Release Notes for Sun Storage 6580 and 6780 Arrays

Release 6.6

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Release Notes for Sun Storage 6580 and 6780 Arrays

This document contains important release information about the Sun Storage 6580 and 6780 Arrays running Sun StorageTek Common Array Manager (CAM) 6.6.0. Read this document so that you are aware of issues or requirements that can affect the installation and operation of the arrays.

The release notes consist of the following sections:

- "What's In This Firmware Release" on page 2
- "System Requirements" on page 3
- "Restrictions and Known Issues" on page 14
- "Product Documentation" on page 18
- "Service Contact Information" on page 19
- "Third-Party Web Sites" on page 19
- "Sun Welcomes Your Comments" on page 19

For Information About CAM

See the Sun StorageTek Common Array Manager software documentation for the CAM 6.6.0 release at:

`http://docs.sun.com/app/docs/prod/stor.arrmgr66#hic`

For Related Patch Information

Look for the latest patches pertaining to your environment at:

`http://sunsolve.sun.com/show.do?target=patchpage`

1. **In the Search box in the masthead, enter 6580 or 6780.**

2. **Filter Results By: Downloads > Patches.**

   Patches related to the array are listed.

What's In This Firmware Release

Array controller firmware version 7.60.18.13 includes expanded disk drive support, including support for Solid State Disk (SSD) and encryption-capable drives (see TABLE 2 for a list of supported drives). This version also includes expanded cache size options for the Sun Storage 6780 Array (see TABLE 1 for a list of array features).

The firmware is provided with Sun StorageTek Common Array Manager (CAM) v. 6.6.0, available for download at:

`http://www.sun.com/storage/management_software/resource_management/cam`

Click the "Buy Now" button to download the latest CAM software.

For more information about bug fixes, see the *Sun StorageTek Common Array Manager Release Notes, 6.6.0*.

Array Features

The Sun Storage 6580 and 6780 Arrays are compared in TABLE 1.

TABLE 1 Comparison of Sun Storage 6580 and 6780 Array Configurations

	6580	6780
Total cache size per array	8 or 16 Gbytes	8, 16, 32, or 64 Gbytes
Number of host ports	8 4-Gbit/second or 8 G-bit/second	8 or 16 4-Gbit/second or 8-Gbit/second
Host interface cards	2	2 or 4
Maximum number of drives supported	256	448
Disk reads	IOPS* 115K Throughput 3000 MB/second	IOPS* 175K Throughput 6400 MB/second
Maximum array configuration	1x16	1x28
Maximum raw capacity	512 Tbytes	896 Tbytes

* Input/output operations per second

Note – Upgrading from a 61x0 array to a Sun Storage 6580 or 6780 Array is a data-in-place migration.

System Requirements

The software and hardware products that have been tested and qualified to work with the Sun Storage 6580 and 6780 Arrays are described in the following sections.

- "Minimum Firmware Requirements" on page 3
- "Supported Disk Drives" on page 3
- "Solid State Disk Requirements" on page 4
- "Array Expansion Module Support" on page 5
- "Data Host Requirements" on page 5

Minimum Firmware Requirements

The firmware version for Sun Storage 6580 and 6780 Arrays features described in this release note is version 07.60.xx.xx. This firmware version (or higher) is installed on the array controllers prior to shipment and is also delivered with Sun StorageTek Common Array Manager (CAM) v, 6.6.0.

Supported Disk Drives

TABLE 2 lists the size, spindle speed, type, interface speed, and tray capacity for the supported Fibre Channel (FC) and Serial Advanced Technology Attachment (SATA) drives for Sun Storage 6580 and 6780 Arrays. Additional legacy drives might also be supported with this product.

Note – For special requirements concerning FC Solid State Disks (SSDs), see "Solid State Disk Requirements" on page 4.

TABLE 2 Supported Disk Drives

Drive	Description
FC, 73GB, Solid State Disk	73-Gbyte SSD drives (4 Gbits/sec); 1168 Gbytes per tray
FC, 146G15K	146-Gbyte 15,000-RPM FC drives (4 Gbits/sec); 2336 Gbytes per tray
FC, 300G15K	300-Gbyte 15,000-RPM FC drives (4 Gbits/sec); 4800 Gbytes per tray
FC, 400G10K	400-Gbyte 10,000-RPM FC drives (4 Gbits/sec): 6400 Gbytes per tray
FC, 450G15K	450-Gbyte 15,000-RPM FC drives (4 Gbits/sec); 7200 Gbytes per tray
SATA-2, 500G7.2K	500-Gbyte 7,200-RPM SATA drives (3 Gbits/sec); 8000 Gbytes per tray
FC, 600GB15K, Encryption Capable	600-Gbyte 15,000-RPM FC drives Encryption Capable (4 Gbits/sec); 9600 Gbytes per tray
SATA-2, 750G7.2K	750-Gbyte 7,200-RPM SATA drives (3 Gbits/sec); 12000 Gbytes per tray
SATA-2, 1T7.2K	1-Tbyte 7,200-RPM SATA drives (3 Gbits/sec); 16000 Gbytes per tray
SATA-2, 2TB7.2K	2-Tbyte 7,200-RPM SATA drives (3 Gbits/sec); 32000 Gbytes per tray

Solid State Disk Requirements

New in this release is support for Solid State Drives (SSDs). These drives have the following installation requirements:

- A maximum of 20 SSD drives can be installed in a single array.
- While it is technically possible to populate an entire tray with SSD drives (16 drives), it is recommended to distribute SSD drives across multiple drive channels.
- SSD drives can be mixed with other drive types in a single tray, but cannot be mixed within the same volume group.

Array Expansion Module Support

TABLE 3 lists supported expansion modules. Refer to "Installing Firmware for Additional Expansion Modules" in the *Sun StorageTek Common Array Manager Release Notes, v.6.6.0* or higher, for more information on the procedure to upgrade trays without data.

Caution – To add trays with data already on them, contact your service representative for assistance to avoid data loss.

TABLE 3 Supported Expansion Modules—6580 and 6780 Arrays

Array Controller	Supported Expansion Modules
Sun Storage 6580 Array	CSM100, CSM200, FLA300, FLC200
Sun Storage 6780 Array	CSM100, CSM200, FLA300, FLC200

Data Host Requirements

This section describes supported data host software, HBAs, and switches.

- "Multipathing Software" on page 5
- "Supported Host Bus Adaptors (HBAs)" on page 7
- "Supported Enterprise Software" on page 13
- "Supported FC and Multilayer Switches" on page 14

Multipathing Software

This section provides a summary of the data host requirements for the Sun Storage 6580 and 6780 Arrays. It lists the current multipathing software and supported host bus adapters (HBAs) by operating system.

You must install multipathing software on each data host that communicates with Sun Storage 6580 and 6780 Arrays.

For Solaris™ Operating System (OS) 9 data hosts, the multipathing software is part of the Sun StorageTek SAN Foundation software. Solaris OS 10 includes the multipathing software. For data hosts running supported versions of Solaris prior to Solaris OS 10, follow the instructions in the *Hardware Installation Guide for Sun Storage 6580 and 6780 Arrays* to download and install the software from the Sun Download Center.

Note – Single path data connections are not recommended. For more information, see "Single Path Data Connections" on page 15.

TABLE 4 lists supported multipathing software by operating system.

TABLE 4 Multipathing Software

OS	Multipathing Software	Minimum Version	Latest Version	Host Type Setting	Notes
Solaris 9 SPARC	STMS/MPxIO	SFK 4.4.13	SFK 4.4.14	Solaris with MPxIO	
Solaris 10	STMS/MPxIO	Update 6 or Update 5 with patch 140919-04 (SPARC), 140920-04 (x64/x86)	Kernel Jumbo Patch (KJP)	Solaris with MPxIO	
Solaris 9,10 with DMP	Symantec Veritas Dynamic Multi-Pathing (DMP)	5.0MP3	5.0MP3	Solaris with DMP	
Windows 2003 Non-clustered	MPIO	01.03.0302.0215	01.03.0302.0215 (MPIO)	Windows 2003 Non-clustered	
Windows MSCS Cluster	MPIO	01.03.0302.0215	01.03.0302.0215 (MPIO)	Windows Server 2003 Clustered	
Windows 2003 Non-clustered with DMP	DMP	5.0MP3	5.1	Windows Server 2003 Non-clustered (with Veritas DMP)	Pending vendor qualification, see Symantec's HCL
Windows 2003 Clustered with DMP	DMP	5.0MP3	5.1	Windows Server 2003 clustered (with Veritas DMP)	Pending vendor qualification, see Symantec's HCL
Windows 2008	MPIO	01.03.0302.0215	01.03.0302.0215	Windows Server 2003	
AIX 6.1	Cambex DPF	6.1.0.63	6.1.0.63	AIX	
AIX 5.3, 6.1 with DMP	DMP	5.0	5.0MP3	AIX with DMP	Pending vendor qualification, see Symantec's HCL
Red Hat 4 SuSE 9/SuSE 10	RDAC/MPP	09.09.B02.0214	09.09.B02.0214	Linux	

TABLE 4 Multipathing Software *(Continued)*

OS	Multipathing Software	Minimum Version	Latest Version	Host Type Setting	Notes
Red Hat 5 SuSE 10 SP1 (and above)	RDAC/MPP	09.03.0C00.0042	09.09.0C02.0214	Linux	
Red Hat 5 (and above)	RDAC	09.03.0C00.0042	09.09.0C02.0214	Linux	
Red Hat SuSE with DMP	DMP	5.0MP3	5.0MP3	Linux with DMP	Pending vendor qualification, see Symantec's HCL
HPUX	Veritas DMP	5.0MP3	5.0MP3	HP-UX	Pending vendor qualification, see Symantec's HCL

Note – Download the MPIO and RDAC multipathing drivers from the Sun Download Center `http://www.sun.com/download/index.jsp?tab=2`.

Note – The multipathing driver for the IBM AIX platform is Veritas DMP, bundled in Veritas Storage Foundation 5.0 for Sun Storage 6580 and 6780 Arrays. Download the Array Support Library (ASL) from `http://support.veritas.com/`.

Supported Host Bus Adaptors (HBAs)

TABLE 5, TABLE 6, and TABLE 7 list supported HBAs and other data host platform elements by operating system.

HBAs must be ordered separately from Sun or its respective manufacturers. Sun HBAs can be ordered from:

`http://www.sun.com/storagetek/storage_networking/hba/`

You can download HBA drivers and other host software from the Sun Download Center at:

`http://www.sun.com/software/download/`

Download operating system updates from the web site of the operating system company.

You must install the multipathing software before you install any OS patches.

TABLE 5 Supported HBAs for Solaris Data Host Platforms

Operating System	Minimum OS Patches	Sun 2-Gbit HBAs	Sun 4-Gbit HBAs	Sun 8-Gb HBAs
Solaris 9	113277-44 or higher	SG-XPCI1FC-QL2 (6767A) SG-XPCI2FC-QF2-Z (6768A) SG-XPCI1FC-EM2 SG-XPCI2FC-EM2	SG-XPCI1FC-QF4 SG-XPCI2FC-QF4 SG-XPCI2FC-EM4-Z SG-XPCI1FC-EM4-Z	N/A
Solaris 10 SPARC	Update 6 or Update 5 with patch 140919-04	SG-XPCI1FC-QL2 (6767A) SG-XPCI2FC-QF2-Z (6768A) SG-XPCI1FC-EM2 SG-XPCI2FC-EM2	SG-XPCIE1FC-QF4 SG-XPCIE2FC-QF4 SG-XPCIE1FC-EM4 SG-XPCIE2FC-EM4 SG-XPCI1FC-QF4 SG-XPCI2FC-QF4 SG-XPCI1FC-EM4 SG-XPCI2FC-EM4 SG-XPCIE2FCGBE-Q-Z SG-XPCIE2FCGBE-E-Z	SG-XPCIE1FC-QF8-Z SG-XPCIE2FC-QF8-Z SG-XPCIE1FC-EM8-Z SG-XPCIE2FC-EM8-Z
Solaris 10 x64/x86	Update 6 or Update 5 with patch 140920-04	SG-XPCI1FC-QL2 (6767A) SG-XPCI2FC-QF2-Z (6768A) SG-XPCI1FC-EM2 SG-XPCI2FC-EM2	SG-XPCIE1FC-QF4 SG-XPCIE2FC-QF4 SG-XPCIE1FC-EM4 SG-XPCIE2FC-EM4 SG-XPCI1FC-QF4 SG-XPCI2FC-QF4 SG-XPCI1FC-EM4 SG-XPCI2FC-EM4 SG-XPCIE2FCGBE-Q-Z SG-XPCIE2FCGBE-E-Z	SG-XPCIE1FC-QF8-Z SG-XPCIE2FC-QF8-Z SG-XPCIE1FC-EM8-Z SG-XPCIE2FC-EM8-Z

TABLE 6 Supported HBAs for Microsoft Windows Data Host Platforms

Host OS / Servers	HBAs	Sun 2-Gb HBAs	Sun 4-Gb HBAs	Sun 8-Gb HBAs
Microsoft Windows 2008 Server 32-bit / x86 (IA32) 64-bit / x64 (AMD) EM64T IA64	QLogic QLE 256x QLogic QLE 246x QLogic QLA 246x QLogic QLA 234x QLogic QLA 2310F Emulex LPe12000/LPe12002/LPe1250 Emulex Lpe11000/LPe11002/LPe1150 Emulex LP11000/LP11002/LP1150 Emulex LP9802/9802DC/982 Emulex LP952/LP9002/LP9002DC Emulex 10000/10000DC/LP1050	SG-XPCI1FC-EM2 SG-XPCI2FC-EM2 SG-XPCI1FC-QL2 SG-XPCI2FC-QF2-Z	SG-XPCIE1FC-QF4 SG-XPCIE2FC-QF4 SG-XPCIE1FC-EM4 SG-XPCIE2FC-EM4 SG-XPCI1FC-QF4 SG-XPCI2FC-QF4 SG-XPCI1FC-EM4 SG-XPCI2FC-EM4 SG-XPCIE2FCGBE-Q-Z SG-XPCIE2FCGBE-E-Z	SG-XPCIE1FC-QF8-Z SG-XPCIE2FC-QF8-Z SG-XPCIE1FC-EM8-Z SG-XPCIE2FC-EM8-Z
Microsoft Windows 2003 32-bit with SP1 R2 / x86 (IA32)	QLogic QLE 256x QLogic QLE 246x QLogic QLA 246x QLogic QLA 234x QLogic QLA 2310F Emulex LPe12000/LPe12002/LPe1250 Emulex Lpe11000/LPe11002/LPe1150 Emulex LP11000/LP11002/LP1150 Emulex LP9802/9802DC/982 Emulex LP952/LP9002/LP9002DC Emulex 10000/10000DC/LP1050	SG-XPCI1FC-EM2 SG-XPCI2FC-EM2 SG-XPCI1FC-QL2 SG-XPCI2FC-QF2-Z	SG-XPCIE1FC-QF4 SG-XPCIE2FC-QF4 SG-XPCIE1FC-EM4 SG-XPCIE2FC-EM4 SG-XPCI1FC-QF4 SG-XPCI2FC-QF4 SG-XPCI1FC-EM4 SG-XPCI2FC-EM4 SG-XPCIE2FCGBE-Q-Z SG-XPCIE2FCGBE-E-Z	SG-XPCIE1FC-QF8-Z SG-XPCIE2FC-QF8-Z SG-XPCIE1FC-EM8-Z SG-XPCIE2FC-EM8-Z

TABLE 6 Supported HBAs for Microsoft Windows Data Host Platforms *(Continued)*

Host OS / Servers	HBAs	Sun 2-Gb HBAs	Sun 4-Gb HBAs	Sun 8-Gb HBAs
Microsoft Windows 2003 64-bit with SP1 R2 / x64 (AMD) EM64T IA64	QLogic QLE 256x QLogic QLE 246x QLogic QLA 246x QLogic QLA 234x QLogic QLA 2310F Emulex LPe12000/LPe12002/ LPe1250 Emulex Lpe11000/LPe11002/LPe1150 Emulex LP11000/LP11002/LP1150 Emulex LP9802/9802DC/982 Emulex LP952/LP9002/LP9002DC Emulex 10000/10000DC/LP1050	SG-XPCI1FC-EM2 SG-XPCI2FC-EM2 SG-XPCI1FC-QL2 SG-XPCI2FC-QF2-Z	SG-XPCIE1FC-QF4 SG-XPCIE2FC-QF4 SG-XPCIE1FC-EM4 SG-XPCIE2FC-EM4 SG-XPCI1FC-QF4 SG-XPCI2FC-QF4 SG-XPCI1FC-EM4 SG-XPCI2FC-EM4 SG-XPCIE2FCGBE-Q-Z SG-XPCIE2FCGBE-E-Z	SG-XPCIE1FC-QF8-Z SG-XPCIE2FC-QF8-Z SG-XPCIE1FC-EM8-Z SG-XPCIE2FC-EM8-Z

TABLE 7 Supported HBAs for Linux Data Host Platforms

Host OS / Sun Servers	HBAs	Sun 2-Gb HBAs	Sun 4-Gb HBAs	Sun 8-Gb HBAs
Linux SuSE 10.2 SuSE 11	QLogic QLE 256x QLogic QLE246x QLogic QLA 246x QLogic QLA 234x QLogic QLA 2310F Emulex LP982/LP9802/9802DC Emulex LP9002/LP9002DC/LP952 Emulex LP10000/10000DC/LP1050 Emulex LP11000/LP11002/LP1150 Emulex Lpe11000/LPe11002/LPe1150 Lpe12000/LPe12002/ Lpe1250	SG-XPCI1FC-EM2 SG-XPCI2FC-EM2 SG-XPCI1FC-QL2 SG-XPCI2FC-QF2-Z	SG-XPCIE1FC-QF4 SG-XPCIE2FC-QF4 SG-XPCIE1FC-EM4 SG-XPCIE2FC-EM4 SG-XPCI1FC-QF4 SG-XPCI2FC-QF4 SG-XPCI1FC-EM4 SG-XPCI2FC-EM4 SG-XPCIE2FCGBE-Q-Z SG-XPCIE2FCGBE-E-Z	SG-XPCIE1FC-QF8-Z SG-XPCIE2FC-QF8-Z SG-XPCIE1FC-EM8-Z SG-XPCIE2FC-EM8-Z

TABLE 7 Supported HBAs for Linux Data Host Platforms *(Continued)*

Host OS / Sun Servers	HBAs	Sun 2-Gb HBAs	Sun 4-Gb HBAs	Sun 8-Gb HBAs
Linux SuSE 9.0 - IA 32, 2.6 kernel / x64 EM64T x86 (IA32) IA64	QLogic QLE 256x QLogic QLE246x QLogic QLA 246x QLogic QLA 234x QLogic QLA 2310F Emulex LP982/LP9802/9802DC Emulex LP9002/LP9002DC/LP952 Emulex LP10000/10000DC/LP1050 Emulex LP11000/LP11002/LP1150 Emulex Lpe11000/LPe11002/LPe1150	SG-XPCI1FC-EM2 SG-XPCI2FC-EM2 SG-XPCI1FC-QL2 SG-XPCI2FC-QF2-Z	SG-XPCIE1FC-QF4 SG-XPCIE2FC-QF4 SG-XPCIE1FC-EM4 SG-XPCIE2FC-EM4 SG-XPCI1FC-QF4 SG-XPCI2FC-QF4 SG-XPCI1FC-EM4 SG-XPCI2FC-EM4 SG-XPCIE2FCGBE-Q-Z SG-XPCIE2FCGBE-E-Z	SG-XPCIE1FC-QF8-Z SG-XPCIE2FC-QF8-Z SG-XPCIE1FC-EM8-Z SG-XPCIE2FC-EM8-Z
RHEL 5u2 RHEL 5u3 RHEL 5u4	QLogic QLE 256x QLogic QLE 246x QLogic QLA 246x QLogic QLA 234x QLogic QLA 2310F Emulex LP982/LP9802/9802DC Emulex LP9002/LP9002DC/LP952 Emulex LP10000/10000DC/LP1050 Emulex Lpe11000/LPe11002/LPe1150 Emulex Lpe12000/LPe12002/ LPe1250	SG-XPCI1FC-EM2 SG-XPCI2FC-EM2 SG-XPCI1FC-QL2 SG-XPCI2FC-QF2-Z	SG-XPCIE1FC-QF4 SG-XPCIE2FC-QF4 SG-XPCIE1FC-EM4 SG-XPCIE2FC-EM4 SG-XPCI1FC-QF4 SG-XPCI2FC-QF4 SG-XPCI1FC-EM4-Z SG-XPCI2FC-EM4-Z SG-XPCIE2FCGBE-Q-Z SG-XPCIE2FCGBE-E-Z	SG-XPCIE1FC-QF8-Z SG-XPCIE2FC-QF8-Z SG-XPCIE1FC-EM8-Z SG-XPCIE2FC-EM8-Z

TABLE 7 Supported HBAs for Linux Data Host Platforms *(Continued)*

Host OS / Sun Servers	HBAs	Sun 2-Gb HBAs	Sun 4-Gb HBAs	Sun 8-Gb HBAs
RHEL 4u7	QLogic QLE 256x	SG-XPCI1FC-EM2	SG-XPCIE1FC-QF4	SG-XPCIE1FC-QF8-Z
RHEL 4.8	QLogic QLE 246x	SG-XPCI2FC-EM2	SG-XPCIE2FC-QF4	SG-XPCIE2FC-QF8-Z
	QLogic QLA 246x	SG-XPCI1FC-QL2	SG-XPCIE1FC-EM4	SG-XPCIE1FC-EM8-Z
	QLogic QLA 234x	SG-XPCI2FC-QF2-Z	SG-XPCIE2FC-EM4	SG-XPCIE2FC-EM8-Z
	QLogic QLA 2310F		SG-XPCI1FC-QF4	
	Emulex LP982/LP9802/9802DC		SG-XPCI2FC-QF4	
	Emulex LP9002/LP9002DC/LP952		SG-XPCI1FC-EM4-Z	
	Emulex LP10000/10000DC/LP1050		SG-XPCI2FC-EM4-Z	
	Emulex Lpe11000/LPe11002/LPe1150		SG-XPCIE2FCGBE-Q-Z	
	Emulex Lpe12000/LPe12002/ Lpe1250		SG-XPCIE2FCGBE-E-Z	

TABLE 8 Other Supported Data Host Platforms

Host OS	Host Servers	HBAs
Novell NetWare 6.5 (SP7)	x86 (IA32)	QLogic QLA 2342 QLogic QLA 2340 QLogic QLA 2310F QLogic QLA 246x
Novell NetWare 6.5 (SP3)	x86 (IA32)	QLogic QLA 2342 QLogic QLA 2340 QLogic QLA 2310F QLogic QLA 246x

TABLE 8 Other Supported Data Host Platforms *(Continued)*

HP-UX 11.31	HP RISC IA64	HP A6795A HP A6826A HP A6684A HP A6685A HP AB378A HP AB379A HP AD300A HP AD355A AH400A (IA64) AH401A (IA64)
HP-UX B.11.23	HP RISC IA64	HP A6795A HP A6826A HP A9784A HP AB378A HP AB379A HP AD300A HP AD355A
IBM AIX 5.2, 5.3, 6.1	Power	IBM 5716 IBM 5758 IBM 5759 IBM 6228 IBM 6239

Supported Enterprise Software

The enterprise software applications listed in TABLE 9 are compatible with the Solaris OS on the data host.

TABLE 9 Supported Enterprise Software

Software	Version
Legato NetWorker	7.3
Sun Cluster	3.0, 3.1
Sun StorageTek QFS software	4.0 minimum
Sun StorageTek SAM-FS software	4.0 minimum
Sun StorageTek Availability Suite	3.2 minimum
Sun StorageTek Enterprise Backup Software	7.3

TABLE 9 Supported Enterprise Software *(Continued)*

Software	Version
Solaris Volume Manager	Embedded in the Solaris 9 and 10 OSs
VERITAS Storage Foundation (VxVM/VxFS)	5.0
VERITAS Cluster Server (VCS)	5.0
VERITAS NetBackup	6.0 or higher

Supported FC and Multilayer Switches

The following FC fabric and multilayer switches are compatible for connecting data hosts and Sun Storage 6580 and 6780 Arrays:

- Sun StorEdge Network 2 Gb FC Switch - 8, 16, and 64
- Brocade SilkWorm 200E/300/4100/4900/5000/5100/5300/7500/48000/DCX
- Cisco 9124/9134/9216/9216i/9222i/9506/9509/9513
- McDATA 6140/i10K/QPM 4 Gb blade for 6140
- QLogic SANBox 5602/9000

Restrictions and Known Issues

The following sections provide information about restrictions, known issues, and bugs filed against this product release:

- "Installation and Hardware Related Issues" on page 15
- "Hardware Issues" on page 16
- "Documentation Issues" on page 17

If a recommended workaround is available for a bug, it follows the bug description.

Installation and Hardware Related Issues

This section describes known issues and bugs related to installing and initially configuring Sun Storage 6580 and 6780 Arrays.

Single Path Data Connections

In a single path data connection, a group of heterogeneous servers is connected to an array through a single connection. Although this connection is technically possible, there is no redundancy, and a connection failure will result in loss of access to the array.

Caution – Because of the single point of failure, single path data connections are not recommended.

Setting the Tray Link Rate

When setting the tray link rate for an expansion tray, all expansion trays connected to the same drive channel must be set to operate at the same data transfer rate (speed).

For details about how to set the tray link rate, see "Setting the Tray Link Rate" in the *Hardware Installation Guide for Sun Storage 6580 and 6780 Arrays*.

Upgrading the Sun StorageTek 6540 Array

Bug CR 6783749 – When upgrading a Sun StorageTek 6540 array to a Sun Storage 6580 or 6780 Array, you cannot change the tray ID 85 to tray ID 99 using CAM.

Workaround – You can use controller tray ID 85 for array configurations up to a maximum of 256 drives.

Hardware Issues

This section describes general issues related to Sun Storage 6580 and 6780 Arrays hardware and firmware.

Replacing CRUs/FRUs in Less Than 15 Minutes

Caution – Without adequate ventilation and air circulation, the controller tray will overheat resulting in potential damage to all customer-replaceable units (CRUs) or field-replaceable units (FRUs). Do not allow any CRU/FRU slot to remain empty for an extended time. Replace the failed CRU/FRU within 15 minutes.

System Cabinet Doors Must Be Closed

Caution – The front and back doors of the system cabinet must be closed for compliance to domestic and international EMI regulations as well as proper equipment cooling. Do not block or cover the openings of the system cabinet. Cabinet airflow is from front to back. Allow at least 30 inches (76.2 cm) in front of the cabinet, and at least 24 (60.96 cm) inches behind the cabinet, for service clearance, proper ventilation, and heat dissipation.

Intermittent Power Supply Failure Notification

Bug 6760395 – CAM logEvent messages intermittently reports power supply failures and 12 seconds later changes to optimal. This is caused by devices not responding to polling.

Workaround – No workaround required. You can ignore the failure messages.

The `cfgadm -c unconfigure` *Command Unconfigures UTM LUNs Only and Not Other Data LUNs (Solaris 10)*

Bug 6362850 – The `cfgadm -c unconfigure` command unconfigures Universal Transport Mechanism (UTM) LUNs only and not other data LUNs. When this happens, you will not be able to unconfigure LUNs.

Workaround – Obtain Solaris 10 patch 118833-20 (SPARC) or patch 118855-16 (x86) to fix this issue.

Tray ID Diagnostic Codes

See Appendix C, Troubleshooting and Operational Procedures, in the *Hardware Installation Guide for Sun Storage 6580 and 6780 Arrays* for a description of the controller tray and expansion tray diagnostic codes.

Documentation Issues

This section describes issues related to Sun Storage 6580 and 6780 Arrays documentation.

Upgrade Guide Does Not Include Instructions for Battery Age Reset

Bug CR 6887119 – When upgrading a Sun StorageTek 6540 array to a Sun Storage 6580 or 6780 array, the *Sun Storage 6000 Series Hardware Upgrade Guide* does not include the step to reset the battery age after the upgrade. Not resetting the battery age could prompt premature battery replacement due to misreported age information.

Workaround – Use the Service Advisor battery replacement procedure to reset the battery age after the upgrade.

Total Cache Size Specification for Sun Storage 6780 Array

In Table 1-1 of the *Hardware Installation Guide for Sun Storage 6580 and 6780 Arrays* (820-5773-11), the value for "Total cache size" is reported as "16 Gbytes or 32 Gbytes." As of the CAM 6.6 release, the revised value is "8, 16, 32, or 64 Gbytes." The revised value is documented in TABLE 1 of this release note document.

Product Documentation

Related product documentation is available at the Sun documentation web site:

http://docs.sun.com/app/docs/prod/6780.array#hic

For translated versions of the documentation, go to the http://docs.sun.com web site, select your language, and search for the product documentation.

Application	Title
Site planning information	*Site Planning Guide for Sun Storage 6580 and 6780 Arrays*
Regulatory and safety information	*Sun Storage Regulatory and Safety Compliance Manual*
Installation overview for rack-mounted arrays	*Getting Started Guide for Sun Storage 6580 and 6780 Rack Mounted Arrays*
	Getting Started Guide for Sun Storage 6580 and 6780 Rack Ready Arrays
Rack installation instructions	*Sun Rack II User's Guide*
Rail kit installation instructions	*Sun Modular Storage Rail Kit Installation Guide*
PDU installation instructions	*Power Distribution Unit Installation Guide for Sun Storage 6580 and 6780 Arrays and Sun StorageTek 2500 and 6000 Array Series*
Array installation instructions	*Hardware Installation Guide for Sun Storage 6580 and 6780 Arrays*
Upgrade a Sun StorageTek 6540 array to a Sun Storage 6580 or 6780 array	*Sun Storage 6000 Series Hardware Upgrade Guide*
Release-specific information for the Sun StorageTek Common Array Manager	*Sun StorageTek Common Array Manager Release Notes, v. 6.6.0*
Software installation and initial configuration instructions	*Sun StorageTek Common Array Manager Software Installation Guide*
Reference information for the Common Array Manager CLI	*Sun StorageTek Common Array Manager CLI Guide*
Multipath failover driver installation and configuration	*Sun StorageTek MPIO Device Specific Module Installation Guide For Microsoft Windows OS*
	Sun StorageTek RDAC Multipath Failover Driver Installation Guide For Linux OS

Service Contact Information

If you need help installing or using this product, go to:

http://www.sun.com/service/contacting

Third-Party Web Sites

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Release Notes for Sun Storage 6580 and 6780 Arrays, part number 821-1427-10.