



# Sun StorEdge™ Data Management Center 2.0 Release Notes

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Sun Microsystems, Inc.  
901 San Antonio Road  
Palo Alto, CA 94303-4900 U.S.A.  
650-960-1300

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Send comments about this document to: [docfeedback@sun.com](mailto:docfeedback@sun.com)

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# Sun StorEdge Data Management Center 2.0 Release Notes

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

- [“Installation and Service Information” on page 2](#)
- [“Related Documentation” on page 3](#)
- [“Sun StorEdge Software and Java Software Requirements” on page 6](#)
- [“Sun Target Emulation Utility Version 1.2 and Sun StorEdge Data Management Center Patches” on page 8](#)
- [“Workarounds for Known Bugs” on page 8](#)
- [“Documentation Additions and Errata” on page 17](#)

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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>

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# 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

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

**TABLE 1** Sun StorEdge DMC Related Documentation (Continued)

<b>Application</b>	<b>Title</b>	<b>Part Number</b>
Diagnostics (Solaris 7 8/99)	<i>SunVTS 3.3 User's Guide</i>	806-1594
	<i>SunVTS Quick Reference Card</i>	806-1028
	<i>SunVTS 3.3 Test Reference Manual</i>	806-1595
Diagnostics (Solaris 8)	<i>SunVTS 4.0 User's Guide</i>	806-2057
	<i>Sun VTS Quick Reference Card</i>	806-2059
	<i>Sun VTS 4.0 Test Reference Manual</i>	806-2058

**TABLE 2** Sun StorEdge Fast Write Cache Related Documents

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

**TABLE 3 Sun StorEdge Instant Image Related Documentation**

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

**TABLE 4 Sun StorEdge Network Data Replicator Related Documentation**

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

**TABLE 5 Sun StorEdge Component Manager Related Documentation**

<b>Application</b>	<b>Title</b>	<b>Part Number</b>
Installation	<i>Sun StorEdge Component Manager 2.1 Installation Guide for the Solaris Operating Environment</i>	806-4811
User	<i>Sun StorEdge Component Manager 2.1 User's Guide</i>	806-4813

**TABLE 6** Sun Target Emulation Utility Related Documentation

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

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## 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

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**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.

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**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.

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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>.

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

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## 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.

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# 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.

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Product	Patches to Download
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

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## Workarounds for Known Bugs

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

- “All Sun StorEdge Data Services Software” on page 9
- “Sun StorEdge Fast Write Cache 2.0 Product” on page 11
- “Sun StorEdge Instant Image 2.0 Software” on page 12
- “Sun Target Emulation Utility (SUNWte) Version 1.2” on page 14
- “Sun StorEdge Component Manager 2.1 Software” on page 16

# 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” on page 11](#)
- [“4349810 The Sun Management Center 2.1.1 Software Fails After the Sun StorEdge Fast Write Cache 2.0 Installation” on page 11](#)

## **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”](#) on page 12
- [“4310148 Bitmap Configuration Formula Described in System Administrator’s Guide Does Not Work”](#) on page 13
- [“4364628 The esm\\_gui Should Be Able to Specify a Logical Volume”](#) on page 13

## **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” on page 14
- “4346340 vxvol -f stop: Sun target emulation utility Backend VxVM Volumes Cannot Be Restarted” on page 15
- “4353975 Cannot Specify Volume init Rate and the Rate is Always 1 in the Sun StorEdge Component Manager 2.1 GUI” on page 16

## *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 vxdump 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.

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# Documentation Additions and Errata

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

- [“All Sun StorEdge Installation Guides: Configuring the nsswitch.conf File” on page 17](#)
- [“Setting Up a Bitmap Volume” on page 18](#)

## 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.

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**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).

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## ▼ 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:

---

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

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### 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`.