Sun StorEdge™ Component Manager 2.0 Release Notes

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Sun StorEdge Component Manager 2.0 Release Notes

This document contains important information about the installation and operation of the Sun StorEdge™ Component Manager software. You should read this document before attempting to install or operate Sun StorEdge Component Manager 2.0 on a StorEdge A5000, A5100, A5200 subsystem in addition to StorEdge T300 disk trays. (Unless a specific subsystem is uniquely identified, all supported subsystems are referred to as "A5*x*00" within this document.)

The following topics are covered in this document:

Solaris Releases Supported

Sun StorEdge Component Manager 2.0 software supports the Solaris™ 2.6, Solaris 7, and Solaris 8 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 4). All patches must be at the specified level or higher.
- A *minimum* of 140MB has been allotted for Component Manager virtual memory usage. Each additional enclosure requires approximately 3MB of virtual memory.
- You have allotted enough disk space:
  - `/etc` — a minimum of 2MB
  - `/var` — a minimum of 50MB
  - `/usr/opt` — 35MB

Memory Guidelines

The memory guidelines found in the Installation Guide are superceded as shown below.

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 T300 disk trays from that server. As the monitoring of the Sun StorEdge T300 disk trays is done through the ethernet, Component Manager does not have to run on the same host to which the Sun StorEdge T300 disk trays are attached.

If necessary (that is, a mixed environment of Sun StorEdge T300 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 Patch for Solaris 2.6

For Solaris 2.6 operating environments, patch 108091 must be installed manually before installing Component Manager. The installation script will not automatically install this patch if it is missing.

Required Component Manager and SunDAE Patches

For Component Manager to operate properly, the SunDAE patches must be installed. The installation script will not add these patches; they must be added manually after installing Component Manager.

TABLE 1 SunDAE Patch Requirements

Operating Environment	Required Patch
Solaris (2.6, 7, or 8)	108882-01 and 108888-01
Microsoft NT	108889-01 and 108944-01

Required Patches and Firmware

The following table lists the patches required for Solaris 2.6 or Solaris 7 operating environment (all patches must be at the specified level or higher).

TABLE 2 Component Manager Patch Requirements

Operating Environment	Required Patches for Component Manager[1]	Required Patches for StorEdge A5x00[4]
Solaris 2.6	105181-15 105210-22 105357-04 105490-07 105568-13 105633-22 105669-08 106040-13 107300-01[2] 108882-01 108888-01	103346-xx 105356-10 105357-04 105375-17 106129-08 106219-03 108102-02 108104-01
Solaris 7	106980-05 107078-18 107332-02[3] 107636-01 108882-01 108888-01	103346-xx 106129-08 107458-05 107469-04 107472-01 107473-01 108102-02 108104-01
Microsoft Windows NT	108944-01 108889-01	

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.
2. This patch needs to be installed for Japanese, and Chinese locales only.
3. This patch needs to be installed for Japanese, and Chinese locales only.
4. To download the latest revision level of these patches, refer to the following web site: http://sunsolve.sun.com

The following table lists the firmware levels required for StorEdge A5*x*00 (all firmware must be at the specified level or higher). Refer to the following web site for the latest StorEdge A5*x*00 Software/Firmware Configuration Matrix:

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

TABLE 3 StorEdge A5x00 Firmware Requirements

Solaris Operating Environment	IB Firmware Level	SBus Host Adapter Firmware Level	Disk Firmware Level	On Board Host Adapter Firmware Level	Required Patches for PCI Bus Host Adapter Firmware
Solaris 2.6	1.09	1.11	034A (9GB) 0929 (9GB) 7Dxx (9GB) D44A (18GB) F454 (18GB)	1.8.7	105357-04 105375-18 107280-04
Solaris 7	1.09	1.11	034A (9GB) 0929 (9GB) 7Dxx (9GB) D44A (18GB) F454 (18GB)	1.8.7	107292-03 107474-01

Software Notes

This section contains information to ensure proper Component Manager operation.

Installing Sun StorEdge Fast Write Cache and Sun StorEdge Instant Image

If you are also planning on using Sun StorEdge Fast Write Cache or Sun StorEdge Instant Image, you must install Component Manager first or you may not be able to display these other products. Therefore, you must uninstall them before installing Component Manager. See the respective documentation of these products for further information regarding their uninstallion procedures.

Finding Localized Component Manager Documents

The *Sun StorEdge Component Manager 2.0 Installation Guide* and the *Sun StorEdge Component Manager 2.0 User's Guide* are located on the CD-ROM in:

`cdrom/cdrom0/Component_Mgr/Docs/locale/`*xx*

where *xx* represents one of the following locales:

TABLE 4 CD-ROM Documentation Locales

xx	**Locale**
C	English
fr	French
ja	Japanese
ko	Korean
zh	Simplified Chinese
zh-TW	Traditional Chinese

Avoiding Management Conflicts on the T300 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.

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 2.0 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.

Installing Component Manager in the Microsoft NT Operating Environment

When installing Component Manager on in the NT operating environment, the user must be the Administrator or the files will not be correctly installed. This will be resolved in an upcoming release.

Enabling Microsoft NT Email Notification

On NT, to enable email notification, edit file `enclMgr_rs_message_formats.cf` to contain the following line:

mailHost=*hostname*

where *hostname* is the host for the mail transport agent. This configuration file resides under

Drive:*install_path*\etc\opt\SUNWesm\SUNWencc\etc

where *install_path* is default to:

C:\Program Files\Sun Microsystems\StorEdge

Sending Alarms to a File

When logging via remote reporting, some alarm messages are prefaced with “failed because”. Not all of these messages are failures, the “failed because” text can be ignored on non-failure messages.

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.

Avoiding Conflicts with the Sun Management Center (formerly SyMON)

Sun Management Center (previously known as SyMON) is the management framework for the Solaris operating System. Sun StorEdge Manager is the management framework for storage systems and the SAN (Storage Area Network).

There are three procedures to resolve potential conflicts:

- Resolving JTG Version Conflicts
- Resolving TCP/IP Port Conflicts
- Updating the Discovery Module

Resolving JTG Version Conflicts

When a user runs Sun Management Center after installing Component Manager, Sun Management Center will fail to run because of the different versions of JTG. The baseline, 1.1.0.5, of Sun StorEdge Management Console is based on JTG 1.2.1_04. But Sun Management Center allows only JTG 1.2.1_04a for it to run.

To avoid this JTG version problem, 2 files of Sun Management Center need to be changed until Sun Management Center supports the new JTG version.They are

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

and

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

assuming Sun Management Center is installed under /opt/SUNWsymon (default directory).

- **Modify the line in each of the above files from:**

  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” ‘

Resolving TCP/IP Port Conflicts

Installing the Sun Management Center software with the standard defaults may result in a TCP/IP port conflicts with the snmpdx and mibiisa processes. The setup process notifies the user if there is a port conflict problem. User should select different available port number (for example, 1101) instead of the default port 161.

Selecting the default port 161 requires stopping the process that uses the port 161 before starting the Sun Management Center agent. If the Sun Management Center agent fails to start correctly, refer to the agent.log file to see if there is a port conflict.

For more information on resolving the port conflict, refer to *Sun Management Center User’s Guide*.

Updating the Discovery Module

When the Sun Management Center application is started, the agent module will load the Sum StorEdge Module if the module was previously loaded. If the module is being loaded for the first time, it can be loaded from the Tools/Load Module menu.

The first time the module is loaded, the user needs to run the discovery mechanism to discover the module. The discovery mechanism should be run only after loading the Sun StorEdge module in Sun Management Center. If you have specified a different port number, for example 1101, for the Sun Management Center agent during the setup of Sun Management Center agent, you have to specify the port number in the discovery panel before you start the discovery process.

Once the discovery request succeeds, icons for Sun StorEdge Group will be displayed in the Topology view of the Sun Management Center. There will be two icons displayed that represent the Sun StorEdge modules in Sun Management Center. A small icon in the Navigation pane on the left side, and a large icon in the topology view pane on the right side.

Expand the Sun StorEdge Group in either navigation or topology view by double clicking and the Sun StorEdge Manager icon will be displayed. When you double clicks on the Sun StorEdge Manager icon, it launches the Sun StorEdge Management Console in a separate window. Any operation with the Sun StorEdge Management Console should be done through this interface only.

Known Limitations

The following are the known limitations for the Component Manager 2.0 release:

- This release does not support notification that the StorEdge A5*x*00 subsystem is attached to multiple hosts. If the 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 StorEdge A5*x*00 Subsystems and T300 Disk Trays

- **Bug 4297007:** Filtering Options on Log Viewer and Alarm Viewer not working.

  When selecting the End Date, the filter no longer works properly.

  Workaround: Do not use the end date in your filter

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

  Workaround:
  Restart GUI.

- **Bug 4299378:** Need indication of mo/mc process (daemons) still building when bringing up GUI.

  The mo and mc processes (managed object and managed class daemons) may not be complete when you start the GUI which causes an inaccurate view to be displayed.

  Workaround:
  Wait until the mo and mc processes are completed before launching the GUI.

- **Bug 4299763:** The Health Tab doesn't work on the E250 with A5x00s or hubs.

  The Health folder is greyed out and inaccessible.

  Workaround:
  Remove the persistence files under `/var/opt/SUNWesm/mo` and `/var/opt/SUNWesm/mc` and re-enter your remote monitoring information, such as email addresses.

- **Bug 4301583:** SUNWesmon pkgrm fails if SyMON has been removed.

  Workaround:
  Remove SUNWesmon before removing Sun Management Center (formerly SyMON).

- **Bug 4302004:** Alarms Passed to SyMON don't match priority can be confusing.

  When a down alarm is issued by StorEdge indicating that it cannot connect to an enclosure the alarm is getting sent to Sun Management Console as a critical alarm.

  Workaround:
  View the SyMON Alarm Info Table under The Details/Browser/Remote Systems/SunStorEdge for accurate alarms.

- **Bug 4302005:** Duplicate alarms getting posted to Sun Management Console (SMC).

  Workaround:
  View the SyMON Alarm Info Table under The Details/Browser/Remote Systems/SunStorEdge for accurate alarms.

- **Bug 4303418:** Part of window becomes black when dragging the toolbar.

  When clicking and dragging the alarm toolbar to the left or right edge of the right pane, part of the window become black

  Workaround:
  Minimize or maximize the window. Then restore it to its previous size.

- **Bug 4304597:** Only a blank screen appears when bringing up Alarm and Log Viewers.

  Workaround:
  Close and reopen the window.

- **Bug 4306409:** Deinstallation script removes SUNWcj2rt unconditionally.

  Workaround:
  Reinstall this package if using Solaris 2.6 or 2.7.

- **Bug 4305869:** Help dialog sometimes fail to display with correct ratio.

- **Bug 4306409:** Deinstallation script removes SUNWcj2rt unconditionally.

  Workaround:
  Reinstall this package if using Solaris 2.6 or 2.7.

- **Bug 4316759:** "day/month/year" in email should be in English, regardless of locale.

  Workaround:
  None.

- **Bug 4319540:** Install script does not detect “Patch Obsoleted By” correctly.

  Workaround:

  1. At the time of installing CM, manually check sunsolve.sun.com to see if this patch has been obsoleted by another patch.

  2. Manually check to see if this superceding patch is installed on your system.

  3. If there is a superceding patch and it is installed, then answer “n” else answer “y” to the question on installing the patch.

New Known Limitations to StorEdge T300 Disk Trays

- **Bug 4302073:** Disk not shown as part of volume in Disk Property pane.

  Workaround:
  None.

- **Bug 4304345:** Invalid create status.

  If a LUN is created when a polling failure occurs, the GUI posts the event in the Creating LUN area, but it is not being created and no other LUN can be created until this event goes away (which it never will).

  Workaround:
  Stop and restart the management daemons.

- **Bug 4305672:** T300 still listed as being discovered.

  After a long period of time when it appears that the T300 is still being discovered, if you select the icon in the tree view, a null pointer exception is generated.

  Workaround:
  Make sure the there are no LUN operations in progress and re-discover world.

- **Bug 4304625:** LUN creation appears to get lost if re-discovery is initiated.

  If LUN creation is started and a re-discover world is initiated, then the LUN creation process appears to get lost.

  Workaround:
  Do not discover world until after LUN operations have finished.

- **Bug 4304625:** LUN creation appears to get lost if re-discovery is initiated.

  If LUN creation is started and a re-discover world is initiated, then the LUN creation process appears to get lost.

  Workaround:
  Do not discover world until after LUN operations have finished.

Existing Known Limitations to Both StorEdge A5*x*00 Subsystems and T300 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.

- **Bug 4235773**: File ➤ Close causes Log Viewer error in console.

  When using File ➤ Close to close the Log Viewer, error messages are displayed in the console window.

  Workaround:
  Close the Log Viewer through the window manager (by clicking on the title bar)

- **Bug 4244444**: Multiple GUIs should not initiate re-discovery.

  If multiple users are running the Management Console and have enabled and disabled Maintenance Mode concurrently within the Configuration Tab, the system can become unusable.

  Workaround:
  Only one user should enable and disable Maintenance Mode at one time.

- **Bug 4258781**: Management class ran out of memory and died.

  When the management class station is running in a large configuration (for example, 20 TB, 80 enclosures), it may run out of memory and the process may die after approximately 15 hours.

  You need to stop the management stations and then restart both the managed object and management class stations. To restart the management stations, refer to the *Sun StorEdge Component Manager 2.0 Installation Guide.*

- **Bug 4258824**: Unable to read Log Viewer, receiving `java.io.NotSerializable` exception.

  When you attempt to launch the Log Viewer, the following error message may appear and prevent you from accessing Log Viewer messages:

```
Error while reading log file.
   Writing aborted by exception; java.io.NotSerializable:
com.sun.dae.components.alarm.remote_alarm.email.EmailRAHandler$1
```

  Workaround:
  Press the Next button, and the Log Viewer messages are displayed.

- **Bug 4258830**: `mcboot` process appears to hang.

  When attempting to restart the managed object and management class stations, the management class station may appear to hang while instantiating the management class of the first object.

- **Bug 4260118**: Data is not updated correctly when switching from Configuration Tab to Health Tab.

  Data may not be updated when you switch to the Health Tab from the Configuration Tab (or vice versa) for the same enclosure.

  Workaround:
  Select another enclosure, and then re-select your original enclosure.

Existing Known Limitations to StorEdge A5*x*00 Subsystems

- **Bug 4244219**: Managed object station process dies during polling.

  The managed object process may sometimes fail during the installation process. For example, you may receive an error message similar to the following:

```
Segmentation Fault
    si_signo [11]: Segmentation Fault
    si_errno [0]: Error 0
    si_code [1]: SEGV_MAPERR [addr: 0x0]

        stackpointer=E9E7FC40

*** panic: JIT signal handler did not take the signal
```

  You will need to stop the management stations and then restart both the managed object and management class stations. To restart the management stations, refer to the *Sun StorEdge Component Manager 2.0 Installation Guide.*

- **Bug 4258834**: Status of disks is being reported as Unknown.

  The status of some disks is being reported as Unknown. The `luxadm` program reports the disk status as follows:

```
on (Open Failed)
```

Documentation Issues

The following issues reflect software revisions made after Component Manager 2.0 release documentation was published:

- The installation script path shown in step 4 on page 3 (“Installing the Software”) of the *Sun StorEdge Component Manager 2.0 Installation Guide: For the Microsoft Windows NT Operating Environment* should be:

```
cdrom:\Component_Mgr\WinNT_4.0\ComponentManager.exe
```

- Disregard the following from the *Sun StorEdge Component Manager 2.0 User’s Guide*:
  - step c, “Select the Initialization Rate from the pull-down menu”, page 32
  - “To Abort Initialization” procedure, page 36
- The correct rules for disk evaluation should be documented in the *Sun StorEdge Component Manager 2.0 User’s Guide* as follows:

  A system log message will be written under the following conditions:

  - When a disk drive is powered down
  - When a disk drive is powered up
  - When a disk drive is bypassed by the user (Port A or B)
  - When a disk drive is bypassed by a device (Port A or B)
  - When a disk LED is turned on or off
  - When a disk LED is set to blink

  A system log message will be written and an alarm message will be generated (also triggering a remote support notification) under the following conditions:

  - When a disk drive fails due to an open failure, SCSI error, or fault condition (Critical alarm)
  - When an unknown condition is detected (Alert alarm)
  - When a disk drive is unplugged (Down alarm)
- Online Help incorrectly lists the Message Types for remote reporting as EMEA, NAFO, ESMC, and Command Center. Email Message Types consist only of default message formats and log Message Types consist only of log message formats.
- Online Help incorrectly indicates the “file monitoring” (string pattern) alarm for disks and GBICs as a CAUTION severity level. An ALERT alarm is generated instead of a CAUTION alarm.

- Step 1 on page 5 of the *Sun StorEdge Component Manager 2.0 Installation Guide: For the Solaris Operating Environment* incorrectly suggests that Sun Management Center (formerly known as SyMON) will be removed with the `pkgrm` command. The `pkgrm -l SUNWesmon` command will remove the Component Manager Sun Management Center support package. Please refer to the documentation accompanying the Sun Management Center for uninstallation and uninstall it before removing the `SUNWesmon` package.
- The Code Example 1-2, "Example Installation Session", on page 9 of the *Sun StorEdge Component Manager 2.0 Installation Guide: For the Solaris Operating Environment* will appear as follows if you are installing the localized version of Component Manager.

CODE EXAMPLE 1 Localized Installation Session

```
# ./install_cm*
Product language versions available are
        1. English
        2. French
        3. Japanese
        4. Simplified Chinese
What language version do you want to install [1-4]?:
2

                        Sun StorEdge Component Manager

This product provides a graphical interface to the monitoring and
configuring of Component Manager.  It is assumed that you agree to
legal terms
explained in
        http://www.sun.com/share/text/SMICopyright.html



DO YOU AGREE TO THE ABOVE TERMS AND WISH TO INSTALL THIS ON TO YOUR
SYSTEM
[y/n] (y)? y
Checking for required patch 105357-04
Checking for required patch 105181-15
Checking for required patch 105490-07
Checking for required patch 105210-22
Checking for required patch 105568-13
Checking for required patch 105633-22
Checking for required patch 105669-08
Checking for required patch 106040-13
```

CODE EXAMPLE 1 Localized Installation Session

```
By default Component Manager and Sun StorEdge platform are
installed in /usr/opt
An install log can be found at /var/tmp/cm_install.log.04Feb2000-
14:05:34


Starting installation of Java  packages.
Installation of SUNWj2rt was successful.
Installation of SUNWfj2rt was successful.


Starting installation of Sun StorEdge Platform packages.
Installation of SUNWesm was successful.
Installation of SUNWdaert was successful.
Installation of SUNWesmrt was successful.
Installation of SUNWmjacf was successful.
Installation of SUNWmjmai was successful.
Installation of SUNWmjhlp was successful.
Installation of SUNWesmru was successful.
Installation of SUNWfrdae was successful.
Installation of SUNWfresm was successful.


Starting installation of Component Manager Core packages
Installation of SUNWencl was successful.


Starting installation of Component Manager packages
Installation of SUNWencm was successful.
Installation of SUNWencc was successful.
Installation of SUNWencu was successful.
Installation of SUNWencmr was successful.
Installation of SUNWenccr was successful.
Installation of SUNWfrenc was successful.

Installation of Sun StorEdge Component Manager was successful.



An un-install script has been generated to aid in the removal of
this
software.
The location of the un-install script is:
        /var/tmp/uninstall_cm
```