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Sun StorEdge™ Data Management Center 2.0 Release Notes

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Sun StorEdge Data Management Center 2.0 Release Notes

This document contains important last-minute product information about Sun StorEdge™ Data Management Center (DMC) software. This document describes the following topics:

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Installation and Service Information

If you are a Sun™ support or service provider, for product information, go to:

`http://webhome.ebay/networkstorage/products/`

For installation services in the U.S., contact Sun at the following number.

1-800-USA4SUN (1-800-872-4786)

For installation services outside the U.S., contact your local sales or service representative.

For information about service, sales, consulting, and support, go to:

`http://www.sun.com/service/support/contactsalesoffice.html`

`http://www.sun.com/service/support/sunsolve/index.html`

Related Documentation

For late-breaking news about this release, go to the following web site:

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

For the latest version of released storage software documentation, go to:

`http://www.sun.com/products-n-solutions/hardware/docs/Software/`

TABLE 1   Sun StorEdge DMC Related Documentation

Application	Title	Part Number
DMC	`atmadmin`(1M) `ifptm`(7D) `luxadm`(1M) `nvmadm`(1M) `storutil`(1M) `sunvts`(1M) `svadm`(1M)	n/a
	Sun StorEdge Data Management Center 2.0 Software Installation Guide	806-5704
	Sun StorEdge SBus FC-100 Host Adapter Installation and Service Manual	802-7572
	Sun StorEdge StorTools User's Guide	806-1946
	SunATM 4.0 Release Notes	805-6553
	SunATM 4.0 Installation and User's Guide	805-6552
Diagnostics (Solaris 2.6)	*SunVTS 2.1 User's Guide*	802-7299
	SunVTS 2.1.3 Test Reference Manual	805-4163
	SunVTS 2.1 Quick Reference	802-7301
Diagnostics (Solaris 7)	*SunVTS 3.0 User's Guide*	805-4442
	SunVTS 3.0 Test Reference Manual	805-4443
	SunVTS Quick Reference Card	805-4444
	SunVTS 3.1 User's Guide	805-7406
	SunVTS 3.1 Test Reference Manual	805-7407
	SunVTS Quick Reference Card	805-7408

TABLE 1	Sun StorEdge DMC Related Documentation	*(Continued)*
Application	**Title**	**Part Number**
Diagnostics (Solaris 7 8/99)	*SunVTS 3.3 User's Guide*	806-1594
	SunVTS Quick Reference Card	806-1028
	SunVTS 3.3 Test Reference Manual	806-1595
Diagnostics (Solaris 8)	*SunVTS 4.0 User's Guide*	806-2057
	Sun VTS Quick Reference Card	806-2059
	Sun VTS 4.0 Test Reference Manual	806-2058

TABLE 2	Sun StorEdge Fast Write Cache Related Documents	
Application	**Title**	**Part Number**
man Pages	`fwcadm`(**1FWC**) `cache_control` `cache_config` `cache_health` `svadm(1SV)`	N/A
Installation	*Sun StorEdge Fast Write Cache 2.0 Installation Guide*	806-4405
	Sun StorEdge Fast Write Cache 2.0 256 MByte SBus NVRAM Card Installation Guide	806-6353
System Administration	*Sun StorEdge Fast Write Cache 2.0 System Administrator's Guide*	806-2064
Release	*Sun StorEdge Fast Write Cache 2.0 Release Notes*	806-3165
Configuration	*Sun StorEdge Fast Write Cache 2.0 Configuration Guide*	806-4383
Options	*OpenBoot 3.x Command Reference Manual*	806-1377

TABLE 3   Sun StorEdge Instant Image Related Documentation

Application	Title	Part Number
`man` pages	`ii_config`(1M) `ii_control`(1M) `ii_health`(1M) `iiadm`(1M)	N/A
System Administration	*Sun StorEdge Instant Image 2.0 System Administrator's Guide*	806-0230
Installation	*Sun StorEdge Instant Image 2.0 Installation Guide*	806-4004
Release	*Sun StorEdge Instant Image 2.0 Release Notes*	806-0231

TABLE 4   Sun StorEdge Network Data Replicator Related Documentation

Application	Title	Part Number
`man` pages	`bitmapfs.cf`(4) `rdcadm`(1M) `rdc.cf`(4) `rdcd`(1M) `rdc_ii.cf`(1M) `rdcsyncd`(1M)	N/A
Installation	*Sun StorEdge Network Data Replicator 2.0 Installation Guide*	806-4403
System Administration	*Sun StorEdge Network Data Replicator 2.0 System Administrator's Guide*	806-4402
Hardware Installation	*Sun StorEdge SBus FC-100 Host Adapter Installation and Service Manual*	802-7572
Release	*Sun StorEdge Network Data Replicator 2.0 Release Notes*	806-4404

TABLE 5   Sun StorEdge Component Manager Related Documentation

Application	Title	Part Number
Installation	*Sun StorEdge Component Manager 2.1 Installation Guide for the Solaris Operating Environment*	806-4811
User	*Sun StorEdge Component Manager 2.1 User's Guide*	806-4813

TABLE 6	Sun Target Emulation Utility Related Documentation	
Application	**Title**	**Part Number**
man pages	sftm(7D)	N/A
	ste(7D)	
	ste.cf(4)	
	steadm(1M)	
	steconf(1M)	
	stesize.ksh	
	stesocal.ksh	
	stezap.ksh	
	stxprint(1M)	
Release	*Sun StorEdge Target Emulation 1.2 Release Notes*	806-5527

Sun StorEdge Software and Java Software Requirements

The following paragraphs describe the required Java software versions for the Sun StorEdge software.

Sun StorEdge Data Management Center Software

This software requires that the Java™ runtime environment (JRE) be installed to operate properly. At the time of this release, only the following versions of the Java software are supported:

- For installations *without* the Sun StorEdge Component Manager 2.1 software: Java Versions 1.2.1_04b through 1.2.2_05a

- For installations *with* the Sun StorEdge Component Manager 2.1 software: Java Version 1.2.2_05a

Note – Java Version 1.3.0 and more recent versions are not supported by the Sun StorEdge Data Management Center 2.0 or Sun StorEdge Component Manager 2.1 software.

> ⚠️ **Caution –** You must install a supported version of the Java software prior to installing the Sun StorEdge software. If you do not upgrade the system to a supported Java version, you can still install the software, but the software might not operate properly once the installation is complete.

To verify the version of the Java software currently installed on the system, type the following:

```
# java -version
```

To update your version of the Java software, go to `http://java.sun.com`.

> **Note –** To install the French, Japanese or Chinese localized version of the Sun StorEdge software, load the localized version of the Java software.

Sun StorEdge Component Manager 2.1 Software

If you plan to install the Sun StorEdge Component Manager 2.1 software, do so prior to installing the Sun StorEdge Data Management Center 2.0 Software.

Sun Target Emulation Utility Version 1.2 and Sun StorEdge Data Management Center Patches

If you are using applications that use SCSI reserve and release commands, you must download the following Sun target emulation utility (`SUNWte`) and Sun StorEdge Data Management Center patches from the SunSolve web site:

`http://www.sun.com/service/support/sunsolve/index.html`

Install these patches if you are using both products.

Product	Patches to Dowload
Sun target emulation utility (`SUNWte`) version 1.2	Patch numbers 109983-02 through 109986-02 or higher
Sun StorEdge DMC version 2.0	Patch numbers 109967-02 through 70997-02 or higher, depending on your Solaris™ Operating Environment release

Workarounds for Known Bugs

This section describes workarounds for known bugs for the following products:

All Sun StorEdge Data Services Software

The known bugs in this section are as follows:

- "4483960 Installation Error Message When Installing the SUNWesm Package" on page 9
- "4486833 Incorrect Information in the Sun StorEdge 2.0 Services Software CD Documentation" on page 10

4483960
Installation Error Message When Installing the SUNWesm *Package*

During the installation process, the SUNWesm package checks for the Solaris OE version. The package reads the VERSION= variable in the /var/sadm/system/admin/services/Solaris_* file, where * can be 2.6, 2.7, or 8 for a valid installation.

If this file contains an additional VERSION= string, the package displays the following error message:

```
Storage Product Software unsupported on Solaris Revision x y
Cannot install SUNWscm.  Run "pkgrm SUNWscm" to remove
partially installed package.  Exiting...
```

An example of an additional VERSION= string might be FORMAT_VERSION=2 in the case where your machine is a boot server.

Workaround

Before installing the Sun StorEdge 2.0 services software which includes the SUNWesm package, perform the following steps:

1. Check the Solaris OE release information in the /etc/release file.

2. Edit the /var/sadm/system/admin/services/Solaris_* file and temporarily remove any VERSION= strings other than the single VERSION= string that indicates your Solaris OE version. You can replace this information after the installation is finished.

For example, remove FORMAT_VERSION=2 in this sample file:

```
FORMAT_VERSION=2
OS=Solaris
VERSION=8
```

4486833

Incorrect Information in the Sun StorEdge 2.0 Services Software CD Documentation

The documentation in the Sun StorEdge services software CD cases state that all the documentation on the CD is in the Adobe® Acrobat (`.pdf`) format. In fact, some documentation on the CD is also in PostScript™ (`.ps`) format.

Workaround

You can print PostScript files on any PostScript printer and you can view PostScript files using a PostScript viewer.

The latest version of the Sun StorEdge services software documentation in Adobe Acrobat format is available on the Web at:

`http://www.sun.com/products-n-solutions/hardware/docs`

Sun StorEdge Fast Write Cache 2.0 Product

The known bugs in this section are as follows:

4310143
`fwcadm cache` `-s` *No Longer Working*

Execution of `fwcadm cache` `-s` is resulting in a usage error. This supported process checks the NVRAM card status and is documented in the *Sun StorEdge Fast Write Cache 2.0 System Administrator's Guide.*

Workaround: Use the `scmadm` `-S` command to check NVRAM statistics.

4349810
The Sun Management Center 2.1.1 Software Fails After the Sun StorEdge Fast Write Cache 2.0 Installation

The version of the Java software installed by the Sun StorEdge Fast Write Cache 2.0 software is not compatible with the Sun Management Center 2.1.1 software.

Workaround: Install the Sun Management Center 2.2.1 software last. If it is already installed, you must remove it and then reinstall it after you install the Sun StorEdge Fast Write Cache software.

Sun StorEdge Instant Image 2.0 Software

The known bugs in this section are as follows:

4306093
The Sun Management Center Software Fails After the Sun StorEdge Instant Image 2.0 Installation

If you run the Sun™ Management Center software after installing the Sun StorEdge Component Manager software, the Sun Management Center software will fail to run due to Java version conflicts. The Sun StorEdge Management Console baseline 1.1.0.5 is based on Java 1.2.1_04. However, the Sun Management Center software will only run with Java 1.2.1_04a.

Workaround: Change the following Sun Management Center files:

`/opt/SUNWsymon/classes/base/console/bin/es-console.sh`

`/opt/SUNWsymon/classes/base/server/bin/es-server.sh`

This assumes that the Sun Management Center software is installed under the default directory:
`/opt/SUNWsymon`.

In both of the files, change:

```
OUT='java -version 2>&1 | grep -c "Solaris_JDK_1.2.1_04a"'
```

to:

```
OUT='java -version 2>&1 | grep -c "Solaris_JDK_1.2.1_04"'
```

4310148

Bitmap Configuration Formula Described in System Administrator's Guide Does Not Work

The information on page 1-7 of the *Sun StorEdge Instant Image 2.0 System Administrator's Guide* is incorrect regarding the bitmap volume and file sizing.

Correct formula: A bitmap volume's size is based on the size of the master volume as follows:

8 Kbytes per Gbyte of master volume size (rounded up), plus an additional 8 Kbytes for overhead, with a minimum bitmap volume size of 24 Kbytes.

For example, to shadow a 3-Gbyte master volume, the bitmap size must be (3 * 8 Kbytes) + 8 Kbytes, or 32 Kbytes in size.

4364628

The `esm_gui` *Should Be Able to Specify a Logical Volume*

Workaround: Use the command line interface `iiadm` to generate volume pairs if you want to use bitmap volumes.

Sun Target Emulation Utility (`SUNWte`) Version 1.2

The known bugs in this section are as follows:

4216804, 4216809
Sun Target Emulation Utility and VERITAS Volume Manager 2.6

VERITAS Dynamic Multi-pathing (DMP) does not support Sun target emulation utility (`SUNWte`) disks.

Workaround: To manage Sun target emulation utility disks using VERITAS Volume Manager on the initiator, you must disable the VERITAS DMP using the following steps:

1. **Unmount all file systems created on Volume Manager volumes.**

   ```
   # umount volumes
   ```

2. **Stop the Volume Manager.**

   ```
   # vxdctl stop
   ```

3. **Remove the** vxdmp **driver from the** /kernel/drv **directory.**

   ```
   # rm /kernel/drv/vxdmp
   ```

4. **Edit the** /etc/system **file and remove the following line:**

   ```
   forceload: drv/vxdmp
   ```

5. **Remove the Volume Manager DMP files.**

```
# rm -rf /dev/vx/dmp /dev/vx/rdmp
```

6. **Symbolically link** /dev/vx/dmp **to** /dev/dsk**.**

```
# ln -s /dev/dsk /dev/vx/dmp
```

7. **Symbolically link** /dev/vx/rdmp **to** /dev/rdsk**.**

```
# ln -s /dev/rdsk /dev/vx/rdmp
```

8. **Reboot the system to disable the DMP functionality.**

```
# /usr/sbin/shutdown -i6
```

4346340
vxvol -f stop*: Sun target emulation utility Backend VxVM Volumes Cannot Be Restarted*

If a volume becomes unavailable to the cache layer, the cache marks that device as offline. Stopping Volume Manager (VxVM) volumes result in them being marked as offline. The cache does not poll for offline devices to come back online. They must be brought online in the cache manually.

Workaround: To perform Volume Manager maintenance, bring the Sun target emulation utility product down first. If the cache has placed devices offline, re-enable the devices by bringing the cache down and then back up again.

Sun StorEdge Component Manager 2.1 Software

4353975

Cannot Specify Volume init Rate and the Rate is Always 1 in the Sun StorEdge Component Manager 2.1 GUI

During LUN creation on a Sun StorEdge T3 array, no GUI option is available to set the volume init rate.

Workaround: Use the Sun StorEdge T3 command line interface to modify the default `init` rate of 1.

Documentation Additions and Errata

This information in this section supplements the product documentation. This section contains the following topics:

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All Sun StorEdge Installation Guides: Configuring the `nsswitch.conf` File

This installation step helps ensure that the host names in the `/etc/hosts` file are read and known by machines running the Sun StorEdge Versions 2.0 and 2.0.1 services software. In the section, you will edit the `/etc/nsswitch.conf`(4) file using a text editor.

1. **Include the following** `hosts:` **and** `services:` **entries in the** `/etc/nsswitch.conf` **file.**

   Ensure that `files` is placed before `nis` or `nisplus`.

   - For systems using the NIS naming service:

   ```
   hosts: files nis
   services: files nis
   ```

   - For systems using the NIS+ naming service:

   ```
   hosts: files nisplus
   services: files nisplus
   ```

2. **Shut down and restart your machine.**

   ```
   # /etc/shutdown -y -g 0 -i 6
   ```

Setting Up a Bitmap Volume

The Sun StorEdge Instant Image and Sun StorEdge Network Data Replicator (Sun SNDR) software use a bitmap volume to track changes written to disk. The related documentation states that you can use a bitmap file. However, you should use a volume to prevent possible file system deadlocks. These deadlocks rarely occur and do not cause data corruption, but they are inconvenient.

Note – When selecting a volume to be used in the Sun SNDR software volume set, ensure that the volume does not contain disk label private areas (for example, slice 2 on a Solaris-formatted volume). The disk label region is contained in the first sectors of cylinder 0 of a disk. The safest method is to ensure that cylinder 0 is not part of any logical volume that is replicated (except for volumes under VERITAS Volume Manager control, where cylinder 0 can be part of a logical volume that is replicated).

▼ To Set Up a Bitmap Volume

1. **Use a volume manager to create a disk volume.**

   The *Sun StorEdge Instant Image Release Notes* and *Sun StorEdge Network Data Replicator Installation Guide* describe how to correctly size bitmaps.

2. **Clear the volume using the** dd(1M) **command on** /dev/zero**.**

   ```
   # dd if=/dev/zero of=raw-device count=xx skip=yy
   ```

   where:

of=*raw-devices*	is the bitmap volume block device, such as /dev/rdsk/c0t0d0s3
count=*xx*	is the number of blocks to clear
skip=*yy*	is the the number of blocks to skip from the start of the partition before starting the bitmap clearing operation

3. **Specify the bitmap volume to use.**

   - For the Sun StorEdge Instant Image software, specify the volume by using the iiadm -e or config -e commands or the graphical user interface.
   - For the Sun SNDR software, specify the volume by using the rdcadm -e command or by adding it to a configuration file such as rdc.cf.