



Sun StorEdge™ Network Data Replicator 2.0 Release Notes

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Sun StorEdge Network Data Replicator 2.0 Release Notes

This document contains important last-minute product information about the Sun StorEdge™ Network Data Replicator (Sun SDR) software. This document describes the following topics:

- [“Installation and Service Information” on page 2](#)
- [“Related Documentation” on page 3](#)
- [“Product Notes” on page 4](#)
- [“Workarounds for Known Bugs” on page 4](#)
- [“Documentation Additions and Errata” on page 7](#)

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/>

| Application | Title | Part Number |
|-----------------------|---|--------------------|
| man pages | bitmapfs.cf(4) rdcadm(1M) rdc.cf(4) rdcd(7D) rdc_ii.cf(4) rdcsyncd(7D) | N/A |
| Installation | <i>Sun StorEdge Network Data Replicator 2.0 Installation Guide</i> | 806-4403 |
| | <i>Sun StorEdge Instant Image 2.0 Installation Guide</i> | 806-4004 |
| System administration | <i>Sun StorEdge Network Data Replicator 2.0 System Administrator's Guide</i> | 806-4402 |
| | <i>Sun StorEdge Instant Image 2.0 System Administrator's Guide</i> | 806-0230 |
| | <i>Sun StorEdge Instant Image 2.0 Release Notes</i> | 806-0231 |
| | <i>SunATM 3.0 Installation and User's Guide</i> | 805-0331 |

Product Notes

For maximum data security, use the Sun StorEdge Network Data Replicator 2.0 software with the Sun StorEdge Instant Image 2.0 software. These products integrate to ensure that data consistency can be maintained during resynchronization operations.

Before you start a resynchronization operation, ensure that you have an appropriate point-in-time snapshot of the target volume. You can verify this by either using the automatic resynchronization facility (see the `rdcsyncd` and `rdc_ii.cf` man pages) or manually performing Sun StorEdge Instant Image operations.

Workarounds for Known Bugs

This section describes workarounds for known bugs including the following:

- [“4326038 /usr/kernel/drv/mc_rms.conf stated range for systemid=# causes Fast Write Cache or SV to fail.”](#) on page 4
- [“4483960 Installation Error Message When Installing the SUNWesm Package”](#) on page 5
- [“4486833 Incorrect Information in the Sun StorEdge 2.0 Services Software CD Documentation”](#) on page 6

4326038

`/usr/kernel/drv/mc_rms.conf` *stated range for systemid=# causes Fast Write Cache or SV to fail.*

A comment in the `/usr/kernel/drv/mc_rms.conf` file gives an erroneous range of 2 to 16 for `systemid=#`. The correct range is 2 to 5.

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>

Documentation Additions and Errata

See also [“4486833 Incorrect Information in the Sun StorEdge 2.0 Services Software CD Documentation”](#) on page 6.

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 7
- [“Setting Up a Bitmap Volume”](#) on page 8
- [“Swapping the Sun StorEdge Network Data Replicator Hosts”](#) on page 9

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.

▼ 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 |

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`.

Swapping the Sun StorEdge Network Data Replicator Hosts

In case of disaster recovery or link failure situations, you can swap the Sun StorEdge Network Data Replicator host roles to provide access to your critical data. That is, the primary host can become the secondary host and the secondary host can become the primary host. This scheme enables you to recover the old primary host and, if you choose, switch back to the original roles.

The basic steps to swap hosts roles are as follows. These steps assume that you have quiesced the application writing to the Sun StorEdge Network Data Replicator volumes and then unmounted those volumes.

1. Disable the Sun StorEdge Network Data Replicator software at the primary host (named Site-A). This step also discards the primary bitmap volume at Site-A.
2. At Site-A, edit the `/etc/opt/SUNWrc/rdc.cf` configuration file to change the host information.
3. At Site-A, unmount the volumes, if possible.
4. At the secondary host (named Site-B), disable the software.
5. At Site-B, edit the `/etc/opt/SUNWrc/rdc.cf` file to change the host information.
6. At Site-B (which is now the primary host), enable the Sun StorEdge Network Data Replicator software.
7. At Site-B, synchronize the volumes from Site-B to Site-A.
8. Perform any modifications or recovery procedures required by your application.

Note – For example, if you are using a database application, you might have to copy data and control files to the new secondary host after the synchronization.

Sample `rdc.cf` File Used in This Example

```
atm10 /dev/vx/rdsk/oracle816/oratest /dev/vx/rdsk/oracle816/oratest_bm \  
atm20 /dev/vx/rdsk/oracle816/oratest /dev/vx/rdsk/oracle816/oratest_bm \  
ip sync
```

| | |
|--|----------------------------------|
| <code>atm10</code> | Site-A (primary host) |
| <code>/dev/vx/rdsk/oracle816/oratest</code> | Site-A host volume |
| <code>/dev/vx/rdsk/oracle816/oratest_bm</code> | Site-A host bitmap volume |
| <code>atm20</code> | Site-B (secondary host) |
| <code>/dev/vx/rdsk/oracle816/oratest</code> | Site-B host volume |
| <code>/dev/vx/rdsk/oracle816/oratest_bm</code> | Site-B host bitmap volume |
| <code>ip</code> | Transmission protocol |
| <code>sync</code> | Replication mode |

▼ To Disable the Software at Site-A

Note – These steps assume that you have quiesced the application writing to the Sun SNDR volumes and then unmounted those volumes.

1. **Disable the Sun SNDR software and discard the Sun SNDR scoreboard bitmap.**

```
# rdcadm -dn -f /etc/opt/SUNWrdc/rdc.cf  
# svadm -dn -f /etc/opt/SUNWrdc/rdc.cf
```

2. **Edit the `rdc.cf` file to swap the Site-A primary host information and Site-B secondary host information.**

For example, in the example entry shown in [“Sample `rdc.cf` File Used in This Example” on page 10](#), change `atm10` to `atm20` and `atm20` to `atm10`.

3. **If possible, unmount the Sun SNDR volumes.**

```
# umount mount-point
```

▼ To Change the Site-B Secondary Host to the Primary Host

1. **Disable the Sun SNDR software and discard the Sun SNDR scoreboard bitmap.**

```
# rdcadm -dn -f /etc/opt/SUNWrdc/rdc.cf
# svadm -dn -f /etc/opt/SUNWrdc/rdc.cf
```

2. **Edit the `rdc.cf` file to swap the Site-A primary host information and Site-B secondary host information.**

For example, in the example entry shown in [“Sample rdc.cf File Used in This Example” on page 10](#), change `atm10` to `atm20` and `atm20` to `atm10`.

3. **Enable the Sun SNDR software.**

```
# rdcadm -en -f /etc/opt/SUNWrdc/rdc.cf
```

4. **Perform a full synchronization from Site-B to Site-A.**

```
# rdcadm -mn -f /etc/opt/SUNWrdc/rdc.cf
```

5. **Perform any modifications or recovery procedures required by your application.**

