Brocade Fabric OS v7.0.1

Release Notes v3.0

March 9, 2012

Document History

Document Title	Summary of Changes	Publication Date
Brocade Fabric OS v7.0.1 Release Notes v1.0	Initial Release	December 15, 2011
Brocade Fabric OS v7.0.1 Release Notes v2.0	Updated descriptions for Enterprise ICL license and Fabric license. Updated DCX 8510 power supply table with FC8-32E, FC8-48E related information. Updated important notes section related to zoning database support, D-port support and Forward Error Correction support. Updated the v7.0.1 Closed with Code Change defect table	March 2, 2012
Brocade Fabric OS v7.0.1 Release Notes v3.0	Updated to indicate that FOS v7.0.1 includes support for ICL connectivity with up to ten DCX 8510 chassis in a “core-edge” topology.	March 9, 2012

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Overview

FOS v7.0.1 introduces support for the following new 16G FC hardware platforms:

- Brocade 6505 entry level 16G FC switch
    - Supports 12-24 16 Gbps FC ports
    - Ports are capable of operating at 2/4/8/16 Gbps FC for open systems
    - Supports D-port and Forward Error Correction (FEC) with 16G SFP+
    - Supports Access Gateway mode
    - Supports Condor3 ASIC enabled VC level credit recovery
    - Supports Advanced Performance Monitoring E-port Top Talkers
    - Also supports all features supported on Brocade 300 platform
    - **Does not support** Encryption/Compression on ISLs, 10G capability, Integrated Routing
- FC8-32E and FC8-48E Condor3 based 8G blades for DCX 8510-8 and DCX 8510-4
    - Support automatic VC-level credit recovery (enabled by Condor3 ASIC) to ensure application performance and availability
    - Support Advanced Performance Monitoring E-port Top Talkers
    - Support Integrated Routing
    - Also support features and functions that are supported on Condor2 based 32 and 48 ports 8G blades (FC8-32 and FC8-48)
    - **Do not support** D-port, FEC on front-end ports, Encryption/Compression, 10G FC

In addition to new hardware support, there are additional features, support, and enhancements in FOS v7.0.1, including:

- Enhanced Optical ICL topology support for DCX 8510
    - Support for up to nine DCX 8510 chassis in "full mesh" configuration using optical ICLs
    - Support for ICL connectivity with up to ten DCX 8510 chassis in a "core-edge" topology
    - Enterprise ICL license support on DCX 8510
- Support for Dynamic Fabric Provisioning: Fabric Assigned World Wide Name capability
- Disruptive upgrade of DCX to DCX 8510
- VCS/VDX6730 to FC SAN connectivity
- FCIP feature support: ESCON and Bus/Tag printer emulation support

New Feature Descriptions

Enhanced Optical ICL Topology Support for DCX 8510

FOS v7.0.1 supports the following enhanced topologies using optical ICLs:

- Support for up to nine DCX 8510 chassis in full mesh configuration using optical ICLs
- Support for ICL connectivity with up to 10 DCX 8510 chassis in core-edge topology

This increased support delivers massive scalability, significantly reduces cabling complexity, and also makes more ports available for device connectivity.

FOS v7.0.1 also adds support for Enterprise ICL license on DCX 8510 platforms. Description of this license can be found in the "Optionally Licensed Software" section of this document.

Support for Dynamic Fabric Provisioning: Fabric Assigned World Wide Name

In order to simplify and accelerate server deployment and improve operational efficiency, FOS v7.0.1 provides Fabric Assigned WWN or FA-PWWN capability. This feature allows users to create a virtual WWN for a server instead of using the server's physical port WWN (PWWN) to create zoning and LUN mapping/masking. When a FA-PWWN capable server is attached to the SAN, this feature allows the fabric to assign this virtual WWN to that server. This feature requires servers to be using Brocade HBAs/Adapters. Please consult Brocade HBA/Adapter driver documentation and Release Notes to confirm minimum requirements for this feature. For Brocade Network Advisor support, please consult Brocade Network Advisor documentation and Release Notes.

VCS/VDX6730 to FC SAN Connectivity

This feature enables connectivity between hosts (using FCoE) connected to VCS/VDX platforms and FC storage connected to FC SAN via FCR. An E-port on a VDX6730 platform running NOS v2.1.1 is connected to an EX_port on an FCR running FOS v7.0.1 to enable this functionality.

Note:

- Integrated Routing license is not required to share devices between VDX/VCS Ethernet fabric and FC SAN fabric.
- It is recommended to use 5300, DCX/DCX-4S, DCX 8510-8, DCX 8510-4 for FCR functionality for higher scalability.
- A new FCR EX_port mode 5 is used to connect VCS/VDX6730 to FCR

FCIP Enhancements

FOS v7.0.1 enables ESCON and Bus/Tag printer emulation support on FCIP platforms.

This feature provides near native performance for FICON Extended paths to remote ESCON or Bus and Tag printers. Enabling FICON Printer emulation requires the Advanced FICON Acceleration license. This feature is supported on 7800 and FX8-24.

Optionally Licensed Software

Fabric OS v7.0.1 includes all basic switch and fabric support software, as well as optionally licensed software that is enabled via license keys.

Optionally licensed features supported in FOS v7.0.1 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 Fabric or E_Port or Full Fabric— This license enables a switch to connect to a multi-switch fabric via E_Ports, forming ISL connections.

Note: This license is only required on select embedded switch models and Brocade 300, and does not apply to other fixed-port switches or chassis-based platforms.

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 Top Talkers feature.

Brocade Fabric Watch — Monitors mission-critical switch operations and provides notification if established limits or thresholds are exceeded. Fabric Watch includes Port Fencing capabilities.

High Performance Extension over FCIP/FC (formerly known as "FCIP Services") (For the FR4-18i blade) — This license key also includes the FC-FastWrite feature and IPsec capabilities.

Note: The FC-FastWrite feature is not supported on FR4-18i in FOS v7.0 or later.

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 FR4-18i.

FICON Management Server— Also known as "CUP" (Control Unit Port), enables host-control of switches in Mainframe environments.

Enhanced Group Management — This license enables full management of devices in a data center fabric with deeper element management functionality and greater management task aggregation throughout the environment. This license is used in conjunction with Brocade Network Advisor application software and is applicable to all FC platforms supported by FOS v7.0 or later.

Adaptive Networking with QoS—Adaptive Networking provides a rich framework of capability allowing a user to ensure high priority connections obtain the bandwidth necessary for optimum performance, even in congested environments. The QoS SID/DID Prioritization and Ingress Rate Limiting features are included in this license, and are fully available on all 8Gb and 16Gb platforms.

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.

Integrated Routing— This license allows any port in a DCX 8510-8, DCX 8510-4, Brocade 6510, DCX-4S, DCX, 5300, 5100, 7800, or Brocade Encryption Switch to be configured as an EX_Port or VEX_Port (on some platforms) supporting Fibre Channel Routing. This eliminates the need to add a dedicated router to a fabric for FCR purposes.

Encryption Performance Upgrade — This license provides additional encryption processing power. For the Brocade Encryption Switch or a DCX/DCX-4S/DCX 8510-8/DCX 8510-4, the Encryption Performance License

can be installed to enable full encryption processing power on the BES or on all FS8-18 blades installed in a DCX/DCX-4S/DCX 8510-8/DCX 8510-4 chassis.

DataFort Compatibility — This license is required on the Brocade Encryption Switch or DCX/DCX-4S/DCX 8510-8/DCX 8510-4 with FS8-18 blade(s) to read and decrypt NetApp DataFort-encrypted disk and tape LUNs. DataFort Compatibility License is also required on the Brocade Encryption Switch or DCX/DCX-4S/DCX 8510-8/DCX 8510-4 Backbone with FS8-18 Encryption Blade(s) installed to write and encrypt the disk and tape LUNs in NetApp DataFort Mode (Metadata and Encryption Algorithm) so that DataFort can read and decrypt these LUNs. DataFort Mode tape encryption and compression is supported beginning with the FOS v6.2.0 release on DCX platforms. Availability of the DataFort Compatibility license is limited; contact your vendor for details.

Brocade 8000 FC Ports on Demand — This license enables all eight FC ports on the Brocade 8000.

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, High, 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/DCX 8510-8/DCX 8510-4 for the FX8-24 on an individual slot basis.

10GbE FCIP/10G Fibre Channel – This license enables the two 10GbE ports on the FX8-24 or the 10G FC capability on FC16-xx blade ports. On the Brocade 6510, this license enables 10G FC ports. This license is available on the DCX/DCX-4S/DCX 8510-8/DCX 8510-4 on an individual slot basis.

- **FX8-24:** With this license assigned to a slot with an FX8-24 blade, 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
- **FC16-xx**: Enables 10G FC capability on an FC16-xx blade in a slot that has this license
- **Brocade 6510**: Enables 10G FC capability on the switch

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/DCX 8510-8/DCX 8510-4 for the FX8-24 on an individual slot basis.

7800 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.

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.

ICL 8-Link – 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.

ICL POD License – This license activates ICL ports on core blades of DCX 8510 platforms. An ICL 1st POD license only enables half of the ICL ports on CR16-8 core blades of DCX 8510-8 or all of the ICL ports on CR16-4 core blades on DCX 8510-4. An ICL 2nd POD license enables all ICL ports on CR16-8 core blades on a DCX 8510-8 platform. (The ICL 2nd POD license does not apply to the DCX 8510-4.)

Enterprise ICL (EICL) License – The EICL license is required on a Brocade DCX 8510 chassis when that chassis is participating in a group of five or more Brocade DCX 8510 chassis connected via ICLs.

Note that this license requirement does not depend upon the total number of DCX 8510 chassis that exist in a fabric, but only on how many chassis are interconnected via ICLs. This license is only recognized/displayed when operating with FOS v7.0.1 and later.

Temporary License Support

The following licenses are available in FOS v7.0.1 as Universal Temporary or regular temporary licenses:

- 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/10G Fibre Channel license
- FICON Management Server (CUP) license
- Enterprise ICL license

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

Temporary and Universal Temporary licenses have durations and expiration dates established in the licenses themselves. FOS will accept up to two temporary licenses and a single Universal license on a unit. 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.

Supported Switches

Fabric OS v7.0.1 supports the Brocade 300, 5410/5424/5450/5460/5470/5480/NC-5480, 5100, 5300, VA-40FC, Brocade Encryption Switch (BES), DCX/DCX-4S, 8000, 7800, 6505, 6510, DCX 8510-8 and DCX 8510-4.

Access Gateway mode is also supported by Fabric OS v7.0.1, and is supported on the following switches: the Brocade 300, 5100, VA-40FC, 8000, 5450, 5460, 5470, 5480, NC-5480, M5424, 6510, 6505.

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:

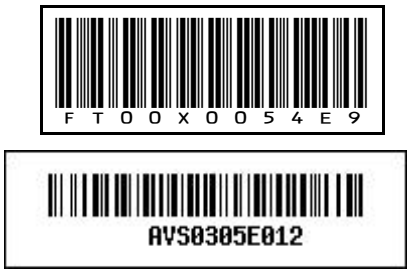
- IEEE 802.1Qbb Priority-based Flow Control
- IEEE 802.1Qaz Enhanced Transmission Selection
- IEEE 802.1 DCB Capability Exchange Protocol (Proposed under the DCB Task Group of IEEE 802.1 Working Group)
- FC-BB-5 FCoE (Rev 2.0)

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:



   The serial number label is located as follows:

   - Brocade Encryption Switch, VA-40FC, 300, 5100, 5300, 6510, 6505 — On the switch ID pull-out tab located on the bottom of the port side of the switch

- 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 DCX, DCX 8510-8 — Bottom right of the port side
- Brocade DCX-4S, DCX 8510-4 — 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 and DCX 8510-8/DCX 8510-4. For the Brocade DCX/DCX-4S and DCX 8510-8/DCX 8510-4 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.

1. 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 v7.0.1

Issues in the following list of TSBs are known to be potential risks to using FOS v7.0.1 and should be considered carefully prior to using this release of code:

TSB	Summary
None	

TSB Issues Resolved in FOS v7.0.1

Issues in the following list of TSBs are known FOS v7.0.x risks that are not exposures in FOS v7.0.1. 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
None	

Recommended Migration Paths to FOS v7.0.1

Migrating from FOS v7.0

Any 8G or 16G platforms running any FOS v7.0.0x release can be non-disruptively upgraded to FOS v7.0.1.

Migrating from FOS v6.4.x

DCX/DCX-4S units running any FOS v6.4.x release can be non-disruptively upgraded to FOS v7.0.1.

Any 8G platforms (other than DCX/DCX-4S) that are currently operating at lower than FOS v6.4.1a must be upgraded to FOS v6.4.1a or later before non-disruptively upgrading to FOS v7.0.1 Upgrading these platforms from any FOS V6.4.x release **lower than FOS v6.4.1a to FOS v7.0.1 will cause disruption to FC traffic**.

Upgrading any 8G platform operating at FOS v6.4.1a or later to FOS v7.0.1 is non-disruptive to FC traffic.

Migrating from FOS v6.4.1_fcoe1

The upgrade from FOS v6.4.1_fcoe1 to FOS v7.0.1 is non-disruptive to both FC and FCoE traffic on DCX and DCX-4S.

Note: Upgrading from FOS v6.4.1_fcoe or FOS v6.4.x releases other than v6.4.1_fcoe1 to FOS v7.0.1 will be disruptive to FCoE traffic going through FCOE10-24 blades in DCX/DCX-4S. When loading FOS v7.0.1 with Brocade Network Advisor v11.1.1/11.1.1a, there is no warning flagging this FCoE traffic disruption.

Migrating from FOS v6.3.x

To non-disruptively migrate from FOS v6.3.x to v7.0.1, units should first load FOS v6.4.1a or later (v6.4.1b should be used for encryption platforms, units operating in Access Gateway mode, or units with ports configured as EX or VEX for FCR), and then migrate to FOS v7.0.1.

FOS Upgrade and Downgrade Special Considerations

The DCX/DCX-4S units running any FOS v6.4.x can be non-disruptively upgraded to FOS v7.0.1. This upgrade is non-disruptive to FC traffic only. When loading FOS v7.0.1 to a DCX chassis with FCOE10-24 blades with Brocade Network Advisor v11.1.1/11.1.1a, there is no warning flagging FCoE traffic disruption.

The DCX/DCX-4S units running FOS v6.4.1_fcoe1 can be non-disruptively upgraded to FOS v7.0.1. This upgrade is non-disruptive to both FCoE traffic through FCOE10-24 blades and FC traffic.

Non-disruptive upgrade to FOS v7.0.1 on 8G switches is allowed from **FOSv6.4.1a** or later.

Disruptive upgrades to Fabric OS 7.0.1 are allowed and supported from FOS 6.3 (up to a two-level migration) using the optional "-s" parameter with the *firmwaredownload* command.

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 v7.0 .1 will be disruptive to the I/O through the switch.

FC FastWrite , EX_Ports, and TCP byte streaming on FR4-18i must be disabled prior to upgrading to FOS v7.0.1. Failure to do so will cause the upgrade to be blocked.
Upgrading a switch currently operating in interopmode 2 or 3 to FOS v7.0.1 is disruptive. The interopmode must be changed to 0 prior to upgrading to FOS v7.0.1, as interopmodes 2 and 3 are not supported on FOS v7.0.1. Changing the interopmode is an offline operation.

Important Notes

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

Brocade Network Advisor Compatibility

Brocade® Network Advisor provides the industry's first unified network management solution for data, storage, and converged networks. It supports Fibre Channel Storage Area Networks (SANs), Fibre Channel over Ethernet (FCoE) networks, Layer 2/3 IP switching and routing networks, wireless networks, application delivery networks, and Multiprotocol Label Switching (MPLS) networks. In addition, Brocade Network Advisor supports comprehensive lifecycle management capabilities across different networks through a seamless and unified user experience. It is the next-generation successor product to legacy Brocade management products (Brocade Data Center Fabric Manager (DCFM), Brocade Fabric Manager (FM) and Brocade Enterprise Fabric Connectivity Manager (EFCM)).

Brocade Network Advisor is available with flexible packaging and licensing options for a wide range of network deployments and for future network expansion. Brocade Network Advisor 11.1.0 is available in

- SAN-only edition
- IP-only edition
- SAN+IP edition.

For SAN Management, Network Advisor 11.1 is available in three editions:

- *Network Advisor 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) switches.
- *Network Advisor 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 8510-4/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) / DCB switches, and Brocade HBAs / CNAs.
- *Network Advisor 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. Network Advisor SAN Enterprise supports all the hardware platforms and features that Network Advisor Professional Plus supports, and adds support for the Brocade DCX Backbone (DCX 8510-8/DCX) and Fiber Connectivity (FICON) capabilities.

More details about Network Advisor's new enhancements can be found in the Network Advisor 11.1 Release Notes, Network Advisor 11.1 User Guide, and Network Advisor 11.1 Installation, Migration, & Transition Guides.

Note: Brocade Network Advisor 11.0 and DCFM 10.4 cannot manage switches running FOS v7.0 or later.

Brocade Network Advisor 11.1.3 is required to manage Brocade 6505 platform.

DCFM Compatibility

DCFM is not qualified or support the management of switches operating with FOS v7.0 and later firmware versions. **You must first upgrade DCFM to Network Advisor 11.1 or later if you are planning to upgrade devices to FOS v7.0 or you risk losing management connectivity.**

WebTools Compatibility

FOS v7.0.1 is qualified and supported only with Oracle JRE 1.6.0 update 24.

SMI Compatibility

- It is important to note that host SMI-S agents cannot be used to manage switches running FOS v7.0.1
- If users want to manage a switch running FOS v7.0.1 using SMI-S interface, they must use Brocade Network Advisor's integrated SMI agent.

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.

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	Direct E-port connections are not supported – must use FCR
Brocade 3000	Direct E-port connections are not supported – must use FCR v3.2.1c [3]
Silkworm 3016, 3250, 3850, 3900, 24000	Direct E-port connections are not supported – must use FCR
4100, 4900, 7500, 7500e, 5000, 200E, 48K Brocade 4012, 4016, 4018, 4020, 4024, 4424	v6.2.2 or later[6]
Silkworm 12000	v5.0.x [3] (Direct E_Port connections are not supported – must use FCR)
Brocade 5410, 5480, 5424, 5450, 5460, 5470, NC-5480	v6.2.0 or later[6]
Brocade DCX, 300, 5100, 5300	v6.1.0e and later [2] [6]
VA-40FC	v6.2.1_vfc [6], v6.2.2 or later [6]
Brocade DCX-4S	v6.2.0 or later [6]
Brocade DCX with FS8-18 blade(s), Brocade Encryption Switch	v6.1.1_enc or later [6]
Brocade 7800, DCX and DCX-4S with FCOE10-24 or FX8-24 blades	v6.3.0 or later
Brocade 8000	v6.1.2_CEE1 or later
Brocade DCX/DCX-4S with FA4-18 blade(s)	DCX requires v6.0.x or later [6], DCX-4S requires 6.2.x or later[5] [6]
Brocade DCX 8510-8/DCX 8510-4	FOS v7.0 or later
Brocade 6510	FOS v7.0 or later
Brocade 6505	FOS v7.0.1 or later
48000 with FA4-18 blade(s), Brocade 7600	v6.2.2 or later [6]

Supported Products and FOS Interoperability	
Secure Fabric OS (on any model)	Not Supported
Mi10k, M6140, ED-6064, ES-3232, ES-4300, ES-4400, ES-4500, ES-4700 (McDATA Fabric Mode and Open Fabric Mode) [1]	Direct E_Port connections are not supported – must use FCR. M-EOS v9.9.5 or later
McDATA ED-5000 32-port FC director	Not Supported

Multi-Protocol Router Interoperability	
Brocade 7420	Not supported
Brocade 7500 and FR4-18i blade	v6.2.2 and higher [4] [6]
McDATA SANRouters 1620 and 2640	Not Supported

NOS (VDX Platform) Interoperability	
Brocade VDX6710, VDX6720, VDX6730	NOS v2.1.1 or later[7]

Table Notes:

[1] 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.

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

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

[4] McDATA 1620 and 2640 SANRouters should not be used with FOS-based routing (FCR) for connections to the same edge fabric.

[5] FA4-18 is not supported in a DCX/DCX-4S that is running FOS v7.0 or later

[6] If operating with **FOS v6.2.2e or earlier**, Adaptive Networking QoS must be disabled when connecting to 16G FC platform. Otherwise, ISL will segment.

[7] Connectivity to FC SAN is established via VDX6730 connected to FCR running FOS v7.0.1 or later. FCR platforms supported include 5100, VA-40FC, 5300, 7800, DCX, DCX-4S, DCX 8510-8, DCX 8510-4, 6510. For higher FCR backbone scalability (refer to separate "Brocade SAN Scalability Guidelines" documentation for details), please use 5300, DCX, DCX-4S, DCX 8510-8, DCX 8510-4.

Zoning Compatibility Note:

Users are recommended to upgrade to the following versions of firmware when interoperating with a switch running FOS v7.0 or later in the same layer 2 fabric to overcome some of the zoning operations restrictions that otherwise exist:

Main code level	Patch code levels with full zoning compatibility
FOS v6.2	FOS v6.2.2d or later
FOS v6.3	FOS v6.3.2a or later
FOS v6.4	FOS v6.4.1 or later

If there are switches running FOS versions lower than the above listed patch levels in the same fabric as a switch with FOS v7.0 or later, then cfgsave and cfgenable operations **initiated** from these switches will fail if the zoning database is greater than 128KB. In such scenarios zoning operations such as cfgsave/cfgenable can still be performed successfully if initiated from a switch running FOS v7.0 or later.

Blade Support

Fabric OS v7.0.1 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)	Supported with FOS v6.0 and above (FC8-64 requires FOS v6.4) 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.
FCIP/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 FCIP without routing. **Note**: FR4-18i cannot coexist with FX8-24 in FOS v7.0 or later FR4-18i does not support EX-ports, FC FastWrite and WAN optimization features in FOS v7.0 or later FR4-18i supports VEX ports on FOS v7.0 or later
Virtualization/Application Blade (FA4-18)	Not supported on FOS v7.0 or later
Encryption Blade (FS8-18)	Up to a maximum of 4 blades of this type.
Next Generation Distance Extension Blade (FX8-24)	Up to a max of 4 blades of this type. **Note**: FR4-18i cannot coexist with FX8-24 in FOS v7.0 or later
FCoE/L2 CEE blade FCOE10-24	Up to a max of 4 blades of this type. **Not supported in the same chassis with other intelligent blades or the FC8-64 port blade.**
FC16-32, FC16-48	Not supported

Table 1 Blade Support Matrix for DCX and DCX-4S with FOS v7.0.1

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

Fabric OS v7.0.1 software is fully qualified and supports the blades for the DCX 8510-8 and DCX 8510-4 noted in the table below.

DCX 8510-8/DCX 8510-4 Blade Support Matrix	
FC16-32, FC16-48 16G FC blades	Supported starting with FOS v7.0
FC8-64 64 port 8Gbit port blade	With any mix and up to 8/4 of each. No restrictions around intermix. **Note:** FC8-16, FC8-32, FC8-48 blades are **not** supported on DCX 8510 platforms
FC8-32E, FC8-48E Condor3 based 8G blades	Supported starting with FOS v7.0.1[1]
FC10-6	Not supported.
Intelligent blade	Up to a total of 8/4 intelligent blades. See below for maximum supported limits of each blade.
FCIP/FC Router blade (FR4-18i)	Not supported.
Virtualization/Application Blade (FA4-18)	Not supported
Encryption Blade (FS8-18)	Up to a maximum of 4 blades of this type.
Next Generation Distance Extension Blade (FX8-24)	Up to a maximum of 4 blades of this type.
FCoE/L2 CEE blade FCOE10-24	Not supported

Table 2 Blade Support Matrix for DCX 8510-8 and DCX 8510-4 with FOS v7.0.1

Note: The iSCSI FC4-16IP blade is not qualified for the DCX 8510-8/DCX 8510-4.

1. Note that 16G SFP+ is not supported in FC8-32E and FC8-48E blades

Power Supply Requirements for Blades in DCX/DCX-4S				
Blades	**Type of Blade**	**DCX/DCX-4S** @110 VAC (Redundant configurations)	**DCX/DCX-4S** @200-240 VAC (Redundant configurations)	**Comments**
FC10-6, FC8-16, FC8-32, FC 8-48, FC8-64	Port Blade	2 Power Supplies	2 Power Supplies	• Distribute the Power Supplies evenly to 2 different AC connections for redundancy.
FR4-18i	Intelligent Blade	Not Supported	2 Power Supplies	
FS8-18, FX8-24, FCOE10-24	Intelligent Blade	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 supported number of FS8-18 Blades. • For both DCX and DCX-4S with FX8-24 blades, (1+1) 220VAC Power Supplies are required for redundancy.

Table 3 Power Supply Requirements for DCX and DCX-4S

Typical Power Supply Requirements Guidelines for Blades in DCX 8510-8 (For specific calculation of power draw with different blade combinations, please refer to Appendix A: Power Specifications in the 8510-8 Backbone Hardware Reference Manual)					
Configured Number of Ports	**Blades**	**Type of Blade**	**DCX 8510-8 @110 VAC (Redundant configurations)**	**DCX 8510-8 @200-240 VAC (Redundant configurations)**	**Comments**
Any combination of 8Gb or 16Gb ports with QSFP ICLs	FC8-64, FC16-32, FC8-32E	Port Blade	4 Power Supplies	2 Power Supplies	200-240VAC: 1+1 Power Supplies 110VAC: 2+2[1] Power Supplies
256 16Gb ports + QSFP ICLs	FC16-32, FC16-48 (Maximum of fully populated FC16-32 blades)	Port Blade	4 Power Supplies	2 Power Supplies	200-240VAC: 1+1 Power Supplies 110VAC: 2+2[1] Power Supplies Max 8 FC16-32 port blades
256 8Gb ports + QSFP ICLs	FC8-32E, FC8-48E (Maximum of fully populated FC8-32E blades)	Port Blade	4 Power Supplies	2 Power Supplies	200-240VAC: 1+1 Power Supplies 110VAC: 2+2[1] Power Supplies Max 8 FC8-32E port blades
192 16Gb Ports & max 2 intelligent blades (FX8-24 /FS8-18/combination) with QSFP ICLs	FC16-32, FC16-48, FX8-24, FS8-18	Port / Intelligent Blade	4 Power Supplies	2 Power Supplies	200-240VAC: 1+1 Power Supplies 110VAC: 2+2[1] Power Supplies Max four FC16-48 port blades and max 2 Intelligent blades
192 8Gb Ports & max 2 intelligent blades (FX8-24 /FS8-18/ combination) with QSFP ICLs	FC8-32E, FC8-48E, FX8-24, FS8-18	Port / Intelligent Blade	4 Power Supplies	2 Power Supplies	200-240VAC: 1+1 Power Supplies 110VAC: 2+2[1] Power Supplies Max four FC8-48E port blades and max 2 Intelligent blades
336 16Gb ports + QSFP ICLs	FC16-48 (Maximum of seven FC16-48 blades, with one empty port blade slot)	Port Blade	4 Power Supplies	2 Power Supplies	200-240VAC: 1+1 Power Supplies 110VAC: 2+2[1] Power Supplies Max 7 FC16-48 port blades
336 8Gb ports + QSFP ICLs	FC8-48E (Maximum of seven FC8-48E blades, with one empty port blade slot)	Port Blade	4 Power Supplies	2 Power Supplies	200-240VAC: 1+1 Power Supplies 110VAC: 2+2[1] Power Supplies Max 7 FC8-48E port blades

Typical Power Supply Requirements Guidelines for Blades in DCX 8510-8 (For specific calculation of power draw with different blade combinations, please refer to Appendix A: Power Specifications in the 8510-8 Backbone Hardware Reference Manual)					
Configured Number of Ports	Blades	Type of Blade	DCX 8510-8 @110 VAC (Redundant configurations)	DCX 8510-8 @200-240 VAC (Redundant configurations)	Comments
384 16Gb ports + QSFP ICLs	FC16-32, FC16-48	Port Blade	Not Supported	4 Power Supplies	200-240VAC: For DCX 8510-8, four (2+2)[1] 220V AC Power Supplies are required
384 8Gb ports + QSFP ICLs	FC8-32E, FC8-48E	Port Blade	Not Supported	4 Power Supplies	200-240VAC: For DCX 8510-8, four (2+2)[1] 220V AC Power Supplies are required
Any combination of 8Gb or 16Gb ports and intelligent blades with QSFP ICLs	FC16-32, FC16-48, FC8-64, FC8-32E, FC8-48E, FS8-18, FX8-24	Intelligent Blade /Combination	Not Supported	4 Power Supplies	For DCX 8510-8, four (2+2)[1] 220V AC Power Supplies are required when any special purpose blade are installed

Table 4 Power Supply Requirements for DCX 8510-8

Notes:

1. When 2+2 power supply combination is used, the users are advised to configure the Fabric Watch setting for switch marginal state to be two power supplies. Users can use the CLI switchstatuspolicyset to configure this value if the current value is set to zero. In FOS v7.0.x, the default setting for the marginal state due to missing power supplies is incorrectly set to zero (Defect 000349586), which will prevent Fabric Watch from generating notifications when the switch enters the marginal state due to missing power supplies

Typical Power Supply Requirements Guidelines for Blades in DCX 8510-4 (For specific calculation of power draw with different blade combinations, please refer to Appendix A: Power Specifications in the 8510-4 Backbone Hardware Reference Manual)					
Configured Number of Ports	Blades	Type of Blade	DCX 8510-4 @110 VAC (Redundant configurations)	DCX 8510-4 @200-240 VAC (Redundant configurations)	Comments
96 ports max with QSFP ICLs	FC16-32, FC8-32E	Port Blade	2 Power Supplies	2 Power Supplies	1+1 redundancy with 110 or 200-240 VAC power supplies
Any combination of 8Gb or 16 Gb ports and intelligent blades with QSFP ICLs	FC16-32, FC16-48, FC8-32E, FC8-48E, FC8-64, FS8-18, FX8-24	Intelligent Blade /Combination	Not Supported	2 Power Supplies	200-240VAC: 1+1 Power Supplies

Table 5 Power Supply Requirements for DCX 8510-4

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

Adaptive Networking/Flow-Based QoS Prioritization

- Any 8G or 4G FC platform running FOS v6.2.2e or lower version of firmware cannot form an E-port with a 16G FC platform when Adaptive Networking QoS is enabled at both ends of the ISL. Users must disable QoS at either end of the ISL in order to successfully form an E-port under this condition.

  Users can disable QoS via portcfgQos --disable command. Please consult Fabric OS Command Reference manual for details related to portcfgQoS command.

- When using QoS in a fabric with 4G ports or switches, FOS v6.2.2 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 6.2.2 is running on those switches.

Access Gateway

- AG cascading is not supported on Brocade 6510, Brocade 6505 in FOS v7.0.1.
- 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.

Brocade HBA/Adapter Compatibility

- Brocade HBA/Adapter should be using driver version 2.3.0.2 or later when attached to 16G ports on Brocade switches.

D-Port

- D-port tests must be run with FEC disabled. Sometimes, a D-Port test may get stuck in "IN PROGRESS" state, when FEC is enabled for a port. The D-Port stuck in "IN PROGRESS" state can be recovered by toggling the port (port disable/enable).

- FOS v7.0.0a and later support the execution of D-Port tests concurrently on up to eight ports on the switch.

- D-Port tests may only be executed on ports configured for "*portcfglongdistance port# L0*" or normal port distance mode. Executing D-Port tests on long distance ports may cause tests to fail due to time out exceeded.

- Support of D-Port is extended to R_RDY flow control mode. The R_RDY mode is useful for active DWDM links that do not work in VC_RDY or EXT_VC_RDY flow control modes.

- A new sub-option "-dwdm" is added to "portcfgdport --enable" CLI to configure D-Port over active DWDM links. The "-dwdm" option will not execute the optical loopback test while performing D-Port tests as the active DWDM links do not provide necessary support to run optical loopback tests.

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

- SafeNet's KeySecure hosting NetApp's LKM (SSKM) is supported for data encryption operations with FOS v7.0.1
    - Use of SSKM with the Brocade encryption solution is only supported for SSKM operating in PVM mode. Please see SSKM documentation for operating in PVM mode for details. Operation in HVM mode is not supported.
    - It is recommended to use Tight VNC connection to access the management console for SSKM and LKM key vaults instead of remote desktop. If remote desktop is used, customer may encounter the following errors related to smart card reader:
        - Error communicating with smart card reader.
        - Card reader already in use by default key.
        - Unable to complete TEP/TAP process as window for selecting card and entering password does not appear.
    - Please refer to SafeNet Keysecure install documentation for setting up and initially configuring the SSKM key vaults. There are some changes between setting up the SSKMs and the LKMs. Please refer SafeNet or NetApp documentation for any LKM to SSKM migration procedures. This migration is not tested/supported with FOS v7.0.1 or later.
    - The following is tested and supported with FOS v7.0.1
        - Platform Serial Number: 27CJNQ1
        - Platform FW Version: SSKM-1.0-03
        - Platform Firmware Build ID: 0.5_secure
        - DB version: 166
        - SEP FW ID: SEPLuna TDB
        - SEP HW ID: Luna K6 TBD
        - SEP SW ID: 6.2.0 TBD
        - System Card FW ID: 200.5
        - Management console version: 1.0 build 18.
- For crypto tape operations, please ensure to use Emulex FC HBA firmware/drivers 2.82A4/7.2.50.007 or higher. Use of lower level firmware/drivers may result in hosts not being able to access their tape LUNs through a crypto target container.

- If the migration to FOS v7.0 or later does not occur from 6.4.1a, 6.4.1b, or 6.4.2, the following will result
    - BES will reboot if auto reboot is enabled otherwise it needs to be rebooted manually for recovery2010/11/08-04:54:35:485488, [FSS-1009], 4424/886, CHASSIS, ERROR, MACE, FSS Error: fcsw0-vs: MISMATCH: component., svc.c, line: 2462, comp:FSSK_TH, ltime:2010/11/08-04:54:35:485484
- Adding of 3PAR Session/Enclosure LUNs to CTCs is now supported. Session/Enclosure LUNs (LUN 0xFE) used by 3PAR InServ arrays must be added to CryptoTarget (CTC) containers with LUN state set to "cleartext", encryption policy set to "cleartext". BES/FS8-18 will not perform any explicit enforcement of this requirement.
- The "*cryptocfg –manual_rekey –all*" command should not be used in environments with multiple encryption engines (FS8-18 blades) installed in a DCX/DCX-4S/DCX 8510 chassis with 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 host clusters are deployed in an Encryption environment, please note the following recommendations:
    - If two EEs (encryption engines) are part of a HAC (High Availability Cluster), 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 the 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 or Brocade Network Advisor release (DCFM 10.3 or later for pre-FOS v7.0 and Network Advisor 11.1 or later for FOS v7.0 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 or Brocade Network Advisor release (DCFM 10.3 or later for pre-FOS v7.0 and Network Advisor 11.1 or later for FOS v7.0 or later) 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.
- HP SKM & ESKM are supported with Multiple Nodes and Dual SKM/ESKM Key Vaults. Two-way certificate exchange is supported. Please refer to the Encryption Admin Guide for configuration information. If using dual SKMs or ESKMs on BES/FS8-18 Encryption Group, then these SKM / ESKM Appliances must be clustered. Failure to cluster will result in key creation failure. Otherwise, register only one SKM / ESKM on the BES/FS8-18 Encryption Group.
- The RSA RKM Appliance A1.6, SW v2.7.1.1 is supported. The procedure for setting up the RKM Appliance with BES or a DCX/DCX-4S/DCX 8510 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.
- Hot Code Load from FOS v6.4.1a to FOS v7.0 or later is supported. Cryptographic operations and I/O will be disrupted but other layer 2 FC traffic will not be disrupted.
- 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.
- BES/FS8-18 will reject the SCSI commands WRITE SAME and EXTENDED COPY, which are related to VAAI (vStorage APIs for Array Integration) hardware acceleration in vSphere 4.1. This will result in non-VAAI methods of data transfer for the underlying arrays, and may affect the performance of VM related operations.

FCIP (FR4-18i, Brocade 7800 and FX8-24)

- Any firmware activation will disrupt I/O traffic on FCIP links.
- Latency measurements supported on FCIP Tunnels:
    - 1GbE & 10GbE - 200ms round trip time and 1% loss.
- 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 v7.0.0 or later, if any of the following features are enabled in the FCIP configuration, a downgrade operation to pre-FOS v7.0.0 will be blocked until the features are removed from the FCIP configuration:

- InBand Management
- Multigigabit Circuit
- Shared GE among Logical Switches
- Auto-mode compression option
- VE as XISL
- 10GigE lossless failover
- Modified QoS percentages
- 10GigE ARL
- IP Configuration where multiple GigEs have same subnet values
- For a tunnel configuration on 1GE ports that has more than 4 circuits
- Teradata emulation enabled
- Circuits configured explicitly to be listeners or an initiators

FCoE/DCB/CEE (Brocade 8000 and FCOE10-24)

- When upgrading a Brocade 8000 or DCX/DCX-4S with one or more FCOE10-24 blades from FOS v6.x to FOS v7.0.0 or later, the user should carefully review Chapter 5 of the FOS v7.0.0 Converged Enhanced Ethernet Administrator's Guide.
- FOS v7.0 or later supports a new optimized model for provisioning FCoE with fewer configuration steps to enable FCoE on DCB ports. These changes do not allow the Brocade 8000 to retain FCoE configuration information following an upgrade to FOS v7.0 or later. After the upgrade to FOS v7.0 or later, all FCoE edge ports will need to be provisioned with the new model before any FIP FLOGIs will take place
- Although including Brocade 8000 in the path of TI (Traffic Isolation) and ETI (Enhanced Traffic Isolation) Zones is not prohibited, it is not supported. Configuring Brocade 8000 in the TI/ETI Zone path is not recommended and will result in undefined behavior.
- Ethernet L2 traffic with xSTP Hello timer set to less than or equal to 3 seconds may experience momentary traffic disruption during HA failover.
- 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.
- 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.
- The Brocade 8000 and FCOE10-24 support only one CEE map on all interfaces connected to CNAs. Additionally, CEE map is not recommended for use with non-FCoE traffic. QoS commands are recommended for interfaces carrying non-FCoE traffic.

- Before upgrading to FOS v6.4.1_fcoe/v6.4.1_fcoe1/v7.0.0 or later, if the CEE map "default" value already exists, the same "default" value is preserved after upgrading to FOS v6.4.1_fcoe/v6.4.1_fcoe1/v7.0.0 or later. However, if the CEE map "default" is not configured before upgrading to FOS v6.4.1_fcoe/v6.4.1_fcoe1/v7.0.0 or later, then after upgrading to FOS v6.4.1_fcoe/v6.4.1_fcoe1/v7.0.0 or later, the following CEE map "default" will be created automatically:

  cee-map default

  priority-group-table 1 weight 40 pfc

  priority-group-table 2 weight 60

  priority-table 2 2 2 1 2 2 2 2

- When upgrading from FOS v6.3.x or v6.4.x to FOS v6.4.1_fcoe/v6.4.1_fcoe1/v7.0.0 or later, the CEE start up configuration dcf.conf file will be incompatible with the FCoE provisioning changes implemented in v6.4.1_fcoe and later releases. Users can save the dcf.conf file as a backup and apply it once the firmware upgrade is completed to get the DCX/DCX-4S to the same startup configuration as in the older release.
- It is recommended that Spanning Tree Protocol and its variants be disabled on CEE interfaces that are connected to an FCoE device.
- 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. If there is a login group name conflict, the merge logic would rename the login group by including the last three bytes of the switch WWN in the login group name. As long as the OUI of the switch WWNs are identical this merge logic guarantees uniqueness in any modified login group name (switches with the same OUI will have unique last 3 bytes in WWN). However, if the participating switches have different OUIs but identical last three bytes in the switch WWNs, then the merge logic will fail to guarantee uniqueness of login group names. This will result in one of the login groups being dropped from the configuration. This means, no device can login to the login group that is dropped as a result of this name conflict. Users must create a new login group with a non-conflicting name to allow device logins.
- 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 v7.0.1 or downgrading from v7.0.1 is disruptive to the IO through the switch.
- Upgrading firmware on a DCX or DCX-4S with one or more FCOE10-24 blades from FOS v6.4.1_fcoe1 to FOS v7.0 or later will be non-disruptive to FCoE traffic through FCOE10-24 blades and FC traffic.
- Upgrading firmware on a DCX or DCX-4S with one or more FCOE10-24 blades from FOS v6.3.x, v6.4.x, and v6.4.1_fcoe to FOS v7.0 or later will be disruptive to any traffic through the FCOE10-24 blades.
- Connecting 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.

- 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 slot/port**

  switch:admin>**fcoe –enable slot/port**

- When a FCOE10-24 blade is powered off during configuration replay, the interface specific configuration won't get applied. Later when FCOE10-24 blade is powered on, all physical interfaces will come up with default configurations. User can execute "copy startup-config running-config" command to apply the new configuration after powering on the FCOE10-24 blade.
- When IGMP Snooping is disabled on a VLAN, all configured IGMP groups are removed from that VLAN. User has to reconfigure the IGMP groups after enabling the IGMP snooping on that VLAN.

FCR and Integrated Routing

- 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.
- To allow Hot Code Load on Brocade 5100 when using Integrated Routing, the edge switch connected to the 5100 must be running Fabric OS v6.1 or later code.

Forward Error Correction (FEC)

- Though FEC capability is generally supported on Condor3 (16G capable FC) ports when operating at either 10G or 16G speed, it is not supported when using active DWDM links. Hence FEC must be disabled on Condor3 ports when using active DWDM links by using portCfgFec command. Failure to disable FEC on active DWDM links may result in link failure during port bring up.

FICON

- For FICON qualified releases, please refer to the *Appendix: Additional Considerations for FICON Environments* section for details and notes on deployment in FICON environments. (This appendix is only included for releases that have completed FICON qualification).

FL_Port (Loop) Support

- FL_Port is not supported on FC16-32, FC16-48, FC8-32E, FC8-48E, Brocade 6510, and Brocade 6505.
- The FC8-48 and FC8-64 blade support attachment of loop devices.
  - 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 with no new restrictions.

ICLs on DCX/DCX-4S

- 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.

Native Connectivity (M-EOS interoperability)

- A switch running FOS v7.0 or later cannot form E-port connectivity with any M-EOS platform. A switch running FOS v7.0 or later can only operate in Brocade native mode (interopmode 0). Connectivity between M-EOS platforms and a switch running FOS v7.0 or later is supported via FCR.

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 configured 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.

Port Statistics

- On Condor3-based (16G FC) ports, the enc_in (number of encoding errors inside of frames) and enc_out (number of encoding errors outside of frames) counters will not be updated when a port is *operating* at either 10G or 16G speed. This is due to the different encoding scheme used at 10G and 16G speeds when compared to 8G/4G/2G speeds. Because of this, Fabric Watch alerts and Port Fencing based on ITW (Invalid Transmission Word) thresholds will not function as these enc_in and enc_out counters will not be incremented when operating at either 10G or 16G (ITW is computed based on enc_in and enc_out counters). Also any CLI or GUI that displays enc_in and enc_out counters will show no incrementing of these counters when a port is operating at either 10G or 16G.

  Both enc_in and enc_out counters contain valid information when a Condor3-based port is operating at speeds **other than** 10G and 16G.

Virtual Fabrics

- 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.

Zoning

- The maximum zone database size supported in FOS v7.x is limited to 1MB, even though the cfgsize CLI on some platforms (DCX, DCX-4S, DCX 8510-8, DCX 8510-4) show the maximum zone database capacity to be 2MB. Users should not exceed the 1MB zone database capacity to operate within the

supported limits. Please note that there is no enforcement by FOS 7.0.x to restrict users to operate within 1MB zone database limit - it is the responsibility of the user to not exceed this limit.

- There are limitations to zoning operations that can be performed from a FOS v6.x switch that is in the same fabric as a FOS v7.0 or later switch if the FOS v6.x switch is not running the recommended firmware version. Please see Fabric OS Interoperability section for details.

  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.

Miscellaneous

- Using a Windows anonymous FTP server for supportsave collection

  When using anonymous ftp, to avoid long delays or failure of simultaneous supportsave collections when AP blades are present in a director chassis, the number of unlimited anonymous users for a Windows FTP server should be configured as follows:

  Number of anonymous FTP connections = (Number of director chassis) + (Number of installed Application Blades x 3)

- RASlog message AN-1010 may be seen occasionally indicating "Severe latency bottleneck detected". Even though it is a "Warning" message, it is likely to be a false alarm and can be ignored.

- 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 important to note that the outputs of slotshow –p and chassishow commands also display the maximum allowed power consumption per slot. These are absolute maximum values and should not be confused with the real-time power consumption on 16G blades. The chassisshow command has a "Power Usage (Watts):" field that shows the actual power consumed in real-time on 16G blades.

- Class 3 frames that have been trapped to CPU will be discarded in the following scenarios on DCX/DCX-4S/DCX 8510 during the following conditions:

  - HA failover on DCX/DCX-4S/DCX 8510 platforms while running FOS v7.0 or later firmware
  - Firmware upgrade from v7.0 to a later release on Brocade 300, 5100, VA-40FC, 5300, 6510
  - Firmware upgrade from v7.0.1 to a later release on Brocade 6505

- The QSFP information in the sfpshow output will indicate the ID field as all zeros. This is as designed.

  ```
  ras080:FID128:root> sfpshow 5/32
  QSFP No: 8 Channel No:0
  ```

Identifier: 13 QSFP+
Connector: 12 MPO Parallel Optic
Transceiver: 0000000000000000 16_Gbps id

- 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.
- For the configure command, in FOS v6.4, or later 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.

Defects

Open Defects in Fabric OS v7.0.1

This section lists defects with High or Medium Technical Severity open in Fabric OS v7.0.1 as of December 15, 2011. While these defects are still formally "open," they are unlikely to impede Brocade customers in their deployment of Fabric OS v7.0.1 and have been deferred to a later release.

None of these defects have the requisite combination of probability and severity to cause significant concern to Brocade customers.

Note that when a workaround to an issue is available, it is provided; otherwise, no recommended workaround is available at this time.

Defect ID: DEFECT000329211	**Technical Severity:** High	
Summary: Encountered a DataPath panic on the Brocade 7800 when portcfgdefault was executed on VE port (with a circuit in test mode)		
Symptom: User experiences temporary FCIP traffic disruption after executing portcfgdeault on a VE port that has TPERF running.		
Workaround: Avoid executing "portcfgdefault" on a VE port that has TPerf running.		
Feature: FCIP	**Function:** FCIP Port	**Probability:** Low
Found in Release: FOS7.0.0		

Defect ID: DEFECT000355346	**Technical Severity:** High	
Summary: Replacing a failed FX8-24 blade may result in one circuit on a crossport configured tunnel getting stuck "In Progress..."		
Symptom: A crossport circuit fails to complete initialization and the user doesn't have the full bandwidth of the tunnel.		
Feature: FCIP	**Function:** FCP TCP/IP Stack	**Probability:** Low
Found in Release: FOS7.0.0		

Defect ID: DEFECT000369926	**Technical Severity:** High	
Summary: Emulated I/O that traverses multiple hops in a VF base fabric and one of those links is a VE tunnel with FastWrite enabled.		
Symptom: FastWrite fails in a multihop VE-XISL configuration.		
Feature: Striker/Spike Platform Services	**Function:** VF	**Probability:** High
Found in Release: FOS7.0.1		

Defect ID: DEFECT000381543	**Technical Severity:** High	
Summary: Device Discovery between backbone fabric and edge fabric fails after changing FCR switch domain ID.		
Symptom: Host fails to discover target across backbone to edge routing.		
Workaround: Reboot the hosts.		
Feature: 8G FCR	**Function:** Other	**Probability:** Medium
Found in Release: FOS7.0.1		

Defect ID: DEFECT000342944	**Technical Severity:** Medium	
Summary:	WebTools dialog does not include FID in the error message resulting from Config Download failure on DCX with multiple logical switches.	
Symptom:	If configdownload fails for a particular fid while being performed through WebTools , the displayed error message does not include the logical switch FID.	
Feature: FOS-Infrastructure	**Function:** Config Download	**Probability:** Low
Found in Release: FOS7.0.0		

Defect ID: DEFECT000348045	**Technical Severity:** Medium	
Summary:	Fabric Watch is not properly triggering E-Port state change events.	
Symptom:	Fabric Watch logs will not include E-Port state changes events.	
Workaround:	Use Fabric Watch Port Class to monitor state changes.	
Feature: Field Escalation	**Function:** Fabric Services	**Probability:** Medium
Found in Release: FOS6.3.2	**Service Request ID:** SR 586189	

Defect ID: DEFECT000367062	**Technical Severity:** Medium	
Summary:	Manually stopping D-Port tests may result in software verify error.	
Symptom:	User sees the following software verify error message after manually stopping D-Port tests. "VERIFY - Failed expression: (SM_SUCCESS == dp_return)"	
Workaround:	Workaround is to leave D-Port tests running to completion and not stop them.	
Feature: FC Services	**Function:** D-port	**Probability:** Medium
Found in Release: FOS7.0.1		

Defect ID: DEFECT000367436	**Technical Severity:** Medium	
Summary:	Fabric Watch email alerts use the default switch name instead of current switch name in the "Sent From" field.	
Symptom:	The 'sent from' field name in a Fabric watch email alert is the default switch name instead of current switch name for the FID.	
Feature: FABRIC WATCH	**Function:** Other	**Probability:** High
Found in Release: FOS7.0.1		

Defect ID: DEFECT000367477	**Technical Severity:** Medium	
Summary:	SSH "Allowed User" usernames are converted to all lower case when saved to the configuration file.	
Symptom:	Sshutil command will fail for the usernames containing upper case letters.	
Workaround:	Run sshutil command with username converted to all lower case letters, or avoid configuring usernames with upper case letters.	
Feature: FOS Security	**Function:** SSH	**Probability:** Medium
Found in Release: FOS7.0.1		

Defect ID: DEFECT000369286	**Technical Severity:** Medium	
Summary:	Inconsistency in handling of unsupported port speed configuration after replacing an FC16-xx blade with an FC8-xxE blade.	
Symptom:	After replacing an FC16-xx blade with an FC8-xxE blade, ports previously configured to fixed 10G speed will be reset to auto speed negotiation while ports previously configured to fixed 16G will be persistently disabled.	
Workaround:	Manually correct the configured port speed and reenable the port.	
Feature: 16G ASIC Driver	**Function:** General	**Probability:** High
Found in Release: FOS7.0.1		

Defect ID: DEFECT000371302	**Technical Severity:** Medium	
Summary:	CEE/FCoE: protocol spanning tree config is not visible after spanning tree shut/no shut	
Symptom:	If the customer changes the path cost to custom and does a shut/no shut the configuration will have flat set as standard but rest of the config will remain as custom.	
Workaround:	Reconfigure “port-channel path-cost custom” and then configure “port-channel path-cost standard".	
Feature: CEE-LAYER2	**Function:** STP	**Probability:** Medium
Found in Release: FOS7.0.1		

Defect ID: DEFECT000373589	**Technical Severity:** Medium	
Summary:	The error message for a duplicate user assigned FAPWWN will show the slot/port as -1/-1 if the port is in a different logical switch.	
Symptom:	If the user attempts to assign a WWN that has already been assigned to a port in a different logical switch, the following message is displayed: "Error: Virtual Port WWN is already mapped (FID <xxx>, Switch port -1/-1)." This does not indicate the actual physical port with the duplicate WWN assignment.	
Workaround:	Login to the FID indicated in the error message and issue "fapwwn --show all" to identify which port has the WWN already assigned.	
Feature: Fabric Provisioning	**Function:** CLI	**Probability:** High
Found in Release: FOS7.0.1		

Defect ID: DEFECT000374924	**Technical Severity:** Medium	
Summary:	Port Admin Dialog: FC8-32E and FC8-48E blades will list speed combo values which are not supported on these platforms.	
Symptom:	User will see speed combo values for FC8-32E and FC8-48E blades, but these settings are not valid for these blade types.	
Feature: WebMgmt	**Function:** Ports Admin	**Probability:** High
Found in Release: FOS7.0.1		

Defect ID: DEFECT000375412	**Technical Severity:** Medium	
Summary: Sending Test Email from Web Tools does not work if DNS has not been properly configured.		
Symptom: Sending Test Email from Web Tools does not work.		
Workaround: DNS configuration needs to be in place and accurate for e-mail functionality to work correctly.		
Feature: WebMgmt	**Function:** Switch Admin	**Probability:** Medium
Found in Release: FOS7.0.1		

Defect ID: DEFECT000376141	**Technical Severity:** Medium	
Summary: Devices imported into VDX fabric clusters via FC Router with be listed as "Device type: Physical Unknown(initiator/target)"		
Symptom: Issuing "show name-server" on a VDX switch will display all imported SAN devices as unknown FC4 Type, "Device type: Physical Unknown(initiator/target)".		
Workaround: User could login to the remote SAN fabric directly to acquire the FC4 Type information.		
Feature: 8G FCR	**Function:** Other	**Probability:** High
Found in Release: FOS7.0.1		

Defect ID: DEFECT000378573	**Technical Severity:** Medium	
Summary: CEE/FCoE: MSTP instance cost is not changing after configuring the spanning tree cost and changing the mstp mode		
Symptom: MSTP instances are not assigned proper costs when port-channel path-cost is changed.		
Workaround: User needs to unconfigure the port-channel path-cost.		
Feature: CEE-LAYER2	**Function:** MSTP	**Probability:** Low
Found in Release: FOS7.0.1		

Defect ID: DEFECT000378642	**Technical Severity:** Medium	
Summary: Performance Monitor Dialog: with Java 1.7.0, the selections for port/blade are not listed on the port throughput, port error and blade aggregate throughput graphs.		
Symptom: User will not see the port/blade selection on the port throughput, port error and blade aggregate throughput graphs.		
Workaround: User can manually enter the port number in the slot, port format to display the desired graph. For blade aggregate throughput, manually entering just the slot number will display the appropriate graph.		
Feature: WebMgmt	**Function:** Performance Monitor	**Probability:** High
Found in Release: FOS7.0.1		

Defect ID: DEFECT000381334	**Technical Severity:** Medium	
Summary:	Mode 1 portloopbacktest fails on FC16 blades in either slot 7 or 8 of 8510-4	
Symptom:	User sees failure message when running portloopbacktest BLADE ID 0x60 in slot 7 reset, mode:5 condor3_fpl_lli_ns_status[3518]: slot 7 chip 0 asic port 24 has LOS peerSlot -1 (null) asicChip 0 asicPort 0 FAILED to set speed 16 G BLADE ID 0x60 in slot 7 reset, mode:5 SKIPPED!.	
Feature: Field Escalation	**Function:** Diagnostics	**Probability:** High
Found in Release: FOS7.0.0	**Service Request ID:** 679251	

Closed with Code Change in Fabric OS v7.0.1

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of December 15, 2011 in Fabric OS v7.0.1. This section was updated on March 2, 2012.

Defect ID: DEFECT000326023	**Technical Severity:** High
Summary: HA-Failover of switch seen when running IP over FC with multi-frame sequences.	
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
Where Else Fixed: FOS6.4.2 b GA	

Defect ID: DEFECT000329676	**Technical Severity:** High
Summary: On FOSv6.3.2c and v6.4.0a or later, unstable links trigger continuous frame tracing to CPU for processing.	
Symptom: CPs cold recovery when continuous stream of frames are trapped to CPU, overloading the processor. 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 backported from FOS7.0.0GA to FOS6.4.2b in this area to throttle further. FOS 6.3.2e pulled in the same enhancement.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 501279, 693771
Where Else Fixed: FOS6.4.2, FOS7.0.0 GA, FOS6.4.2 b GA	

Defect ID: DEFECT000336580	**Technical Severity:** High
Summary: SNMP: FA-MIB: ConnUnitLinkTable did not return all the VE ISL entries	
Symptom: The user will not get all the FCIP ISL link information in ConnUnitLinkTable	
Feature: Mgmt Embedded - SNMP	**Function:** Other
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000337102	**Technical Severity:** High
Summary: Non-decryptable DF mode tape causes FPGA/blade fault	
Symptom: When a non-decryptable DF mode tape is processed by the BES, it can cause a DECRYPT_DECOMPRESS timeout/failure, which in some instances can cause other tape jobs to fail. In the most serious case, the BES or FS8-18 will fault, aborting all tape jobs.	
Feature: Field Escalation	**Function:** Encryption
Probability: Low	
Found in Release: FOS6.3.2	**Service Request ID:** 516651

Defect ID: DEFECT000345301	**Technical Severity:** High
Summary: In FCR configurations with Speed Tags, if LSAN Binding is added, binding is not being properly enforced.	
Symptom: If LSAN Binding is added to an FCR configuration with Speed Tags already defined, binding may not be properly enforced and devices may not get properly imported/exported.	
Workaround: Removal of stale configuration.	
Feature: 8G FCR	**Function:** FCR Daemon
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000346417	**Technical Severity:** High
Summary: Data Encryption: if tape device is improperly identified as a disk device, BES could hang and go faulty.	
Symptom: BES switch is hanging/going faulty and stopping all tape backup operations. Seeing message [CVLC-1009], … Wrong device type: should be tape, found disk.	
Feature: Field Escalation	**Function:** Encryption
Probability: Low	
Found in Release: FOS6.4.0	**Service Request ID:** 585157
Where Else Fixed: FOS6.4.2 a	

Defect ID: DEFECT000348660	**Technical Severity:** High
Summary: After FCIP links in an FCR backbone fabric bounce several times, FCR is not translating all SID/DIDs properly.	
Symptom: Customer cannot access device after the FCIP links have 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, FOS6.4.2 a	

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	
Where Else Fixed: FOS6.4.2 a	

Defect ID: DEFECT000350136	**Technical Severity:** High
Summary: Encrypted/Compressed E-Port trunk goes down following CP failover	
Symptom: Encrypted link goes down after hafailover and gets stuck at G-Port.	
Workaround: Slotpoweroff /slotpoweron the blade.	
Feature: 16G ASIC Driver	**Function:** In-flight encryption/compression
Probability: Medium	
Found in Release: FOS7.0.0	

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, FOS6.4.2 a	

Defect ID: DEFECT000350463	**Technical Severity:** High
Summary: Unable to configure ports as extended distance using CLI on 6510 10G ports without extended fabric license	
Symptom: The intention is that you should be able to configure any non-default Extended Fabric mode on a licensed 10G FC port without requiring the Extended Fabric license – non-10G ports still require the Extended Fabric license for this operation. On the 6510 pizza box, for 10G ports, from CLI you cannot configure anything but the default Extended Fabric modes without an Extended Fabric license present. On DCX 8510 family CLI, the Extended Fabric configuration behaves as expected for licensed 10G ports (no Extended Fabric license is required for any extended distance modes).	
Feature: WebMgmt	**Function:** Switch Admin
Probability: High	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000350660	**Technical Severity:** High
Summary: D-port failing when more than 4-ports are initiated simultaneously	
Symptom: D-port tests fail on some ports when run on more than 4 links simultaneously.	
Workaround: Toggle the port	
Feature: FC Services	**Function:** D-port
Probability: Medium	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.1

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
Where Else Fixed: FOS6.4.2 b GA	

Defect ID: DEFECT000353445	**Technical Severity:** High
Summary: Out of band bulk requests (SMI) can cause Name Server to panic in frame redirection environments.	
Symptom: Multiple name server panics observed in conjunction with applications which performs GXX_ID (such as GCS_ID) queries via out of band.	
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
Where Else Fixed: FOS6.4.2 b GA	

Defect ID: DEFECT000354348	**Technical Severity:** High
Summary: Not receiving the RAS log Cx-5021 message for front port partial credit loss on an EX-Port	
Symptom: Customer will be unaware if EX_Ports are leaking credit.	
Feature: 8G FCR	**Function:** FCR Daemon
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000356094	**Technical Severity:** High
Summary: IDLE not being sent after NOS - results in other issues and eventually causes G_Port.	
Symptom: Customer simply notices that one side 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: DEFECT000356468	**Technical Severity:** High
Summary: Access Gateway does not clean up frame exchange properly if 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: Low	
Found in Release: FOS6.3.2	**Service Request ID:** 629273
Where Else Fixed: FOS6.4.2 b GA	

Defect ID: DEFECT000359518	**Technical Severity:** High
Summary: Cannot remove configured Admin Domain if defzone is configured as "allaccess"	
Symptom: Customer unable to remove admin domains when defzone –allaccess is set (which is an invalid configuration, involving an unlikely "loophole" to configure.)	
Workaround: remove zone files from switch and reboot.	
Feature: Field Escalation	**Function:** Fabric Services
Probability: Low	
Found in Release: FOS6.2.2	**Service Request ID:** 336453

Defect ID: DEFECT000362720	**Technical Severity:** High
Summary: If an F_Port trunk has gone down and stays offline, the switch may panic during code upgrade.	
Symptom: Director may experience hafailover and switches reboot caused by kernel panic while doing zone check.	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Low	
Found in Release: FOS6.3.2	**Service Request ID:** 653815

Defect ID: DEFECT000364137	**Technical Severity:** High
Summary: FabricWatch Port Class is not monitoring ICL ports. E-Port Class monitors are monitoring ICL ports.	
Symptom: ICL Ports will not report any threshold warnings and will not be fenced for Port Class attributes.	
Feature: FABRIC WATCH	**Function:** PORT FENCING
Probability: High	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000364443	**Technical Severity:** High
Summary: Compact Flash became 100% full on BES after switch panic.	
Symptom: BES crashed, rebooted, and left a large corefile that was saved in Compact Flash, causing it to fill up.	
Feature: Field Escalation	**Function:** OS: Linux
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 660833
Where Else Fixed: FOS6.4.2 b GA	

Closed with Code Change in Fabric OS v7.0.1

Defect ID: DEFECT000364799	**Technical Severity:** High
Summary: After downgrading from v7.0.0 to v6.4.x, a route rebalance or recalculation will cause some ICL paths to be blocked.	
Symptom: Connectivity between devices lost after route change.	
Workaround: Disable all ICL ports and then enable all ICL ports.	
Feature: UNDETERMINED	**Function:** UNDER REVIEW
Probability: High	
Found in Release: FOS6.4.2	

Defect ID: DEFECT000364945	**Technical Severity:** High
Summary: Unable create 4th tunnel with crossport circuits in chassis with multiple FX8-24 blades.	
Symptom: Unable create more than three tunnels with crossport circuit configuration in a chassis with multiple FX8-24 blades.	
Feature: FCIP	**Function:** Other
Probability: High	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000365069	**Technical Severity:** High
Summary: ICL Ports on 8510 directors show "Mod_Val" on 1 out of 4 ports on a QSFP.	
Symptom: Event log indicates bad QSFP requiring reseat or replacement.	
Workaround: Reseating QSFP may correct the issue.	
Feature: 16G Hardware	**Function:** 16G QSFP
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000365071	**Technical Severity:** High
Summary: QSFP port status is not refreshed in WebTools port admin window.	
Symptom: Insertion/Removal of QSFP is not reflected in Port Admin window.	
Workaround: Refresh, or close and re-open Port Admin window.	
Feature: WebMgmt	**Function:** Ports Admin
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000365075	**Technical Severity:** High
Summary: QSFP ICL ports are being fenced due to excessive state changes even though current high threshold value is not exceeded	
Symptom: QSFP ICL links are getting fenced unexpectedly.	
Feature: FABRIC WATCH	**Function:** PORT FENCING
Probability: Low	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.1

Defect ID: DEFECT000368931	**Technical Severity:** High
Summary: Deprecate FruReplace CLI command in FOS	
Symptom: Use of FruReplace command in the process of performing replacement of a defective WWN card will result with a potential failed transfer leaving the replacement WWN card unusable.	
Feature: FOS-Infrastructure	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	**Service Request ID:** 673189

Defect ID: DEFECT000369610	**Technical Severity:** High
Summary: Emulated FICON Tape Read Channel Program can grow too large, resulting in FICON Protocol timeouts and aborts	
Symptom: FICON Abort during tape read emulation	
Feature: FCIP	**Function:** FCIP I/O
Probability: High	
Found in Release: FOS7.0.0	

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: When an 8G capable port is configured at fixed speed of 4G or 8G, and remote is configured as speed auto negotiation, and there is only 1 port connected to the remote, after switch reboot, or slotpoweroff/slotpoweron, sometime this port cannot sync up. Portdisable/portenable cannot recover. When there are more than 1 links connected, this problem is not observed.	
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 actions such as SupportSave.	
Feature: Data Security	**Function:** HA Cluster
Probability: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 123606

Defect ID: DEFECT000373075	**Technical Severity:** High
Summary: Linux kernel bug causing panic on switch running FOS v6.4.2	
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

Closed with Code Change in Fabric OS v7.0.1

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: 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: DEFECT000317392	**Technical Severity:** Medium
Summary: systemverification failing on 7800.	
Symptom: systemverfication test fails	
Feature: Diagnostics	**Function:** Other
Probability: Low	
Found in Release: FOS6.3.1	
Where Else Fixed: FOS7.0.0 GA	

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
Where Else Fixed: FOS7.0.0 GA, FOS6.4.1 b	

Defect ID: DEFECT000335811	**Technical Severity:** Medium
Summary: Brocade 5450 switches crashed when latest version of enclosure management SW was used.	
Symptom: Brocade 5450 platform may panic if used with newer version of MMB that uses new ISMIC block that was previously unsupported.	
Workaround: Use initial qualified MMB version.	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Low	
Found in Release: FOS6.2.0	**Service Request ID:** 530085
Where Else Fixed: FOS6.4.2 a	

Defect ID: DEFECT000336933	**Technical Severity:** Medium
Summary: Switch sends ELP to device after the device sends FLOGI during power-up sequence	
Symptom: When connected to 4G switch, during a specific storage device power-up sequence, host cannot access target.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.1.2	**Service Request ID:** 444823
Where Else Fixed: FOS6.4.2	

Defect ID: DEFECT000339701	**Technical Severity:** Medium
Summary: Even after removing the device from the LSAN zoning, nsinfo.html for switch is not updated with removed devices.	
Symptom: nsinfo.html may not be updated with devices that have been removed from an LSAN zone.	
Feature: 8G FCR	**Function:** FCR Daemon
Probability: Medium	
Found in Release: FOS6.4.2	

Defect ID: DEFECT000342412	**Technical Severity:** Medium
Summary: TPERF session may not be able to be restarted until all user disabled GE ports on the test tunnel are re-enabled.	
Symptom: If a user disables GbE ports on a TPERF test tunnel while a TPERF session is in progress and the TPERF session is subsequently terminated, TPERF may not be able to be restarted until the disabled GbE ports are re-enabled. When in this state, if the user attempts to re-start TPERF, they will get a message indicating that a TPERF session is already in progress.	
Feature: FCIP	**Function:** FCIP CLI
Probability: Low	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.1

Defect ID: DEFECT000342738	**Technical Severity:** Medium
Summary: Enhancement to BE credit loss detection and recovery	
Symptom: Previously, if backend credit is lost, the user needs to reseat the blade to recover. This release added user configuration options to generate link reset, port re-init, or blade fault upon detection of backend credit loss.	
Feature: 8G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS7.0.0	
Where Else Fixed: FOS6.3.2 c, FOS6.4.2 a	

Defect ID: DEFECT000345346	**Technical Severity:** Medium
Summary: For 16G platforms, configdefault may lead to an invalid port speed configuration state if ports in the same group are in different logical switches.	
Symptom: If configdefault is executed in the default switch, portcfgoctetspeedcombo settings will get set to default on all logical switches.	
Feature: ConfigMgmt	**Function:** Config Download
Probability: Medium	
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: DEFECT000348098	**Technical Severity:** Medium
Summary: WebTools zoning window fails to launch if device Port WWN and Node WWN are the same.	
Symptom: WebTools zoning window fails to launch.	
Feature: WebMgmt	**Function:** Zone Admin
Probability: Low	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000348173	**Technical Severity:** Medium
Summary: Unable to make modifications on the Canvas Configuration List of WebTools (SID/DID Performance).	
Symptom: Once the CCL is has been created, individual names cannot be removed, copied, or edited.	
Feature: WebMgmt	**Function:** WT Platform Support
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000348516	**Technical Severity:** Medium
Summary: Switch failed to go active due to ASIC initialization failure.	
Symptom: 4G Switch/blade may fail chip initialization, resulting in switch not going online. This is observed more often under higher temperature with portloopback test.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.4.1	**Service Request ID:** 590691
Where Else Fixed: FOS6.4.2 b GA	

Defect ID: DEFECT000349008	**Technical Severity:** Medium
Summary: DP panicked after modifying metric on FCIP Circuit using a crossport with IPSec enabled	
Symptom: After modifying the metric on a standby FCIP Circuit of a crossport with IPSec enabled, the tunnels for that DP complex go down due to a software fault on the DP.	
Workaround: Disable IPsec on FCIP tunnel.	
Feature: FCIP	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000349730	**Technical Severity:** Medium
Summary: IO is not distributed evenly across circuits in FCIP tunnel after multiple FCIP circuits are disabled	
Symptom: If user disables multiple circuits in an FCIP tunnel, traffic may not be evenly distributed across remaining circuits.	
Feature: FCIP	**Function:** Other
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000349839	**Technical Severity:** Medium
Summary: DCX 8510-4 inundated with [PS-5011] internal messages	
Symptom: List of TopTalker flows will not be accurate since some flows are not being monitored.	
Feature: Performance Monitor	**Function:** Top Talker
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000350157	**Technical Severity:** Medium
Summary: pdmd memory increase seen on the standby CP of a DCX 8510-8 with max LS creation and fully populated EX-Ports after a long period of time with I/O running	
Symptom: pdmd memory usage may increase on the standby CP of 8510-8 with max LS creation and fully populated EX-Ports after a long period of I/O running.	
Feature: License	**Function:** License
Probability: Low	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.1

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	
Where Else Fixed: FOS6.4.2 a	

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: Medium	
Found in Release: FOS6.3.1_dcb	
Where Else Fixed: FOS6.4.2 b GA	

Defect ID: DEFECT000354900	**Technical Severity:** Medium
Summary: Severity level for SCN-1002 is set to "Warning" instead of "Error"	
Symptom: SCN-1002 are displayed as Warnings.	
Feature: Mgmt Embedded - SNMP	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

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	

Defect ID: DEFECT000357783	**Technical Severity:** Medium
Summary: Tape device connected to BES is dropping frames.	
Symptom: Tape Device Driver is failing with a check condition - illegal command while trying to retrieve a drive dump.	
Feature: Data Security	**Function:** Tape Encryption
Probability: Medium	
Found in Release: FOS6.4.1	**Service Request ID:** 635267

Defect ID: DEFECT000358533	**Technical Severity:** Medium
Summary: Cold recovery observed when devices are not LSAN zoned but are exchanging ELS frames.	
Symptom: Cold recovery after a CP Failover or during Firmware Download. This is observed under rare conditions, in FCR fabrics. Devices that are not LSAN zoned somehow know the PROXY ID of the other device and send ELS frames. These 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: Low	
Found in Release: FOS6.4.2	**Service Request ID:** 638173
Where Else Fixed: FOS6.4.2 b GA	

Defect ID: DEFECT000358538	**Technical Severity:** Medium
Summary: FFDC does not pull kernel data during OOM (Out Of Memory) condition.	
Symptom: OOM occurs, but FFDC file has no information on kernel mtrace.	
Feature: Infrastructure	**Function:** Other
Probability: Low	
Found in Release: FOS6.4.2	

Defect ID: DEFECT000358765	**Technical Severity:** Medium
Summary: Switchshow displayed the GigE port of BR7500/FR4-18i as "FCIP Copper"	
Symptom: BR7500 and FR4-18i has optical SFP in GbE port, but switchshow displayed it as "Copper". There is 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
Where Else Fixed: FOS6.4.2 b GA	

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 OOM condition.	
Feature: Field Escalation	**Function:** Panic / OOM
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 641499

Closed with Code Change in Fabric OS v7.0.1

Defect ID: DEFECT000360104	**Technical Severity:** Medium
Summary: With multiple BNA sessions requesting license details from the switch, requests may fail.	
Symptom: Error message "Sentinel RMS Development Kit: Error[133]: Fail to acquire resource lock" seen on switch and BNA unable to display license details.	
Feature: License	**Function:** License
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000360650	**Technical Severity:** Medium
Summary: ports that are not connected randomly go into a disabled state after a hafailover.	
Symptom: ports are disabling on hafailovers on high port count directors	
Feature: 16G Platform Services	**Function:** Other
Probability: High	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000362362	**Technical Severity:** Medium
Summary: FC16-32 blade fails POST (FAULTY-51)	
Symptom: After power cycling an 8510, FC16-32 port blade is set to Faulty-51.	
Workaround: Power cycle the blade or the chassis.	
Feature: Diagnostics	**Function:** Post Diags
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000363516	**Technical Severity:** Medium
Summary: "tracestore" thread hogging CPU for extensive periods after executing a polling script.	
Symptom: "tracestore" thread has high CPU utilization for extensive periods.	
Feature: Field Escalation	**Function:** OS: Infrastructure
Probability: Medium	
Found in Release: FOS6.3.1	**Service Request ID:** 647161

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	
Workaround: No	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.3.2	
Where Else Fixed: FOS6.4.2 b GA	

Closed with Code Change in Fabric OS v7.0.1

Defect ID: DEFECT000363794	**Technical Severity:** Medium
Summary: Out of order frames seen during Core blade removal/insertion with Lossless feature enabled.	
Symptom: When running traffic across a core blade, out-of-order frames (OOO) are seen when a core blade is removed and when a core blade is inserted.	
Feature: 8G Platform Services	**Function:** Routing
Probability: Low	
Found in Release: FOS7.0.0	

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	
Workaround: No	
Feature: 8G ASIC Driver	**Function:** PORT
Probability: Medium	
Found in Release: FOS6.3.2	
Where Else Fixed: FOS6.4.2 b GA	

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

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: DEFECT000370040	**Technical Severity:** Medium
Summary: Getting “No access” response while querying any table via an SNMPv3 "user-defined" user that is assigned to a particular Logical Fabric.	
Symptom: Customer is not be able to contact the switch the first time and also will not be able to get complete query results.	
Feature: Mgmt Embedded - SNMP	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	**Service Request ID:** 697903

Closed with Code Change in Fabric OS v7.0.1

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

Defect ID: DEFECT000371823	**Technical Severity:** Medium
Summary: EZ Manager does not allow Custom Zoning when dual configured (Initiator/Target) device exists.	
Symptom: EZ manager should allow Custom zoning when dual configured device exists in the switch.	
Workaround: Use Advanced Management (WT)	
Feature: WebMgmt	**Function:** Web Tools EZ
Probability: High	
Found in Release: FOS6.3.2	

Defect ID: DEFECT000372216	**Technical Severity:** Medium
Summary: GA_NXT is not transferring the symbolic names (port or node) from the non-local device table	
Symptom: GA_NXT is not transferring the symbolic names (port or node) from the non-local device table	
Feature: FC Services	**Function:** Name Server
Probability: High	
Found in Release: FOS6.4.2	

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: DEFECT000342830	**Technical Severity:** Low
Summary: ceeportloopbacktest "-port" option does not run correctly on 8000	
Symptom: BR8000 did not test the CEE port which user selected with “-port” option.	
Feature: Diagnostics	**Function:** Other
Probability: High	
Found in Release: FOS6.4.1	**Service Request ID:** 577081

Closed with Code Change in Fabric OS v7.0.0c – GA November 18, 2011

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of November 18, 2011 in Fabric OS v7.0.0c

Defect ID: DEFECT000354348	**Technical Severity:** High
Summary: Not receiving the RAS log Cx-5021 message for front port partial credit loss on an EX-Port	
Symptom: Customer will be unaware if EX_Ports are leaking credit.	
Feature: 8G FCR	**Function:** FCR Daemon
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000364137	**Technical Severity:** High
Summary: FabricWatch Port Class is not monitoring ICL ports. E-Port Class monitors are monitoring ICL ports.	
Symptom: ICL Ports will not report any threshold warnings and will not be fenced for Port Class attributes.	
Feature: FABRIC WATCH	**Function:** PORT FENCING
Probability: High	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000364799	**Technical Severity:** High
Summary: After downgrading from v7.0.0 to v6.4.x, a route rebalance or recalculation will cause some ICL paths to be blocked.	
Symptom: Connectivity between devices lost after route change.	
Workaround: Disable all ICL ports and then enable all ICL ports.	
Feature: UNDETERMINED	**Function:** UNDER REVIEW
Probability: High	
Found in Release: FOS6.4.2	

Defect ID: DEFECT000364945	**Technical Severity:** High
Summary: Unable create 4th tunnel with crossport circuits in chassis with multiple FX8-24 blades.	
Symptom: Unable create more than three tunnels with crossport circuit configuration in a chassis with multiple FX8-24 blades.	
Feature: FCIP	**Function:** Other
Probability: High	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.0c

Defect ID: DEFECT000365069	**Technical Severity:** High
Summary: ICL Ports on 8510 directors show "Mod_Val" on 1 out of 4 ports on a QSFP.	
Symptom: Event log indicates bad QSFP requiring reseat or replacement.	
Workaround: Reseating QSFP may correct the issue.	
Feature: 16G Hardware	**Function:** 16G QSFP
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000365071	**Technical Severity:** High
Summary: QSFP port status is not refreshed in WebTools port admin window.	
Symptom: Insertion/Removal of QSFP is not reflected in Port Admin window.	
Workaround: Refresh, or close and re-open Port Admin window.	
Feature: WebMgmt	**Function:** Ports Admin
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000365075	**Technical Severity:** High
Summary: QSFP ICL ports are being fenced due to excessive state changes even though current high threshold value is not exceeded	
Symptom: QSFP ICL links are getting fenced unexpectedly.	
Feature: FABRIC WATCH	**Function:** PORT FENCING
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000365794	**Technical Severity:** High
Summary: In an IPSec configuration between FX8-24 and 7800, some circuits never come online	
Symptom: IPSec circuits stuck in a In-progress state.	
Feature: FCIP	**Function:** FCP TCP/IP Stack
Probability: Low	
Found in Release: FOS7.0.1	

Defect ID: DEFECT000368931	**Technical Severity:** High
Summary: Deprecate FruReplace CLI command in FOS	
Symptom: Use of FruReplace command in the process of performing replacement of a defective WWN card will result with a potential failed transfer leaving the replacement WWN card unusable.	
Feature: FOS-Infrastructure	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	**Service Request ID:** 673189

Closed with Code Change in Fabric OS v7.0.0c

Defect ID: DEFECT000369430	**Technical Severity:** High
Summary: Host Discovery issue from edge to edge with VE in BB fabric if EX_Ports are on port 0-3 of an FX8-24 blade in slot 7 of a DCX-4S.	
Symptom: Hosts will not be able to discover targets across the backbone fabric.	
Feature: Striker/Spike Platform Services	**Function:** Routing
Probability: Low	
Found in Release: FOS7.0.1	

Defect ID: DEFECT000369610	**Technical Severity:** High
Summary: Emulated FICON Tape Read Channel Program can grow too large, resulting in FICON Protocol timeouts and aborts	
Symptom: FICON Abort during tape read emulation	
Feature: FCIP	**Function:** FCIP I/O
Probability: High	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000365735	**Technical Severity:** Medium
Summary: In Extended Fabric sub tab shows the port speed as 0 for ports configured as N16.	
Symptom: Configured N16 port speed is not displayed as N16 in the port speed column in Extended Fabric sub tab for 16G platforms.	
Feature: Mgmt Embedded - HTTP	**Function:** Other
Probability: Medium	
Found in Release: FOS7.0.1	

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: DEFECT000374366	**Technical Severity:** Medium
Summary: Stuck VC detection is being intermittently delayed	
Symptom: Stuck VC will be detected, however the detection maybe intermittently delayed	
Feature: Bottleneck detection	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.0b - August 24, 2011

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of August 24, 2011 in Fabric OS v7.0.0b.

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	
Where Else Fixed: FOS6.4.2 a	

Defect ID: DEFECT000341971	**Technical Severity:** High
Summary: Loop attached device loses secondary disk path after port disable/enable	
Symptom: Secondary paths will not appear in the output from disk query commands.	
Feature: 8G Platform Services	**Function:** Other
Probability: Medium	
Found in Release: FOS7.0.0	

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	
Where Else Fixed: FOS6.4.2 a	

Defect ID: DEFECT000347632	**Technical Severity:** High
Summary: Delays in Name Server observed during FICON CEC IMLs	
Symptom: Invalid Attachment and Name Server Query failures may be observed due to delays in Name Server processing when programming CAM entries for the ASIC.	
Feature: 8G ASIC Driver	**Function:** Other
Probability: Medium	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.0b

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	

Defect ID: DEFECT000353981	**Technical Severity:** High
Summary: D-Port failures seen in stress and corner case scenarios.	
Symptom: D-port test stays "in progress" for a long period of time and eventually times out.	
Workaround: portdporttest --stop and disable/enable the port	
Feature: FC Services	**Function:** D-port
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000354980	**Technical Severity:** High
Summary: FIPS: Firmwaredownload signature verification fails for directors	
Symptom: During a firmwaredownload, invalid packages might not be detected by directors. This could lead to invalid packages being loaded as valid firmware.	
Feature: FOS-Infrastructure	**Function:** Firmware Download
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000355613	**Technical Severity:** High
Summary: Fabricd crash encountered during D-port testing	
Symptom: Fabricd crash could be encountered when utilizing D_Port functionality	
Feature: FC Services	**Function:** D-port
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000355830	**Technical Severity:** High
Summary: Fabric Watch and Port Fencing Threshold settings should not apply to D-Ports.	
Symptom: D-Ports become fenced during d-port testing.	
Feature: FABRIC WATCH	**Function:** PORT FENCING
Probability: Medium	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.0b

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
Where Else Fixed: FOS6.4.2 a	

Defect ID: DEFECT000357193	**Technical Severity:** High
Summary: C2-1012 Between DCX-4S Core and FX8-24 Blade	
Symptom: Stuck VC 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	

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	

Defect ID: DEFECT000357938	**Technical Severity:** High
Summary: Backend CRC errors seen on a FC8-64 blade in a DCX 8510	
Symptom: CRC errors and possibly I/O timeouts	
Feature: 8G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000357942	**Technical Severity:** High
Summary: LOSN not recognized by portautodisable	
Symptom: Ports that leave AC state and lose sync are not auto disabled	
Feature: 8G ASIC Driver	**Function:** ASIC Driver
Probability: High	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.0b

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.	
Feature: FOS Security	**Function:** Authentication
Probability: High	
Found in Release: FOS6.4.1	**Service Request ID:** 631887

Defect ID: DEFECT000359245	**Technical Severity:** High
Summary: The NS contains stale entries after a bad disk is remove 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

Defect ID: DEFECT000359493	**Technical Severity:** High
Summary: If FX8-24 blades are swapped, the Inband Mgmt configuration is not properly loaded onto the new blade.	
Symptom: Inband Mgmt is not functioning after FX8-24 blade is replaced (swapped).	
Workaround: Reboot CP	
Feature: FCIP	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

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	

Defect ID: DEFECT000349412	**Technical Severity:** Medium
Summary: portcfgshow output displays "Fill Word (Current)" incorrectly	
Symptom: portcfgshow displays incorrect values for "Fill Word (Current)" field	
Feature: 8G ASIC Driver	**Function:** Other
Probability: Medium	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.0b

Defect ID: DEFECT000349465	**Technical Severity:** Medium
Summary: TopTalker Monitor fails if user changes the monitor from Egress to Ingress	
Symptom: User will be unable to create Top Talkers in Ingress mode	
Feature: Mgmt Embedded - HTTP	**Function:** Other
Probability: High	
Found in Release: FOS7.0.0	

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	

Defect ID: DEFECT000352406	**Technical Severity:** Medium
Summary: Storage Port logging in as unknown will be displayed as an initiator in BNA.	
Symptom: Certain storage devices may log in with an unknown FC4 type. This will result in BNA incorrectly displaying the device as an initiator.	
Feature: FC Services	**Function:** FCP
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000352773	**Technical Severity:** Medium
Summary: 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	
Where Else Fixed: FOS6.4.2 a	

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

Closed with Code Change in Fabric OS v7.0.0b

Defect ID: DEFECT000354560	**Technical Severity:** Medium
Summary: Failed tape jobs encountered with tape pipelining enabled when utilizing a FICON to ESCON converter	
Symptom: Tape jobs intermittently fail with tape pipelining enabled when utilizing a FICON to ESCON converter.	
Workaround: Disable tape pipelining	
Feature: Field Escalation	**Function:** FCIP
Probability: Medium	
Found in Release: FOS6.4.2	
Where Else Fixed: FOS6.4.2 a	

Defect ID: DEFECT000354750	**Technical Severity:** Medium
Summary: Unable to access the boot prom on a 5480 when it is installed in a C-7000 chassis	
Symptom: Unable to access the boot prom on a 5480.	
Feature: UNDETERMINED	**Function:** UNDER REVIEW
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 589577

Defect ID: DEFECT000354967	**Technical Severity:** Medium
Summary: WebTools: When attempting to upgrade a switch in IM2/IM3 to FOS v7.0, fail message should direct user to Interoperability tab to change switch to Brocade Native Fabric Mode	
Symptom: When upgrading a switch in IM2/IM3 to v7.0 via WebTools, the failure message references the interopmode command, but does not provide WebTools instructions.	
Feature: FC Services	**Function:** Other
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000355888	**Technical Severity:** Medium
Summary: D_Port (CLI): Caution message should not mention Brocade Branded SFPs.	
Symptom: Caution message seen when executing D_Port CLI mentions "only Brocade Branded SFPs".	
Feature: FC Services	**Function:** D-port
Probability: High	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000355909	**Technical Severity:** Medium
Summary: perfaddusermonitor/fmconfig not correctly counting SOFf frames	
Symptom: SOFf frame counter is not detecting SOFf frame ingress/egress when filter monitor is enabled.	
Feature: Field Escalation	**Function:** ASIC Driver
Probability: High	
Found in Release: FOS6.4.2	**Service Request ID:** 632819

Closed with Code Change in Fabric OS v7.0.0b

Defect ID: DEFECT000356559	**Technical Severity:** Medium
Summary: Need more detailed error message for blocking firmware upgrade from FOS 6.4.0c to FOS 7.0 due to a deprecated feature.	
Symptom: Firmware upgrade from v6.4 to v7.0 is blocked, and user does not get sufficient information from the error message.	
Feature: FABRIC WATCH	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000356933	**Technical Severity:** Medium
Summary: configdownload fails on 6510	
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

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: If this issue is encountered, it can lead to LOGREC entries with Command Rejects with reason code 0x0F61 against a 0xFF command. This will result in XRC suspensions.	
Feature: FCIP	**Function:** Emulation
Probability: Medium	
Found in Release: FOS6.4.0	

Defect ID: DEFECT000358793	**Technical Severity:** Medium
Summary: DCX8510-4 panics during systemverification	
Symptom: DCX8510-4 panics during systemverification when systemverification is run repeatedly.	
Feature: Diagnostics	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	**Service Request ID:** 636925

Defect ID: DEFECT000359151	**Technical Severity:** Medium
Summary: All clear text and encrypted LUN states are unavailable	
Symptom: All clear text and encrypted LUNs are reporting: LUN state unavailable.	
Feature: Data Security	**Function:** Encryption Group
Probability: Medium	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.0b

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

Defect ID: DEFECT000360186	**Technical Severity:** Medium
Summary: Brocade Encryption Engine doesn't handle Logout Extended Link with Initiator correctly.	
Symptom: When the initiator issues logout to Encryption engine it received a response it was successful, but then the initiator is able to successfully issue a read command to the encryption engine.	
Feature: Data Security	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000360329	**Technical Severity:** Medium
Summary: FSPF error message, "FSPF returned count_size 4 rc -5!!!!!" due to MSd call in FICON mode	
Symptom: FSPF error message appears out as soon as the CEC POR is started. It does not appear in the errdumpall output.	
Feature: FC Services	**Function:** FSPF
Probability: Low	
Found in Release: FOS6.4.2	

Defect ID: DEFECT000360537	**Technical Severity:** Medium
Summary: Certain traffic patterns causing back end CRC errors on FC8-64 Blades in Slots 3 and 9 of DCX	
Symptom: Experiencing CRC errors with good EOF when FC8-64 blades are installed in slots 3 or 9 of a DCX system.	
Feature: 16G Platform Services	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000361820	**Technical Severity:** Medium
Summary: CS_CTL potential marking issue due to Condor-2 to Blaster port toggle on FWDL	
Symptom: With the CS_CTL bit being set properly, data is not traversing the correct FCIP H/M/L QoS connection.	
Feature: 8G ASIC Driver	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.0b

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	

Defect ID: DEFECT000363258	**Technical Severity:** Medium
Summary: Documentation Defect: CEE command reference guide missing operands in "show running-config"	
Symptom: CEE command reference guide missing operands in "show running-config"	
Feature: Tech Pubs	**Function:** Guides
Probability: Medium	
Found in Release: FOS7.0.0	**Service Request ID:** 656483

Closed with Code Change in Fabric OS v7.0.0a – GA June 2, 2011

This section lists the defects with Critical, High and Medium Technical Severity closed with a code change as of June 2, 2011 in Fabric OS v7.0.0a.

Defect ID: DEFECT000321855	**Technical Severity:** High
Summary: CRC and/or CDR-5021 errors seen on DCX, DCX-4S, or 5100 switch platforms	
Symptom: CRC or other errors as described below: 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 (CDR-5021)	
Feature: FC10-6 Platform Services	**Function:** ASIC Driver
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 451697
Where Else Fixed: FOS7.0.0 GA	

Defect ID: DEFECT000345259	**Technical Severity:** High
Summary: FC8-64 blade set to FAULTY 51 after removal/insertion of that blade in DCX 8510 chassis with diagpost on	
Symptom: May see a faulted blade upon insertion due to diagnostics failure.	
Feature: 16G Platform Services	**Function:** FOS Kernel Drivers
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000345858	**Technical Severity:** High
Summary: FIPS firmware integrity check has gaps in coverage	
Symptom: None	
Feature: FOS-Infrastructure	**Function:** Firmware Download
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000346532	**Technical Severity:** High
Summary: Disable or shutdown BES causes the SVC nodes to go offline and service mode.	
Symptom: Disable or poweroff BES switch causes the SVC nodes to go offline. The SVC nodes reboot several times before it toggled between offline and services mode.	
Workaround: Issue affects SVC storage with BES going offline. Restart storage with VI/VT members (BES) online.	
Feature: FC Services	**Function:** Name Server
Probability: High	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.0a

Defect ID: DEFECT000349012	**Technical Severity:** High
Summary: FICON: Active config is out of synch with FOS indicating a port is blocked after HA failover	
Symptom: Active configuration indicates port is not blocked. FOS indicates port is blocked.	
Feature: FICON	**Function:** Ficud
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	

Defect ID: DEFECT000349589	**Technical Severity:** High
Summary: FICON: CE DE received by host 5 seconds after B1 CCW causing channel timeout	
Symptom: IFCC - CREJ Code of 00 until the implementation is completed in the patch branch, and the CCW is enabled. Until then, it is responded to as an "Invalid CCW Command"	
Feature: FICON	**Function:** Ficud
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000350136	**Technical Severity:** High
Summary: Encrypted/Compressed E-Port trunk goes down following CP failover	
Symptom: Encrypted link goes down after hafailover and gets stuck at G-Port.	
Workaround: Slotpoweroff /slotpoweron the blade.	
Feature: 16G ASIC Driver	**Function:** In-flight encryption/compression
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000350457	**Technical Severity:** High
Summary: Access Gateway N-port stuck in G-port after code upgrade	
Symptom: After upgrade fabric switch attached to AG switch with QoS enabled from 6.2.x to 6.3.x, N-port stuck in G-Port. Disable QoS on fabric switch port, port came up fine.	
Feature: Field Escalation	**Function:** Access Gateway
Probability: Low	
Found in Release: FOS6.3.1	**Service Request ID:** 610119

Closed with Code Change in Fabric OS v7.0.0a

Defect ID: DEFECT000350463	**Technical Severity:** High
Summary: Unable to configure ports as extended distance using CLI on 6510 10G ports without extended fabric license	
Symptom: The intention is that you should be able to configure any non-default Extended Fabric mode on a licensed 10G FC port without requiring the Extended Fabric license – non-10G ports still require the Extended Fabric license for this operation. On the 6510 pizza box, for 10G ports, from CLI you cannot configure anything but the default Extended Fabric modes without an Extended Fabric license present. On DCX8510 family CLI, the Extended Fabric configuration behaves as expected for licensed 10G ports (no Extended Fabric license is required for any extended distance modes).	
Feature: WebMgmt	**Function:** Switch Admin
Probability: High	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000350599	**Technical Severity:** High
Summary: FICON: Persistent state is not set in Portcfg when port is blocked in the IPL file	
Symptom: Ports are not blocked following switch POR, despite being blocked in the IPL file	
Feature: FICON	**Function:** Ficud
Probability: High	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000350660	**Technical Severity:** High
Summary: D-port failing when more than 4-ports are initiated simultaneously	
Symptom: D-port tests fail on some ports when run on more than 4 links simultaneously.	
Workaround: Toggle the port	
Feature: FC Services	**Function:** D-port
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000351469	**Technical Severity:** High
Summary: FICON: LPATH Reset flag not cleared on local paths if CUB is returned for first init IU after reset - path can't be assigned as CRP	
Symptom: Operational CUP logical path indicates "Reset" state and cannot be assigned as CRP. ____:FID21:root> ficoncupset crp 74fa00 08 Processing - set CRP Attempting to set Current Reporting Path to (74FA00:08) Error return from set CRP(-48) Specified Logical Path (74FA00:08) is not operational	
Feature: FICON	**Function:** Ficud
Probability: High	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.0a

Defect ID: DEFECT000342412	**Technical Severity:** Medium
Summary: TPERF session may not be able to be restarted until all user disabled GE ports on the test tunnel are re-enabled.	
Symptom: If a user disables GE ports on a TPERF test tunnel while a TPERF session is in progress and the TPERF session is terminated, TPERF may not be able to be restarted until the disabled GE ports are re-enabled. When in this state, when the user attempts to re-start TPERF, they will get a message indicating that a TPERF session is already in progress.	
Feature: FCIP	**Function:** FCIP CLI
Probability: Low	
Found in Release: FOS7.0.0	

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	

Defect ID: DEFECT000343519	**Technical Severity:** Medium
Summary: FICON: Local LPATHS not cleared from CUP LPATH db upon implicit logo for port disable	
Symptom: Potential inability for FICON channels to successfully establish logical paths to the CUP, in configurations where there are a large number of sub-channels defined to the CUP.	
Feature: FICON	**Function:** Ficud
Probability: High	
Found in Release: FOS7.0.0	

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

Defect ID: DEFECT000349008	**Technical Severity:** Medium
Summary: DP panicked after modifying metric on FCIP Circuit using a crossport with IPSec enabled	
Symptom: Tunnels for DP complex go down do to FFDC for Soft Fault on DP after modifying the metric on a standby FCIP Circuit on a crossport with IPSec enabled.	
Workaround: Disable IPsec on FCIP tunnel.	
Feature: FCIP	**Function:** Other
Probability: Low	
Found in Release: FOS7.0.0	

Closed with Code Change in Fabric OS v7.0.0a

Defect ID: DEFECT000349010	**Technical Severity:** Medium
Summary: Component (ms) dropping HA data update during logical switch delete and moving of ports	
Symptom: FICON Database out of Sync between CP's HA failure	
Feature: FICON	**Function:** MS-FICON
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000349839	**Technical Severity:** Medium
Summary: DCX 8510-4 inundated with [PS-5011] internal messages	
Symptom: List of TopTalker flows will not be accurate since some flows are not being monitored.	
Feature: Performance Monitor	**Function:** Top Talker
Probability: Medium	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000350157	**Technical Severity:** Medium
Summary: pdmd memory increase seen on the standby CP of a DCX 8510-8 with max LS creation and fully populated EX-Ports after a long period of time with I/O running	
Symptom: pdmd memory usage may increase on the standby CP of 8510-8 with max LS creation and fully populated EX-Ports after a long period of I/O running..	
Feature: License	**Function:** License
Probability: Low	
Found in Release: FOS7.0.0	

Defect ID: DEFECT000350270	**Technical Severity:** Medium
Summary: FICON: Channel aborts I/O after presenting pending Attention status	
Symptom: Channel aborts I/O, Mainframe IOS000 messages indicating that there was a channel detected error.	
Workaround: Disable FICON Tape pipelining	
Feature: FCIP	**Function:** Emulation
Probability: Medium	
Found in Release: FOS6.4.2	

Defect ID: DEFECT000351031	**Technical Severity:** Medium
Summary: FIPS zeroization requires multiple prompting for DHCHAP clearing	
Symptom: Multiple prompts for zeroization function	
Feature: FOS Security	**Function:** Other
Probability: Medium	
Found in Release: FOS7.0.0	