Sun StorEdge™ Component Manager 2.1 Release Notes

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Sun StorEdge Component Manager 2.1 Release Notes

This document contains important information about the installation and operation of the Sun StorEdge™ Component Manager 2.1 software. You should read this document before attempting to install or operate Sun StorEdge Component Manager 2.1 on a Sun StorEdge A5000, A5100, A5200 subsystem in addition to StorEdge T3 disk trays. (Unless a specific subsystem is uniquely identified, all supported subsystems are referred to as "A5*x*00" within this document. Also, the Sun StorEdge T3 disk tray may be referenced as the Sun StorEdge T300 disk tray in Component Manager documents and online help.)

The following topics are covered in this document:

Solaris Releases Supported

Sun StorEdge Component Manager 2.1 software supports the Solaris™ 2.6, Solaris 7, Solaris 8, and Microsoft NT operating environments.

Software Requirements

Before installing the Component Manager software, verify that your system meets the following requirements:

- If you are running under the Solaris 2.6 operating environment, the `SUNWses` package must already be installed.
- The required patches and firmware for your operating environment have been installed (see "Required Patches and Firmware" on page 3). All patches must be at the specified level or higher.
- You have allotted enough disk space:
  - `/etc` — a minimum of 2MB
  - `/var` — a minimum of 50MB
  - `/usr/opt` — 35MB

Memory Guidelines

Component Manager requires a minimum of 174MB of virtual memory, and 0.5MB of virtual memory for each additional enclosure or disk tray. Also, Component Manager requires 8% of the CPU capacity, with .18% increase for each additional enclosure.

As a guideline, you should have approximately 50MB of available physical memory. (Use the `vmstat` command to check the Memory / Free.)

If Component Manager performance is an issue due to system resource requirements, we recommend you move the Component Manager application to another server with less load and monitor the Sun StorEdge T3 disk trays from that server. As the monitoring of the Sun StorEdge T3 disk trays is done through the ethernet, Component Manager does not have to run on the same host to which the Sun StorEdge T3 disk trays are attached.

If necessary (that is, a mixed environment of Sun StorEdge T3 disk trays and Sun StorEdge A5x00 enclosures) you may partition the monitoring by utilizing another host for monitoring the disk trays and continuing to monitor the enclosures from the initial host. Sun StorEdge A5x00 enclosures may be monitored from any host on the same FC loop.

Required Solaris 2.6 Package

Before installing Component Manager, you must have the SUNWses package already installed on your system if you are running under the Solaris 2.6 operating environment. If it is not already installed, the SUNWses package can be found on the Solaris 2.6 software CD. Once you have accessed the package, type the following command to install the package:

```
# pkgadd -d . SUNWses
```

Required Patches and Firmware

The following table lists the patches required for Solaris 2.6, Solaris 7, Solaris 8 or Microsoft NT operating environments (all patches must be at the specified level or higher).

TABLE 1 Component Manager Patch Requirements

Operating Environment	Required Patches for Component Manager[1]
Solaris 2.6	105181-19 105210-27 105284-31 105357-04 105490-07 105568-16 105633-36 105669-10 106040-13 108091-03
Solaris 7	106541-10 106980-10 107544-03 107636-03 107081-11 107403-04 108376-03
Solaris 8	None
Microsoft Windows NT	None

1. The Component Manager installation script (install_cm) checks for these patches during the installation process, and will automatically install these patches if they are not already on your system.

Required Firmware

Refer to the following web site for the latest StorEdge A5*x*00 & T3 Software/Firmware Configuration Matrix:

```
http://sunsolve.sun.com
```

Patches for Using Component Manager and Instant Image

To use both Component Manager and Instant Image, you must manually install patch 109624-01 (or later).

Patches for Using Component Manager and Fast Write Cache

To use both Component Manager and Fast Write Cache, you must manually install patch 109628-01 (or later).

Patches for Using Component Manager with the Sun StorEdge A5*x*00 Enclosures

To use Component Manager with the Sun StorEdge A5*x*00, you must manually install patch 107473-04 (or later).

Patches for Using Component Manager with the Sun StorEdge T3

To use Component Manager with the Sun StorEdge T3 disk tray, you must manually install patch 109115-02 (or later).

Software Notes

This section contains information to ensure proper Component Manager operation.

Enabling or Disabling Sun StorEdge T3 Disk Tray Controllers or Using the Component Manager Diagnose Tab

Caution – Enabling or Disabling the Sun StorEdge T3 Disk Tray or using the Diagnose Tab can result in data being unavailable.

The Sun StorEdge T3 disk tray controller enable and disable capabilities documented in Chapter 5, "Controlling with Component Manager", of the *Sun StorEdge Component Manager 2.1 User's Guide* are not required for routine management; they should only be used by authorized Sun service personnel. Similarly, use of the Diagnose Tab (OFDG) as discussed in Chapter 6, "Diagnosing with Component Manager", should also only be used by authorized Sun service personnel. Improper use of the Diagnose Tab, or enabling or disabling disk tray controllers, can result in the disk tray failing into a reboot loop or incorrectly reporting failure of all disk

FRUs. This will result in data unavailability which can only be corrected by power cycling the failing disk tray. See the *Sun StorEdge T3 Disk Tray Installation, Operation and Service Manual* for more information on power cycling the disk tray.

Using the `ofdg` Utility

Caution – Sun StorEdge T3 disk tray `ofdg` utility is for service use only. Use of this feature makes data unavailable.

The `ofdg` utility is used to perform offline diagnostic testing. This tool should be used only by authorized Sun service personnel. The `ofdg` utility is limited in its test capabilities and must be run while the system is offline to avoid problems.

Avoiding Management Conflicts on the Sun StorEdge T3 Disk Tray

Use Component Manager or the CLI but not both simultaneously; otherwise, there will be lag time (due to polling issues) before Component Manager is updated to reflect changes made with the CLI.

Using the `esm_cli` Command

The command line interface (CLI) for Sun StorEdge Component Manager on Sun StorEdge T3 disk trays is available via the Sun StorEdge T3 `telnet` CLI; for Sun StorEdge A5x00 enclosures, it is available through the Solaris `luxadm` command.

Note – The Sun StorEdge Management Console `esm_cli` command is not supported for Sun StorEdge Component Manager CLI operations.

Avoiding Invalid Alarms After `syslogd` Stopped

If the `syslogd` has stopped running (for any reason) and error messages are not sent to `/var/adm/messages`, the messages may actually be queued in chronological order until `syslogd` restarts. However, Component Manager will

interpret the time stamp for each message sent after `syslogd` has restarted as the *current* date, rather than the original date(s) when each message was generated. This may, in turn, cause Component Manager to generate Alert alarms that are not valid.

To avoid unnecessary and invalid alarms, you should first stop the management stations, restart `syslogd`, and then restart the management stations.

To stop and restart the management stations, refer to the *Sun StorEdge Component Manager 2.1 Installation Guide.*

Removing a Device From a Configuration

When removing an A5x00 device from a configuration, be sure to also remove the entries corresponding to the device from the device tree (under `/dev/es`).

Avoiding Component Manager Daemon Problems While Performing LUN Operations

Make sure that all LUN operations have completed before issuing a Discover World operation. Otherwise, a LUN operation initiated through the GUI will cause the Component Manager daemons to stop. If this happens, simply close the Component Manager GUI, restart the Component Manager daemons, and the restart the Component Manager GUI. This issue will be resolved in an upcoming release.

Avoiding Excessive LUN Alarms

Most LUN Alarms (success and failures) are numerous and are logged in the Caution category. To monitor LUN operations with greater clarity, remove all the caution alarms before you begin LUN operations.

Upgrading from Component Manager 1.0 to 2.1

After removing Component Manager (see “To Remove Component Manager” in the *Sun StorEdge Component Manager 2.1 Installation Guide: For the Solaris Operating Environment*), you must remove the persistence files.

```
# cd /var/opt/SUNWesm/mc/persistence
# rm *.grf
# cd /var/opt/SUNWesm/mo/persistence
# rm *.grf
```

Continue with “Installing the Software” on page 8 of the *Sun StorEdge Component Manager 2.1 Installation Guide: For the Solaris Operating Environment*.

Installing Component Manager 2.1 in the Microsoft NT Operating Environment

After installing version 1.2.2 of the Java2 Runtime Environment (see “Installing the Java2 Runtime Environment” in the *Sun StorEdge Component Manager 2.1 Installation Guide: For the Microsoft NT Operating Environment*) but before completing the installation of the Sun StorEdge Management Console, you may encounter a window prompting you reboot. Do not reboot. Select “No I’ll restart my computer later.”

Downloading Correct HTML Files

If you are using the old or incompatible HTML files for the Sun StorEdge T3 disk tray, you will receive an alert and email message as follows:

```
Download the correct version of HTML files. Refer to
Troubleshooting in online help for more details.
```

This message will be generated each time Component Manager attempts to discover the Sun StorEdge T300 or the Component Manager daemons are stopped and started.

You can replace the files with those on the Component Manager CD.

User Action

To correct this problem, install the correct HTML files. The procedure which follows supersedes the instructions in online help and those starting on page 108 of the *Sun StorEdge Component Manager 2.1 User's Guide*.

You must become root on the Sun StorEdge T3 disk tray and have the root password. The T3 should have a root password and if it is null, the following procedure may not work. To configure a root password for the T3 refer to *Sun StorEdge T3 Disk Tray Installation, Operation, and Service Manual*.

1. **Use the `telnet` command to connect to the T300 and login as root.**

   For example, if the Sun StorEdge T3 disk tray has an IP address of 123.456.78.90, enter the following:

```
% telnet 123.456.78.90
% User ID: root
% Password: <enter or password>
T300>
```

2. **Check for a `/web` directory.**

```
T300> ls
```

3. **If there is not a `/web` directory, create one.**

```
T300> mkdir /web
```

4. **Change to the `/web` directory.**

```
T300> cd /web
```

5. **Exit the telnet session.**

```
T300> exit
```

6. **Navigate to the server where the Component Manager CD is mounted.**

7. **Navigate to the html files.**

```
# cd /cdrom/cdrom0/Component_mgr/prereq/t3h/cm2.1
```

8. **Start an ftp session to the Sun StorEdge T3 onto which you want to load the correct html files.**

```
# ftp ip_address
```

9. **Enter the following:**

```
ftp> cd /web
ftp> prompt
ftp> mput *.htm
ftp> quit
```

Configuring the Sun StorEdge T3 Disk Tray syslog for Component Manager

This procedure will enable Component Manager to receive syslog messages from the Sun StorEdge T3 disk tray. Because you cannot edit files on the disk tray, you must use `ftp` to move them to a host to make the edits and then use `ftp` again to move them back to the disk tray. This procedure consists of the following tasks:

Transferring the Disk Tray Files to the Server

1. **Start an `ftp` session from the server to the disk tray.**

   For example:

```
server:/:<15>ftp 123.456.789.0
```

2. **Log in to the disk tray by typing** `root` **and your password at the prompts.**

```
Name (123.456.789.0:root): root

331 Password required for root.
Password: password
230 User root logged in.
ftp>
```

3. **Move to your working director on the server.**

   For example:

```
ftp> lcd /tmp
Local directory now /tmp
ftp>
```

4. **Move to the** `/etc` **directory on the disk tray.**

```
ftp> cd /etc
250 CWD command successful.
```

5. **Set the transfer mode.**

```
ftp> binary
```

6. **Copy the** `syslog.conf` **file from the** `/etc` **directory on the disk tray to your working directory.**

```
ftp> get syslog.conf
```

7. **Copy the** `hosts` **file from the** `/etc` **directory on the disk tray to your working directory.**

```
ftp> get hosts
```

8. **Exit the `ftp` session.**

```
ftp>
quit
221 Goodbye.
server:/:
```

Editing the Disk Tray `/etc/syslog.conf` File

- **On the server, use a text editor to edit the `syslog.conf` file in the working directory.**

  Add the following line to the bottom of the file:

```
# .info | http push
```

Transferring the Files Back to the Disk Tray

After editing the `/etc/syslog.conf` and `/etc/hosts` files, use ftp to transfer the files from the server back to the disk tray.

1. **Start an `ftp` session from the server to the disk tray.**

   For example:

```
server:/:<15>ftp 123.456.78.90
Connected to 123.456.78.90.
220 chon-ji FTP server (SunOS 5.7) ready.
Name (123.456.78.90:root):
```

2. **Log in to the disk tray by typing `root` and your password at the prompts.**

```
Name (123.456.78.90:root): root

331 Password required for root.
Password: password
230 User root logged in.
ftp>
```

3. **Move to the** `/etc` **directory on the disk tray.**

```
ftp> cd /etc
250 CWD command successful.
ftp>
```

4. **Type** `binary` **to set the transfer mode.**

```
ftp> binary
```

5. **Copy the edited** `syslog.conf` **file from your working directory to the** `/etc` **directory on the disk tray.**

```
ftp> put syslog.conf
```

6. **Copy the edited** `hosts` **file from your working directory to the** `/etc` **directory on the disk tray.**

```
ftp> put hosts
200 PORT command successful.
150 Binary data connection for hosts (123.456.78.90) (47 bytes).
226 Binary Transfer complete.
47 bytes received in 1 seconds (0 Kbytes/s)
ftp>
```

7. **Exit the** `ftp` **session.**

```
ftp>
quit
221 Goodbye.
server:/:
```

Known Limitations

The following are the known limitations for the Component Manager 2.1 release:

- This release does not support notification that the Sun StorEdge A5*x*00 subsystem is attached to multiple hosts. If the Sun StorEdge A5*x*00 loop is split (one half goes to one host and the other half goes to another host), this release can manage only the portion that is visible from the host on which Component Manager is running.
- This release is not a replacement of the `luxadm` program.
- This release requires that the Sun StorEdge Management Console be launched from the machine on which Component Manager is installed.

New Known Limitations to Both Sun StorEdge A5*x*00 Subsystems and T3 Disk Trays

- **Bug 4334687**: When doing an `esm_orderly` start/stop you get a NullPointerException.

  Workaround:
  Stop and restart Component Manager.

- **Bug 4333939**: CM doesn't appear on management console if it is brought up too soon.

  Workaround:
  After starting the ESM services, wait a while before bringing up the Sun StorEdge Management Console.

- **Bug 4338905:** Upgrading from 2.0 - 2.1, persistence for the alarms is lost.

  Workaround:
  None.

- **Bug 4346198:** Switch icon does not appear in the Navigation Pane in the Microsoft NT Operating Environment. There is no switch management software support in Component Manager 2.1 for the Microsoft NT operating environment.

  Workaround:
  None.

New Known Limitations to Sun StorEdge T3 Disk Trays.

- **Bug 4335316:** Using `vol_verify` to an unmounted LUN won't start, no indication of why.

  Workaround:
  Run `vol_verify` only on mounted LUNs.

- **Bug 4337653** Enabling or disabling a controller through Component Manager sometimes fails.

  Workaround:
  Unplug and plug the controller instead of using the `enable` Sun StorEdge T3 disk tray CLI command or the Enable button on the Component Manager Control Tab. Do not use Component Manager Diagnose Tab functionality. See "Enabling or Disabling Sun StorEdge T3 Disk Tray Controllers or Using the Component Manager Diagnose Tab" on page 5

- **Bug 4338471:** An open in interconnect cable between u1l1 and u2l1 causes `ofdg` to fail on all `lpc` commands or when running a FastFind test from the Diagnose Tab.

  Workaround:
  Do not use Component Manager Diagnose Tab functionality. See "Enabling or Disabling Sun StorEdge T3 Disk Tray Controllers or Using the Component Manager Diagnose Tab" on page 5. Do not use the `ofdg` command. See "Using the `ofdg` Utility" on page 6.

- **Bug 4338620:** Need to stop and re-start ESM service after re-booting in order to get the discovery process kicked-off. During installation, user is not asked for a reboot after JRE has been installed once. This happens on NT installations.

  Workaround:
  After starting the ESM services, wait a while before bringing up the Sun StorEdge Management Console.

- **Bug 4339555:** Using the `ofdg` CLI command or the FastFind test on the Diagnose Tab with a failed u2l1 interconnect FRU will cause a Sun StorEdge T3 disk tray to enter a reboot loop.

  Workaround:
  Do not use Component Manager Diagnose Tab functionality. See "Enabling or Disabling Sun StorEdge T3 Disk Tray Controllers or Using the Component Manager Diagnose Tab" on page 5. Do not use the `ofdg` command. See "Using the `ofdg` Utility" on page 6.

- **Bug 4340656:** Running the Diagnose Tab FastFind test on a Sun StorEdge T3 disk tray partner group with a failed disk FRU on u2 will cause disk FRUs in u1 to be bypassed on both ports.

  Workaround:
  Do not use Component Manager Diagnose Tab functionality. See "Enabling or Disabling Sun StorEdge T3 Disk Tray Controllers or Using the Component Manager Diagnose Tab" on page 5.

- **Bug 4341673:** Open serial lines in interconnect cables causes inconsistent results with the `ofdg` CLI command or the FastFind test on the Diagnose Tab.

  Workaround:
  Do not use Component Manager Diagnose Tab functionality. See "Enabling or Disabling Sun StorEdge T3 Disk Tray Controllers or Using the Component Manager Diagnose Tab" on page 5. Do not use the `ofdg` command. See "Using the `ofdg` Utility" on page 6.

- **Bug 4343069:** The filter option "Begin Date" on Diagnostics Syslog Viewer doesn't work

  Workaround:
  This has been fixed and will be available in the first Component Manager patch.

- **Bug 4343079:** Other filter options on Diagnostic `syslog` Viewer do not work without "End Date" checked.

  Workaround:
  This has been fixed and will be available in the first Component Manager patch.

- **Bug 4345907:** Component status is misleading when a Sun StorEdge T3 controller fails in a partner group.

TABLE 2 Display Inconsistencies

What Component Manager Displays	What Component Manager Should Display
System in Physical Pane is displayed as yellow (Degraded).	System in Physical Pane should be red (Not OK).
Unit and controller in Physical Pane are displayed in yellow (Degraded).	Controller is listed as being OK in property table list. It should be listed as Degraded and be displayed in yellow.
Unit is displayed as yellow (Degraded) in Physical Pane. Disks and Power Module are both correctly displayed as red.	Unit should be displayed as red in Physical Pane.

- **Bug 4346447:** Component Manager gives inaccurate controller status after enabling. When trying to enable a controller from the Component Manager Control Tab, the controller will change from a disabled state to an enabled state when, in fact, the controller is still disabled or booting.

  Workaround:
  Do not use Component Manager Control Tab enable or disable functionality on the Sun StorEdge T3 disk tray. See "Enabling or Disabling Sun StorEdge T3 Disk Tray Controllers or Using the Component Manager Diagnose Tab" on page 5.

- **Bug 4346795:** LUN creation window displays "There exists no unassigned disk for this administrative domain." You cannot create a LUN with disks from a LUN which was just deleted until Component Manager successfully polls the disk released from the delete LUN operation.

  Workaround:
  Wait until Component Manager successfully polls the released disks before proceeding with a LUN creation operation.

New Known Limitations to Sun StorEdge A5*x*00 Enclosures

- **Bug 4342189:** When booting up the MO station of Component Manager with an Sun StorEdge A5x00 enclosure attached to the host, occasionally one of the following errors occurs when the managed object station is attempting to create a new proxy: `java.lang.NoClassDefFoundError`, or `java.lang.ClassFormatError`.

  Workaround:
  Stop and restart the Component Manager daemons.

- **Bug 4343584:** While performing an `esm_em_mo boot start`, you may receive a `java.lang.VerifyError`.

  Workaround:
  Stop and restart the Component Manager daemons.

Existing Known Limitations to Sun StorEdge T3 Disk Trays

- **Bug 4298678:** NT management service GUI crashes with a java exception error after inactivity.

  Workaround:
  Restart GUI.

Existing Known Limitations to Both Sun StorEdge A5*x*00 Subsystems and T3 Disk Trays

- **Bug 4224081**: Online help search does not correctly highlight “found” entries.

  When using the online help Search utility, the entry is not always highlighted correctly in the main content pane.
- **Bug 4224107**: Many `java NullPointerExceptions` found when traversing through online help search. When using the online help Search utility, some `NullPointerExceptions` messages may occur.
- **Bug 4224161**: Received `IllegalArgumentException` while selecting text in online help.

  When using the online help Search utility, some `IllegalArgumentException` messages may occur when attempting to select text within the main content pane.

Documentation Issues

The following issues reflect software revisions made after Component Manager 2.1 release documentation was published:

- Usage of “Sun StorEdge T300 disk tray” in all Component Manager 2.2 documents refers to the Sun StorEdge T3 disk tray.
- For the *Sun StorEdge Component Manager 2.1 User’s Guide*:
  - The Component Manager session that has most recently started and connected with the Sun StorEdge T3 disk tray will receive all `syslog` messages. Therefore, another Component Manager session started earlier will no longer receive Sun StorEdge T3 disk tray `syslog` messages.
  - in “Testing LUNs” on page 100, step 4 should be omitted.
- **Bug 4336309**: Online help: Troubleshooting: Full Disk in Log Directory.

  Step 2, should say “move” (`mv` command) instead of “copy” (`cp` command). Step 3 should be omitted. This has been corrected in the *Sun StorEdge Component Manager 2.1 User’s Guide* but not in online help.
- **Bug 4345393**: Online help and page 108 of the Sun StorEdge Component Manager User’s Guide incorrectly describe the correct html download procedure. See “Downloading Correct HTML Files” on page 8.