low	
Found in Release: FOS6.3.0	**Service Request ID:** 428387
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000300326	**Technical Severity:** High
Summary: Weblinker causes active CP to reboot (initiate a cold recovery) when the standby CP is not responsive (stuck in a reboot loop).	
Symptom: Weblinker on active CP panics, leading to a cold recovery.	
Feature: Field Escalation	**Function:** Management Services
Probability: Low	
Found in Release: FOS6.2.0	**Service Request ID:** 432083
Where Else Fixed: FOS6.4.1, FOS6.3.2 a	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000301260	**Technical Severity:** High
Summary: Host/Target unable to establish routes across VEX-VE Link	
Symptom: Due to timing issue, hosts will not be able to access targets for any operational purposes when the NUMBER of FCIP Circuit configuration on one side of the FCIP Tunnel does not match the other side.	
Feature: FCIP	**Function:** FCIP I/O
Probability: Low	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000301590	**Technical Severity:** High
Summary: Duplicate proxy ID condition on an E_Port ISL after a firmware download causes invalid translation in FCIP FCR and dropped FCP responses to Initiator	
Symptom: Host and Target unable to establish connectivity across VEX link on Brocade 7800 and FX8-24 after a firmware download.	
Workaround: Disable/enable (toggle) switch target ports.	
Feature: Legacy FCIP (7500/FR4-18i)	**Function:** FCIP I/O
Probability: Low	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000301952	**Technical Severity:** High
Summary: When multiple PLOGIns to well known addresses are received very fast back to back before routes are established there is no ACCept sent back by management server.	
Symptom: Host gets a link level ACK for it's initial PLOGI in to the switch management server, but does not receive the ACCept from the management server, causing the host to time out it's login and issue an ABTS after it is brought on line. Typically seen with hosts that issue fast logins such as in mainframe FICON environments.	
Feature: Field Escalation	**Function:** FICON
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 435255
Where Else Fixed: FOS6.3.2, FOS6.4.1	

Defect ID: DEFECT000304839	**Technical Severity:** High
Summary: F_Port comes online as a G_Port on Brocade 200E and 4G embedded platforms, causing the host not to log in.	
Symptom: During a host reboot, the host may not come up when connected to Brocade 200E and 4G embedded platforms.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Medium	
Found in Release: FOS6.2.2	**Service Request ID:** 436525
Where Else Fixed: FOS6.4.1, FOS6.2.2 d, FOS6.3.2 a	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000304922	**Technical Severity:** High
Summary: Compact flash failure handling needs enhanced to detect and proactively trigger an hafailover when a bad flash part is detected.	
Symptom: Compact flash can sometimes fail silently, so customer only sees critical daemon failures, which then trigger a failover. Occasionally no failure is seen at all when this happens, the switch will continue running but does not produce any logs.	
Feature: Field Escalation	**Function:** OS: Infrastructure
Probability: Low	
Found in Release: FOS6.2.1	**Service Request ID:** 434659
Where Else Fixed: FOS6.4.1, FOS6.3.2 a	

Defect ID: DEFECT000312516	**Technical Severity:** High
Summary: Weblinker processes terminate (core dump) and then restart when management app (DCFM, etc.) queries Top Talker information using CAL requests over HTTP.	
Symptom: Weblinker processes terminate and then restart when querying Top Talker information from the switch.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 445261
Where Else Fixed: FOS6.4.1, FOS6.2.2 d	

Defect ID: DEFECT000313195	**Technical Severity:** High
Summary: Due to a residual setting left over in the firmware, if Top Talkers is enabled / disabled, and devices PLOGI in to unknown type ports, class 3 frame rejects are continuously forwarded to the CPU causing slow performance.	
Symptom: Host ports can experience slow performance after enabling and then disabling Top Talker. This is accompanied by class 3 frame rejects showing in the portlogdump.	
Feature: 8G ASIC Driver	**Function:** C2 ASIC driver
Probability: Low	
Found in Release: FOS6.3.1	
Where Else Fixed: FOS6.4.1, FOS6.3.2 a	

Defect ID: DEFECT000262707	**Technical Severity:** Medium
Summary: Core file size not checked when being generated by several system processes, causing the core files to exceed size of the Compact Flash (CF) and corrupt FOS system files.	
Symptom: Switch will not reboot due to corrupted FOS system files.	
Feature: Field Escalation	**Function:** OS: Linux
Probability: Low	
Found in Release: FOS6.1.0	
Where Else Fixed: FOS6.3.2, FOS6.4.1	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000274403	**Technical Severity:** Medium
Summary: One directional route problem in fabric prevents local switch communicating to remote switch, causing remote switch to disable local switch without any notification.	
Symptom: Switch goes to disabled state without any reason logged, and with no user action. Customer sees messages indicating RTWR has reached max retries in RASLOG.	
Feature: Field Escalation	**Function:** RAS Logging / Tracing
Probability: Low	
Found in Release: FOS6.2.0	**Service Request ID:** 411755
Where Else Fixed: FOS6.4.1, FOS6.2.2 d, FOS6.3.2 a	

Defect ID: DEFECT000280933	**Technical Severity:** Medium
Summary: Window scaling in TCP gets set to zero if the TCP SYN is retried more than 3 times causing a 64kB window to be used	
Symptom: FCIP Circuit will come up, but the TCP stats display in the portshow fciptunnel <ve> -tc command will show the window scale value of 0 and the Send Window set to 64kB. The user may also experience slow performance and high I/O response times on the application using the FCIP Tunnel.	
Feature: FCIP	**Function:** FCIP Port
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000282759	**Technical Severity:** Medium
Summary: Switches in AG mode are not handling multi-sequence frames properly. This causes memory corruption and switch panic.	
Symptom: One or more switches in AG mode in the same fabric have an agdd panic occur. RASLOG error messages like: "[KSWD-1002], 1285, FFDC | CHASSIS, WARNING, Brocade300, Detected termination of process agd0:1793" are seen and then debug information is dumped.	
Feature: Field Escalation	**Function:** Access Gateway
Probability: Low	
Found in Release: FOS6.3.0	**Service Request ID:** 419851
Where Else Fixed: FOS6.4.1, FOS6.2.2 d, FOS6.3.2 a	

Defect ID: DEFECT000286898	**Technical Severity:** Medium
Summary: Switch panics after information unit (iu) allocation failure.	
Symptom: When a frame comes in to the embedded port and there is no memory to hold it temporarily, the switch panics. This is likely to happen when there are spurious interrupts from a device. It impacts 4G switches only.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.1.0	**Service Request ID:** 423799
Where Else Fixed: FOS6.3.2, FOS6.4.1	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000287990	**Technical Severity:** Medium
Summary: Value of 0xffffffff in the config file for the N_Port topology field causes an error and fails the configdownload operation.	
Symptom: Using the configdownload command on a BES in AG mode with SRDF enabled fails with the following error: strtoul failed str 0xffffffff, errno =2 aglib_strtobm failed for ag.pg.pgporttopo.0 value = 0xffffffff configDownload: agImport() failed key = ag.pg.pgporttopo.0, rc = -1	
Feature: Access Gateway Services	**Function:** Other
Probability: Medium	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000288832	**Technical Severity:** Medium
Summary: On Brocade 5460 platform, firmware version was being set to the FOS default value string, not the proper version string	
Symptom: Firmware version string always shows FOS default on Brocade 5460, not the correct version through 3rd party SVP.	
Feature: Embedded Platform Services	**Function:** Sys-Control/Environment Monitor
Probability: Low	
Found in Release: FOS6.3.1	
Where Else Fixed: FOS6.3.2, FOS6.4.1, FOS6.3.1 b	

Defect ID: DEFECT000290173	**Technical Severity:** Medium
Summary: The fmconfig filter monitors stop counting frames after a firmware downgrade and then upgrade operation is done	
Symptom: The fmconfig command does not display counters for frame monitors after a firmware downgrade and then upgrade operation is done.	
Feature: Performance Monitor	**Function:** Filter monitor
Probability: Medium	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000290918	**Technical Severity:** Medium
Summary: Due to changes made to support virtual fabrics, the formatting of errdump messages causes some log messages to be lost after upgrading to FOS 6.2.0+	
Symptom: Firmware upgrade related messages from the previously installed version of FOS vanish from the logs after upgrading FOS v6.2.x or later.	
Feature: Field Escalation	**Function:** OS: Infrastructure
Probability: High	
Found in Release: FOS6.2.2	**Service Request ID:** 422701
Where Else Fixed: FOS6.4.1, FOS6.3.2 a	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000297954	**Technical Severity:** Medium
Summary: Due to heartbeat counter communication problems between the Control Processor (CP) and FR4-18i blade, the CP and blade can lose sync, causing the blade to be rebooted.	
Symptom: FCIP-5030 messages are seen in the internal RASLOG, indicating that the FR4-18i blade has lost heartbeat with the Control Processor (CP). Switch is rebooted with a "HAM-1004 reboot unknown" error message showing in the RASLOG.	
Feature: Field Escalation	**Function:** FCIP
Probability: Low	
Found in Release: FOS6.3.0	**Service Request ID:** 429431
Where Else Fixed: FOS6.3.2, FOS6.4.1	

Defect ID: DEFECT000298571	**Technical Severity:** Medium
Summary: "(DLS)" label needs to be removed from the "Dynamic Load Sharing" and "Lossless" group boxes that show up in the Webtools Switch Administration Routing Tab	
Symptom: Confusion due to ambiguous text in Webtools for "Dynamic Load Sharing" and "Lossless" in the Routing Tab group box under Switch Administration.	
Feature: WebMgmt	**Function:** Switch Admin
Probability: Low	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000298920	**Technical Severity:** Medium
Summary: QoS priority traffic distribution over an FCIP tunnel may be incorrect with large amounts of outstanding I/O, due to resource depletion at high IO rates.	
Symptom: QoS circuits running over a 1G/10G bandwidth circuit will have incorrect QoS distributions with large I/O, resulting in QoS priority traffic distribution not being enforced properly over an FCIP Tunnel. Customer using QoS zoning may see performance issues on the Brocade 7800 and FX8-24 products.	
Feature: FCIP	**Function:** FCIP I/O
Probability: Medium	
Found in Release: FOS6.3.1	
Where Else Fixed: FOS6.3.2, FOS6.4.1	

Defect ID: DEFECT000298963	**Technical Severity:** Medium
Summary: Weblinker kept unused file descriptors which caused FFDCs and RAS-1004 Software 'Verify' errors every 3 minutes on a VF, filling up the RASLOG.	
Symptom: A customer may see RAS-1004 Software 'Verify' errors every 3 minutes on each VF on a switch being managed by DCFM or Web Tools, if VF is enabled and Radius server is configured. This will fill up the RASLOG and eventually causes an FFDC event in other system modules due to “too many open files”.	
Feature: Field Escalation	**Function:** OS: Infrastructure
Probability: Medium	
Found in Release: FOS6.3.1	**Service Request ID:** 430447
Where Else Fixed: FOS6.4.1	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000299528	**Technical Severity:** Medium
Summary: When running tape operations using tape pipelining in a Brocade 7800 or FX8-24 blade, the FCP_CONF command may be dropped, causing the tape operation to fail.	
Symptom: I Series I/O stops with tape pipelining enabled, causing tape operations running over a Brocade 7800 or FX8-24 blade to not complete successfully.	
Feature: FCIP	**Function:** Emulation
Probability: Low	
Found in Release: FOS6.3.1	
Where Else Fixed: FOS6.3.2, FOS6.4.1	

Defect ID: DEFECT000300954	**Technical Severity:** Medium
Summary: ceeturboramtest not running as part of systemverification in FCOE10-24 and Brocade 8000.	
Symptom: RAM errors are not detected by systemverification diagnostic.	
Feature: Diagnostics	**Function:** Post Diags
Probability: Low	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000301650	**Technical Severity:** Medium
Summary: Spinfab fails on an Eport residing in a Base switch.	
Symptom: Frame drops and undefined behavior can be expected while running spinfab.	
Feature: Diagnostics	**Function:** Other
Probability: High	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000301959	**Technical Severity:** Medium
Summary: In a Brocade 48000 with an FC4- 48 blade, after port enable/disable of primary port, NPIV PIDs disappear from cam table entries, disrupting data.	
Symptom: In a Brocade 48000 with an FC4- 48 blade, booting a host connected to a primary port causes NPIV data on secondary port IO to abort.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: High	
Found in Release: FOS6.3.0	**Service Request ID:** 422909
Where Else Fixed: FOS6.4.1	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000302032	**Technical Severity:** Medium
Summary: Port is reinitialized multiple times during unstable signal/port fault period when connected to certain servers that do not cut light when rebooting.	
Symptom: With certain very specific servers that do not cut off light during reboot, the switch cannot bring an F_Port on line for a long time.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.3.1	
Where Else Fixed: FOS6.4.1, FOS6.3.2 a	

Defect ID: DEFECT000302170	**Technical Severity:** Medium
Summary: Long TPERF runs result in inaccurate stats as well as FCIP tunnel bounces. The 7800 needs to be rebooted to recover.	
Symptom: TPERF reflected incorrect loss and out of order statistics. The FCIP Tunnel will eventually go down during TPERF runs, even on a clean network. The 7800/FX8-24 needs to be rebooted to recover.	
Feature: FCIP	**Function:** FCIP CLI
Probability: Medium	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000302245	**Technical Severity:** Medium
Summary: List of network security vulnerabilities needs to be addressed with BES and FS8-18 platform.	
Symptom: The following vulnerabilities are reported by network vulnerability scan against a fabric with the BES and FS8-18 platform: 393 NFS Enabled, 572 RPC mountd, 675 RLogin Service, 678 RPC portmap, 817 RPC nlockmgr, 971 rshd Detected, 3913 OpenSSH, GSSAPIDelegateCredentials Information Disclosure Vulnerability, 7649 OpenSSH Signal Handler Denial Of Service Vulnerability, 2362 SSH2 Algorithm Negotiation Enumeration, 5998 Remote Shell (rsh) Without Credentials Allowed, 7820 OpenSSH Multiple Identical Block Denial Of Service Vulnerabilities, 987 Exported NFS Shares, 5642 NFS Shares Mountable By Everyone, 2198 Telnet Server Found	
Feature: Field Escalation	**Function:** Encryption
Probability: High	
Found in Release: FOS6.3.1	**Service Request ID:** 434745
Where Else Fixed: FOS6.4.1, FOS6.3.2 a	

Defect ID: DEFECT000303023	**Technical Severity:** Medium
Summary: Newly active CP fails to complete recovery from either FWDL (FOS v6.2.x to FOS v6.3.x), or from hafailover, due to persistent disabled GE port on FR4-18i blade	
Symptom: During either a firmware download (FOS v6.2.0e to FOS v6.3.0d), or hafailover, Active CP fails to come online completely, requiring a reboot of both CPs to regain hasync.	
Feature: Field Escalation	**Function:** FC Layer 2 Routing
Probability: High	
Found in Release: FOS6.2.0	**Service Request ID:** 433211
Where Else Fixed: FOS6.4.1, FOS6.3.2 a	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000304033	**Technical Severity:** Medium
Summary: On a Brocade 5470, setting the port to fixed 8GB causes boot over SAN to fail with some 3rd party HBAs.	
Symptom: Boot over SAN with 3rd party 8G HBA fails with port speed configured fixed to 8GB.	
Feature: 8G ASIC Driver	**Function:** PORT
Probability: Medium	
Found in Release: FOS6.3.1	
Where Else Fixed: FOS6.4.1, FOS6.3.2 a	

Defect ID: DEFECT000308204	**Technical Severity:** Medium
Summary: After a panic occurs in a Brocade FR4-18i or 7500, the CP attempts to output error message FCIP-5051 using an uninitialized section of shared memory in the FR4-18i or 7500, causing an "Oops: kernel access of bad area" panic on the CP.	
Symptom: A Brocade FR4-18i or 7500 panic occurs followed by a CP panic, with an "Oops: kernel access of bad area" message seen in the RASLOG.	
Feature: FCIP	**Function:** FCIP CP
Probability: Low	
Found in Release: FOS6.3.2	
Where Else Fixed: FOS6.4.1, FOS6.3.2 a	

Defect ID: DEFECT000308833	**Technical Severity:** Medium
Summary: IPv4 and IPv6 shows different Webtools behavior in Fabric Tree. Webtools should not be able to be launched from Fabric Tree when using IPv6	
Symptom: Webtools can be launched from Fabric Tree when using auto configured IPv6 address when it shouldn't be.	
Feature: WebMgmt	**Function:** IPV6
Probability: High	
Found in Release: FOS6.1.2	**Service Request ID:** 443373
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000311055	**Technical Severity:** Medium
Summary: Tape pipelining emulation times out after an extended amount of inactivity on the Brocade 7800	
Symptom: After a tape drive has been idle for a few hours and then traffic is restarted, the tape performance is degraded.	
Feature: FCIP	**Function:** Emulation
Probability: Medium	
Found in Release: FOS6.3.2	**Service Request ID:** 444721
Where Else Fixed: FOS6.4.1	

Close with Code Change in Fabric OS v6.4.1

Defect ID: DEFECT000313466	**Technical Severity:** Medium
Summary: SCSI command frames are dropped through IFL links in FCR Fabric.	
Symptom: If a Brocade switch performs an HA Failover at the same time as an device is continuously issuing a PLOGI to an unknown port, switch may drop SCSI command frames across IFL connections after hafailover. SCSI data frames pass through. This does not happen with normal device plogin to devices already in name server database and this affects 8G FCR only.	
Workaround: To avoid the problem configuring EX_Port and device doing PLOGI to unknown device in the same ASIC chip or remove such device from fabric.	
Feature: 8G ASIC Driver	**Function:** C2 ASIC driver
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 425953
Where Else Fixed: FOS6.4.1, FOS6.3.2 a	

Defect ID: DEFECT000313557	**Technical Severity:** Medium
Summary: Fabric watch blade handler monitor is not handling AP blades status properly, causing invalid status to be reported in switchstatusshow	
Symptom: The output of the switchstatusshow command does not show "marginal" switch status when an AP blade goes down.	
Feature: 4G Platform Services	**Function:** FOS Kernel Drivers
Probability: Low	
Found in Release: FOS6.3.1	
Where Else Fixed: FOS6.4.1	

Defect ID: DEFECT000315227	**Technical Severity:** Medium
Summary: FCIP Tunnel bounces when running a large number of small FCIP frames through a WAN optimizer.	
Symptom: FCIP tunnel will periodically go down and then recover when a large number of small FCIP frames are run through a network with WAN Optimizers present and the FCIP Tunnel is in byte streaming mode.	
Feature: Legacy FCIP (7500/FR4-18i)	**Function:** FCP TCP/IP Stack
Probability: Low	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.4.1	

Closed with Code Change in Fabric OS v6.4.0c - GA September 2, 2010

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of September 2, 2010 in Fabric OS v6.4.0c.

Defect ID: DEFECT000301286	**Technical Severity:** High
Summary: Routes are not properly redistributed after trunk group loses a trunk member.	
Symptom: In a setup with 8G switches running exchanged base route policy, the routes are not rebalanced properly after a trunk group loses a member. This may cause performance to be sluggish on 8G switches fabric if there happens to be a slow drain device using the lower bandwidth links to further congest the fabric. This only impacts 8G switches.	
Workaround: Keep trunk groups with equal bandwidth.	
Feature: Field Escalation	**Function:** FC Layer 2 Routing
Probability: Medium	
Found in Release: FOS6.2.1	**Service Request ID:** 433171
Where Else Fixed: FOS6.3.2	

Defect ID: DEFECT000310231	**Technical Severity:** High
Summary: Constant link resets occur when a long distance port is configured.	
Symptom: After configuring a long distance E_Port that requires 128 to 511 credits the customer observes continuously link timeout with no traffic running. Constant stream of C2-5021. This, only, affects 8G platforms.	
Workaround: Use QOS mode	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Medium	
Found in Release: FOS6.3.1	**Service Request ID:** 443673

Defect ID: DEFECT000315258	**Technical Severity:** High
Summary: Switch panics, blade faults, or switch is disabled when credit loss is detected on backend link.	
Symptom: When credit loss happens on internal backend port, RASLOG C-5021 or C2-5021 is reported with "S#,P-1(#)". If this happens on: • FR4-18i: Blade is faulted. • Brocade 4900,5300 and7500: Switch is faulted/disabled. • All other switches/directors: hareboot/hafailover will eventually happen. An example of C2-5021 internal port raslog as: [C2-5021], 730078/0, SLOT 6 | CHASSIS, WARNING, , S8,P-1(61): Link Timeout,....	
Feature: 8G Platform Services	**Function:** FOS Kernel Drivers
Probability: Low	
Found in Release: FOS6.4.0	

Close with Code Change in Fabric OS v6.4.0c

Defect ID: DEFECT000315751	**Technical Severity:** High
Summary: FCIP tunnel bounces on workload start	
Symptom: Traffic disruption is observed.	
Workaround: Enable some sort of FICON emulation (XRC or Tape Read/Write Pipelining).	
Feature: FCIP	**Function:** FCIP Port
Probability: High	
Found in Release: FOS6.4.0	**Service Request ID:**

Defect ID: DEFECT000315752	**Technical Severity:** High
Summary: HA failover caused the newly active CP to disable switch or may cause switch panic.	
Symptom: When Lossless is enabled, HA failover caused the newly active CP to disable switch or may cause switch panic. When the switch is disabled, the ports remain disabled. The user has to enable the switch explicitly.	
Feature: 8G Platform Services	**Function:** Routing
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000297957	**Technical Severity:** Medium
Summary: The command haenable is not auto rebooting the standby CP when the standby CP is removed and reseated/replaced	
Symptom: The active and backup CP end up out of synch when the standby CP is reseated or replaced as part of the documented field CP replacement procedure.	
Workaround: Reboot the standby CP manually.	
Feature: Infrastructure	**Function:** HA
Probability: High	
Found in Release: FOS6.4.0	**Service Request ID:** 429501

Defect ID: DEFECT000305689	**Technical Severity:** Medium
Summary: During a tape read, dropping the first and middle data frames results in a connection timeout error , dropping the last frame results in a hung host.	
Symptom: During tape reads, frame drops cause connection timeout errors or hung hosts.	
Feature: FCIP	**Function:** Emulation
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000305799	**Technical Severity:** Medium
Summary: FICON block count mismatch in tape read emulation (FCIP link)	
Symptom: Tape job fails with block count mismatch ABEND	
Workaround: Disable / don't enable FICON emulation	
Feature: FCIP	**Function:** FCIP I/O
Probability: Low	
Found in Release: FOS6.4.0	

Close with Code Change in Fabric OS v6.4.0c

Defect ID: DEFECT000307117	**Technical Severity:** Medium
Summary: Unable to form an ISL with AP7420 platform	
Symptom: A switch running FOS6.4.0 cannot form an ISL with AP7420 platform	
Workaround: Connect AP7420 to a platform that is running an earlier release of FOS than FOS6.4.0 (e.g. FOS6.3.0).	
Feature: FC Services	**Function:** Fabric
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000308461	**Technical Severity:** Medium
Summary: Error in thresholding logic for port state change events prevents thresholding condition from being reported properly.	
Symptom: Fabric watch does not detect the condition and generate the correct warning messages for port thresholding events. Customer only sees SNMP-1008 messages indicating "...Last device change happened at HH:MM:SS..." but no thresholding event indicating the count is above the threshold.	
Feature: FABRIC WATCH	**Function:** CLI
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000308734	**Technical Severity:** Medium
Summary: Backup/Restore job fails with FICON tape read extension	
Symptom: Restore job fails with invalid record id	
Workaround: Disable / don't enable FICON emulation for tape jobs	
Feature: FCIP	**Function:** FCIP I/O
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000312245	**Technical Severity:** Medium
Summary: Path not brought online after path deactivation/reactivation in a large heavily loaded FICON tape emulation configuration	
Symptom: Unable to vary paths back online after offline.	
Workaround: When FICON path control blocks are stuck at invalid state, disable the tunnel. If issues are occurring with FICON emulation and ESCON devices, disable FICON Emulation. In the case of the failed tape job, resubmit it.	
Feature: FCIP	**Function:** Emulation
Probability: Medium	
Found in Release: FOS6.4.0	

Close with Code Change in Fabric OS v6.4.0c

Defect ID: DEFECT000313149	**Technical Severity:** Medium
Summary: Receiving emulation error 60 during FICON read tape emulation.	
Symptom: Attention status received.	
Workaround: When FICON path control blocks are stuck at invalid state, disable the tunnel. If issues are occurring with FICON emulation and ESCON devices, disable FICON Emulation. In the case of the failed tape job, resubmit it.	
Feature: FCIP	**Function:** Emulation
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000313907	**Technical Severity:** Medium
Summary: Without an FCoE license installed on the switch (8000), configdownload fails	
Symptom: configdownload fails with the following, " ERROR: Unable to apply port configuration. error=No FCoE license present. Commit function of configdownload failed for filter FCOE, Irc = -373. 2010/08/12-19:03:11, [CONF-1023], 1973, FID 128, INFO, V_E218, configDownload failed for chassis."	
Feature: CEE-FCOE	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.1	

Closed with Code Change in Fabric OS v6.4.0b - GA June 25, 2010

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of June 25, 2010 in Fabric OS v6.4.0b.

Defect ID: DEFECT000283335	**Technical Severity:** High
Summary: A device with a node WWN of zero connected to an NPIV port queried by CALD causes the switch to panic and reboot	
Symptom: CALD causing switch to panic and reboot about every 20-30mins. It was observed after a recent upgrade to a partner management application.	
Feature: Field Escalation	**Function:** Management Embedded
Probability: Medium	
Found in Release: FOS6.2.1	**Service Request ID:** 421461

Defect ID: DEFECT000299814	**Technical Severity:** High
Summary: IP addresses are allowed to be deleted even if in use by a route	
Symptom: Tunnel configuration anomalies.	
Workaround: Issue portcfgshow iproute to find any invalid route entries and delete them.	
Feature: FCIP	**Function:** Other
Probability: High	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000300728	**Technical Severity:** High
Summary: The LUNs contained in a CTC (Crypto Target Container) lose their paths when a non-encryption switch connecting the host and target is rebooted.	
Symptom: When two BES switches are connected via a single path through a non-encryption switch, the path between the host and the LUNs can be lost when the non-encryption switch is rebooted. This only happens when the HA Cluster (HAC) is set for manual failback, and will also not be observed if there are multiple paths through the fabric so that the loss of one switch does not create a temporary loss of path.	
Feature: Data Security	**Function:** HA Cluster
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000301448	**Technical Severity:** High
Summary: Build Fabric sent to Access Gateway with F-Port trunking.	
Symptom: When F-Port trunking is activated and after the master trunk goes offline, the switch will add the new master trunk to the list of ports, which will send EFP/BF/DIA flood. The ports will remain in this state until all N-Ports are taken offline and logged back into the fabric again. Build Fabric (BF) sent to AG and AG forwarding the BF to redundant fabric caused fabric disruption.	
Feature: FC Services	**Function:** Fabric
Probability: Medium	
Found in Release: FOS6.4.0	**Service Request ID:** 432859

Close with Code Change in Fabric OS v6.4.0b

Defect ID: DEFECT000301612	**Technical Severity:** High
Summary: VE port "aptpolicy port_based" did not change internal policy	
Symptom: When an FX8-24 and a FS8-18 are installed in the same chassis and the user attempts to set the routing policy to port-based, it may not take effect and the internal policy could remain as exchanged based routing.	
Feature: 8G Platform Services	**Function:** Routing
Probability: High	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000302706	**Technical Severity:** High
Summary: Tape job over FCIP on FID 128 stopped after sometime in port based route policy environment.	
Symptom: In VF-disable mode, observed aborts and timeout on traffic over FCIP on FID 128 with port based route policy (aptpolicy of 1) in effect.	
Feature: Field Escalation	**Function:** RAS Logging / Tracing
Probability: Medium	
Found in Release: FOS6.3.1	**Service Request ID:** 436473

Defect ID: DEFECT000303951	**Technical Severity:** High
Summary: Ports changed status to mod_val causing ISL downtime after overnight EEdisable/enable test - after reboots	
Symptom: Port status changed to mod_val and ISL fails to form. It's possible that host may not be able to access LUNs and I/O can be interrupted.	
Feature: System Controls/EM	**Function:** Mace/Lance
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000269189	**Technical Severity:** Medium
Summary: SERDES tuning values to support BR–804 HBA. In addition for v6.4.0b, regardless what the fill word mode setting is on the port, it will operate at mode 1 internally with embedded switch Brocade 5480	
Symptom: Fine tune SERDES value for BR–804 HBA support. This change only applies to Brocade 5480 platform.	
Feature: Embedded Platform Services	**Function:** Bulova
Probability: Medium	
Found in Release: FOS6.3.0	
Where Else Fixed: FOS6.4.0, FOS6.3.1 a, FOS6.3.1 b	

Close with Code Change in Fabric OS v6.4.0b

Defect ID: DEFECT000270825	**Technical Severity:** Medium
Summary: Expose all 64 bit port stats counter through SNMP	
Symptom: 64 bit port stats is only available in CLI via portStats64Show, it's not exposed through SNMP.	
Feature: Mgmt Embedded - SNMP	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000273725	**Technical Severity:** Medium
Summary: Detected termination of webd and triggered call home event.	
Symptom: At a customer site, webd terminated and restarted from time to time. At the same time as the webd crash, HA status temporarily went to non-redundant, which triggered a Call Home event. webd was killed by watchdog as webd was waiting for a reply from a busy httpd and webd did not have a timeout mechanism. No other functional impact observed besides call home event.	
Feature: Field Escalation	**Function:** Management Services
Probability: Low	
Found in Release: FOS6.2.0	**Service Request ID:** 412187

Defect ID: DEFECT000286033	**Technical Severity:** Medium
Summary: Bottleneckmon cannot be enabled on F-ports with "Locked G_Port" AND "Disabled E_Port" enabled in portcfg.	
Symptom: Customer is not able to enable bottleneckmon --enable <port> on switches with message "Error: port is not an F_Port". The command works as expected after disable Locked G_Port option. This error happens only when both "Locked G_Port " AND "Disabled E_Port" parameters are "on" in portcfgshow.	
Workaround: Disable either or both "Locked G_Port " AND "Disabled E_Port" features; However, changing these features is disruptive.	
Feature: Field Escalation	**Function:** OS: Configuration
Probability: High	
Found in Release: FOS6.3.1	**Service Request ID:** 423357

Defect ID: DEFECT000298078	**Technical Severity:** Medium
Summary: Backup to all cleartext containers using tape application (Netbackup) in a multiplex/stream environment results in a Brocade Encryption Switch fault	
Symptom: The system will fault and result in tape flows halting.	
Feature: Data Security	**Function:** Tape Encryption
Probability: Medium	
Found in Release: FOS6.3.0	**Service Request ID:** 429393

Close with Code Change in Fabric OS v6.4.0b

Defect ID: DEFECT000298268	**Technical Severity:** Medium
Summary: I Series tape I/O stops with tape pipelining enabled	
Symptom: Tape I/O with I Series server is not possible with tape pipelining enabled.	
Workaround: Disable / do not enable tape pipelining.	
Feature: FCIP	**Function:** FCIP I/O
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000298400	**Technical Severity:** Medium
Summary: DCFM encryption support is unable to import large-sized encryption certificates	
Symptom: When importing certificates that contain both the text and Base64 encoded portion of a cert, the import will fail although DCFM encryption support does not report that it fails and reports a success.	
Feature: Data Security	**Function:** Infrastructure
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000300066	**Technical Severity:** Medium
Summary: Data Security, EE in a DCX type chassis can fail to properly accomodate CTC upon EG re-creation	
Symptom: Containers created before EG is deleted do not show up in the fabric post EG re-creation with chassis hosting FS8-18 blades.	
Workaround: slotpoweroff/slotpower on of FS8-18 blade for CTCs to be hosted after EG re-creation.	
Feature: Data Security	**Function:** Infrastructure
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000300754	**Technical Severity:** Medium
Summary: In large configurations, applying TI Zone failover disabled is causing FCP traffic over VEX to throttle back	
Symptom: Applying new TI Zone with failover disabled, FCIP performance (throughput) gets impacted.	
Feature: FCIP	**Function:** FCIP I/O
Probability: Medium	
Found in Release: FOS6.4.0	

Close with Code Change in Fabric OS v6.4.0b

Defect ID: DEFECT000300759	**Technical Severity:** Medium
Summary: Addition of End-to-End Monitors through DCFM or CLI will fail after an HA Failover if Monitors were installed on the switch before the failover.	
Symptom: On a Condor 2 Platform, if the user has End-to-End Monitors installed and then performs an HA Failover, he cannot further install any new Monitors on chips(s) other than on which End-to-End Monitors were already configured prior to the Failover.	
Workaround: Clear all existing End-to-End Monitors on the switch and try to re-install the required monitors.	
Feature: Performance Monitor	**Function:** EE monitor
Probability: High	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000301457	**Technical Severity:** Medium
Summary: With tape pipelining enabled, AIX host receiving connection timeout error	
Symptom: AIX host gets a connection timeout error after the first write with tape pipelining enabled.	
Workaround: Disable tape pipelining.	
Feature: FCIP	**Function:** Emulation
Probability: High	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000301609	**Technical Severity:** Medium
Summary: FICON FCIP: CHPID cable pull results in invalid FDPB and no way to recover device paths	
Symptom: After cable pull of CHPID port, the FICON path block becomes invalid and the device paths can no longer be recovered without a slotpoweroff/on of the FX8-24 or reboot of the switch.	
Workaround: Reboot 7800 or FX8-24 slot to recover the FICON device connectivity.	
Feature: FCIP	**Function:** FCIP I/O
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000301766	**Technical Severity:** Medium
Summary: Host detects tape drive offline intermittently during backup	
Symptom: The tape devices intermittently show "offline" condition to host. This is observed in setup where some Physical Initiators do not register as FC4 type device and some do.	
Feature: Data Security	**Function:** Disk Encryption
Probability: Low	
Found in Release: FOS6.3.0	**Service Request ID:** 433655

Close with Code Change in Fabric OS v6.4.0b

Defect ID: DEFECT000302002	**Technical Severity:** Medium
Summary: Unable to disable default zone from Mi10k in interop fabric(FOS and Mi10k) in IM2 mode	
Symptom: After a zone merge failure between Mi10k and FOS switches, disable Default zone from Mi10k, throws error as "Error: Zone Activation failed due to error in pushing the data to the rest of the fabric", need a switch reboot to recover.	
Feature: FC Services	**Function:** Zoning
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000302325	**Technical Severity:** Medium
Summary: The Brocade 7800 does not support the Path Down function in IM2 mode.	
Symptom: Fabric becomes unstable and segments when one leg of a TI Zone with Failover Disabled is disrupted.	
Feature: FC Services	**Function:** FSPF
Probability: High	
Found in Release: FOS6.3.0	

Defect ID: DEFECT000303264	**Technical Severity:** Medium
Summary: Tape pipelining I/O errors observed when forcing a drop of last data frame	
Symptom: IO errors when forcing drop of last data frame with tape pipelining enabled.	
Feature: FCIP	**Function:** Emulation
Probability: Low	
Found in Release: FOS6.4.0	

Closed with Code Change in Fabric OS v6.4.0a - GA June 4, 2010

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of June 4, 2010 in Fabric OS v6.4.0a.

Defect ID: DEFECT000271043	**Technical Severity:** High
Summary: As a result of firmwaredownload, systemverifcation test, or blade insertion, occasionally blade FCoE10-24 may turn faulty 21	
Symptom: Slotshow indicates that FCoE10-24 is found to be in a faulty state	
Workaround: slotpoweroff/on the FCoE10-24 to clear the faulty state	
Feature: CEE-Infrastructure	**Function:** ANVIL DRIVER
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000290749	**Technical Severity:** High
Summary: FICON: FRU events are not generated on the operator's console for removal or insertion	
Symptom: No FRU event notification at the operator's console	
Feature: FICON	**Function:** Ficud
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000296886	**Technical Severity:** High
Summary: Rare corner case of Lossless being disabled after several downgrade and upgrade scenarios.	
Symptom: A DCX logical switch with port based routing, IOD (In-Order Delivery), DLS, and LosslessDLS enabled running Fabric OS v6.3.0b is updated to v6.4.0, Lossless gets disabled.	
Workaround: Re-enable Lossless / IOD on logical switches that were previously enabled.	
Feature: 8G Platform Services	**Function:** Routing
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000297733	**Technical Severity:** High
Summary: With FMS enabled, after moving all ICL and 254 FC ports into a logical switch with zero based addressing, port 1/0 (area 00) is incorrectly disabled	
Symptom: Port 0 with area 0x00 is disabled	
Workaround:	
Feature: 8G Platform Services	**Function:** FOS Kernel Drivers
Probability: Medium	
Found in Release: FOS6.4.0	

Closed with Code Change in Fabric OS v6.4.0a

Defect ID: DEFECT000297793	**Technical Severity:** High
Summary: Data encryption, name server fails to show the existence of a specific virtual initiator	
Symptom: As a result of an external FC port experiencing an excessive number of encoding CRC errors the internal ports are faulted incorrectly by switch firmware, hence a data encryption virtual initiator associated with the internal port fails to appear in name server.	
Workaround: Remove the condition / cause of the excessive CRC errors (ie replace cable or SFP).	
Feature: Data Security	**Function:** Platform
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000297978	**Technical Severity:** High
Summary: Zoned terminated while activating zoning from DCFM	
Symptom: Unexpected reboot and failover if attempt to push zone DB from DCFM in IM2/IM3 fabrics only.	
Workaround: Use CLI (or ECFM for non-TI/Redirect zones) in IM2/IM3	
Feature: FC Services	**Function:** Zoning
Probability: Medium	
Found in Release: FOS6.4.0	
Where Else Fixed: FOS6.3.1 b	

Defect ID: DEFECT000298015	**Technical Severity:** High
Summary: After code upgrade, non Brocade branded SFPs got Mod_Val.	
Symptom: non-Brocade branded SFPs are in Mod_Val state after firmware upgrade. This impacts FOS v6.2.2x and FOS v6.3.1x only with 1 specific non-Brocade branded SFPs.	
Workaround: Use Brocade branded SFPs	
Feature: 4G Platform Services	**Function:** FOS Kernel Drivers
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000298098	**Technical Severity:** High
Summary: FICON: NSD panic while running IRNDUP to SW48K	
Symptom: Missing interrupt (IFCC) while running IRNDUP	
Feature: FC Services	**Function:** Name Server
Probability: Medium	
Found in Release: FOS6.4.0	

Closed with Code Change in Fabric OS v6.4.0a

Defect ID: DEFECT000298730	**Technical Severity:** High
Summary: A LUN sized > 2TB cannot be configured for encryption with the -newLUN option	
Symptom: There is a potential for hosts to overwrite encryption metadata for encrypted LUNs where Read Capacity (16) is used to determine max LUN LBA (LUNs greater than 2TB in size).	
Workaround: Do not configure LUNs for encryption, using the -newLUN option if the LUN size is greater than 2TB.	
Feature: Data Security	**Function:** Disk Encryption
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000299991	**Technical Severity:** High
Summary: FICON: Webtools out of sync with CLI in not showing correct port status when FMS mode is enabled and port is moved between different logical switches from the DCFM	
Symptom: Webtools port status from Port Admin is not displaying correct port status where CLI does.	
Feature: WebMgmt	**Function:** WT Platform Support
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000300388	**Technical Severity:** High
Summary: WebTools: Name server tab unable to export name server data base from FCR configured switch.	
Symptom: After opening the name server tab and performing export the tables, export fails with an error message “For Input String N/A”.	
Feature: WebMgmt	**Function:** Name Server
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000301006	**Technical Severity:** High
Summary: Data Encryption, tape containers get stuck in login busy state after performing ISL disruption tests	
Symptom: Performing HA failover by toggling ISL between HA cluster members can cause containers to be not hosted with reason "login busy".	
Workaround: Do not connect target devices to BES directly, but connect them to an L2 switch.	
Feature: Data Security	**Function:** Tape Encryption
Probability: Medium	
Found in Release: FOS6.4.0	

Closed with Code Change in Fabric OS v6.4.0a

Defect ID: DEFECT000281212	**Technical Severity:** Medium
Summary: In AG mode, N-Port failover results in F-Ports with attached hosts getting stuck as G_Port	
Symptom: F-Ports get stuck as G-Ports after AG N-Port failover.This happens when there is a change in the base address for the N-Port due to failover, or when there is no wwn-area mapping for few devices and due to the login sequence of these devices, the PIDS assigned conflicted with the already allocated PID to another device, resulting in the F-Ports getting stuck as G-Port.	
Workaround: portdisable/enable	
Feature: Embedded Platform Services	**Function:** Other
Probability: Medium	
Found in Release: FOS6.2.0_bc	

Defect ID: DEFECT000286529	**Technical Severity:** Medium
Summary: FICON: when CHPs are very busy, CUP may report many IFCCs	
Symptom: IFCCs on CUP exchange	
Feature: Field Escalation	**Function:** FICON
Probability: Low	
Found in Release: FOS6.3.0	

Defect ID: DEFECT000288968	**Technical Severity:** Medium
Summary: When running 200 ms delay and 1% packet loss, after 4 days of run time, an IPSec enabled FCIP circuit bounced.	
Symptom: Tunnel bounce can occur.	
Feature: FCIP	**Function:** FCIP Port
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000289418	**Technical Severity:** Medium
Summary: Tape drives fail when running over FCR with EX ports in Open mode. The REC accept payload is incorrect.	
Symptom: If host to tape I/O traverses FCR and includes an edge fabric, the tape drives would run for a bit and then fail due to REC ACC is not processed correctly if EX port is operating in IM3/Open mode.	
Feature: Legacy FCR - 7500/FR4-18i	**Function:** FCR Daemon
Probability: High	
Found in Release: FOS6.3.0	**Service Request ID:** 419137

Closed with Code Change in Fabric OS v6.4.0a

Defect ID: DEFECT000290784	**Technical Severity:** Medium
Summary: Abort in Read emulation if Attention status received between status and status accept	
Symptom: IFCCs during Tape Read processing.	
Workaround: Disable FICON Emulation	
Feature: FCIP	**Function:** FCIP I/O
Probability: Medium	
Found in Release: FOS6.3.1	

Defect ID: DEFECT000298077	**Technical Severity:** Medium
Summary: FICON: IFCCs seen when enabling ICL ports wiht Lossless DLS enabled	
Symptom: IFCCs observed and traffic can be adversely affected.	
Feature: 8G Platform Services	**Function:** Routing
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000298120	**Technical Severity:** Medium
Summary: Port based routing frame were out of order when FCP image pairs concurrently initiate exchanges as originators over GE ports	
Symptom: 3rd party device has very poor performance over FCIP link between two Brocade 7800 over 1G GE port. Same issue applies to FX8-24 blades.	
Feature: FCIP	**Function:** FCIP Performance
Probability: Medium	
Found in Release: FOS6.3.1	**Service Request ID:** 429767
Where Else Fixed: FOS6.3.1 b	

Defect ID: DEFECT000298774	**Technical Severity:** Medium
Summary: Multiple critical CDR-1003 raslog during supportsave	
Symptom: After a non-disruptive upgrade from Fabric OS version v6.1.x to Fabric OS version 6.2.x, CDR-1003 CRITICAL messages may be posted during a supportSave operation on Brocade 4G platforms. With the fix in this release, the critical message is update to Warning and it can be ignored unless it's persistent and not happening during supportsave.	
Workaround: Ignore if CDR-1003 happens during supportsave and not persistent.	
Feature: 4G ASIC Driver	**Function:** ASIC Driver
Probability: High	
Found in Release: FOS6.3.1	

Closed with Code Change in Fabric OS v6.4.0a

Defect ID: DEFECT000299335	**Technical Severity:** Medium
Summary: FICON emulation, core hangs during error recovery	
Symptom: After an FCIP link failure, an FFDC will occur and some traffic across remaining FCIP links will continue to be disrupted.	
Feature: FCIP	**Function:** Emulation
Probability: High	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000300065	**Technical Severity:** Medium
Summary: Data Encryption, Manual HA failback command on FOS v6.4.0 fails	
Symptom: Manual failback command (cryptocfg –-failback -EE) issued from node other than failed over node fails with an error.	
Workaround: Issue the manual failback command from the node hosting the failed over containers.	
Feature: Data Security	**Function:** HA Cluster
Probability: Medium	
Found in Release: FOS6.4.0	

Appendix: Additional Considerations for FICON Environments

This appendix includes supplemental information for users deploying FOS-based platforms in FICON environments.

- The DCX-4S is only supported for FICON in Brocade Native Mode (interopmode 0) and therefore is not supported for interoperability with M-EOS platforms.
- Multiple 10 Gb/sec ISLs and FCIP links can load-share between cascaded FICON directors/switches but do not load balance in a FICON configuration.

10-bit addressing mode is not supported in a FICON environment.

Area	Comments
FCIP	VEX ports are not supported on the 7800 and FX8-24 blade in a FICON environment
FCIP	When performing multiple cabling changes to the SAN fabric in a FICON Emulating FCIP Tunnel configuration with the Brocade 7800 or FX8-24 blade, either disable all of the FCIP Tunnels or issue the switch disable command on all FCIP interconnected switches to avoid IFCCs in a mainframe environment. Issuing either a switch disable or an FCIP Tunnel disable command will allow the FCIP FICON Emulation processing state-machine to execute an orderly cleanup process and allow normal activation of the new configuration. When all cabling and Traffic Isolation Zone manipulations have been completed, enable the switches or the FCIP Tunnels.
Firmware Downloads	Non-disruptive Hot Code Load is only supported on director class switches (48000, DCX, and DCX-4S). Comprehensive non-disruptive Hot Code Load is not supported on the 7500 or 7800 or a DCX, DCX-4S or 48000 with an FR4-18i or FX8-24 blades since the FCIP tunnels will go down for 10-15 seconds and all traffic in the tunnels will be disrupted.. IFCCs may result if traffic is not stopped while downloading firmware.
Firmware Downloads	Replacement of a CP card in the Brocade 48000 may cause disruption of I/O traffic. Brocade recommends that the CP be replaced during a scheduled downtime to prevent disruption in FICON environments.
Firmware Downloads	The CUP device must be varied offline to all MVS partitions before starting a code load. The CUP device can be varied back online after the code load completes. Failure to vary off the CUP devices may result in missing interrupt.
Firmware Downloads	Brocade recommends rebooting the Standby CP prior to upgrading from 6.4.0a to 6.4.2a. This recommendation is limited to upgrades from 6.4.0a and is not recommended when upgrading from 6.4.0c. The Standby CP can be rebooted by sliding the power switch down on the physical CP card or by using the reboot command via the CLI connected to the **standy CP**.
Interoperability	When connecting an 8G capable port in a Brocade switch to an IBM Virtualization Engine TS7700, the port must be configured to a minimum of 16 buffers to avoid IFCCs at the channel and loss of FICON paths to the control unit. This requires the Extended Fabric license on the Brocade switch.
Manageability	In a mixed fabric environment, an M-EOS switch must be principal switch if the fabric is in Interopmode 2 (McDATA Fabric Mode).

<table>
<tr><th>Area</th><th>Comments</th></tr>
<tr><td>Manageability</td><td>It is suggested that Port Fencing be used to avoid taking ports down for normal fabric events. The recommended fencing criteria and settings are:

<table><tr><th>Criteria</th><th>Value</th></tr><tr><td>ITW (Invalid Transmission Words)</td><td>25</td></tr><tr><td>CRC (Cyclical Redundancy Check)</td><td>3</td></tr><tr><td>Protocol Errors</td><td>2</td></tr><tr><td>State Change</td><td>7</td></tr></table>
Note: In a FICON environment, the time base polling interval MUST be set to one minute for granular control and response. By default, Port Fencing time base is set to one hour.</td></tr>
<tr><td>Manageability</td><td>Firmware download must be executed sequentially if DCFM is used for downloading code to Brocade MEOS and FOS non-bladed platforms.</td></tr>
<tr><td>Manageability</td><td>As a "Best Practice" for deploying FOS switches/directors into a FICON environment, verify the FOS version shipped with the most current FOS recommendation. It is recommended to update all FOS switch/directors to the same FOS levels for production.</td></tr>
<tr><td>Manageability</td><td>FMS must be enabled on the local switch for the remote CUP to work.</td></tr>
<tr><td>Optics</td><td>Brocade recommends using 50 micron multimode fiber optic cabling rated at 2000 MHz-km (OM3 or OM4 fiber) for connecting to 8 Gb/sec short wavelength (SX) small form factor pluggable optics (SFPs). Other 50 micron and 62.5 micron multimode fiber may be used as an alternative, but distance limitations may exist.</td></tr>
<tr><td>Serviceability</td><td>Performance of optical links depends upon the cleanliness of the cables and connectors, especially at 8 Gb/sec or higher speeds. Consult with your switch and cable vendors for proper cable maintenance.</td></tr>
<tr><td>Serviceability</td><td>The 48 port blade (FC8-48) is supported as follows:
The switch, or logical switch, must be configured for Brocade Native mode (interopmode 0).
It is only supported on VF enabled chassis on the DCX
It is not supported in the default switch on the DCX.
DCX-4S does not need to be in VF mode to support the 48 port blade</td></tr>
<tr><td>Traffic Isolation Zones</td><td>Enable Lossless DLS when activating Traffic Isolation (TI) Zones to avoid any traffic disruption.</td></tr>
<tr><td>Traffic Isolation Zones</td><td>Traffic Isolation (TI) Zoning with FICON supports enabling or disabling of the failover option. Assistance from service support should be sought before attempting to enable this feature.</td></tr>
<tr><td>Traffic Isolation Zones</td><td>Activating TI Zone with failover disabled may cause IFCC's. Enable failover prior to activating/deactivating TI Zone to avoid IFCCs.</td></tr>
<tr><td>Three or More Switches In A Fabric</td><td>There are some configuration considerations in certain circumstances where there are three or more switches (domain IDs) in a FICON fabric. Assistance from service support should be sought to ensure proper configuration.</td></tr>
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Note: Please refer to the *Firmware Upgrades and Downgrades* section of this document when planning an upgrade to a fabric that includes the 7500 or 7800, or has any FR4-18i or FX8-24 blades in a 48k, DCX-4S, or DCX chassis.

Interoperability

Within a fabric, current major releases will work with previous major releases on the same platform. When cascading switches, it is recommended to keep all switches in the fabric at the same code level. Although not expressly prohibited, having two switches in the same fabric that differ by more than one major FOS release level is not recommended. For example, a switch at FOS v6.4.2a connected to another switch at v6.4.0c is OK. Connecting a switch running FOS v6.4.2a to a switch running FOS v6.1.0a is not recommended.

The following table indicates supported intra-fabric interoperability between hardware platforms, supported management software levels, and recommended firmware versions.

FICON Hardware/Firmware/Software Interoperability with FOS v6.4.2a									
	DCFM	EFCM	DCX/ DCX-4S	48000	M6140/ Mi10K	5100/ 5300	4100/ 4900/ 5000[2]	7500/ 7500E[3]	7800
DCX/ DCX-4S	10.4.5a	NS	S	S	S [1,4]	S	S	S	S
48000	10.4.5a	NS		S	NS	S	S	S	S
M6140/ Mi10K	10.4.5a	9.7.4			S	S[1]	NS	S[1]	S[1]
5100/ 5300	10.4.5a	NS				S	S	S	S
4100/ 4900/ 5000[2]	10.4.5a	9.7.4					S	NS	NS
7500/ 7500E[3]	10.4.5a	NS						S	NS
7800	10.4.5a	NS							S

Table Notes:

S=Supported
NS = Not Supported

FR4-18i Extension blade is only interoperable with 7500 or 7500E extension switches.
FX8-24 Extension blade is only interoperable with 7800 extension switch.

FC8-64, FS8-18, FCOE10-24 and FA4-18i are not supported in a FICON environment.

All platforms operating with FOS v6.4.2a unless otherwise specified.

[1] - Supported with Mi10K/M6140 running M-EOS v9.9.7
[2] - 4100, 4900, & 5000 running FOS v6.2.0e
[3] - Brocade Accelerator for FICON option requires 7500 or 7500E Upgrade license
[4] - DCX-4S does not support interop with M-EOS platforms (M6140/Mi10k)