Sun Storage Common Array Manager

Software Release Notes, Release 6.10 Update for Solaris OS Hosts

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Contents

1. CAM 6.10 Update Release Notes for Solaris OS 1

What's New in CAM 6.10 Update 2

Controller and Disk Firmware Updates 2

About the CAM Software 3

How to Get the Software 3

What You Get With the Software 3

Documentation 4

For Product Information... 5

Mixing Drive Speeds and Capacities 5

System Requirements 5

Supported Arrays 6

Supported Host Operating Systems 7

Supported Web Browsers 7

Firefox Browser Issues 7

Best Practices for Browser Performance 7

Supported Languages 8

Solaris Patches for SAS HBAs 8

Upgrading Firmware 9

2500 Arrays Upgrade 9

2500 Array Support for VMware ESX 4.1 with Firmware 07.35.55.10 and later 9

6540, 6140, and FLX380 Arrays Upgrade 10

J4000 Arrays 10

Sun Blade 6000 Disk Module 10

Sun Storage F5100 Flash Array Notes 10

Supported Expansion Modules 10

Notable Fixes 14

Known Issues 14

Array Issues 15

Controller Smart battery replacement procedure 15

AIX host type for 6140 arrays 15

Battery nears expiration: 06.xx write back cache should not be disabled 15

Both RAID controllers reboot after 828.5 days--2500/6000 arrays 16

Communication Loss reported from Windows and Linux when registering JBODs on Oracle Enterprise Linux 6 proxy 16

Reboots occur due to ancient I/O being aborted in large configurations 16

Configuration Issues 17

Reregister Auto Service Request for CAM 17

Auto Service Request advisory note: DTS Listener transfer 17

Array name remains unchanged after a full array reset 18

Access Configuration: Cascaded J4400 issues 18

Access Configuration fails with error: java.util.HashMap cannot be cast to java.util.Properties 18

Access Configuration: non-zoned SAS2 wide port aggregation FRU Report display—F5100 + 6Gb/sec HBA 18

Array lock key must be set before configuration files are imported 19

ComponentInsertEvent not generated for disk drive inserted into J4200 19

Current Jobs page can take more than five minutes to display 19

Expander firmware 5.3.73 does not persist a SAS zone group 20

Replication status incorrect when primary volume fails 20

Service Advisor: replacing failed SIM with dual path configurations 20

Volumes not deleting from the Single Page window 21

Attempt to delete partner replication set on secondary array fails 21

Documentation Issues 21

Incorrect Windows server OS listed in CAM 6.9 Release Notes 21

Incorrect sscs add notification description in CLI guide 21

2500 Series Release Notes: Simplex vs. Duplex Configurations 22

Disk Locked description is inaccurate in online help 22

Firmware Update Issues 22

Firmware upgrade fails with error: FWR_UPGRADE_FAILURE,6 for J4200/J4400 arrays 22

Firmware upgrade fails on J4400 SATA drives 23

Firmware upgrade fails when expander and disks are upgraded together 23

Firmware upgrade not recognized by GUI until agent runs 23

Sun Blade 6000 firmware upgrade error: No such expander - 50800200006deabf SIGSEGV in Linux libSTORARC.so 24

Sun Blade 6000 firmware upgrade fails with down-level expander 24

Sun Blade 6250 and 6270—upgrading network expansion modules fails 24

Installation and Upgrade Issues 24

Error occurs when upgrading 2510 controller and drive firmware 24

Installation fails on SUSE 10.3 32-bit and 64-bit hosts 25

Solaris Issues 25

Solaris with Veritas DMP or other host type 25

Error—”no execute access to opt/SMgr/agent/notifysmagent.sh”—occurs during system boot-up 25

UTM LUNs Controlled by “Solaris Traffic Manager” 6000/2500 arrays 26

Contacting Support 26

CAM 6.10 Update Release Notes for Solaris OS

Use this document for instructions about how to download the latest Oracle's Sun Storage Common Array Manager (CAM) software and learn about new features, related documentation, system requirements, notable bug fixes, and known issues for the CAM 6.10 product release.

These Release Notes include the following sections:

- "What's New in CAM 6.10 Update" on page 2
- "About the CAM Software" on page 3
- "Mixing Drive Speeds and Capacities" on page 5
- "System Requirements" on page 5
- "Upgrading Firmware" on page 9
- "Supported Expansion Modules" on page 10
- "Notable Fixes" on page 14
- "Known Issues" on page 14
- "Contacting Support" on page 26

What's New in CAM 6.10 Update

The Sun Storage Common Array Manager (CAM) 6.10 Update release is available only for Solaris OS management hosts.

Oracle's Sun Storage Common Array Manager (CAM) 6.10 software that includes the fix for the following CVEs is supported only on Oracle Solaris 10 SPARC and x86 platforms. If you are running the CAM software on Windows or Linux, you will need to migrate to Oracle Solaris 10 to use the fix.

CVE-2007-5333,CVE-2007-5342,CVE-2007-6286,CVE-2008-0002,CVE-2008-1232,CVE-2008-1947,CVE-2008-2370,CVE-2008-2938,CVE-2008-5515,CVE-2009-0033,CVE-2009-0580,CVE-2009-0781,CVE-2009-0783,CVE-2009-2693,CVE-2009-2901,CVE-2009-2902,CVE-2009-3548,CVE-2010-1157,CVE-2010-2227,CVE-2010-3718,CVE-2010-4172,CVE-2010-4312,CVE-2011-0013,CVE-2011-0534,CVE-2011-1184,CVE-2011-2204,CVE-2011-2526,CVE-2011-3190.

If you cannot migrate from Windows or Linux to Oracle Solaris 10 for installing CAM 6.10 with the CVE fix, you can continue to use CAM 6.9 on Windows or Linux. In this case, in order to address the CVE issues, you need to stop the Web Console on Windows or Linux by performing one of the following steps:

For Windows: `C:\Sun\WebConsole\bin\smcwebserver stop`

For Linux: `/opt/sun/webconsole/bin/smcwebserver stop`

This CAM 6.10 release note contains important information about:

- Controller and disk firmware updates for 2530-M2, 2540-M2, 2510, 2530, 2540, 6180, and 6580/6780 arrays
- Bug fixes that correct previous known software problems

Controller and Disk Firmware Updates

Controller and disk firmware has been updated with this release. See the *Sun Storage Common Array Manager Baseline Firmware Reference, Version 6.10 Update* for more information.

About the CAM Software

How to Get the Software

The CAM 6.10 software is available for download from the following locations:

- Oracle Software Delivery Cloud (https://edelivery.oracle.com/)
- My Oracle Support (MOS) (https://support.oracle.com/)

To download from Oracle Software Delivery Cloud:

1. Go to https://edelivery.oracle.com/and sign in.
2. From Select a Product Pack, select Sun Products.
3. From Platform, select the OS version for your host.
4. Select Sun Storage Common Array Manager Software 6.10, and download the software.

For detailed MOS download steps, see the knowledge article "How to Download Common Array Manager (CAM) Software and Patches" Doc ID 1296274.1 available on MOS.

Note – Each array should be managed by one CAM management host only. Installing the management software on more than one host to manage the same array can cause discrepancies in the information reported by CAM.

What You Get With the Software

TABLE 1 lists the version information for the software included in this release.

TABLE 1 Sun Storage Common Array Manager Contents

Type	Version
Sun Storage Common Array Manager	6.10 Update
Oracle Java Web Console software	3.1
Apache Tomcat for Solaris	6.0.43

TABLE 1 Sun Storage Common Array Manager Contents *(Continued)*

Type	Version
Jetty Web server	7.6.12
Oracle Java 2 Software Development Kit	1.6.0_95
Firmware files	See *Sun Storage Common Array Manager Baseline Firmware Reference, Version 6.10 Update*
Remote scripting CLI client	2.1.4

Documentation

The CAM 6.10 documentation set is located at:

`http://docs.oracle.com/cd/E51876_01/index.html`

The documentation set consists of the 6.9.x titles which apply to CAM 6.10, as noted in TABLE 2.

TABLE 2 Where to Find CAM 6.10 and Disk Array Information

For information about:	Refer to:
Installing CAM on Solaris hosts	*Sun Storage Common Array Manager Installation and Setup Guide. Version 6.9.x*
Disk array hardware	Hardware installation guide and release notes for your array: `http://www.oracle.com/technetwork/documentation/oracle-unified-ss-193371.html#modular`
Latest firmware requirements	*Sun Storage Common Array Manager Baseline Firmware Reference, Version 6.10 Update*
Managing the array using the GUI	*Sun Storage Common Array Manager Administration Guide, Version 6.9.0*
Managing the array using the `sscs` CLI	*Sun Storage Common Array Manager CLI Guide, Version 6.9.0*
Troubleshooting information and hardware replacement procedures	Service Advisor, launched from Sun Storage Common Array Manager GUI
Upgrading from firmware rev 6.x to 7.x	"Upgrading Firmware" on page 9

For Product Information...

- Visit https://support.oracle.com/CSP/main/article?cmd=show&type=NOT&doctype=HOWTO&id=1296274.1 to get details about array firmware, and find out more about downloading Common Array Manager software and its patches.
- Join or start a discussion with Oracle experts and industry peers in the My Oracle Support Community for Storage Disk 6000 and 2000 Series RAID Arrays at: https://community.oracle.com/community/support/oracle_sun_technologies/disk_storage_2000__3000__6000_raid_arrays_&_jbods

Mixing Drive Speeds and Capacities

Intermixing drives in 61x0, CSM2, 25xx, and 25xx-M2 trays is supported. However, the following limitations apply to mixed drives within a pool.

- New volumes made up of mixed capacity drives will utilize the same capacity as that of the smallest disk. Disks with larger capacity will have under-utilized space.
- Spindle speed match (SSM). You can mix 10K and 15K drives, but you cannot mix 7200 with 10K and 15K drives.
- Volumes can be made up of different spindle speeds; however, it is recommended that this not be done.
- If a volume is made up of drives with varying spindle speeds, the performance could be as slow as the slowest drive in the volume.

System Requirements

System requirements for Sun Storage Common Array Manager software are described in the following sections:

- "Supported Arrays" on page 6
- "Supported Host Operating Systems" on page 7
- "Supported Web Browsers" on page 7
- "Supported Languages" on page 8
- "Solaris Patches for SAS HBAs" on page 8

Supported Arrays

Sun Storage Common Array Manager software supports the following Sun storage systems:

- Sun Storage 6180 array
- Sun Storage 6580 array
- Sun Storage 6780 array
- StorEdge 6130 array
- StorageTek 6540 array
- StorageTek 6140 array
- Sun Storage 2530-M2 array
- Sun Storage 2540-M2 array
- StorageTek 2510 array
- StorageTek 2530 array
- StorageTek 2540 array
- StorageTek FLX380 array
- StorageTek FLX280 array
- StorageTek FLX240 array
- Sun Storage F5100 Flash array
- Sun Storage J4200 array
- Sun Storage J4400 array
- Sun Storage J4500 array
- Sun Blade 6000 Disk Module
- Sun Blade 6000 Multi-Fabric Network Express Module
- Sun Blade 6000 10GbE Multi-Fabric Network Express Module
- Sun Blade 6000 Virtualized Multi-Fabric 10GbE Network Express Module

Supported Host Operating Systems

TABLE 3 Management Host Operating System Support

Operating System	OS Version	Installation Notes
Solaris OS	Solaris 10 OS U11, U10 and U9	See the *Sun Storage Common Array Manager Installation and Setup Guide, Version 6.9.0*.
Oracle VM Server	Oracle VM Server 2.2.2	Management host (out-of-band) support only.

Supported Web Browsers

TABLE 4 Supported Web Browsers

Browser	Supported Version
Firefox	3.0 and higher
Microsoft Internet Explorer	9.0, 8.0

Firefox Browser Issues

If you install the CAM management host software on a Solaris 10 SPARC sun4v system, you might have problems accessing the CAM GUI using Firefox. To access the GUI using Firefox, log into the management host as `root` and enter the following:

wcadmin add -p -a se6130ui java.options="-D sun.security.pkcs11.enable-solaris=false"

svcadm disable webconsole

svcadm enable webconsole

Best Practices for Browser Performance

For best web browser performance:

- Enable pop-up windows.

- Specify No Proxy for the Sun Storage Common Array Manager host to avoid situations where your browser might hang, time out, or generate error messages. From Preferences > Advanced > Proxies (or a similar path, depending on your browser), add the Sun Storage Common Array Manager management host name to the "No Proxy for" section.
- Recent Firefox versions might require you to accept and add a security certificate prior to bringing up the authentication page.

Supported Languages

Because locales are part of the installation, there is no need to download additional software other than appropriate patches.

For Solaris, Linux, and Windows, the Browser User Interface (BUI) is available in:

- English
- French
- Japanese
- Simplified Chinese

Command-line interface (CLI) is available in:

- English

Online help is available in:

- English
- Simplified Chinese
- Japanese

Man pages are available in:

- English
- Japanese

Solaris Patches for SAS HBAs

To obtain patches for the SAS HBA using Solaris, install the following patches for Solaris 10 Update 9.

The mpt_sas driver requires these patches:

- Oracle Solaris 10 10/09 plus patch 142676-02
- Oracle Solaris 10 10/09 plus patch 143523-02

The mpt_sas driver also requires this Solaris 10 update:

- Oracle Solaris 10 09/10 Update 9

See http://www.lsi.com/support/sun for information about LSI HBA packages.

Upgrading Firmware

Firmware delivered with Sun Storage Common Array Manager software can be installed using the Install Firmware Baseline feature. However, moving from one major firmware release to another (6.x to 7.x) requires a utility specific to the array family. See 2500 Arrays Upgrade and 6540, 6140, and FLX380 Arrays Upgrade for details.

If you attempt an upgrade and it fails, contact My Oracle Support at: https://support.oracle.com

For baseline firmware information, such as controller, NVSRAM, IOM, disk drive, firmware file names, see *Sun Storage Common Array Software Baseline Firmware Reference*.

2500 Arrays Upgrade

For the 25xx arrays, upgrading from a 06.xx.xx.xx version to 07.xx.xx.xx requires a special utility. Consult the My Oracle Support document *Procedure to Upgrade the Sun StorageTek 2500 Series Array Controller Firmware from 06.xx to 07.xx* (Doc ID 1319254.1) which provides links to the upgrade utility and to the *Sun StorageTek 2500 Array Series Firmware Upgrade Guide* (820-6362).

2500 Array Support for VMware ESX 4.1 with Firmware 07.35.55.10 and later

VMware ESX 4.1 is supported as a data host platform for StorageTek 2540 arrays with firmware version 07.35.55.10 installed. The corresponding ESXi version 4.1 is also supported by this firmware version. Note that this support is not mentioned in the latest *Sun StorageTek 2500 Series Array Release Notes, Release 1.4.*

6540, 6140, and FLX380 Arrays Upgrade

Upgrading from a 06.xx.xx.xx version to 07.xx.xx.xx requires a special utility. Consult the My Oracle Support document *Procedure to Upgrade the Sun StorageTek 6540 Array, 6140 Array or FLX380 Storage Array from Firmware 06.xx to 07.xx.* (Doc ID 1131593.1) which provides links to the upgrade utility and to the *Sun StorageTek 6000 Series Array Firmware Upgrade Guide* (820-7197).

J4000 Arrays

It is best practice to upgrade HBAs (SG-XPCIE8SAS-E-Z) to Phase 14 firmware (1.26.03 or later) before upgrading JBOD installations to Sun Storage Common Array Manager version 6.6 and above. This helps avoid issues when discovering JBODs that have SIM firmware 3A53 (J4200) or 3R53 (J4400).

Sun Blade 6000 Disk Module

Before beginning the firmware upgrade process, review this document: *SAS-1/SAS-2 Compatibility Upgrade Guide*. This guide contains information required for a successful firmware upgrade.

Sun Storage F5100 Flash Array Notes

- The FMod firmware upgrade process requires a manual enclosure power cycle.
- SAS2 HBA connectivity requires 5.04.05 firmware, which is installed only on units shipped by manufacturing. Field upgrades from 5.3.73 firmware to 5.04.05 firmware using CAM are not possible.

Supported Expansion Modules

The following tables list supported expansion modules that can be attached to an array configuration.

TABLE 5 Supported Expansion Modules: 6000 Series Arrays

Array Controller	Firmware Version	Supported Expansion Module	IOM Code	
Sun Storage 6180	07.84.58.10	CSM200	98G0	**Note -** When you upgrade from CAM 6.8.1 and have CSM200 trays with 98E4 IOM code, you will be instructed to load 98D6 IOM code on these trays.
Sun Storage 6580 and Sun Storage 6780	07.84.58.10	CSM200	98G0	
		CSM100 FC	9682	
		CSM100 iSATA	9728	
StorageTek 6540	06.60.22.10	CSM200	98D6	
		CSM100 FC	9682	
		CSM100 SATA	9728	
		FLA200	9330	
		FLA300	9682	
		FLC200-dSATA	9566	
		FLC200-iSATA	9728	
StorageTek 6540	07.60.63.10	CSM200	98G0	
		CSM100 FC	9682	
		CSM100 SATA	9728	
		FLA200	9330	
		FLA300	9682	
		FLC200-dSATA	9566	
		FLC200-iSATA	9728	
StorageTek 6140	06.60.22.10	CSM200	98D6	
		CSM100 FC	9682	
		CSM100 SATA	9728	
		FLA200	9330	
		FLA300	9682	
		FLC200-dSATA	9566	
		FLC200-iSATA	9728	

TABLE 5 Supported Expansion Modules: 6000 Series Arrays *(Continued)*

Array Controller	Firmware Version	Supported Expansion Module	IOM Code
StorageTek 6140	07.60.63.10	CSM200	98G0
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLA300	9682
		FLC200-dSATA	9566
		FLC200-iSATA	9728
StorEdge 6130	06.60.22.10	CSM200	98D6
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLC200-dSATA	9566

TABLE 6 Supported Expansion Module: 2500-M2 Series Arrays

Array Controller	Firmware	Supported Expansion Module	IOM Code
Sun Storage 2530-M2	07.84.53.10	2501-M2	0366
Sun Storage 2540-M2	07.84.53.10	2501-M2	0366
StorageTek 2510 2530. 2540	07.35.74.10	2501*	0199
	07.35.74.10	2501	0199

* Only Simplex (single controller) 2501 expansion modules may be attached to a Simplex 2500 series controller tray.

TABLE 7 Supported Expansion Modules: FLX240, FLX280, and FLX380 Arrays

Array Controller	Firmware	Supported Expansion Modules	IOM Code
StorageTek FLX240	06.60.22.20	CSM200	98D6
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLA300	9682
		FLC200-dSATA	9566
		FLC200-iSATA	9728
StorageTek FLX280	06.60.22.20	CSM200	98D6
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLA300	9682
		FLC200-dSATA	9566
		FLC200-iSATA	9728
StorageTek FLX380	06.60.22.20	CSM200	98D6
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLA300	9682
		FLC200-dSATA	9566
		FLC200-iSATA	9728
StorageTek FLX380	07.60.63.10	CSM200	98G0
		CSM100 FC	9682
		CSM100 SATA	9728
		FLA200	9330
		FLA300	9682
		FLC200-dSATA	9566
		FLC200-iSATA	9728

For additional baseline firmware information, such as controller, NVSRAM, disk drive, and firmware file names, see *Sun Storage Array Baseline Firmware Reference*.

Notable Fixes

Following is a list of the notable bug fixes delivered with the CAM 6.10 Update.

- Bug 20470433 - CAM Email not presenting 'From' field in email alerts.
- Bug 19778233 - CAM removes drive serial number substrings and prevents firmware upgrade
- Bug 19563133 - Firmware upgrade fails on a 6780 using CAM 6.10 going from 7.80 to 7.84
- Bug 19451239 - Drives not listed in Service Adviser
- Bug 19447926 - In-Band management registration succeeds but then array is not accessible
- Bug 19009546 - Upgrade embedded apache tomcat to 6.0.43 for security issues.
- Bug 18756656 - Upgrade JDK used by CAM processes to Java 6 update 95.
- Bug 18186833 - Upgrade JDK used by CAM installer/uninstaller to Java 6 update 95.
- Bug 20488443 - 6x80: Require NetApp Fix

Known Issues

The following sections describe known issues and recommended workarounds:

- "Array Issues" on page 15
- "Configuration Issues" on page 17
- "Documentation Issues" on page 21
- "Firmware Update Issues" on page 22
- "Installation and Upgrade Issues" on page 24
- "Solaris Issues" on page 25

Array Issues

Reference the hardware release notes for more information about known issues that pertain to your arrays.

Controller Smart battery replacement procedure

This Smart battery information is a supplement for the CAM Service Advisor Battery Removal/Replacement procedure.

To determine if a Smart battery is installed, verify by checking the following:

1. Go to Storage Systems > *array name* > Troubleshooting > FRUs.
2. From the FRU Summary page, click Battery.
3. From the Component Summary page for the battery, look at the serial number in the Unique Identifier column.

   If the serial number for the battery starts with an "S," it's a Smart battery.
4. Under the Name column, click the battery name.

   On the Battery Health Details page, you will see Last Learn Cycle and Next Learn Cycle fields. If the battery is a non-Smart battery, these two fields are not present.
5. When you replace a Smart battery, you do not need to reset the battery age as described in the Service Advisor procedure.

AIX host type for 6140 arrays

Bug 15742788 (7092652)—The host type setting for AIX hosts with the CAMBEX DPF failover driver should be set to AIX_FO, not AIX as stated in the *Sun StorageTek 6140 Array Release Notes*.

Battery nears expiration: 06.xx write back cache should not be disabled

Bug 15668206 (6983826)—With the 06.xx array firmware, the write back cache is incorrectly inactivated when the batteries enter the near-expiration period. Normally, it should in-activate when the batteries expire.

Resolution —Upgrade the array firmware to 07.xx. See "Upgrading Firmware" on page 9.

Both RAID controllers reboot after 828.5 days--2500/6000 arrays

Bugs 15583341, 15640887 (6872995, 6949589)—Both RAID controllers reboot after 828.5 days of continuous operation. A timer in the firmware (vxWorks) called "vxAbsTicks" is a 32-bit (double word) integer that keeps count in the 0x0000 0000 format. When this timer rolls over from 0xffffffff to 0x00000000 (after approximately 828.5 days), if there is host I/O to volumes, the associated drives fail with a write failure.

Original Resolution—Every 24 hours, firmware spawns a task--cfgMonitorTask--that checks the value of the vxworks kernel timing counter. For controllers with 03.xx-06.60 firmware (6000 series) and 03.xx-6.70 firmware (2500 series): Both controllers reboot if counter is greater than 825 days.

Final Resolution—Every 24 hours, firmware spawns a task--cfgMonitorTask--that checks the value of the vxworks kernel timing counter.

This fix staggers the reboots of the controllers for approximately five days so the only impact is a small performance degradation while the reboot occurs.

For controllers with firmware 07.15.11.12 or later (6000 series) and firmware 07.35.10.10 or later (2500 series): Controller A reboots if counter is greater than 820 days. Controller B reboots if counter is greater than 825 days.

Communication Loss reported from Windows and Linux when registering JBODs on Oracle Enterprise Linux 6 proxy

Bug 15715109 (7044185)—Windows and Solaris management hosts report communication loss.

Workaround—Register the JBOD locally or use Solaris management host to manage the Oracle Enterprise Linux 6 proxy.

Reboots occur due to ancient I/O being aborted in large configurations

Bug 15626618 (6931169)—In configurations where vdisks include more than 32 volumes, you might see host I/O errors or internal controller reboots from the controller detecting the I/Os that have not been processed within the timeout period (for example, ancient I/Os).

Workaround—A best practice is to quiesce host I/O when performing vdisk re-configuration. This helps avoid host I/O errors or internal controller reboots that might occur before setup operations complete.

Configuration Issues

Reregister Auto Service Request for CAM

A new transport protocol for phone home communications with Oracle was introduced with CAM 6.9. If you haven't already updated to CAM 6.9, you must unregister CAM with Auto Service Request (ASR), then reregister with ASR after CAM 6.10 is installed.

1. To unregister with ASR, log into CAM and go to General Configuration > Auto Service Request > Unregister.
2. Install CAM 6.10.
3. You can register with ASR during initial setup, or later from the General Configuration > Auto Service Request > Auto Service Request (ASR) Setup page.
4. To complete ASR activation, use the My Oracle Support web site: http://support.oracle.com. For more information about ASR activation, see the CAM online help topic "Activating ASR with My Oracle Support."
5. Refer to the new DTS URLs in the CAM online help topic "Client Security" to verify your firewall settings.

Auto Service Request advisory note: DTS Listener transfer

When performing a firmware update or using Service Advisor to put an array into service mode, messages similar to these may appear in the CAM event log:

```
Nov 3, 2011 10:32:34 AM
com.sun.storage.cam.service.notif.asr.dts.DTSListener
transferAttemptFailed
SEVERE: Message transfer attempt failed: HTTP Error: 404 Not
found Queue not found
Nov 3, 2011 10:32:34 AM
com.sun.storage.cam.service.notif.asr.dts.DTSListener
transferAttemptFailed
SEVERE: Retrying...  Time To Live in milliseconds = 960
```

```
Nov 3, 2011 10:32:34 AM
com.sun.storage.cam.service.notif.asr.dts.DTSListener
messageSendFailed
SEVERE: Failed to send message.
```

The CAM operation is not affected and these messages may be ignored. Refer to knowledge article 1381185.1 for more information.

Array name remains unchanged after a full array reset

Bug 15774381 (7147538)—After performing a full array reset from the Administration page, the CAM array name for some arrays is not changed to "unlabeled" as was done in previous releases.

Workaround—To set the array name using the GUI, go to the Administration page and click Save. If you are using the CLI,, use the `modify array` command:

modify -N <*new-array-name*> array <*array-ID*>

Access Configuration: Cascaded J4400 issues

Bugs 15621203, 15621748, 15621899 (6924428, 6925163, 6925341)–-Auto-save zone template does not import; cascaded J4400s return incorrect PHY port data; hosts connected to ports with no zones see all disks in J4400.

Workaround—Use only the "HostOrSimLinkIn" port to cascade J4400 arrays.

Access Configuration fails with error: java.util.HashMap cannot be cast to java.util.Properties

Bug 15624460 (6928490)—This error has been observed in a configuration of cascaded J4200 and J4400 arrays with dual-path to the host (one HBA connected to SIM0 domain and another HBA of the same host connected to SIM1).

Workaround—Retry the operation.

Access Configuration: non-zoned SAS2 wide port aggregation FRU Report display—F5100 + 6Gb/sec HBA

Bug 15649467 (6960746)—Report for configuration with both HBA ports into single SAS Domain with Zoning disabled yields FRU Report issues such as:

- Chassis.00 FRU reports: One of the two connected Expander 1 Port 0 Cable Status fields is dropped from the report.
- Chassis.00 FRU reports: The second connected port Expander 1 Port 1 Cable Status displayed is Degraded.
- Access Configuration pages are missing port 0.

Attaching both ports from an HBA into the same F5100 expander results in a "wide port" (8 phys). Sun Storage Common Array Manager software models the aggregated connections as a single, logical SAS port. The information displayed in the Access Configuration Summary only lists the connected port with the higher alphanumeric sort. For example, if Ports 0 and 2 are connected into the same expander, only Port 2 is listed.

This issue also occurs in the CLI where Port options list a single entry under the Connector list.

Other forms of addressing the wide port are still in force. The SAS Address of the port is available for use in operations, presenting a single address for all eight PHYS of the two HBA connectors.

Array lock key must be set before configuration files are imported

If the configuration file to be imported contains secure volumes, the array lock key must be set before the import. The verification step of the import fails if a secure volume is found but the array lock key has not been set. The import job will not be started and no settings on the target array will be changed.

ComponentInsertEvent not generated for disk drive inserted into J4200

Bug 15644125 (6953638)—When a disk drive is inserted into the J4200, no ComponentInsertEvent is generated and entered into the Event Log. Only ValueChangeEvents [such as (Status +) from Removed to OK for disk in slot x] are generated.

Current Jobs page can take more than five minutes to display

Bug 15582215 (6871197)—In a Sun Storage 6180 array with 1023 Volume Copies, it takes over five minutes for the Current Jobs page to display.

Workaround—Click the Current Jobs page a second time to display the page more quickly.

Expander firmware 5.3.73 does not persist a SAS zone group

Sun Storage F5100 Flash array expander firmware 5.3.73 does not persist a SAS zone group in the case where an initiator's SAS address changes. Initiator SAS address change can be caused by a host reboot or when a new initiator is plugged into a previously zoned F5100 port. When a SAS address changes, Sun Storage Common Array Manager will still report the initiator and the devices are associated; however, the F5100 expander has actually disassociated the host from the zoned devices. This results in the host losing access to zoned devices.

Workaround –Re-zone the new initiator address with the existing devices, to ensure the new host initiator is associated with the target devices. This issue is fixed in F5100 expander firmware 5.4.4.

Replication status incorrect when primary volume fails

Bug 15399510 (6561709)—When the primary volume in a replication set (6xxx arrays) fails, the management software might incorrectly list the volume as replicating.

Service Advisor: replacing failed SIM with dual path configurations

If you have dual paths to hosts in zones with cascaded JBODs and you need to replace a failed SIM, you might encounter a problem when you have to plug in the SAS cables to the new SIM. This is because the new SIM is not zoned and all hosts see all disks until the old zone is restored.

Workaround—Before you replace a failed SIM, be sure to **stop all I/O, even in dual path configurations**. When you insert the new SIM, you have to upgrade the firmware which requires stopping the I/O anyway. Taking this step before replacing a failed SIM enables rezoning the new SIM before attempting further I/O.

Volumes not deleting from the Single Page window

Bug 15542935 (6807053)—Unable to delete volumes with the "Show Data in Single Page" option from the Volume Summary page. After multiple volumes are deleted, the Volume Summary Page still shows the same number of volumes as before.

Workaround—Use paginated view to delete volumes.

Attempt to delete partner replication set on secondary array fails

Bug 15723678 (7057616)—When you delete a replication set using the CLI or GUI, the partner replication set on the secondary array will not be deleted if the controller that is participating in the replication has a port that is down.

Workaround—Go to the secondary array and delete the partner replication set from that array.

Documentation Issues

Incorrect Windows server OS listed in CAM 6.9 Release Notes

Bug 18094855—Table 1-4 Management Host Operating System Support in the CAM 6.9 Release Notes incorrectly lists Windows Server 2008 R2 SP2 as a supported platform.

Workaround—The correct supported Windows Server 2008 versions are: Windows Server 2008, Windows Server 2008 SP2, and Windows Server 2008 R2.

Incorrect sscs add notification description in CLI guide

Bug 15798792 (7177830)—The `sscs add notification` command on page 32 of the CAM CLI guide (`http://docs.oracle.com/cd/E24008_01/pdf/E24015.pdf`) incorrectly states the default sends out all alerts.

Workaround—The default sends an alert type of 'clear'. Change the text to:

-m,--alarm-level <down | critical | major | minor>

Specifies the minimum priority level of alerts to be sent out. By default, an alert of type 'clear' will be sent out.

2500 Series Release Notes: Simplex vs. Duplex Configurations

The *Sun StorageTek 2500 Series Array Release Notes, Release* 1.4 document contains contradictory information on pages one and 21 concerning the StorageTek 2501 Expansion Module in simplex (single controller) and duplex (two controllers) configurations. The correct information is this: **Only Simplex 2501 expansion modules may be attached to a Simplex 2500 series controller tray.**

Disk Locked description is inaccurate in online help

Bug 15772650 (7145187)—The field description for Disk Details > Disk Locked is inaccurate.

Correction—For disks supporting Data Encryption Services, a value of True means this disk is locked and cannot accept read or write operations. False means the disk is not locked.

Firmware Update Issues

For notable fixed issues related to firmware, see the patch README file.

Firmware upgrade fails with error: FWR_UPGRADE_FAILURE,6 for J4200/J4400 arrays

Bugs 15582208, 15617124, 15621944 (6871188, 6919285, 6925388)—Upgrading firmware on J4200/J4400 attached to x6250 blade fails, with the following error message:

```
Error upgrading firmware. Check the following error message and
array alarm page for possible problems. flash firmware image
failed FWR_UPGRADE_FAILURE,6
```

The firmware on the JBOD remained at 3R21 and all disks remained at the same FW level.

Workarounds—For this symptom–SUSE Linux host, J4400 SIM upgrade failed with return code 6, possibly leading to SIM firmware mismatch–there are two possible workarounds:

- If the upgrade failed without firmware mismatch, do this:

  Power cycle the array and rerun the firmware upgrade wizard GUI.

- If the upgrade failed with firmware mismatch, do this:

  Power cycle the array and rerun the firmware upgrade using one of the following CLI commands:

  sscs modify -a <*array-name*> **-f -t sim -o -w firmware**

  or

  csmservice -i -a <*array-name*> **-f -t sim -o -w**

Firmware upgrade fails on J4400 SATA drives

Bug 15633465 (693982—When upgrading a J4400, the SATA disk firmware upgrade fails.

Workaround—Move affected disks to another slot before upgrading so they do not remain in a degraded state.

Firmware upgrade fails when expander and disks are upgraded together

Bug 15614975 (6916355)—Errors occur when you attempt to upgrade expander and disk firmware at the same time.

Workaround—Power-cycle the array and re-run the firmware install wizard. Then resume the disk drive firmware upgrade.

Firmware upgrade not recognized by GUI until agent runs

Bug 15583664 (6873568)—After a firmware upgrade, the CAM GUI is not updated with the correct version.

Workaround—Wait 5 minutes for the agent to run or run the agent manually.

Sun Blade 6000 firmware upgrade error: No such expander - 50800200006deabf SIGSEGV in Linux libSTORARC.so

Bug 15643397 (6952753)—During a Sun Blade 6000 firmware upgrade, the following error was reported:

```
No such expander - 50800200006deabf SIGSEGV in Linux libSTORARC.so
```

Workaround—Use a non-Adaptec HBA (mixed blade environment with SAS controller).

Sun Blade 6000 firmware upgrade fails with down-level expander

Bug 15639625 (6948014)—An attempt to upgrade Sun Blade 6000 firmware fails if the associated NEM is not at current revision level.

Workaround—When the Network Expansion Module (NEM) and Sun Blade 6000 Disk Module are flagged for upgrade, execute an upgrade on the NEM first. Then, the upgrade works for the Sun Blade 6000 Disk Module storage. For more information, see the *SAS Compatibility Firmware Guide*.

Sun Blade 6250 and 6270—upgrading network expansion modules fails

Bug 15653326 (6965677)—CAM reports that the upgrade of the NEM expanders completed successfully. However, the updated firmware is not reflected in the GUI.

Workaround—Retry the upgrade (multiple attempts might be needed) or use a non-Adaptec HBA.

Installation and Upgrade Issues

Error occurs when upgrading 2510 controller and drive firmware

Bug 15713795, 15771749 (7042337, 7143862)—When you upgrade controller and drive firmware for the StorageTek 2510 array, the upgrade fails and the Install wizard displays “Error upgrading firmware.”

Workaround—Perform the upgrade in two steps. First upgrade only the controller firmware, and then upgrade the drive firmware.

Installation fails on SUSE 10.3 32-bit and 64-bit hosts

Bug 15755131 (7112028)—Installation of CAM fails with the error:

```
The package jdk- did not install successfully.
```

Workaround—Run `uninstall -f` and then reinstall the CAM software. The uninstall removes the jdk so you do not have to remove it manually.

Solaris Issues

Solaris with Veritas DMP or other host type

Bug 15840516—With the release of firmware 07.84.44.10, the host type 'Solaris (with Veritas DMP or other)' is no longer a valid host type.

Workaround—If you are using Veritas with DMP, refer to Veritas support (`http://www.symantec.com/support/contact_techsupp_static.jsp`) for a recommended host type.

Error—"no execute access to opt/SMgr/agent/ notifysmagent.sh"—occurs during system boot-up

Bug 15629617 (6934913)—This error occurs when /opt*(SMagent install directory)* is built on a disk partition other than root partition.

Workaround—Though event notification is lost as a result, there are no adverse effects because the SMagent detects the disk device(UTM volume) during re-scan. The notifysmagent.sh script should be available to the sysseventd since the script is located in the same directory of the SMagent startup script.

UTM LUNs Controlled by “Solaris Traffic Manager” 6000/2500 arrays

After you upgrade to S10U3 (or later), the in-band management UTM LUNs are controlled by Solaris Traffic Manager (MPxIO). In most cases, in-band management will not fail as a result of this; however, it is best practice to ensure that the UTM LUNs are not controlled by MPxIO.

Workaround—Use the `format inquire` command to get the eight-character Vendor (VID) and Product IDs. Follow this procedure:

1. Edit the file /kernel/drv/scsi_vhci.conf

   The following line should read:

   ```
   device-type-scsi-options-list = “SUN Universal Xport”,
   “disable-option”; “disable-option” = 0x7000000
   ```

2. Run the `stmsboot -u` command.

   Respond to the prompts as follows:

   ```
   WARNING: This operation will require a reboot.
   Do you want to continue? [y/n] (default: y) y
   ```

   The changes will result when the system is rebooted.

   ```
   Reboot the system now? [y/n] (default: y) y
   ```

Contacting Support

Contact Support at: https://support.oracle.com