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Eclipse SAN Routers

Enterprise/ Operating System internetworking
Version 04.05.00
SANvergence Manager 04.06.02

Release Notes
P/N 958-000364-450 Rev C

7/28/05

These release notes describe changes to Eclipse SAN Router firmware, called Enterprise Operating System Internetworking (E/OSi) for version 04.05.00 and to SANvergence Manager for versions 04.06.02.

NOTE: To improve readability, the remainder of this document refers to E/OSi versions without the leading zeros. In other words, E/OSi version 04.04.02 is referenced as version 4.4.2.

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Applicable Products

The following products are supported in this release:

- Eclipse 1620, 3300, and 4300 SAN Routers
- SANvergence Manager

What's New in this Release

Element Manager Changes

- Updated terminology in Eclipse 1620, 3300, and 4300 SAN Router Element Managers and CLI to be consistent with terminology in E/OSi 4.6 and SANvergence Manager 4.6.2 releases.

- Added save-to-flash-needed icon and message to warn users when SAN Router configuration does not match the configuration saved in flash. Also added a reminder dialog if configuration needs to be saved before closing the Element Manager.

- Support for OEM Customization of the Eclipse 1620.

- Added ability for the user to enable and disable Telnet access to the SAN Router.

- Mini-Storage-Friendly TCP - Added reorder resistance, with the Fast Retransmit timer, and send congestion window (CWND) reduction as configurable parameters in the *set port tcp adv* command.

CLI Changes

- Updated terminology for Eclipse 1620, 3300, and 4300 SAN Routers to be consistent with terminology in E/OSi 4.6 and SANvergence Manager 4.6.2 releases.

- Support for OEM Customization of the Eclipse 1620.

- Adds a command to allow the user to configure a 25 line by 80 character banner that displays at the telnet login. This feature addresses issues with security audits at customer sites.

- Added ability for the user to enable and disable Telnet access to the SAN Router. Telnet access defaults to enabled.

- Mini-Storage-Friendly TCP - Added reorder resistance, with the Fast Retransmit timer, and send congestion window (CWND) reduction as configurable features in the *Advanced TCP* dialog box.

Scripting Vulnerability for Web Server

The SAN Router's embedded web server will perform the following URL transformation for any page that it does not support. This decreases vulnerability of the SAN Router embedded web server against cross-site scripting.

- Sends a "Requested page not found" error message.

- Replaces "/<>" characters from the request URL with " "space.

Other Additions

Verified compatibility of SANvergence Manager and Element Managers with JRE 1.5 (Solaris 10).

Code Fixes and Enhancements

For details on code fixes and enhancements for this release, refer to *Minor Code Fixes and Enhancements in 4.5*, page 16.

NOTE: The minor code fixes and enhancements incorporated into this build were tested against E/OSi 4.5, but a complete regression test was not performed on every item listed within this document. The parameters and matrices provided in this SRN are supported for 4.5, but were not necessarily fully tested with this release.

E_Port Compatibility

The following table shows E/OSi 4.5 support for attaching Fibre Channel switch E_Ports to the Eclipse SAN Routers. The Fibre

Channel switches must be at E/OS 5.X and 6.X and can be operating in McDATA Fabric 1.0 or Open Fabric 1.0 interoperating modes.

Table 1   E_Port Compatibility with E/OSi 4.5 for all Eclipse Routers

Fibre Channel Switch	Release	McDATA Fabric 1.0	Open Fabric 1.0	Brocade Native Mode
Sphereon 3016	E/OS 5.x, 6.1, 6.2, 7.1	X	X	
Sphereon 3216	E/OS 5.x, 6.1, 6.2, 7.1	X	X	
Sphereon 3032	E/OS 5.x, 6.1, 6.2, 7.1	X	X	
Sphereon 3232	E/OS 5.x, 6.1, 6.2, 7.1	X	X	
Sphereon 4300	E/OS 6.1, 6.2, 7.1	X	X	
Sphereon 4500	E/OS 5.x, 6.1, 6.2, 7.1	X	X	
Interpid 6064	E/OS 5.x, 6.1, 6.2, 7.1	X	X	
Interpid 6140	E/OS 5.3, 6.1, 6.2, 7.1, 8.0	X	X	
Intrepid 10000	EOSn 6.x	X	X	
Brocade 3200/3800	3.1.1a,b,c		X	X
Brocade 2400/2800	2.4.1c,f, 2.6.0c,d, 2.6.1a,b,c		X	X
Brocade 2400/2800	2.6.1a,b,c		X	X
Brocade 3900	4.1.2a, b, e		X	X
Brocade 12000	4.1.2e		X	X
QLogic SANBox2	1.3.64.00, 3.0, 4.0, 4.1		X	
IBM Blade Server	IBM QLogic 4.1, 5.2		X	
Cisco 9509	1.3.5, 2.0.1 b, 2.0.3		X	

iFCP Compatibility

- iFCP connections between all SAN Router models running E/OSi 4.4, 4.5, 4.6.1, and 4.6.2 are supported.

- iFCP connections from SAN Routers running E/OSi 4.4.1 are only supported to SAN Routers also running E/OSi 4.4.1.

Supported Features

The following table lists features supported on each Eclipse SAN Router with E/OSi 4.5.

Table 2   Features Supported on Eclipse Routers with E/OSi 4.x

Feature/Configuration/Application	Eclipse 2640	Eclipse 1620	Eclipse 3300	Eclipse 4300
mSAN routing (Inter-fabric routing in the data center)	Yes	No	Yes	Yes
iSAN routing (Routing over iFCP for BC/DR over distance)	Yes	Yes	Yes	Yes
iSCSI gateway functionality	Yes	Yes	Yes	Yes
Ability to be non-principal switch	Yes	Yes	Yes	Yes
McDATA Fabric (native) mode	Yes	Yes	Yes	Yes
Brocade (native) mode	Yes	Yes	Yes	Yes
Open Fabric (interop) mode	Yes	Yes	Yes	Yes

Not Supported in this Release

- iSNS (Internet Storage Name Server) is not supported in this release.

- The *Create IPS Zoneset Policy, Import Fabric Ports*, and *Use Static Sub Fabric ID* parameters have been removed from SANvergence Manager for E_Port configuration.

- Fabric to fabric routing (mSAN routing) - routing between two fabrics connected to Eclipse 1620 SAN Router Fibre Channel ports.

- The NOP parameter in the Element Manager Advanced TCP Configuration dialog box was removed.

- Zoning based on physical ports within zones exported over iFCP.

• MPIO is not supported. E/OSi 4.5 is qualified for Microsoft iSCSI initiator 2.0 except for multipath I/O (MPIO).

Upgrade and Downgrade Considerations

Following are some general considerations when upgrading to E/OSi 4.5 from an earlier release:

• E/OSi 4.3 supports three different Zone Policy settings: No Zone Synchronization, Append IPS Zones, and Create IPS Zoneset. The E/OSi 4.4 phased out Create IPS Zoneset, so when upgrading from E/OSi 4.3 to 4.4, 4.4.2, or 4.5, if the Zone Policy was set to Create IPS Zoneset, it changes to Append IPS Zones.

• The E/OSi 4.3 exposes Nishan WWNs to a fabric, whereas the E/OSi 4.4, 4.4.2, and 4.5 exposes McDATA WWNs to a fabric.

• E/OSi 4.3 displays the Preferred Domain ID in hexadecimal, whereas the E/OSi 4.4, 4.4.2, and 4.5 display the Preferred Domain ID in decimal.

• If you downgrade E/OSi, be aware that configurations made on the SAN Router that are not supported with the downgraded firmware could cause problems. For example, if a GE port was initially configured to support iFCP and you downgrade to firmware that only supports iSCSI on the GE port, reconfiguring the port for iSCSI may not be possible. In this case, before downgrading, you must reconfigure the port to support iSCSI.

Upgrading E/OSi Firmware

To upgrade firmware, follow instructions in the following publications:

• Eclipse 1620 SAN Router - Chapter 3 in the Eclipse 1620 SAN Router Installation and Service Manual (620-000205).

• Eclipse 3300/4300 SAN Routers - Chapter 5 in the Eclipse 3300/4300 SAN Routers User Manual (620-000201).

Refer to *Related Documentation*, page 29, for more information on these publications.

Upgrading bootrom

You may need to upgrade the bootrom if the version on the SAN Router does not match the installed E/OSi firmware. However, we do not recommend an upgrade unless directed by an authorized McDATA Support representative

You can use the CLI or Element Manager to download and install bootrom to the SAN Router. The following instructions are for using the Element Manager. To download using the CLI, refer to the *E/OSi Command Line Interface User Manual* (P/N 620-000207).

1. To determine if the bootrom installed on your system requires an upgrade:

   • Select *Configuration/System/Properties* to display the *System Properties* dialog box. Check the version number in the *Boot ROM version* field.

   • Compare the bootrom version number to the bootrom version in Table 1-1 for the E/OSi firmware installed on your SAN Router.

   NOTE: All bootrom versions for E/OSi releases before v4.1.0 are bootrom v0.3.4.

Table 1-1   SAN Router E/OSi and bootrom Versions

E/OSi Version	Eclipse 3300 SAN Router		Eclipse 4300 SAN Router		Eclipse 1620 SAN Router	
	bootrom Version	bootrom File Name	bootrom Version	Bootrom File Name	bootrom Version	Bootrom File Name
v4.1.0	v0.4.3	IPS3k043bootrom.bin	v0.4.1	IPS4k041bootrom.bin	NA	NA
v4.2.0	NA	NA	NA	NA	v1.0.1	IPS3k101bootrom.bin
v4.3.0	v0.4.3	IPS3k043bootrom.bin	v0.4.1	IPS4k041bootrom.bin	v1.0.1	IPS3k101bootrom.bin
v4.3.1	v1.0.1	IPS3k101bootrom.bin	v1.0.1	IPS4k101bootrom.bin	v1.0.1	IPS3k101bootrom.bin
v4.3.2	v1.0.1	IPS3k101bootrom.bin	v1.0.1	IPS4k101bootrom.bin	v1.0.1	IPS3k101bootrom.bin
v4.3.4	v1.0.1	IPS3k101bootrom.bin	NA	NA	NA	NA
v4.4.0	v1.0.3	IPS3k103ECPbootrom.bin	v1.0.1	IPS4k101bootrom.bin	v1.0.3	IPS3k103ECPbootrom.bin

Table 1-1   SAN Router E/OSi and bootrom Versions

E/OSi Version	Eclipse 3300 SAN Router		Eclipse 4300 SAN Router		Eclipse 1620 SAN Router	
	bootrom Version	bootrom File Name	bootrom Version	Bootrom File Name	bootrom Version	Bootrom File Name
v4.4.1	v1.0.3	IPS3k103ECPbootrom.bin	v1.0.1	IPS4k101bootrom.bin	v1.0.3	IPS3k103ECPbootrom. bin
v4.4.2	v1.0.3	IPS3k103ECPbootrom.bin	v1.0.1	IPS4k101bootrom.bin	v1.0.3	IPS3k103ECPbootrom. bin
v4.5	v1.0.3	IPS3k103ECPbootrom.bin	v1.0.1	IPS4k101bootrom.bin	v1.0.3	IPS3k103ECPbootrom. bin

2. If you need to upgrade the bootrom to match your current E/OSi firmware, select *File>Firmware Upgrade*.

    The *Firmware Upgrade* dialog box displays.

    The dialog box shows the previous version, build date, the active/inactive status of both E/OSi firmware locations, the TFTP Server IP address, and the full path and filename of the existing firmware.

    NOTE: Note that the older firmware version is in Location 1, while the newest version is in Location 2. When you download a new bootrom file, it automatically loads to Location 1 with the older firmware version. If you click *Activate*, the new bootrom and older firmware will move to Location 2 and become active. To avoid potential problems that may occur with incompatible firmware and bootrom, instead of clicking *Activate*, you must reset the system. The following steps lead you through this procedure.

3. Enter or edit the TFTP server IP address where the bootrom.bin file is stored.

4. Enter or edit the filename for the new bootrom.bin file on the TFTP server.

5. Click the *Download* button.

    When the download completes, the following message displays:

    Download Completed Successfully. Location 1 must be activated for the switch to boot from this new image.

6. Do not click *Activate* on the dialog box. This activates the E/OSi firmware, which might be the wrong version. Instead, reset the SAN Router. This will activate the new bootrom with the current version of E/OSi firmware installed on the system.

   To reset the SAN Router, select *Reset Switch* from the *File* menu. When the *Reset Options* dialog box displays, select the first option to *Reset System*.

   Do not close the browser until the SAN Router resets.

7. Close and restart the web browser to load the Element Manager from the new version. After resetting the SAN Router, it may take 2 or 3 minutes for the SAN Router's embedded web server to become ready.

Converting Saved SAN List

After upgrading from 4.3.x to 4.5, use the following steps to convert the file containing the SAN IDs discovered while using version 4.3.x to 4.5 format. The file is converted to an XML file (SavedSanList.xml) containing SAN names and IDs, switch details, and other information. When you launch the new version of SANvergence manager, the application reads this file and SAN information displays in the main window.

1. Copy the default.san file from the directory where the previous version of SANvergence Manger is installed.

2. From the command prompt execute one of the following commands:

   Windows

   ```
   convertSanListFrom43x.bat
   ```

   Solaris

   ```
   convertSanListFrom43x
   ```

After installing the new SANvergence Manager, copy this file into the directory where the new application is installed

Prerequisites for Installing and Using E/OSi 4.5

- SANvergence Manager 4.6.2 must be used with this firmware release. We suggest that you upgrade to SANvergence Manager 4.6.2 prior to upgrading to E/OSi 4.5 because E/OSi 4.5 will contain terminology consistent with SANvergence 4.6.x. There are two versions of SANvergence Manager: Standard and Enterprise edition. Each Eclipse SAN Router will ship with a copy of SANvergence Manager Standard Edition.

- We recommend that you do not use the backup configuration and that you reset the system to factory defaults if upgrading E/OSi from 3.x to 4.4 and above. To do this, select *Reset System* from the *File* menu for the SAN router's Element Manager. When the *Reset Options* dialog box displays, select *Reset to System defaults* and click *OK*.

  NOTE: This procedure is not necessary if upgrading from E/OSi 4.3.x and 4.4.x to 4.5.

- DirectX 9.0b or later must be installed on the management workstation (Windows operating system) if additional software programs, such as EFCM or PC Anywhere, are coresident with SANvergence Manager.

Product Operational Notes

The following table provides important information on behavior, operating characteristics, and use of the Eclipse SAN Routers.

Table 3   Product Operational Notes

Note	Category
Trivial file transfer protocol (TFTP) may not work reliably while upgrading the firmware on the SAN Router. If this occurs, try the upgrade again with the per-packet timeout on the TFTP server set to less than 5 seconds.	Installation and Configuration
As a compatibility note, E/OSi releases 4.3.x, 4.4, 4.4.2, and 4.5 will not operate in an mFCP connected environment with SAN Routers running a 3.X, or earlier, release. You can achieve interoperability over an iFCP link when code versions (3.X with 4.X) are intermixed in iFCP connected SANs if you set the same compression on both sides of the iFCP link. We recommend that you upgrade both routers to a 4.x version. If there are multiple SAN routers (non-1620s) interconnected via mFCP, please make sure that you upgrade each of the routers to the same E/OSi version in isolation before reconnecting them with mFCP. If this is not done, the zoning information may become un-usable.	Installation and Configuration
If the IP address of the iSCSI initiator changes, zoning needs to be redefined.	iSCSI
With E/OSi 4.4.x code, McDATA requires 7E and 7F domains to be available or the switch does not merge into fabrics. 7E and 7F should not be used for Domain IDs when in Open Mode or Brocade Mode or 30 or 31 when in McDATA mode.	R_Port
Zoning based on world-wide node names is not supported by the SAN routers. To maintain interoperability between the Eclipse fabric and third-party Fibre Channel fabrics, please configure "soft" zoning on the Fibre Channel fabric using world-wide port names of devices instead of world-wide node names.	R_Port
When a TCP port has iSCSI enabled, there is an additional restriction on the MTU configuration in the *Advanced TCP Configuration* dialog box. For the *Manual* or *Min* MTU discovery modes, the actual allowed MTU size that can be entered is MTU - 40. For example, if the network allows a maximum MTU size 4096, then the maximum that can be entered in the *MTU size* field for *Manual* or *min* is 4056 (in other words, 4096 - 40). For the *Auto* discovery mode no special consideration is needed. The restriction to a lower setting is due to the switch advertising the MTU size as the TCP MSS size and then not handling larger receive frames (such as 4096) correctly.	iSCSI
When an initiator registers with a SAN Router, it will count towards the initiator limit of 50 imposed by the SAN Router. This occurs whether the initiator is active or not. In other words, when 50 initiators register, no other initiators may do so. As a result, inactive iSCSI devices registering with the router may prevent active sessions from being established.	iSCSI

Table 3   Product Operational Notes (*continued*)

Note	Category
The *iSCSI Devices* window in the Element Manager is not automatically updated. If an iSCSI device is removed, the device continues to display as active. To display the latest status, select the *Refresh* button. You can manually remove the inactive device from the window by selecting the device and then selecting the *Remove* button.	iSCSI
When a new LUN is added to a storage subsystem, the link connecting the storage subsystem to the McDATA SAN Routers must be reset. The easiest way to reset the link is to disable the port and then re-enable the port in the Element Manager or the CLI.	iSCSI
The TCP window size of an iSCSI connection is fixed at 160 KB. Unlike iFCP, it is not adjusted as a function of the calculated round trip time (RTT) or manually configurable.	iSCSI
The iSCSI logical unit (LUN) Mapping/Masking function applies to targets that are directly attached to a SAN router. LUN Mapping/Masking for targets connected to an Eclipse network via R_Port connections will be supported in a future release.	iSCSI
A back-to-back iSCSI configuration between SAN Routers, where Fibre Channel Initiators on one SAN are communicating with Fibre Channel Targets on the other SAN, is not supported. Some Fibre Channel header information is lost in the conversion from Fibre Channel to iSCSI and back to FC, causing some FC-aware applications to break.	iSCSI
Each iSCSI device added to the SAN router is assigned an equivalent Fibre Channel port WWN and node WWN that remain persistent after reboots. However, if an iSCSI device is deleted and added back to the system, its equivalent Fibre Channel port and node WWNs may change. Therefore, when a saved zone set is restored to the Eclipse system, some of the iSCSI devices may have different port WWNs than those currently in use. Also, if these devices were zoned using WWN zoning, they could be included in unintended zones.	iSCSI
Tested configurations include up to twelve iSCSI servers per iSCSI port on an Eclipse SAN Router, even though the router is designed to support higher numbers. Table 7, page 1-25, lists some iSCSI Initiators that were tested and verified to work with this release.	iSCSI
Running iSCSI and iFCP traffic on the same TCP port has not been fully tested and qualified.	iSCSI
Power-cycling an 3000/4000 SAN Router during a bootrom upgrade renders the 3000/4000 SAN Router unusable. If the bootrom becomes corrupted, contact McDATA Support to return the unit for re-initialization.	Installation and Configuration
You are unable to select a redundant iFCP link in Element Manager when the link becomes primary. The redundant link is a learned connection, and Element Manager does not allow it to be selected in the *Remote Connections* dialog, since it cannot be changed.	Management Software

Table 3   Product Operational Notes (*continued*)

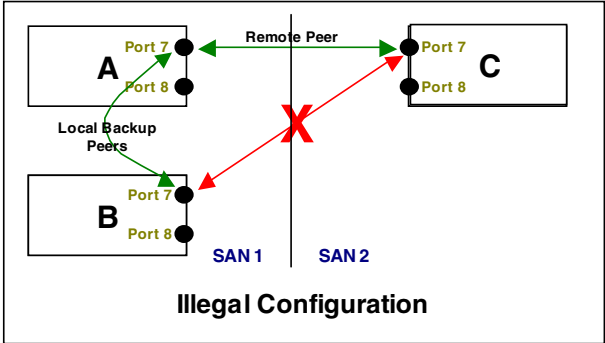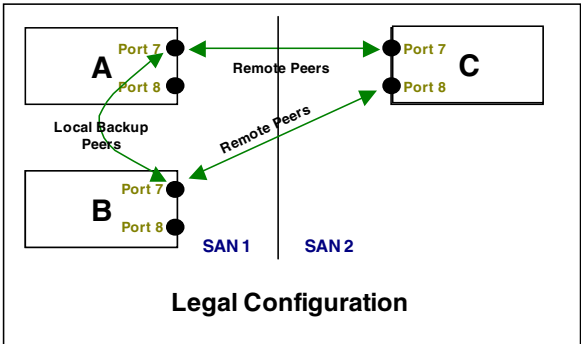| Note	Category
When you disable the primary iFCP link using Element Manager, the redundant link disappears as well because the SAN Router removes the learned connection when the primary link is manually disabled. With no primary link, a redundant link is not necessary.	Management Software
When restoring a zone set, please note that only active devices in the SAN are restored (for example, devices registered with the storage name server as being members of zones). Any offline devices that belonged to the saved zone set are no longer members of their respective zones.	Management Software
If the enterprise fabric connectivity manager (EFCM) is configured to start automatically, then other Java applications, such as SANvergence Manager, may not be able to start. The error message displayed is "initialization of the dynamic link library C:\WINNT\system32\ddraw.dll failed. The process is terminating abnormally." This is due to a conflict between Java and some versions of DirectX. To resolve, use Windows Update to obtain the latest DirectX software for your operating system version. Windows NT is no longer being updated by Microsoft. For Windows NT, you must configure EFCM to manually start.	Management Software
SANvergence Manager and Element Manager are only tested on English versions of the Windows and Solaris operating systems.	Management Software
To start a new Element Manager session in Internet Explorer, open a brand new browser session instead of using the new window command (Ctrl-N).	Management (SIOS)
For Solaris systems, install all operating system patches required for Java Runtime Environment support. See the readme file located in the root directory of the CDROM.	Management (SIOS)
When exporting a Fibre Channel (FC) end device that belongs to multiple zones from one SAN (with a unique SAN ID) to a remote SAN (with its own unique SAN ID), export the overlapping zones through the SAME iFCP port on all SAN Routers (4300, 3300, and 1620 models). Also, the overlapping zones need to be exported to a single iFCP port on the remote SAN.	iFCP
The iFCP redundancy function is designed to handle single failures. Hence, when the Eclipse network has multiple failures related to iFCP, the fail-over and recovery mechanisms may not work reliably. For example, single failures, such as down iFCP port, reliably fail-over traffic to the backup iFCP port. However, if immediately after the fail-over, another failure occurs, such as when the Router or iFCP port is reset, then the iFCP function may not work properly.	iFCP

Table 3   Product Operational Notes (*continued*)

Note	Category
A remote port cannot be used as a remote peer for a local router port if that local router port is configured to be a backup port for another local router port that has already been configured to use the same remote port as a remote peer. For example, in the following figures, there are three 3300 SAN Routers: SW "A", SW "B," and SW "C." • SW "A" and SW "B" are in the same fabric and have the same SAN ID. • SW "C" is in another fabric with a different SAN ID. If SW "B" Port 7 is configured as a backup for SW "A" Port 7, and SW "A" Port 7 is already configured as a remote for SW "C" Port 7, then SW "C" Port 7 cannot be used as a remote for SW "B" Port 7. SW "C" port 8 can be used as a remote for SW "B" ports 7 or 8. **Illegal Configuration** **Legal Configuration**	iFCP
Dot1dBridge Enterprise specific trap is not being seen in HP OpenView.	Third Party interoperability

Table 3   Product Operational Notes (*continued*)

Note	Category

The JNI FCE-6410 will not see devices unless the following parameters are set in the jnic.conf file:
    FCLoopEnable = 1
    FCFabricEnable = 1
    FCPortCfgEnable = 1
	Third Party interoperability

Devices with Mylex RAID controllers may lose some drives in an iFCP failover scenario when connected to an SAN router.	Third Party interoperability
Do not configure Emulex Fibre Channel HBA in a Solaris SPARC workstation for "loop first then point-to-point" mode.	Third Party interoperability
Issues from possible application shortfalls in latency handling. You may have to adjust Windows timeout values to compensate for SAN network latency changes. This will reduce these issues.	Third Party interoperability
When using a Qlogic 2100 Fibre Channel Host Bus Adapter under Solaris, configure it for loop mode. When using a Qlogic 2200 Fibre Channel Host Bus Adapter under Solaris, configure it for point-to-point mode.	Third Party interoperability
Problems with Agilent Fibre Channel HBAs running v3.5.15.18 driver. If you experience any problems, please use driver v3.5.3.9.	Third Party interoperability

Minor Code Fixes and Enhancements in 4.5

E/OSi 4.5 is based on E/OSi 4.4 and contains all fixes and enhancements from E/OSi 4.4.1 and 4.4.2, as well as previous releases. Code fixes and enhancements are organized by the product area to which they relate, such as installation and configuration, management, R_Port, iFCP, iSCSI, and third party interoperability. Within each product area, code fixes and enhancements are organized by their tracking number.

NOTE: Because of a database conversion for problem tracking, code fixes and enhancements now have a five-digit instead of four-digit tracking number. Every effort was made to maintain data integrity during this database conversion.

Table 4   Minor Code Fixes and Enhancements in E/OSi 4.5

Tracking Number	Description	Product Area	Model
56654	Invalid FC_ID reported for an iSCSI connection.	iSCSI	Eclipse 1620
55938	NOP-IN PDU were sent 110 seconds after session turned Idle.	iSCSI	Eclipse 4300
55875	Eclipse 4300 System Reset with ~180 iSCSI initiators and various control panel activity.	iSCSI	Eclipse 4300
55643	If Fibre Channel Target is not available, responding iSCSI login with CmdSn=1, saturn code set status CD=0x301 and ExpCmdSN=0, but should should be 1.	iSCSI	Eclipse 4300
55642	When qlc2200 was zoned to a iSCSI initiator with a few disks, iSCSI login to disk got no response and host shows "Target Error."	iSCSI	Eclipse 4300
55578	No NOP-IN PDUs were sent when NOP function is enabled and session idle 3 minutes.	iSCSI	Eclipse 4300
55470	iSCSI: Hex-Constant in form as 0Xc00 is treated as '0' by saturn in parameter negotiation during Login process (0xC00 is ok).	iSCSI	Eclipse 3300 Eclipse 4300 Eclipse 1620
55469	iSCSI does not cleanup local target list when removed from last zone.	iSCSI	Eclipse 3300 Eclipse 4300 Eclipse 1620
55466	iSCSI NOP_IN doesn't work.	iSCSI	Eclipse 3300
55265	iSCSI session bounces before stabilizing.	iSCSI	All Router products
55208	IPS will expose its own WWNN back to itself as a an available target.	iSCSI	Eclipse 3300 Eclipse 4300 Eclipse 1620
55181	iSCSI Initiators block at 50 instead of 100 for 3300 and 50 instead of 200 for the 4300.	iSCSI	Eclipse 3300 Eclipse 4300
54810	msiSCSIinitiator took ~30 seconds to logout 3300-connected disks (3300 FIN with no logout response).	iSCSI	Eclipse 3300
53489	iSCSI I/O dies with protocol errors when ImmData=yes and initr2t=no.	iSCSI	All Router products
50263	iSCSI testing on 2640 statsn gets out of sync during timeout conditions.	iSCSI	All Router products
49245	Eclipse SAN Router closes TCP connection when running copa 512_write.stp with NOP checked and Data Digest enabled.	iSCSI	All Router Products

Table 4   Minor Code Fixes and Enhancements in E/OSi 4.5 (*continued*)

Tracking Number	Description	Product Area	Model
46814	iSCSI:1022 code: in normal session, no response is sent for logout request.	iSCSI	All Router products
46114	When running iSCSI traffic with the NOP option enabled, the SAN Router attaches 48bytes of random data that causes the iSCSI initiator to get out of sync with the target.	iSCSI	Eclipse 1620
45960	Eclipse Reject PDU has StatSN,ExpCmdSN,MaxCmdSN, Word5 fields set to all 0's and DataSegLength set to 0x30.	iSCSI	All Router products
55744	Plogi frames being dropped between Eclipse 1620s.	iFCP	Eclipse 1620
55433	Running 100 ms RTT with 1% packet loss. The SRDF/A link bounces. Note: This is the same problem as PR 55886 except iSCSi initiator used rather than an FC initiator.	iFCP	Eclipse 1620
54966	Memory leak on remote mSAN while removing and importing devices.	iFCP	Eclipse 1620
49199	iFCP ping and ftcpPing does not work correctly for ICMP data over 1472 bytes.	iFCP	Eclipse 3300
55784	The 1620 rebooted after it ran out of memory.	CLI	Eclipse 1620
55271	Eclipse 3300 with 4.4. Setting CLI prompt name does not stay after logging out of a CLI session.	CLI	Eclipse 3300
51613	Statistics From "show stats" are very different From Element Manager graphs.	CLI	All Router products
55693	Maximum allowed iSCSI Devices = X: Current Count = Y does not appear in SANvergence Manager message log for Eclipse 3300 and 4300.	Network Management	Eclipse 4300 Eclipse 3300
55475	Element Manager: ping example for size is wrong, says -t should be -s.	Network Management	Eclipse 1620
54629	SNMP_TRAP_AUTFAILURE mib: the Trap Viewer posts the Authentication Failure as Critical, but it should be information/public.	Network Management	Eclipse 3300
54627	SNMP_TRAP_COLDSTART mib: the Trap Viewer posts the Cold Start as Critical, but it should be information/public.	Network Management	Eclipse 3300
54309	SNMP-eportDeviceImportMaxEntries results are incorrect (R4.5, based off 4.4; support statement = max of 64 imported devices).	Network Management	Eclipse 4300 Eclipse 3300
54233	SNMP MIB - eport Device Fibre Channel Switch port (Query response shows Fibre Channel Switch Port Address, MIB description indicates Port Number)	Network Management	Eclipse 4300
51775	Query to switch with negative request-id causes switch to reply erroneously.	Network Management	All Router products

Table 4   Minor Code Fixes and Enhancements in E/OSi 4.5 (*continued*)

Tracking Number	Description	Product Area	Model
50931	SNMP trap does not show "Remote Connection Unreachable" in E/OSi 4.4.	Network Management	Eclipse 1620
53087	SNMP Filter/Agent not enabled for Enterprise class MIBs.	Network Management	Eclipse 3300
55211	Missing devices associated with simultaneously importing large numbers of devices into fabrics containing one or more Qlogic switches.	Platform	Eclipse 3300 Eclipse 4300 Eclipse 1620
52229	Management port hangs when bombarded by UDP traffic on UDP ports that the SAN Router is not servicing or listening to.	Management Port	Eclipse 1620
51022	1620 Management port locks up and switch reboots.	Management Port	Eclipse 1620
56625	FC_IDs on Remote target appear to be changing.	R-Port	All Router products
55213	Eclipse product R_Port does not properly form accept response to ge_id command.	R-Port	All Router products
55886	SRDF/A - FC Initiator Timeout. This is the same problem as PR 55433 except FC initiator used rather than an iSCSI initiator.	R-Port	Eclipse 1620

Outstanding Known Issues in E/OSi 4.5 and SANvergence Manager Software 4.6.2

Issues are organized by the product area to which they relate, such as installation and configuration, management, R_Port, iFCP, iSCSI, and third party interoperability. Within each product area, issues are organized by their tracking number, if applicable. Workaround or recovery steps for the issue are included when they apply or are available.

NOTE: Because of a database conversion for problem tracking, issues now have a five-digit instead of four-digit tracking number. Every effort was made to maintain data integrity during this database conversion.

Table 5   Outstanding Known Issues

Tracking Number	Description	Product Area	Model
42958	**Description/Symptom:** Failed to refresh Fibre Channel Device Properties data from switch" misleading when all E-Ports. Error message to be fixed in future release. Fixed in 4.6 release. **Customer Impact:** low.	Element Manager	Eclipse 1620
27529	**Description/Symptom:** Critical error messages are not captured in System logs. Fixed in 4.6 release. **Customer Impact:** medium.	Element Manager	Eclipse 1620
27300	**Description/Symptom:** Element Manager: When upgrading firmware *close* button is allowed, but downloading continues. Fixed in 4.6 release. **Customer Impact:** medium.	Element Manager	All Router Products
27399	**Description/Symptom:** Port Traffic graph should report iFCP traffic as Mbps instead of MB/sec. Fixed in 4.6 release. **Customer Impact:** low.	Element Manager	All Router Products
27438	**Description/Symptom:** Remote Gateway statistics screen (Element Manager) is not updated after an iFCP failover. **Customer Impact:** medium.	Element Manager	All Router Products
27472	**Description/Symptom:** Element Manager often posts two identical message log entries. Fixed in 4.6 release. **Customer Impact:** low.	Element Manager	All Router Products

Table 5   Outstanding Known Issues (*continued*)

Tracking Number	Description	Product Area	Model
27498	**Description/Symptom:** Pulling link cable does not cause port down. Fix targeted for 4.7 release. **Customer Impact:** none.	Fibre Channel Driver	All Router Products
27340	**Description/Symptom:** No Basic Accept received when aborting FLOGI. Fix targeted for 4.7 release. **Customer Impact:** medium.	Fibre Channel Control Task	Eclipse 1620
43659	**Description/Symptom:** SAN Router sends a logout response followed by a FINC with the same TCP sequence number. Fix targeted for 4.7 release. **Customer Impact:** medium.	iSCSI	Eclipse 1620
555757	**Description/Symptom:** The iSCSI initiator is not able to participate in the TCP Storage Friendly feature. Fix targeted for 4.7 release. **Customer Impact:** none.	iSCSI	Eclipse 1620
42956	**Description/Symptom:** When a configuration is saved to flash, SNMP access is lost for few seconds. **Customer Impact:** low.	SNMP Agent	All Router Products
27469	**Description/Symptom:** Unexpected iFCP Latency chart (Element Manager) information for a disabled iFCP port. Fixed in 4.6 release. **Customer Impact:** none.	SNMP Agent	All Router Products
27453	**Description/Symptom:** Fibre Channel port shows red in Element Manager when there is no connector. Fix targeted for 4.7 release.	SNMP Agent	All Router Products
54232	**Description/Symptom:** The following SNMP objects are not supported: • eportDeviceFCSwitchFabricPort • eportLunDiscoveryPortName **Customer Impact:** low.	SNMP Agent	All Router Products
27611	**Description/Symptom:** The set mgmt portadd command should have a default gateway parameter. Fixed in 4.6 release. **Customer Impact:** medium.	CLI	Eclipse 1620
27269 27152	**Description/Symptom:** Cannot change *Cost* variable on Link Aggregated trunk. CLI trunk command changes the Cost variable. Fix targeted for 4.7 release. **Customer Impact:** medium.	CLI	All Router Products
27298	**Description/Symptom:** CLI zone show hangs on quit (takes a long time to quit). **Customer Impact:** medium.	CLI	Eclipse 1620 Router

Table 5   Outstanding Known Issues (*continued*)

Tracking Number	Description	Product Area	Model
54412	**Description/Symptom:** New Brocade code (4.4.0b) does not attach to R-port on Eclipse SAN-Router (Brocade Native Mode). **Customer Impact:** high.	R-Port	Eclipse 1620
27501	**Description/Symptom:** Traffic stops for 1:40 second when making zoning changes to another unrelated zone. **Customer Impact:** medium.	R-Port	All Router Products
27434	**Description/Symptom:** Build Fabric doesn't affect segmented ISL. **Customer Impact:** medium.	R-Port	All Router Products
27352	**Description/Symptom:** ESS frame missing SW_RSCN support bit -- open fabric 1.0. **Customer Impact:** none.	R-Port	All Router Products
27341	**Description/Symptom:** ELP is not generated by the Eclipse 1620 Router. **Customer Impact:** low.	R-Port	Eclipse 1620
27255	**Description/Symptom:** GPN_ID not sufficient after online SW_RSCNb. Fixed in 4.6 release. **Customer Impact:** medium.	R-Port	Eclipse 1620
55690	**Description/Symptom:** If the ISL links between two switches is disrupted for longer than 10 seconds, the two FC switches are separated into two physical fabrics and one FC Fabric is isolated from the SAN Router R-Port. After the ISL links are reattached, the R-Port continues to show isolation. **Customer Impact:** medium. **Work Around:** Manually disable and enable the SAN Router R-Port from the Element Manager.	R-Port	Eclipse 1620
46358	**Description/Symptom:** When the MTU size on a TCP port configured for iSCSI is set to 4096 bytes, the router sets the MSS incorrectly. Fixed in 4.6 release. **Customer Impact:** high.	iSCSI	All Router Products
43936	**Description/Symptom:** Router sends packets with old TCP sequence numbers at login. Fixed in 4.6 release. **Customer Impact:** medium.	iSCSI	Eclipse 1620
27653	**Description/Symptom:** Inactive iSCSI devices count toward the limit. Fixed in 4.6 release. **Customer Impact:** medium.	iSCSI	All Router Products
27533	**Description/Symptom:** No FIN sent to the initiator when the Nishan iSCSI port is disabled. Fixed in 4.6 release. **Customer Impact:** medium.	iSCSI	Eclipse 1620

Table 5   Outstanding Known Issues (*continued*)

Tracking Number	Description	Product Area	Model
27512	**Description/Symptom:** Can't [Cancel] out if SANvergence Manager is looking for non-existent SAN. Fixed in 4.6 release. **Customer Impact:** medium.	SANvergence Manager	All Router Products
46365	**Description/Symptom:** SANvergence Manager may not show all switches within a fabric. Other operations are not affected. The chances of this occurring are rare. Fixed in 4.6 release. **Customer Impact:** none.	SANvergence Manager	Eclipse 1620
43551	**Description/Symptom:** The LUN Mapping/Masking feature can still be launched after the switch is rebooted, even if the feature is disabled. Fixed in 4.6 release. **Customer Impact:** medium.	SANvergence Manager	All Router Products
44202	**Description/Symptom:** *Fabric Configuration* dialog box values cannot be retrieved with READ-ONLY password. Fixed in 4.6 release. **Customer Impact:** low.	SANvergence Manager	All Router Products
47408	**Description/Symptom:** iFCP ping reboots 1620 when MTU size is set to 2176. Fix targeted for 4.7 release. **Customer Impact:** high.	iFCP	Eclipse 2640

Scalability Metrics

The following table lists provides the scalability metrics for current Eclipse SAN Routers with E/OS 4.x.

Table 6   Scalability Metrics for Eclipse Products Using E/OSi 4.x

Metric	Eclipse 1620	Eclipse 3300	Eclipse 4300
Fibre Channel			
1. Maximum number of (tested) Fibre Channel fabrics per mSAN	2	2	2
2. Recommended maximum number Fibre Channel switches (domains) in a Fabric[a]	12	12	12
3. Combined maximum imported Fibre Channel devices from all fabrics with an mSAN	64	64	64
4. Total number of Fibre Channel switches in all interconnected fabrics in an mSAN	24	24	24

Table 6   Scalability Metrics for Eclipse Products Using E/OSi 4.x

Metric	Eclipse 1620	Eclipse 3300	Eclipse 4300
5. Maximum number of (tested) Router R_Ports connected to a Fabric from one or more SAN Routers	2	2	2
6. Maximum Fibre Channel devices in a connected fabric	1024	1024	1024
7. Maximum loop devices attached to a single Router FL_Port	8	8	8
8. Maximum loop devices attached to the entire SAN Router	16	32	32
Zoning			
9. Maximum imported Fibre Channel devices from a single fabric	64	64	64
10. Maximum zones in a connected fabric	512	512	512
11. Recommended maximum Eclipse SAN Router zones[b]	128	128	128
iFCP/iSCSI			
12. Maximum iFCP/iSCSI sessions on a single GE/TCP port (initiator-target pairs)[c]	64	64	64
13. Maximum iFCP/iSCSI sessions per SAN Router (initiator-target pairs)[c]	64	64	64
14. Maximum number of iSCSI initiators per port[b]	50	50	50
15. Maximum number of iSCSI initiators per SAN Router[b]	50	100	100
16. Maximum iFCP point to multi-point connections (one "site" to many sites") per port	8	8	8
17. Maximum iFCP point to multi-point connections (one "site" to many sites") per router	16	16	32
mFCP			
18. Maximum number of Eclipse routers in an mSAN	1	2	2
19. Maximum (tested) mFCP connections between two Eclipse SAN Routers[d]	n/a	4	4

a. This number is a guideline; you can have more switches in one fabric and fewer in another fabric connected to the same router to balance out the recommended guideline.

b. Performance of the zoning GUI in SANvergence Manager may be adversely affected once the number of zones increases beyond the recommended limit.

c. This number is the current tested and supported limit. Ways to increase the supported limit are being explored. Please note that with iFCP and iSCSI configurations, each initiator port WWN and target port WWN pair will form a session and will count towards the maximum supported iFCP+iSCSI sessions. For example, if you have an iFCP shared zone with one server (single HBA WWN) and a JBOD with four disks (four port WWNs), then it'll result in four unique iFCP sessions (TCP connections).

d. mFCP ISLs between routers is not supported on the Eclipse 1620, which prevents more than one Eclipse 1620 to connect to the same fabric. The limit of two on the Eclipse 3300/4300 is the tested limit. The primary reason for using multiple routers in the same mSAN is for high-availability configurations.

HBAs Tested for this Release

For a list of host bus adapters (HBAs) tested for this release, refer to Appendix A in McDATA Supported Configurations Matrices at www.mcdat.com under:

Support\Technical Documents\Compatability Matrix

iSCSI Initiators Verified for 4.5

E/OSi 4.5 was tested for Microsoft iSCSI initiator 2.0 except for multipath I/O (MPIO). Therefore, MPIO is not supported in E/OSi 4.5.

Table 7   **Microsoft iSCSI Initiators Tested with Eclipse 1620, 3300, and 4300 for E/OSi 4.5**

Adapter/HBA/LOM Vendor and Model	Adapter/HBA/LOM Driver	Windows 2000 Professional Service Pack 4	Windows XP Professional Service Pack 2	Windows Server 2003 Standard Edition 32 Bit Version
3Com 3C996	Broadcom 7.35.0.0	X		X
3Com 3C996	Broadcom 7.86.0.0	X		X
NetGear GA620[a]	NetGear 2.0	X	NA	NA
NetGear GA621	NetGear 2.0	X		X
Marvell Yukon 88E8050 (LOM)	Marvell 7.14.1.3		X	
SysKonnectSK-9E21D	SysKonnect 7.15.1.3		X	

Table 7 **Microsoft iSCSI Initiators Tested with Eclipse 1620, 3300, and 4300 for E/OSi 4.5**

Intel 21140[b]	Intel 8.0.57.0	X	X	
Intel PRO/1000MTDual PortServer Adapter	Intel 8.0.57.0		X	
Intel PRO/1000MTQuad PortServer Adapter	Intel 8.0.57.0		X	
Broadcom NetXEtreme (LOM)	Broadcom 6.34.0.0		X	

a. Refer to NetGear website.
b. Emulated Adapter in Microsoft Virtual PC 2004, SP1.

Table 8 **iSCSI Interoperability Support for E/OSi 4.5 on Eclipse 1620, 3300, and 4300 SAN Routers**

Operating System	Operating System Software Initiator	Intel Pro-1000T	Qlogic QLA4010	Comments	Supported Tier
Windows 2000(sp4)	1.04a/1.05a			Intel Pro 1000 MT (7.2.17.0) Broadcom Netextreme (6.34.4.0) 3COM 3c996 (6.64.0.0) NetGear GA620 (1.14.22.0)	Supported
Windows 2003	1.04a/1.05a				
Windows 2000(sp4)		4.0.8.15 fw:4.6.87.2	3.09 fw: 1.0.0.8		Tested
Windows 2003			3.09 fw: 1.0.0.8		
Linux RH 9 (2.4.20-8smp)			3.09 fw: 1.0.0.8		

Standards Compliance

MIB Groups

SIOS is compliant with the following standard MIB groups:

- RFC1213 (MIB-II) groups:
    - 1 - system
    - 2 - interfaces
    - 3 - at
    - 4 - ip
    - 5 - icmp
    - 6 - tcp
    - 7 - udp
    - 11 - snmp
- RFC1354 (IP Forwarding) groups:
    - 1 - ipForward
- RFC1493 (Bridge) groups:
    - 1 - dot1dBase
    - 2 - dot1dStp
    - 4.1 - dot1dTpFdbTable
- RFC1757 (RMON) groups:
    - 1 - Statistics
    - 2 - History
    - 3 - Alarms
    - 9 - Event
- RFC2674 (802.1p) groups:
    - 1 - dot1dExtBase
    - 2.1 - dot1dPortPriorityTable
    - 2.3 - dot1dTrafficClassTable
    - 3 - dot1dGarp

- 4 - dot1dGmrp
- RFC2674 (802.1q) groups:
    - 1 - dot1qBase
    - 4.1 - dot1qVlanCurrentTable
    - 4.2 - dot1qVlanStaticTable
    - 4.3 - dot1qPortVlanTable
- Fibre Alliance MIB (v3.0) groups:
    - 1 - uNumber
    - 2 - systemURL
    - 6 - connUnitTable
    - 7 - connUnitRevsTable
    - 8 - connUnitSensorTable
    - 10 - connUnitPortTable
    - 12 - connUnitLinkTable
    - 3 - revisionNumber
    - 4.5 - connUnitPortStatTable

SNMP Traps

E/OSi supports the following standard SNMP traps (notifications):

- RFC1157 (Generic traps)
    - 0 - coldStart: switch startup
    - 2 - linkDown: port down
    - 3 - linkUp: port up
    - 4 - authenticationFailure: invalid community string
- RFC1492 (Spanning Tree traps, enterprise = 1.3.6.1.2.1.17)
    - 1 - newRoot: switch has become STP root
    - 2 - topologyChange: port STP status has changed
- RFC1757 (RMON traps, enterprise = 1.3.6.1.2.1.16)
    - 1 - risingAlarm: a monitored value exceeded its rising alarm threshold

- 2 - fallingAlarm: a monitored value dropped below its falling alarm threshold

- Fibre Alliance (FA traps, enterprise = 1.3.6.1.3.94)

  - 1 - connUnitStatusChange

  - 6 - connUnitPortStatusChange

    NOTE: For connUnitPortStatusChange, the implementation doesn't conform to IETF standards. To conform to the standard, it should report the port index in the varvbind list. Rather it reports the physical port, making it easier for the management application to correlate the port index to the physical port number.

Related Documentation

- McDATA Eclipse 1620 SAN Routers Administration and Configuration Manual (620-000206)

- McDATA Eclipse 1620 SAN Router Installation and Service Manual (620-000205)

- McDATA Eclipse 3300/4300 SAN Routers Administration and Configuration Manual (620-000243)

- McDATA Eclipse 3300/4300 SAN Routers Installation and Service Manual (620-000244)

- McDATA SANvergence Manager User Manual (620-000189)

- McDATA E/OSi Command Line Interface (CLI) User Manual (620-000207-010)

To order a printed copy of these publications, contact your McDATA representative or contact McDATA at the phone number or fax number listed below.

- Phone: (800) 545-5773 and select the option for information about McDATA's complete family of enterprise-to-edge SAN solutions.

- Fax: (720) 558-4193

- Also find these manuals at www.mcdata.com under the *Support* tab, *Technical Documents*.

Previous Releases

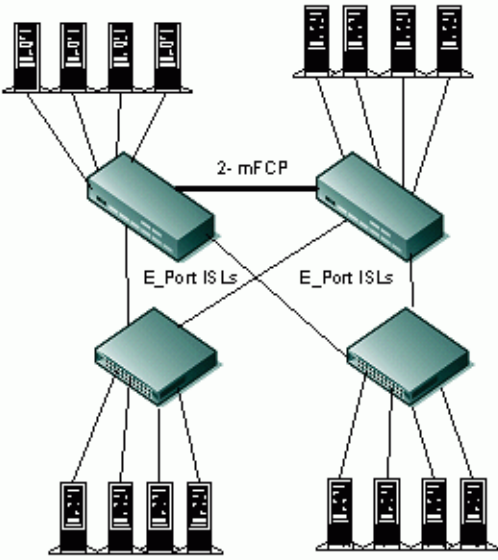## E/OSi 4.4.2 and SANvergence Manager 4.4.1

Supported Platforms

- Eclipse 1620 and 3300 Routers
- SANvergence Manager

Table 9   Minor Code Fixes and Enhancements in E/OSi 4.4.2

Tracking Number	Description	Product Area	Model
51022	Management ports becomes unresponsive or the SAN Router resets.	Serial and 10/100 Management Ports	Eclipse 1620 and 3300
52229	The 10/100 management port becomes unresponsive when bombarded by UDP traffic on UDP ports that the SAN Router is not servicing or listening to.	10/100 Management Port	Eclipse 1620 and 3300
50843	Provide a CLI command that allows users to reset the management port.	10/100 Management Port	Eclipse 1620, 4300, and 3300

Table 9   Minor Code Fixes and Enhancements in E/OSi 4.4.2 (*continued*)

Tracking Number	Description	Product Area	Model
44023	When using the configuration shown below, after resetting the Eclipse 3300 and starting all 16 devices at the same time, frames may be sent to local devices with SID = 0x000000. This may occur on PLOGI and Data frames. If each device is started with a two-second delay between each initialization then all devices should come up and establish connectivity, with some of them possibly having to retry PLOGIs. 	E-Port	Eclipse 3300

E/OSi and SANvergence Manager - 4.4.1

Supported Platforms

- Eclipse 1620, 3300, and 4300 Routers
- SANvergence Manager

Table 10   Minor Code Fixes and Enhancements in E/OSi 4.4.1

Tracking Number	Description	Product Area	Model
49178	Customer is getting 800 Fast Retransmits per second on iFCP MPLS network Causing Slow throughput.	iFCP	Eclipse 3300

E/OSi and SANvergence Manager - 4.4

Supported Platforms

- Eclipse 1620, 3300, and 4300 Routers
- SANvergence Manager

Code Fixes and Enhancements

Table 11   Minor Code Fixes and Enhancements in E/OSi 4.4

Tracking Number	Description	Product Area	Model
27417 4648 27638	PRLI_ACC get delayed and is swapped with INQ sent right after in all Fibre Channel configuration types.	Fibre Channel Control Task	All Router Products
27467	RJ45 port unable to receive packets. Power off required to clear. (Condition noted during lab stress testing.)	GE MAC	Eclipse 1620
45039	iFCP sessions getting dropped.	iFCP	Eclipse 1620
44894	The Fibre Channel array only receives information regarding itself when querying attached Fibre Channel switch - 1620 Fabric.	iFCP	Eclipse 1620
43993 (4672/4729)	Incorrect FCID passed for ADISC across iFCP - the hard Address of originator field should not be modified for ADISC Comm/Resp.	IFCP	All Router Products
42913 43978	Fast LZO with History creates CRC errors to the targets.	iFCP	All products.

Table 11   Minor Code Fixes and Enhancements in E/OSi 4.4 (*continued*)

Tracking Number	Description	Product Area	Model
27599	Exportation across an iFCP link fails.	iFCP	Eclipse 1620
27549	Two Eclipse 3300 SAN Routers in iFCP link will reboot after removing and reinstalling fiber cable multiple times.	iFCP	Eclipse 3300
27517	Under a lot of traffic, the iFCP link ""KEEP ALIVE" is triggered. (Condition noted during lab stress testing.)	iFCP	All Router Products
27489	Traffic is throttled after iFCP failover (zone bandwidth related) (Condition noted during lab stress testing.)	iFCP	Eclipse 1620
27484	Primary iFCP fails to recover traffic when session re-established. (Condition noted during lab stress testing.)	iFCP	Eclipse 1620
27479	Configuration of four Eclipse 1620s experience continual iFCP link failure and recovery.	iFCP	All Router Products
27437	CRC errors after iFCP failover. (Condition noted during lab stress testing.)	iFCP	Eclipse 1620
27332	No SNS information exchange. ITC-small buffer issue.	iFCP	Eclipse 3300
28248	Manual setting of MTU does not function properly with iSCSI.	iSCSI	All Router Products
27655	1620 does not inform the initiator that immediate data is not supported.	iSCSI	All Router Products.
27608	IO fails with short cable pull on 4.4 code.	iSCSI	Eclipse 1620
27528	After a short Fibre Channel target cable pull a manual iSCSI login is required.	iSCSI	Eclipse 1620
27527	Over distance over a "lossy" network, the Fibre Channel array reports 2A1F errors.	iSCSI	Eclipse 1620
27526	SACK does not work.	iSCSI	Eclipse 1620
27525	TCP port hangs, link goes up and down with IP router.	iSCSI	Eclipse 1620
45691	Incorrect Payload in Response to GE_ID and GE_PT.	E_Port	All Router Products
28245	TCP port hangs when a zone is exported to it.	E_Port	All Router Products
27659	IO fails with constant ISL breaks between Eclipse 1620 and Sphereon 4500.	E_Port	Eclipse 1620

Table 11   Minor Code Fixes and Enhancements in E/OSi 4.4 (*continued*)

Tracking Number	Description	Product Area	Model
27657	The exportation definition is lost. (Machine Check when adding a zone).	E_Port	Eclipse 1620
27610	Race condition results in switch dropping PLOGIs.	E_Port	Eclipse 1620
27569	Probe login occurs with same WWN as used by the Name Server.	E_Port	Eclipse 1620
27536	PLOGI required in order to open a TCP session for a remote device.	E_Port	Eclipse 1620
27179	Eclipse SAN Router fails to send Fabric Address group RSCN to Fibre Channel switch after node pull.	E-Port	Eclipse 1620 Router
27229	RRQ command not supported.	E-Port	All Router Products
27230	LS_RJT sent with R_CTL of 0x03 instead of 0x23.	E-Port	All Router Products
27358	ABTS with RX_ID=0xFFFF not handled correctly.	E-Port	All Router Products
27359	Frames from an aborted exchange sent after ABTS --BA_ACC completed.	E-Port	All Router Products
27520	Append zone stuck in Zoning Disabled mode after too large zone update attempt.	E-Port	All Router Products
27531	A single command should exist for data collection and let the user transfer output file to a TFTP server.	CLI	Eclipse 1620
27268	*show zone* command does not show new zones created in CLI.	CLI	All Router Products
27511	CLI gives no option to configure a Fibre Channel port to "fcEport".	CLI	All Router Products
27268	The show zone command does not show new zones created in CLI.	CLI	Eclipse 1620
46619	SANvergence Manager does not notify of lost devices when all zones are un-exported from the neighbor iFCP link.	SANvergence Manager	All Router Products
42959	Alt-D brings up the device tree report instead of adding a device to zone.	SANvergence Manager	All Router Products
27597	Long fabric names are blurry in the *Selective Import* tab of the *Fabric Configuration* dialog box.	SANvergence Manager	All Router Products

Table 11   Minor Code Fixes and Enhancements in E/OSi 4.4 (*continued*)

Tracking Number	Description	Product Area	Model
27573	Unable to run SM v4.4 on P88tf (Winnt) or a 1U service processor	SANvergence Manager	Eclipse 1620
27643	Sometimes if you import many devices from the fabric, some of these devices are missing. SANvergence Manager adds a delay after the import for the SNS registration to complete.	SANvergence Manager	All Router Products
27566	File transfers involving the TFTP server, such as retrieving the switch configuration or syslog, are corrupted on a PC with two Ethernet NIC cards.	SANvergence Manager	All Router Products.
27460	SANvergence Manager 4.3.1 Configuration Report shows incorrect zone ID exported across iFCP.	SANvergence Manager	All Router Products
27551	Changing the column sizes in the *Selective Import* tab should not sort the table.	SANvergence Manager	All Router Products
27612	Typo in Solaris launch file: javaw should be java.	SANvergence Manager	All Router Products
27476	*Configuration Archive* report shows wrong compression method when disabled. Modified report to show N/A if compression is disabled.	SANvergence Manager	All Router Products
27413	Change Help menu to reflect proxy domain IDs for Open Mode -vs- Brocade Mode.	SANvergence Manager	Eclipse 1620
44738	Unable to retrieve devices from sub-fabric.	System	All Eclipse Products
42954	Offline diagnostics shows fans have exceeded their specification (1200 RPM).	System	Eclipse 1620
27572	Ethernet port hangs.	Management Port	Eclipse 1620

Eclipse SAN Router SIOS - 4.3.1 to 4.3.2

The following describes supported platforms and code fixes and enhancements for release 4.3.2.

Supported Platforms

- Eclipse 1620 SAN Router
- IPS Series 3000/4000 SAN Router

Code Fixes and Enhancements

Enhancements and fixes are organized by the product area to which they relate, such as installation and configuration, management, E_Port, iFCP, iSCSI, and third party interoperability. Within each product area, they are organized by their bug tracking number, if applicable.

Tracking Number	Description	Product Area
4457	If a PLOGI is issued to a device that is not registered in the name server (is an invalid FC_ID), the SAN Router will drop the frame. Previously the router would issue an LS_RJT on behalf of the device.	Fibre Channel
4476	Fast Write is now a feature in the Enterprise iFCP bundle, but was included in the Standard iFCP bundle in release 4.3.1.	Management

SAN Router SIOS Changes - 3.0.6 to 4.1

The following describes supported platforms and code fixes and enhancements for release 4.1.

Supported Platforms

- IPS3300
- IPS4300

Code Fixes and Enhancements

Enhancements and fixes are organized by the product area to which they relate, such as general platform, management, E_Port, iFCP, iSCSI, and third party interoperability. Within each product area, they are organized by their bug tracking number, if applicable.

Tracking Number	Description	Product Area
NA	Bandwidth Manager Support. This allows a user to set minimum and maximum transmit bandwidth on a per zone basis.	General Platform
NA	Full Command Line Interface (CLI) support. Previously not all commands were supported.	General Platform
NA	Changing the port type from Fibre Channel to E_Port or from E_Port to Fibre Channel no longer requires a reboot of the entire router.	General Platform

Tracking Number	Description	Product Area
NA	A Simple Network Management Program (SNMP) Trap can be generated whenever there is a major E_Port event, such as a Zone Policy change, a zone merge, an E_Port segmentation, etc.	General Platform
NA	Provide compression throughput graphs.	General Platform
NA	Draft 20-compliant iSCSI Target mode implementations	iSCSI
NA	Support for CHAP authentication of iSCSI initiators in conjunction with an external RADIUS server.	iSCSI
NA	Support for RADIUS client	iSCSI
NA	Support for selective acknowledgements (SACK)	iSCSI
NA	Configurable window size.	iFCP
NA	Calculated window size based on RTT and link speed.	iFCP
NA	Performance enhancement to compression. Multiple algorithms are supported.	iFCP
NA	Support for selective acknowledgements (SACK).	iFCP
NA	Enhanced iFCP standards-compliance: ELS frame handling with and without FastWrite.	iFCP

Eclipse SAN Router SIOS Changes - 4.1 to 4.2

The following describes supported platforms and code fixes and enhancements for 4.2.

Supported Platforms

Eclipse 1620 HDS iSCSI image only (no support for iFCP).

Code Fixes and Enhancements

Enhancements and fixes are organized by the product area to which they relate, such as general platform, management, E_Port, iFCP, iSCSI, and third party interoperability. Within each product area, they are organized by their bug tracking number, if applicable.

Tracking Number	Description	Product Area
NA	Support for the Eclipse 1620 platform. The release is limited to iSCSI configurations for HDS customers.	iSCSI

Eclipse SAN Router SIOS Changes - 4.2 to 4.3

The following describes supported platforms and code fixes and enhancements for 4.3.

Platforms Supported

Eclipse 1620 (all images).

Code Fixes and Enhancements

Enhancements and fixes are organized by the product area to which they relate, such as general platform, management, E_Port, iFCP, iSCSI, and third party interoperability. Within each product area, they are organized by their bug tracking number, if applicable.

Tracking Number	Description	Product Area
NA	Support for iFCP functionality on the Eclipse 1620.	iFCP

SANvergence Manager Software Changes - 3.0.2 to 4.1

The following describes supported platforms and code fixes and enhancements for SANvergence Manager 4.1.

Supported Platforms

Eclipse 3300 and Eclipse 4300 4.1.

Code Fixes and Enhancements

Enhancements and fixes are organized by the product area to which they relate, such as general platform, management, E_Port, iFCP, iSCSI, and third party interoperability. Within each product area, they are organized by their bug tracking number, if applicable.

Tracking Number	Description	Product Area
NA	Support for Bandwidth Manager.	Management
NA	Support for new iSCSI features, including RADIUS client configuration.	Management
NA	Ability to perform an undo zone Append.	Management
NA	Ability to view the active zone set in a given Fibre Channel fabric where the Eclipse fabric is connected via an E_Port.	Management
NA	Ability to view the Fibre Channel switches in each of the Fibre Channel fabrics where the Eclipse fabric is connected via an E_Port.	Management
NA	Support added for Java JRE 1.4.1,	Management
NA	Added SAN and Switch Summary Details to main window.	Management
NA	Added ability to launch Embedded Element Manager for third party Fibre Channel switches in the fabrics attached to the SAN Router.	Management

SANvergence Manager Software Changes - 4.1 to 4.3

The following describes supported platforms and code fixes and enhancements for SANvergence Manager 4.3.

Supported Platforms

- Eclipse 3300 and Eclipse 4300 4.1.
- Eclipse 1620 4.2 and 4.3.

Code Fixes and Enhancements

Enhancements and fixes are organized by the product area to which they relate, such as general platform, management, E_Port, iFCP, iSCSI, and third party interoperability. Within each product area, they are organized by their bug tracking number, if applicable.

Tracking Number	Description	Product Area
NA	Changed product name and appearance from Nishan to McDATA.	Management

SAN Router SIOS - 4.3 to 4.3.1

The following describes supported platforms and code fixes and enhancements for release 4.3.1.

Supported Platforms

- Eclipse 1620 SAN Router
- 3000/4000 Series SAN Routers

Code Fixes and Enhancements

Enhancements and fixes are organized by the product area to which they relate, such as installation and configuration, management, E_Port, iFCP, iSCSI, and third party interoperability. Within each product area, they are organized by their bug tracking number, if applicable.

Tracking Number	Description	Product Area
4338	Element Manager SAN ID is now refreshed after editing a remote gateway connection.	Management
4307	Element Manager applet cache is now updated when upgrading between different features bundles for a specific release	Management

SANvergence Manager Software Changes - 4.3 to 4.3.1

The following describes supported platforms and code fixes and enhancements for SANvergence Manager release 4.3.1.

Supported Platforms

- Eclipse 1620 SAN Router 4.2, 4.3, and 4.3.1 SIOS
- Eclipse 3300 and 4300 SAN Router 4.1 and 4.3.1

Code Fixes and Enhancements

Enhancements and fixes are organized by the product area to which they relate, such as installation and configuration, management, E_Port, iFCP, iSCSI, and third party interoperability. Within each product area, they are organized by their bug tracking number, if applicable.

Tracking Number	Description	Product Area
4348	The Switch Configuration Report is now generated for the Eclipse 1620 SAN Router for all feature bundles.	Management