Sun StorEdge™ Enterprise 2 Gb FC Single and Dual Port Host Bus Adapter Release Notes

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This document contains the latest supplementary information for the Sun StorEdge Enterprise™ 2 Gb FC Single and Dual Port Host Bus Adapter (SG-XPCI1FC-EM2, SG-XPCI2FC-EM2). Use it with the latest version of the *Sun StorEdge Enterprise 2Gb FC Single and Dual Port HBA Installation Guide* (part number 819-2540-10 or later).

This document contains the following sections:

- "Overview" on page 2
- "Solaris 8, 9, and 10 Operating Systems" on page 3
- "Red Hat Enterprise Linux 3 and 4, and SuSE Linux Enterprise Server 8 and 9" on page 7
- "Windows Server 2000 and Windows Server 2003 Systems" on page 10

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Overview

To use the Sun StorEdge Enterprise 2 Gb FC Single and Dual Port Host Bus Adapter with the Solaris 8, Solaris 9, or Solaris 10 Operating Systems, you must use the Sun driver as described in the following section:

■ "Solaris 8, 9, and 10 Operating Systems" on page 3

To use the adapter with the Red Hat Enterprise Linux (RHEL) 3 and 4, and SuSE Linux Enterprise Server (SLES) 8 and 9, you must use the Emulex driver as described in the following section:

■ "Red Hat Enterprise Linux 3 and 4, and SuSE Linux Enterprise Server 8 and 9" on page 7

To use the adapter with Windows Server 2000 and Windows Server 2003 Operating Systems, you must use the Emulex driver as described in the following section:

■ "Windows Server 2000 and Windows Server 2003 Systems" on page 10

Hardware Limitations

Do not install the SG-XPCIFC-EM2 or the SG-XPCI2FC-EM2 host adapter in slot 2 or slot 3 of a Sun Fire™ V40z system. Failure to comply with this restriction will invalidate the Electromagnetic Emissions certification as published in the Declaration of Conformity in the *Sun StorEdge Enterprise 2 Gb FC Single and Dual Port Host Bus Adapter Installation Guide* (part number 819-2540-12).

Solaris 8, 9, and 10 Operating Systems

This section contains the following information about using the Sun StorEdge Enterprise 2 Gb FC Single and Dual Port Host Bus Adapter in the Solaris OS:

System Requirements

The following hardware and software are qualified with the Solaris 8, Solaris 9, and Solaris 10 operating systems.

Minimum Operating System (OS) Levels

- Solaris 8 SPARC OS Update 4/01 with the Solaris 8 recommended patch cluster
- Solaris 9 SPARC OS with the Solaris 9 recommended patch cluster
- Solaris 10 SPARC or x64/x86 OS

Host Platform Support

- Sun Blade™ 1000, 2000 and 2500+ workstations
- Sun Fire V210, V240 and V250 servers
- Sun Fire V440 server
- Sun Fire V480, V490, V880 and V890 servers
- Sun Fire V1280 and E2900 servers
- Sun Fire T2000 server
- Sun Fire 4800, 4810 and E4900 servers
- Sun Fire 6800 and E6900 servers
- Sun Fire 12K and E20K servers
- Sun Fire 15K and E25K servers
- Netra™ 240, 440, and 1280 and servers
- Sun Fire V20z and V40z servers
- Sun Fire X4100 and X4200 servers

Storage System Support

- Sun StorEdge SE3510 and SE3511 FC Arrays
- Sun StorEdge SE6020/SE6120/SE6320 Arrays
- Sun StorEdge SE6130 Array
- Sun StorEdge 6920 system
- Sun StorEdge 99*x*0 series
- Sun StorEdge L25/L100 tape libraries
- Sun StorEdge L500 tape library
- Sun StorEdge L180, L700 tape libraries
- Sun StorEdge L5500, L8500 tape libraries

Fibre Channel Switch Support

TABLE 1   Fibre Channel Switch Support

Switch	Minimum Firmware Version
QLogic SANbox 5200 2 Gb switch	4.2.05
Sun StorEdge Network 2 Gb switch	4.2.05
QLogic SANbox 5602 4 Gb switch	5.0.0.28.00
Sun StorEdge Network 2 Gb Brocade SilkWorm 3200 and 3800 switches	3.2.0a
Sun StorEdge Network 2 Gb Brocade SilkWorm 3250 and 3850 switches	4.4e
Sun StorEdge Network 2 Gb Brocade SilkWorm 3900 switch	4.4e
Sun StorEdge Network 2 Gb Brocade SilkWorm 12000 and 24000 Core Fabric switches	4.4e
Sun StorEdge Network 4 Gb Brocade SilkWorm 4100 switch	5.0.1a
Sun StorEdge Network 4 Gb Brocade SilkWorm 48000 and 200E	5.0.1a
Sun StorEdge Network 2 Gb McDATA Sphereon 4300 switch	7.01
Sun StorEdge Network 2 Gb McDATA Sphereon 4500 switch	7.01
Sun StorEdge Network 2 Gb McDATA Intrepid 6064 director	7.01
Sun StorEdge Network 2 Gb McDATA Intrepid 6140 director	7.01

Known Issues and Bugs

The following issues and bugs have not been resolved in this release.

Known Issue

The following issue has been identified in this release and will be fixed in the next Solaris 10 Update release:

- The IP feature is turned off by default during the installation process, turn it back on if it is required, by editing the `/kernel/drv/emlxs.conf` file. Change `network-on=0;` to `network-on=1;`.

Fixed Bugs

The following bugs have been fixed since the prior release of this document.

- **CR 6248456**

  Synopsis:

  Memory pool alloc failed;Packet transport failed;Unable to allocate data buffer list PID.

- **CR 6252633**

  Synopsis:

  `Luxadm forcelip` command hangs when issued against disconnected Emulex HBA path on SB2500.

- **CR 6252767**

  Synopsis:

  If existing tape is removed from the SAN and link bounced, all scsi I/O is hung until reboot/tape back.

Known Bugs

The following bugs are under investigation at the time of this release.

- **CR 6235226**

  Synopsis:

  Fabric boot failed due to HBA not retrying the `Start/Stop` cmd.

  Description:

  ```
  Fabric boot to the 6920 (System 1) failed, the error on
  console showed:
  Sun Fire 4810
  OpenFirmware version 5.18.0 (09/20/04 21:21)
  ............

  Rebooting with command: boot
  /ssm@0,0/pci@19,700000/emlxs@1/fp@0,0/disk@w203100015d207200,0
  :a
  ERROR: Can't open boot-device
  {0} ok
  ```

  Workaround:

  The problem was seen on F4810 (serengeti) server. The work around was:

  - When the boot hangs, L1-A or send brk then type `reset` at the `ok` prompt.
    After the reset is completed, try the boot again.

  - After the boot from 6920 was successful and you need to reboot:

    1. type `init  0` to bring the system down to the `ok` prompt

    2. type `reset`

    3. boot from 6920

- **CR 6266132**

  Synopsis:

  Cannot boot from an Emulex target.

  Description:

  Could not boot from a (1.50a4) Emulex HBA target (c1t32d1s0) after build S10u1b6 via jumpstar. SE3500 (411I/ses1046) is a boot target in this case.

  Workaround:

  Configure the SE3510 using only one RAID controller instead of two. Booting from a one controller configuration always works.

- **CR 6281250**

  Synopsis:

  Probe-scsi-all/show-children hang at Emulex card

  Description:

  Serengeti/Xmits3.1 qame10-sc0 system running with 5.19.0_build17 FW. The Xmits3.1 IO6 is configured with 2 Emulex cards in slot 5 and slot 7, all dual ports connected to the Minnow 3510 JBOD. Probe-scsi-all/show-children hang at obp. Also at the OS level, only 2 ports can be seen by format.

  Workaround: None.

Red Hat Enterprise Linux 3 and 4, and SuSE Linux Enterprise Server 8 and 9

The Open Source Drivers required to run the Sun StorEdge Enterprise 2 Gb FC Single and Dual Port Host Bus Adapters in Linux operating systems are available for download at the Sun designated page at `http://www.emulex.com/ts/docoem/framsun/10k.htm`. Drivers that support the Linux 2.4 and 2.6 kernels are provided. The Linux 2.4 kernel is used in Red Hat Enterprise Linux (RHEL) 3 and SuSE Linux Enterprise Server (SLES) 8. The Linux 2.6 kernel is used in RHEL 4 and SLES 9. Consult the Sun hardware platform documentation to verify which Linux releases are supported.

The necessary utilities to perform diagnostics and HBA management are packaged in the Application Kit and are available for download at this webpage. The lputil utility performs simple diagnostics and firmware maintenance, the HBAnyware utility supports general HBA management and configuration functions.

This section contains the following information about using the Sun StorEdge Enterprise 2 Gb FC Single and Dual Port Host Bus Adapter in RHEL 3 and 4, and in SuSE Linux 8 and SLES 9 operating systems:

System Requirements

The following hardware and software are qualified with the RHEL and with the SLES.

Minimum Operating System Levels

- RHEL 3 (x86/IA32) AS, ES, and WS
- RHEL 3 (AMD64) AS and WS
- RHEL 4 (x86/IA32) AS, ES, and WS
- RHEL 4 (x64/AMD64) AS and WS
- SLES 8 (x86/IA32)
- SLES 8 (x64/AMD64)
- SLES 9 (x86/IA32)
- SLES 9 (x64/AMD64)

Host Platform Support

- Sun Fire V20z
- Sun Fire V40z
- Sun Fire X4100
- Sun Fire X4200

Storage System Support

- Sun StorEdge SE3510 and SE3511 FC Arrays
- Sun StorEdge SE6020/SE6120/SE6320 Arrays
- Sun StorEdge SE6130 Array
- Sun StorEdge 6920 system
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- Sun StorEdge L500 tape library
- Sun StorEdge L180, L700 tape libraries
- Sun StorEdge L5500, L8500 tape libraries

For information about RHEL 3 and 4 and SLES 8 and 9 fibre channel switch support refer to TABLE 1.

Known Issues and Bugs

The following bugs are under investigation at the time of the release:

- **CR 6289522** The Emulex Linux kernel 2.6 driver (8.0.16.11) doesn't see all the L25/L100 tape drives on V40z.

  Workaround:

  Add the following options to the `/etc/modprobe.conf` file:

  `scsi_mod default_dev_flags=64 max_luns=255`

  Then issue the `mkinitrd` command to rebuild the initial ramdisk. (Substitute your kernel version if different from 2.6.9-11.)

```
% mkinitrd -f /boot/initrd-2.6.9-11.ELsmp.img 2.6.9-11.ELsmp
```

  This increases the maximum number of LUNs to 255 and enables the configuration to see all the attached tape drives (devices now created under `/dev/st*`).

- **CR 6289529** The Emulex Linux kernel 2.6 driver (8.0.16.11) doesn't see LP10000DC-S HBAs on V40z w/SLES9SP1.

  Workaround:

  Load the driver/application kit (available at the Emulex web site) before loading the SP1.

Windows Server 2000 and Windows Server 2003 Systems

The host adapter device driver for running Windows Server 2000 and Windows Server 2003 systems is available for download at the Emulex website: `http://www.emulex.com/ts/docoem/framsun/10k.htm`

SCSIport Miniport driver supports the 32 bit Windows 2000 and Windows Server 2003 only. The Storport Miniport driver can run on 32 bit and 64 bit Windows Server 2003

System Requirements

The following hardware and software are qualified with the Windows Server 2000 and Windows Server 2003 operating systems.

Host Platform Support

The following servers are supported:

- Sun Fire V20z Server
- Sun Fire V40z Server
- Sun Fire X4100 Server
- Sun Fire X4200 Server

Storage Systems Support

The storage systems supported for the Windows Server 2000 and the Windows Server 2003 operating systems are the same as those listed for Red Hat/SuSE Linux in "Storage System Support" on page 8.

Fibre Channel Switch Support

The FC switches supported for the Windows Server 2000 and Windows Server 2003 operating systems are the same as those listed for Red Hat/SuSE Linux in TABLE 1.

Service Contact Information

If you need help installing or using this product in the United States, call 1-800-USA-4SUN, or go to:

`http://www.sun.com/service/contacting/index.html`