System Management Services (SMS) 1.5 Release Notes

Sun Microsystems, Inc.
www.sun.com

Part No. 817-7297-11
October 2005, Revision A

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Contents

Preface

This guide contains release notes for the System Management Services (SMS) 1.5 software.

These release notes apply to the SMS 1.5 patches for UltraSPARC™ IV+ processor support on SMS software, and describes the enhancements and fixes to the SMS software that are also contained in the patches.

Before You Read This Book

This guide is intended for the Sun Fire™ system administrator, who has a working knowledge of UNIX® systems, particularly those based on the Solaris™ Operating System (Solaris OS). If you do not have such knowledge, read the Solaris User and System Administrator documentation provided with your system, and consider UNIX system administration training.

All members of the next-generation Sun Fire server family can be configured as loosely-coupled clusters. However, it is currently outside of the scope of this document to address system management for Sun Fire cluster configurations.

Using UNIX Commands

This document might not contain information about basic UNIX® commands and procedures such as shutting down the system, booting the system, and configuring devices. Refer to the following for this information:

- Software documentation that you received with your system
- Solaris Operating System documentation, which is at:

  http://docs.sun.com

Shell Prompts

Shell	Prompt
C shell	*sc_name*`:sms-user:>` or *domain_id*`:sms-user:>`
C shell superuser	*sc_name*`:#` or *domain_id*`:#`
Bourne shell and Korn shell	>
Bourne shell and Korn shell superuser	#

Typographic Conventions

Typeface[1]	Meaning	Examples
`AaBbCc123`	The names of commands, files, and directories; on-screen computer output	Edit your `.login` file. Use `ls -a` to list all files. `% You have mail.`
`AaBbCc123`	What you type, when contrasted with on-screen computer output	`%` **`su`** `Password:`
AaBbCc123	Book titles, new words or terms, words to be emphasized. Replace command-line variables with real names or values.	Read Chapter 6 in the *User's Guide*. These are called *class* options. You *must* be superuser to do this. To delete a file, type `rm` *filename*.

1 The settings on your browser might differ from these settings.

Related Documentation

The documents listed as online are available at:

```
http://www.sun.com/products-n-solutions/
hardware/docs/Servers/High-End_Servers/
Sun_Fire_15K/SW_FW_Documentation/SMS/index.html
```

Application	Title	Part Number	Format	Location
Software Overview	*Sun Fire High-End Systems Software Overview Guide*	819-1338	PDF HTML	Online
Administrator Guide	*System Management Services (SMS) 1.5 Administrator Guide*	817-7295	PDF HTML	Online
Reference (man pages)	*System Management Services (SMS) 1.5 Reference Manual*	817-7296	PDF HTML	Online
Options	*Sun Fire High-End and Midrange Systems Dynamic Reconfiguration User Guide*	819-1501	PDF HTML	Online
	OpenBoot™ 4.x Command Reference Manual	816-1177	PDF HTML	Online
	Sun Fire 15K/12K System Site Planning Guide	806-3510	PDF HTML	Online
	Sun Fire E25K/E20K System Site Planning Guide	817-4137	PDF HTML	Online
	Sun Fire Link Fabric Administrator's Guide	806-1405	PDF HTML	Online
	Securing the Sun Fire 12K and 15K Domains	817-1357	PDF HTML	Online
	Securing the Sun Fire 12K and 15K System Controllers	817-1358	PDF HTML	Online

Documentation, Support, and Training

Sun Function	URL	Description
Documentation	http://www.sun.com/documentation/	Download PDF and HTML documents, and order printed documents
Support and Training	http://www.sun.com/supportraining/	Obtain technical support, download patches, and learn about Sun courses

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System Management Services (SMS) 1.5 Release Notes, part number 817-7297-11

CHAPTER 1

System Management Services (SMS) 1.5 Release Notes

This chapter contains the release notes for System Management Services (SMS) 1.5 on Sun Fire high-end systems and covers the following topics:

- What's Fixed in This Version
- Software Requirements
- SMS 1.5 Known Limitations
- General Notes and Issues
- SMS Documentation Part Numbers

What's Fixed in This Version

This update to the *SMS 1.5 Release Notes* covers fixes for the following bugs:

- 6255743
- 6270911
- 6277467
- 6288445
- 6289918
- 6290143
- 6292571
- 6302265
- 6302843
- 6309365
- 6324035

This update to the Release Notes also discusses the following patches. These patches are needed in order to support the UltraSPARC IV+ processor in the SMS software.

- 120648-02 (required for UltraSPARC™ IV+ processor support)
- 120789-01
- 120827-01
- 120843-01

For more information on these bugs and possible workarounds, see "Bug Fixes in This Update" on page 7.

Software Requirements

These are the *minimum* software requirements for SMS 1.5. They vary by operating system.

Solaris 8 OS Requirements

As a minimum, the Solaris 8 OS version of SMS 1.5 requires:

- Solaris 8 2/02 OS release on the system controllers (SCs). This is the first release that SMS 1.5 supports.
- Solaris 8 2/02 OS release on the domains. This is the first release that SMS 1.5 supports.
- Same version of SMS software must be installed on both system controllers (SCs)
- Installation of the `Entire Distribution` software group of the Solaris OS, including update version and installed patches on both SCs. All patches are available at : `http://sunsolve.sun.com`
- Patches (in addition to those named in "What's Fixed in This Version" on page 1):
  - 117002-01 patch. This is the first release that SMS 1.5 supports.
  - 108434-17 patch (required for the SCs). This is the first release that SMS 1.5 supports.
  - 110826-09 patch for Solaris 8 on each domain (not required for SC). This is the first release that SMS 1.5 supports.
  - 111335-18 patch for Solaris 8 on each domain (not required for SC). This is the first release that SMS 1.5 supports.
- The Solaris 8 version of SMS 1.5 has binary dependencies on these Solaris libraries:
  - `/usr/lib/libnvpair.so.1`
  - `/usr/lib/libuuid.so.1`
  - `/usr/lib/fm/libdiagcode.so.1`

The fixes for these libraries are available respectively through patches 108528-24, 115831-01, and 115829-01. These are the first releases that SMS 1.5 supports.

Apply the patches to both the SCs and domains.

- On the SCs, Java™ 1.2.2 must be installed in the default directory (`/usr/java1.2/bin/java`). Java 1.2.2 is normally installed in this directory during Solaris `Entire Distribution` installation. This is the first release that SMS 1.5 supports.

Caution – If you are using Sun Fire Link™ and Java 1.2.2 is not installed on the SCs or is not installed in its default directory, SMS will fail to load.

- Install a commercially available third-party or freely available version of `ssh` that supports the SSH 2.0 Protocol. For more information about using `ssh` with the Solaris 8 OS, see "Using `ssh` on the Solaris 8 OS With SMS" on page 5.

Note – If possible, consider upgrading your operating system to the Solaris 9 OS. The Solaris 9 OS includes `ssh`.

Solaris 9 OS Requirements

As a minimum, the Solaris 9 OS version of SMS 1.5 requires:

- Solaris 9 4/04 OS release. This is the first release that SMS 1.5 supports.
- Same version of SMS software on both system controllers (SCs)
- Installation of the `Entire Distribution` software group of the Solaris OS, including update version and installed patches, on both SCs. All patches are available at: `http://sunsolve.sun.com`
- Patches (in addition to those named in "What's Fixed in This Version" on page 1):
  - 113027-03 patch. This is the first release that SMS 1.5 supports.
  - 111712-12 patch (required for the SCs). This is the first release that SMS 1.5 supports.
- On the SCs, Java 1.2.2 installed in the default directory (`/usr/java1.2/bin/java`). Java 1.2.2 is normally installed in this directory during Solaris `Entire Distribution` installation. This is the first release that SMS 1.5 supports.

Caution – If you are using Sun Fire Link, and Java 1.2.2 is not installed on the SCs or is not installed in its default directory, SMS will fail to load.

Solaris 10 OS Requirements

SMS 1.5 currently supports Solaris 10 3/05 OS only on the domains, not on the system controllers (SCs). The SCs require either Solaris 8 OS or Solaris 9 OS.

Patch (in addition to those named in "What's Fixed in This Version" on page 1):

- 118822-18 patch. This is the first release that SMS 1.5 supports.

SMS 1.5 Known Limitations

This section contains known limitations for SMS 1.5 on a Sun Fire high-end system.

CR ID 6265544

SMS 1.5 supports Sun Fire Link wPCI hardware. However, SMS will not support subsequent versions of Sun Fire Link. If you install and use SMS 1.5 with Sun Fire Link hardware, SMS will return the following message when you power on a wPCI board:

```
Detected Sun Fire Link hardware. Sun Fire Link hardware has been
EOL'd and may not be supported by future versions of SMS.
```

General Notes and Issues

This section contains general notes and issues that involve SMS on Sun Fire high-end systems.

`smsconnectsc` Command

`smsconnectsc` is intended to be used in the event a remote SC hangs and cannot be accessed normally through `login`. Using `smsconnectsc` to create a remote console session from the local SC can result in the local SC losing monitoring capability and functionality. Do *not* use `smsconnectsc` except for the express purpose of system recovery.

Reinstallation and Upgrade

Previous versions of SMS documented the use of the Java™ WebStart GUI and the `pkgadd` command to install the SMS packages on the Sun Fire high-end system. SMS versions starting with SMS 1.3 introduced the `smsinstall` and `smsupgrade` scripts, which simplify and streamline the installation and upgrade process to the extent that WebStart and `pkgadd` are no longer recommended or documented. Because of the complexity of configuration for SMS, do *not* use any method other than the ones documented in the *System Management Services (SMS) 1.5 Installation Guide* to install or upgrade to SMS 1.5. Doing so could result in misconfiguration and loss of functionality.

Valid Paths for Version Switching

You can use the `smsversion` command to switch to any version of SMS that is still installed on your system, with these exceptions:

- The upgrade from SMS 1.4 to SMS 1.4.1 is permanent. Once you upgrade to SMS 1.4.1, you cannot return to SMS 1.4. This means that:
  - If you upgrade from SMS 1.4 to SMS 1.5, you can switch back to SMS 1.4.
  - If you upgrade from SMS 1.4 to SMS 1.4.1 and then to SMS 1.5, you cannot switch back to SMS 1.4, only to SMS 1.4.1.
- If you upgrade both SMS and the operating system, you cannot switch to the previous version of SMS unless you first reinstall the previous version of the operating system. For example, if you are running SMS 1.4.1 on the Solaris 8 OS and then upgrade to SMS 1.5 on the Solaris 9 OS, you must reinstall the Solaris 8 OS before you can switch back to SMS 1.4.1.
- If you switch from SMS 1.5 to any previous version of SMS, you must manually undo the hardening on the SCs using the Solaris Security Toolkit, then reharden and reboot.

Using `ssh` on the Solaris 8 OS With SMS

Before installing the SMS 1.5 packages, make sure that you have serial or console access to the SC or have `ssh` available on the SC. After you install SMS 1.5 and reboot the SC, the hardening performed by the `smsinstall` script disables remote access. This hardening takes place due to the new secure by default feature in SMS 1.5. If you do not have `ssh` installed on a system running the Solaris 8 OS, you will not have access to the SC except by using the console cable.

Since Sun does not provide `ssh` software for Solaris 8 OS, you should consider upgrading to the Solaris 9 OS, which includes `ssh`. As an alternative, you must install a commercially available third-party or freely available version of `ssh` that supports the SSH 2.0 protocol.

Note – Sun does not provide support for third-party `ssh` client software.

Note – If you are using `ssh` on the SC, you must change the `ssh` escape character to avoid conflict with the SMS console. Refer to the *System Management Services (SMS) 1.5 Installation Guide* for more information.

SMS Documentation Part Numbers

Software documentation for this release is provided at:

`http://www.sun.com/products-n-solutions/hardware/docs/Servers/High-End_Servers/Sun_Fire_15K/SW_FW_Documentation/SMS/index.html`

Files are named by part numbers. The part numbers correspond to these document titles:

- 817-7297-11.pdf — *System Management Services (SMS) 1.5 Release Notes*
- 817-7294-10.pdf — *System Management Services (SMS) 1.5 Installation Guide*
- 817-7295-10.pdf — *System Management Services (SMS) 1.5 Administrator Guide*
- 817-7296-10.pdf — *System Management Services (SMS) 1.5 Reference Manual*
- 819-1338-10.pdf — *Sun Fire High-End Systems Software Overview Guide*
- 819-1635-10.pdf — *Solaris Security Toolkit 4.1.1 Release Notes*
- 819-1501-10.pdf — *Sun Fire High-End and Midrange Systems Dynamic Reconfiguration User Guide*

Note – There is no longer a separate dynamic reconfiguration (DR) user guide for SMS software. The DR information for SMS now resides in the *Sun Fire High-End and Midrange Systems Dynamic Reconfiguration User Guide*.

CHAPTER 2

SMS 1.5 Bugs

This chapter provides information about known SMS 1.5 bugs, as well as bugs that have been fixed in the SMS patches that support the UltraSPARC IV+ processor. The chapter includes the following sections:

Bug Fixes in This Update

This section lists the bugs in SMS 1.5 software and related bugs that have been fixed in the SMS patches that support the UltraSPARC IV+ processor.

Note – Patch 120648-02 is required for UltraSPARC IV+ processor support.

Enhance UltraSPARC IV+ CPU Error Handling (CR ID 6257778)

Patch 120843-01 enhances the error handling and recovery capabilities of OpenBoot™ PROM to include the UltraSPARC IV+ processors.

`prtdiag` Shows Wrong Bus Frequency for C5 Slots (CR ID 6286277)

After a card is hot-plugged into slot 1 (c5v0) and the system is restarted, `prtdiag` showed the correct bus frequency for the populated slot, but incorrectly reported the bus frequency for the other empty slots. This has been fixed in Patch 120843-01.

"PCI IOC ECC Tests" Fails -l64 or Higher on Starcat with Dual-Core UltraSPARC IV+s (CR ID 6255743)

On Sun Fire E25K/E20K systems that have dual-core UltraSPARC IV+ boards installed, `lpost` might fail at diagnostic levels 64, 96, or 127. When the failure occurs, `lpost` returns the following error message:

```
{SB03/P0/C1} ERROR: TEST=PCI IOC Ecc Tests,SUBTEST=PCI IOC ECC
```

Patch 120648-02 fixes this issue.

Modify `hpost` to Support UltraSPARC IV+ GA of 1500 MHz (CR ID 6270911)

`hpost` in SMS 1.5 needs to be modified to support the UltraSPARC IV+ boards. Patch 120648-02 makes this modification.

`hpost -q` Fails "Out Of Config on Timeout" When Rebooting from Solaris (CR ID 6324035)

Occasionally, a Sun Fire E25K/E20K system running the Solaris 9 4/04 OS on UltraSPARC IV+ boards will time out if you reboot a domain on the UltraSPARC IV+ board. The system returns the following error message:

```
Proccore SB0/P0/C0 timed out on test Domain Advanced Tests id=0x6F.
Test Failed.FAIL Proccore SB0/P0/C0: test_seq_cwd(): failed out of
config on timeout

(Timeout Secs Given: 30)
```

Patch 120648-02 fixes this issue.

UltraSPARC IV+ Version 2.1 Early Lots Should Be Internal-Only (CR 6292571)

The first UltraSPARC IV+ processors released for customer systems are version 2.1.1. Patch 120648-02 modifies POST to detect earlier version 2.1 processors, which are not qualified for customer use, and fail them out of the configuration.

Note that versions 2.1 and 2.1.1 cannot be discriminated by MaskID, which is 2.1 for both. POST discriminates them based on other electrically-readable information.

UltraSPARC IV+: `marginvoltage` vcore minus on PN 1500 MHz Does Not Show the Correct Margined Voltage (CR 6288445)

This bug applies only to 1500 MHz UltraSPARC IV+ boards. Occasionally, using the `marginvoltage` command with the `-m-1` option returns an incorrect value. If you issue the command again a few seconds later, it returns the correct value. This has been fixed in Patch 120789-01.

UltraSPARC IV+: `marginvoltage` Output Format for UltraSPARC IV+ vcore is Not Correct (CR 6290143)

This bug applies only to 1500 MHz UltraSPARC IV+ boards. When you use the `-m-1` or `-m+1` options with the `marginvoltage` command, the system returns an incorrect output format. For example, using the `-m+1` command returns a changed

value of `Nom (voltage)` instead of `Nom+3% (voltage)` on the UltraSPARC IV+ boards, but the same command returns correct output on UltraSPARC IV and UltraSPARC III boards. Patch 120789-01 fixes this issue.

RFE: AVL-FS2 (Starcat): Provide Diagnosis of New UltraSPARC IV+ CPU Errors (CR ID 6277467)

UltraSPARC IV+ processors include additional error detection and RAS capabilities beyond those in UltraSPARC IV and III+ processors. This CR describes an enhancement to the Availability functionality to diagnose the new errors an UltraSPARC IV+ can report. With this enhancement, Availability diagnoses all fatal errors for all processor types, as well as non-fatal errors for Solaris 9 domains. Patch 120827-01 provides this enhancement.

SC CPU Needs to Handle L3/L2 Cache Errors on Non-FMA Domains So As Not to Cause Processor Indictment (CR ID 6302265)

The UltraSPARC IV+ chips have three levels of cache. Levels 2 and 3 refer to data caches; Level 2 is internal to the processor, and Level 3 is external to the processor.

Sometimes an error produces additional error as side effects. When an error occurs in either level of the data cache, the Availability software diagnoses the root cause of the error and discards the side effect error (or errors). This not only aids in diagnosability, but also ensures that a victim component is not indicted due to a side effect error. Patch 120827-01 fixes this condition.

`hwad` Sending Dstop Events in Serial Causes Delay and Incorrect `dsmd` ASR (CR ID 6302843)

On a system running multiple domains, `hwad` must issue a dstop (domain stop) event to each of the running domains before `dsmd` can recover the domains after an error condition. Because these dstops were issued in series, there was a delay between the time that the initial dstop was issued and the time when all of the domains have been recovered.

Patch 120789-01 fixes this issue so that the dstops are now issued to the domains in parallel using separate threads, thus eliminating the delay.

SERD Tunables for CPU Events are Not Consistent Between S9U8, S10U1/FMA, and SMS 1.5 (CR ID 6309365)

To account for the additional cache level in the UltraSPARC IV+ processors, the SC-side SERD (Soft Error Rate Discriminator) required different threshold values to align with existing thresholds on Solaris 9 domain. Without the adjustment, the domain will offline the processor prior to the SC-side diagnosis, and the processor's health status is not updated correctly.

Patch 120827-01 fixes this issue so that diagnoses are consistent between the two operating system versions and SMS 1.5 software for all supported types of processors.

Known Bugs in SMS 1.5 Software

This section summarizes the most important bugs that affect SMS 1.5.

FMA Event Reporting to NetConnect Does Not Pick Up Modified Chassis Serial Number (CR ID 5052078)

If a Sun Fire high-end server runs without having its chassis serial number (CSN) set on the SCs using the `setcsn` command, any Fault Management Architecture (FMA) reports sent to NetConnect after a domain stop (Dstop) will show the serial number as blank in its event reports.

Workaround: Use the `setcsn` command to set the chassis serial number and then restart SMS. You must restart SMS in order for the CSN to appear in the event reports.

For more information about how to set the chassis serial number on the SC, refer to the *System Management Services (SMS) 1.5 Installation Guide*.

ndd/dev/scman man_pathgroups_report Output Needs Clarification (CR ID 6252771)

The ndd(1M) command can be executed as root in order to read and write certain device driver parameters. scman(7D) (ndd/dev/scman) manages the Sun Fire E25K/E20K SC side of the Management (MAN) Network, and it supports the ndd(1M) command.

If the man_pathgroups_report parameter of scman(7D) is not interpreted correctly, it may appear as though a serious hardware error has occurred, when the error is actually caused by software. As a result, it might incorrectly be concluded that swapping of hardware is required in order to root-cause the problem.

When the man_pathgroups_report parameter is specified, you can obtain output such as the following:

```
# ndd /dev/scman man_pathgroups_report
MAN Pathgroup report: (* == error)
Interface     Destination          Active Path    Alternate Paths
--------------------------------------------------------------
scman1         Other SSC             eri0 eri0 exp 0, hme1 exp 0 *
```

The asterisk (*) in the last line denotes that "the last time the hme1 physical interface was used, an error was found". Historically, the majority of occurrences are due to software, not hardware.

Software causes an error when either the MAN network peer no longer responds to "heartbeat" messages, or when there is an incorrect dlpi(7P) state transition. You can repeatedly create the former case by running the following command as root (assuming the exact output appears as shown above):

```
# ndd -set /dev/scman man_set_active_path '1 0 1'
```

For the SC that executes the command (for example, SC0), its Active Path is switched from eri0 to hme1. For a while, SC1 will continue to send packets on the eri0 physical interface, and SC0 will send packets on hme1. After a short while, the two will synchronize and communicate using the same interface. However, an asterisk will be shown (on each SC) to show the last interface on which there was an error. In this case, the error is indeed caused by software (that is, the error is really a non-response to a “heartbeat” message sequence). It is not a fatal hardware error.

An asterisk will indeed be shown in the output if there is a persistent, fatal hardware error. However, you should not assume that hardware is the only possible cause of the asterisk.

SMS 1.5 Documentation Errata

This section summarizes errors in the SMS 1.5 man pages and documentation.

`marginvoltage`(1M)

The `marginvoltage` man page states the following:

Margin settings are not persistent following power cycles.

That statement is true only for core voltages. All other settings are persistent.

`rcfgadm(1M)`

CR ID 4945049

The Note in the `rcfgadm`(1M) man page should read as follows:

If the `rcfgadm` command fails, a board does not return to its original state. A `dxs` or `dcs` error message is logged to the domain. If the error is recoverable, you can retry the command.

- **If you are running the Solaris 8 or Solaris 9 OS on the domain, perform the following check:**

1. **Before you retry the command, ensure that the following `dcs` entries exist in `/etc/inetd.conf` on the domain, and that they have not been disabled.**

```
sun-dr stream tcp wait root /usr/lib/dcs dcs
sun-dr stream tcp6 wait root /usr/lib/dcs dcs
```

2. **If the error is unrecoverable, you must reboot the domain in order to use that board.**

- **If you are running the Solaris 10 OS on the domain, the dcs is now part of the SMF (Service Management Facility). Perform the following steps:**

1. **Make sure you are logged in as root.**

2. **Type the following command at the system prompt on the domain:**

```
# inetadm | grep dcs

disabled disabled svc: /platform/sun4u/dcs: default
```

3. **If the `dcs` is disabled as shown in the above example, enable it by typing the following command:**

```
# svcadm enable svc:/platform/sun4u/dcs:tcp
```

`testemail(1M)`

CR ID 5047803

The description of the `-c` option in the `testemail`(1M) man page should read as follows:

The fault class or comma-separated list of fault classes that `testemail` uses to generate an event.

`-c` *fault_class, fault_class, fault_class*

Examples of valid fault classes are in the file `/etc/opt/SUNWSMS/config/SF15000.dict` .

CR ID 6221370

The note in the Description section should read as follows:

When invoking `testemail` using an Ecache resource, make sure that the system board containing the Ecache is powered on. Otherwise, the `testemail` invocation will fail and no email will be generated.

System Management Services (SMS) 1.5 Administrator Guide

Chapter 1, Page 5:

The description of VCMON should read as follows:

A voltage core monitoring parameter (VCMON) was added to the SMS software. When VCMON is enabled, it monitors any voltage changes or drifts on the processors. If VCMON detects an upward change in voltage (which usually indicates a socket attach issue), it notifies the user with an FMA event and marks the component health status (CHS) of that processor as faulty.

Chapter 10, page 190:

In the description of the `showboards` command, the `-a` option should read `-v`.

In the description of the `showenvironment` command, the category "Device" should be removed.

Chapter 11, page 201:

The first example should read as follows:

`showlogs -d` *domain_indicator* `-p s`

The second example should read:

`showlogs -d` *domain_indicator* `-p c`

Appendix A, page 247:

The following commands should be added:

`smsinstall`: Installs the SMS software.

`smsupgrade`: Upgrades the existing SMS software installed on a system.

Appendix B (CRs 6227544, 4943474):

The following categories of error messages should be added between error codes 11300 and 50000:

11500-11699: Reserved for EFHD messages

11700-11899: Reserved for ELAD messages

11900-12099: Reserved for ERD messages

12100-12299: Reserved for Event Utilities messages

12300-12499: Reserved for Wcapp messages

12500-12699: Reserved for FRUID-related messages

12700-12799: Reserved for EBD messages

System Management Services (SMS) 1.5 Installation Guide

page 5:

The Hardware Compatibility Table (Table 2-1) should list Solaris 8 2/02 as the first supported version of Solaris 8 software for both the domains and the system controllers (SCs).

This table contains a typographical error; it refers to a 1.65 MHz UltraSPARC processor. The correct speed should be 1.5 MHz.

SMS 1.5 supports a `/swap` partition size of 2 Gbytes as well as the 4 Gbyte size described in the Installation Guide. The recommended partition sizes for SMS 1.5 are as follows:

0	/ (`root`)	8 Gbyte
1	`swap`	4 Gbyte
4	OLDS/LVM database (`metadb`)	32 Mbyte
5	OLDS/LVM database (`metadb`)	32 Mbyte
7	`/export/install`	Remaining free

page 16:

SMS must be up and running before you can disable failover.

page 17:

To verify that Java version 1.2.2 has been installed, type the command `java -version` at the system prompt.

Step 3 should read:

Run the `smsupgrade` command to reinstall SMS.

page 30:

SMS must be up and running before you can record the chassis serial number (CSN).

page 39:

The example should show `sc0`, not `sc1`.

page 40:

The `flashupdate` example is missing the `-f` switch. It should read as follows:

`-f /opt/SUNWsms/hostobjs/sgcpu.flash`

page 44:

After Step 2, there should be a Step 3 in this procedure. Step 3 should read:

Upgrade the Solaris OS. See "To Install or Upgrade the Solaris OS on the SC" on page 17.

After Step 3, there should be a Step 4, which should read as follows:

Run `smsupgrade` to reinstall SMS after a major OS upgrade (see page 34). Otherwise, proceed to the next step and restore the SMS configuration.

The heading "To Reinstall SMS Software" should read "To Restore the SMS Configuration."