



# System Management Services (SMS) 1.4 Release Notes

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# Preface

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This guide contains release notes for the System Management Services (SMS) 1.4 software.

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## 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 environment. If you do not have such knowledge, read the Solaris User and System Administrator documentation provided with this 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.

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## How This Book Is Organized

This guide contains the following information:

- Chapter 1 contains the SMS 1.4 and Availability-related Release Notes.
- Chapter 2 contains SMS 1.4 bugs, bugs that affect SMS 1.4 software, and errors in SMS 1.4 documentation.
- Chapter 3 contains the Dynamic Reconfiguration release notes and bugs.

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# Using UNIX Commands

This document may not contain information on basic UNIX commands and procedures such as shutting down the system, booting the system, and configuring devices.

See one or more of the following for this information:

- *Solaris Handbook for Sun Peripherals*
- Online documentation for the Solaris software environment
- Other software documentation that you received with your system

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# Typographic Conventions

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Typeface or Symbol	Meaning	Examples
AaBbCc123	The names of commands, files, and directories; on-screen computer output	Edit your <code>.login</code> file. Use <code>ls -a</code> to list all files. % You have mail.
AaBbCc123	What you type, when contrasted with on-screen computer output	% <b>su</b> 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 <i>User's Guide</i> . These are called <i>class</i> options. To delete a file, type <b>rm filename</b> .

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# Shell Prompts

Shell	Prompt
C shell	<i>sc_name: sms-user: &gt;</i> or <i>domain_id: sms-user: &gt;</i>
C shell superuser	<i>sc_name:#</i> or <i>domain_id:#</i>
Bourne shell and Korn shell	>
Bourne shell and Korn shell superuser	#

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# Related Documentation

Application	Title	Part Number
Installation Guide	<i>System Management Services (SMS) 1.4 Installation Guide</i>	817-3055-10
Administrator Guide	<i>System Management Services (SMS) 1.4 Administrator Guide</i>	817-3056-10
Reference (man1M)	<i>System Management Services (SMS) 1.4 Reference Manual</i>	817-3057-10
Overview Guide	<i>Sun Fire High-End Systems Software Overview Guide</i>	817-3075-10
Options	<i>System Management Services (SMS) 1.4 Dynamic Reconfiguration User Guide</i>	817-4459-10
	<i>Sun Fire 15K/12K Dynamic Reconfiguration User Guide</i>	816-5075-12
	<i>Sun Fire 15K/12K System Site Planning Guide</i>	816-4278-10
	<i>OpenBoot™ 4.x Command Reference Manual</i>	816-1177-10

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*System Management Services (SMS) 1.4 Release Notes*, part number 817-3058-10

# System Management Services (SMS)

## 1.4 Release Notes

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This chapter contains the release notes for System Management Services (SMS) 1.4 on Sun Fire high-end systems and covers the following topics:

- SMS 1.4 Known Limitations
- General Notes and Issues
- SMS Documentation Notes

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## SMS 1.4 Known Limitations

This section contains known limitations that involve SMS on a Sun Fire high-end system:

- At the time of this release, `setbus -c csb` is the only form of `setbus` that should be used. Using the `-b` option or the *location* operand could result in system instability and should *not* be used.
- Due to the possibility of `dstop` for both domains, do not share expanders between a production domain and a domain containing new or untested privileged mode software such as device drivers. See BugId 4761277.
- By default using a MAXCPU board in a split slot configuration is not allowed. If you need this configuration because you are upgrading from SMS 1.3 where the configuration was allowed, contact your Sun Service Representative and refer to RFE number #4863496.
- Running multiple, concurrent `setkeyswitch standby` or `setkeyswitch off` commands can cause `dstops` for domains sharing expanders. See BugId 4799169.
- hsPCI boards contain one 66 Mhz slot. Do not use a 33Mhz card in that slot unless you are willing to reboot the domain. Refer to BugId 4785070.
- If you return to SMS 1.3 from SMS 1.4 on a Sun Fire high-end system, `smsversion` does not automatically restore domain configuration settings. You must restore settings manually. Keep in mind that features provided by SMS 1.4,

such as automatic diagnosis and domain recovery, will not be available if you return to SMS 1.3. Refer to the the *System Management Services (SMS) 1.4 Installation Guide*.

- UltraSPARC IV functionality requires the presence of UltraSPARC IV boards.
- hsPCI+ functionality requires the presence of hsPCI + boards.
- Sun Fire Link clustering functionality, including the Sun Fire Link fabric manager server, requires the presence of wPCI boards.

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## General Notes and Issues

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

## Automatic Diagnosis and Recovery

The following automatic diagnosis and domain recovery features are enabled by default in SMS 1.4:

- *Automatic diagnosis engines*

SMS 1.4 includes three diagnosis engines (DEs) that analyze certain hardware errors and identify the components associated with errors that affect the availability of the system and its domains:

- SMS diagnosis engine

The SMS DE diagnoses hardware errors associated with domain stops (dstops).

- Solaris operating environment

The Solaris operating environment (also referred to as the Solaris DE) identifies non-fatal domain hardware errors and reports them to the system controller.

- POST diagnosis engine

The POST DE identifies any hardware test failures that occur when the power-on self-test is run in SMS.

The DEs record the diagnosis information for the affected components and maintain this information as part of the *component health status* (CHS).

- Fault event and error reporting

The diagnosis engines report diagnosis information through the following channels:

- Event messages displayed in the domain and platform log files.

These event messages contain the chassis serial number of the affected system and event codes that identify the fault or error event. These event messages are also recorded in the SMS event log, which can be viewed by running the `showlogs` command.

Contact your service provider when you see these event messages. Your service provider uses the chassis serial number and event code to initiate the appropriate service action.

---

**Note** – In some cases the diagnosis engine cannot assign a reasonable event code based on the diversity of components associated with the fault. In such cases the event code will contain the word UNKNOWN, for example SF15000-UNKNOWN. Contact your service provider as usual to initiate the appropriate service action.

---

- Email notification of fault and error events

You can configure the email event notification features to receive immediate notice of critical fault events, without manually monitoring the platform or domain logs. As with the event messages, contact your service provider when you receive these emails, so that your service provider can initiate the appropriate service action.

- Fault event notification through Sun Management Center or Sun<sup>SM</sup> Remote Services Net Connect, if you have configured those products accordingly.

- Automatic restoration of stopped domains

For hardware errors associated with `dstops`, POST reviews the CHS information of affected components and deconfigures any faulty components from the system.

For further information on these features, see the “Automatic Diagnosis and Recovery” chapter in the *System Management Services (SMS) 1.4 Administrator Guide*.

## New SMS 1.4 Commands

The following new daemons and commands are related to the automatic diagnosis and recovery features introduced in SMS 1.4. For detailed information on these daemons and commands, refer to their descriptions in the *System Management Services (SMS) 1.4 Reference Manual*.

- `efhd(1M)` – Error and fault handling daemon.
- `elad(1M)` – Event log access daemon.
- `erd(1M)` – Event reporting daemon.
- `setcsn(1M)` – Set the chassis serial number for a Sun Fire high-end system.
- `testemail(1M)` – Test the event-reporting features, which include event message logging and email event notification. Note that the path to this command is:

```
/opt/SUNWSMS/SMS1.4/lib/smsadmin/testemail
```

## Revised SMS 1.4 Commands

The following commands were updated in SMS 1.4 to reflect changes introduced by the automatic diagnosis and recovery features. For further information on these commands, refer to their descriptions in the *System Management Services (SMS) 1.4 Reference Manual*.

- `showlogs` (1M) – Provides new options for displaying event log information.
- `showplatform` (1M) – Now displays the chassis serial number assigned to a Sun Fire high-end system.

## Chassis Serial Number

The chassis serial number is used to identify a Sun Fire high-end system. The serial number identifies the platform in system event messages and is used by service providers to correlate events and service actions to the correct system.

The chassis serial number is printed on a label in the front of the system chassis, near the bottom center. Starting with the SMS 1.4 release, the chassis serial number is automatically recorded by Sun manufacturing on systems that ship with SMS 1.4 installed. To view the chassis serial number, run the `showplatform -p csn` command.

If you are upgrading to SMS 1.4 from an earlier SMS version, use the `setcsn`(1M) command to record the chassis serial number of your Sun Fire high-end system. For details on setting the chassis serial number, refer to the *System Management Services (SMS) 1.4 Installation Guide* and the `setcsn` command description in the *System Management Services (SMS) 1.4 Reference Manual*.

## Capacity On Demand (COD)

You can now temporarily enable an available, instant access CPU (also referred to as headroom) to replace a failed non-COD CPU. In this case, the instant access CPU is considered as a *hot spare*, which is a spare CPU that can be used immediately to replace a failed non-COD CPU. However, once you replace the failed non-COD CPU, you must deactivate the instant access CPU as explained in the “Capacity on Demand” chapter of the *System Management Services (SMS) 1.4 Administrator Guide*. Contact your Sun sales representative or reseller to purchase a COD RTU license for the instant access CPU in use if you want to continue using it.

# System Controller External Network Configuration

Each system controller (SC) must be configured for the TCP/IP network to which it is attached. Refer to the *System Administration Guide: Resource Management and Network Services* of the Solaris 9 System Administrator Collection for details on planning and configuring a TCP/IP-based network. SMS supports both IPv4 and IPv6 configurations.

In this release, the SC supports network connections through the RJ45 jacks on the faceplate of each SC. This corresponds to the network interface `hme0` and `eril` under Solaris software for each SC. You will be required to configure `hme0` or `eril` on each SC with appropriate information for your TCP/IP network. Using this configuration, each SC is known to external network applications by a separate IP hostname and address.

---

**Caution** – The IP addresses shown in the `smsconfig` examples in the Sun Fire high-end system documentation are *examples only*. Always refer to your *Sun Fire 15K/12K System Site Planning Guide* for valid IP addresses for your network. Using invalid network IP addresses could under certain circumstances render your system unbootable!

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Each SC operates in one of two mutually exclusive modes: main or spare. The SC that is in main mode is the SC that controls the machine. The SC that is in spare mode acts as a spare that automatically takes over if the main SC fails. It is important to know which system controller is the main SC and which is the spare SC. To determine the SC role log in to the SC and use the following command:

```
sc0:sms-user:> showfailover -r
MAIN
```

If you do not configure the external community network, applications such as Sun Management Center, `telnet`, and others will need to be given the appropriate IP hostname of the main system controller. In the case of an SC failover, these applications need to be restarted with the IP address of the new main SC.

---

**Note** – Any changes made to the network configuration on one SC using `smsconfig -m` must be made to the other SC as well. Network configuration is not automatically propagated.

---

# System BREAK Sequence

To facilitate failover, the BREAK sequence to stop the system has been changed from STOP-A to the alternate [RETURN] [TILDE] [CONTROL B].

---

**Note** – There must be an interval of more than 0.5 seconds between characters, and the entire string must be entered in less than 5 seconds.

---

Solaris 8 introduced this new feature which gives the system the ability to force a hanging system to halt when required, without allowing random or spurious breaks to cause an unintentional stop. This is true only with serial devices acting as consoles and not for systems with keyboards of their own.

The following line is uncommented by default in the `/etc/default/kbd` file:

```
KEYBOARD_ABORT=alternate
```

---

**Note** – Do not return the use of STOP-A to the system. Your system will lose failover functionality.

---

## IPSec Configuration

Disks intended to be used on a Product Name must be installed using a Sun Fire high-end system. Policy placed in `/etc/inet/inetd.conf` must be added manually to `/etc/inet/ipsecinit.conf` as well.

Whenever policy is taken out of `/etc/inet/inetd.conf` it must be removed manually from `/etc/inet/ipsecinit.conf` also.

Refer to Bug Id 4449848.

## `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 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) 1.4 Installation Guide* to install or upgrade SMS 1.4. Doing so could result in misconfiguration and loss of functionality.

---

## SMS Documentation Notes

This section contains documentation notes that involve SMS on the Product Name.

### 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](http://www.sun.com/products-n-solutions/hardware/docs/Servers/High-End_Servers/Sun_Fire_15K)

These files are named by part number. For your convenience, here are the associated document titles:

817-3055-10.pdf - *System Management Services (SMS) 1.4 Installation Guide* (replaces 816-5320-10)

817-3056-10.pdf - *System Management Services (SMS) 1.4 Administrator Guide* (replaces 816-5318-10)

817-3057-10.pdf - *System Management Services (SMS) 1.4 Reference Manual* (replaces 816-5319-10)

817-3058-10.pdf - *System Management Services (SMS) 1.4 Release Notes* (replaces 816-5321-10)

817-3075-10.pdf - *Sun Fire High End Systems Software Overview Guide* (replaces 816-5322-10)

## Documentation Errata

Example 1 in the `testemail(1M)` man page and command description in the *System Management Services (SMS) 1.4 Reference Manual* omitted the full path to the `testemail` command. The correct command specification is as follows:

```
sc0:sms-user:> /opt/SUNWSMS/SMS1.4/lib/smsadmin/testemail -c
fault.board.ex.1112, fault.board.io.1112 -dD -i EX7,I08
```

See BugID 4934058.

## SMS 1.4 Bugs

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This chapter provides information about known SMS 1.4 bugs. It includes:

- Bugs in SMS 1.4 Software
- Bugs That Affect SMS 1.4 Software
- SMS 1.4 Documentation Errors

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### Bugs in SMS 1.4 Software

This section summarizes the most important 1.4 bugs and RFEs that affect SMS 1.4. It does not include all outstanding bugs and RFEs.

#### Using Control-C to Interrupt Poweron/Poweroff Sequence Can Cause ESMD to Core Dump (BugId 4902308)

Interrupting poweron/poweroff with Control-C can cause ESMD to core dump. ESMD will restart automatically and will gracefully recover. Component failure (esmd) and restart messages will be logged to the platform messages file.

*Workaround:* Do not use Control-C during poweron or poweroff operations.

## Using Control-C to Interrupt Poweron/Poweroff Sequence Can Display Unnecessary Error Messages (BugId 4902311)

Interrupting poweron/poweroff with Control-C might cause errors such as "client monitor failed" to be logged on the platform. Although the messages do not reflect actual errors and have no effect on the system, they can be unnecessarily alarming.

*Workaround:* Either do not issue Control-C commands during power on operations or if you do, ignore the error messages.

## The `setchs -c` Command Is Limited to One Component at a Time (BugId 4925617)

If you try to change CHS on more than one component with a single `setchs` command, only the first component will be changed. The command returns "0" to indicate successful completion, and does not provide an error message indicating that the subsequent components were not changed.

*Workaround:* Do not apply the `setchs -c` command to more than one component at a time.

## ADC Chip Timeout Errors Displayed When SC Is Under Load (BugId 4948686)

When the system controller is subjected to some heavy load conditions, SMS 1.4 software may report ADC chip calibration timeout errors such as this one:

```
...NOTICE ExpBoard.cc 122] The ADC chip calibration timeout on EX13
```

*Workaround:* Ignore the error messages.

## Misleading Message During SC Poweroff (BugId 4953836)

When `esmd` powers down a system controller (SC) due to environmental issues such as high or low temperature, it displays a misleading message. The message states that the SC will be powered off and removed from the domain. A system controller can not be included in a domain, so it cannot be removed.

*Workaround:* Ignore the message.

## Domain Boot Time Has Increased (BugId 4957596)

There has been an increase of approximately 15% in the time it takes a Starcat chassis to turn on and have its domains display a Solaris prompt.

*Workaround:* None.

## Failover May Not Work Properly on Spare SC (BugId 4963029)

When using a degraded centerplane, failover may not work properly on the spare SC.

*Workaround:* Correct the degraded centerplane issue before attempting to fix the spare SC.

## Two-Processor System Boards Display Unknown Status After Domain Reboot (BugId 4970240)

When both processors of a 2-processor system board are indicted due to Solaris ECC correctable errors and the domain is rebooted, the "Power State" of the system board changes to UNKNOWN instead of remaining as ON. This will cause `showchs` to FAIL.

This problem does not occur with four-processor system boards.

*Workaround:* Power cycle the system board.

## Domain Does Not Recover If You Poweroff Expander In a Running Domain (BugId 4970726)

If you poweroff an expander board in a running domain, `dsmd` will not recover the domain.

*Workaround:* Do not poweroff an expander when components in slot 0 or 1 are in use by a running domain.

## Successful DR Operation Displays Error Message (BugId 4971396)

A successful addboard operation performed on a domain configured in a split-slot configuration can sometimes display this error message:

```
FAIL Slot SB12: MaxCPU in use in Slot I012, allow_maxcpu_split_ex
not set. There is no FRU service action indicated for this failure.
```

*Workaround:* Use the `showboards` command to verify that the operation succeeded. If it did, ignore the message.

## setkeyswitch Operation Appears to Hang (BugId 4972781)

If you run `setkeyswitch` commands on multiple domains that share expander boards, you may see error messages similar to this one:

```
[ ...ERR setKeyswitchLock.cc 124] setkeyswitch process already
running: pid=10435
```

The operation is not hanging. Instead, each domain is locking the shared hardware from the other domains. When the first `setkeyswitch` command completes, the remaining `setkeyswitch` commands can begin.

*Workaround:* None.

## Do Not Insert a System Board Into an Expander Board That Is Powered Down (BugId 4970670)

If a system board is inserted into a powered down expander board, no installation record is written.

*Workaround:* Remove the system board, power-on the expander board, and re-insert the system board.

---

## Bugs That Affect SMS 1.4 Software

This section summarizes the most important bugs that can affect the SMS 1.4 system. It is not an exhaustive list of every bug that could affect the SMS 1.4 system.

### After Changing the MAN I1 Network IP Address of an Installed Domain, you must reconfigure the MAN network by hand (BugId 4484851)

If there are already installed domains and you have changed the MAN I1 network configuration using `smsconfig -m`, you must configure the MAN network information on the already installed domains by hand.

*Workaround:* Refer to the information about unconfigured domains in the *System Management Services (SMS) 1.4 Installation Guide*.

### Sun Fire 15K Platform-Specific Begin/Finish Scripts Can Hang on HPCI+-Only Domains (BugId 4797577)

The Solaris 8 update 7 operating environment does not include support for hsPCI+ boards. In domains consisting of only hsPCI+ boards, the installation can hang after the start of the Begin/Finish scripts.

*Workaround:* Press `Ctrl-C` to interrupt the Begin/Finish scripts. This will let the rest of the installation continue, resulting in successful installation.

## Intermittent I<sup>2</sup>C Timeouts (1124) for Hpc3130 Cassette Status (BugId 4785961)

Intermittent I2C timeouts are reported by `dxs` and `frad` while getting the status for an Hpc3130 hsPCI cassette. The impact is benign and limited to generating error messages in the platform, domain and domain console message logs.

*Workaround:* None.

## Unmapped Response to Non-cacheable Request Corrupts State in AXQ Lock Module (BugId 4761277)

If two domains share an expander and a device driver (or OS extension) on one domain issues a bad address to programmed IO space, both domains could `dstop`. This only occurs with defective OS extensions which run in privileged mode such as device drivers.

*Workaround:* Do not share an expander between a production domain and a domain containing untested or problematic privileged mode software such as device drivers.

## Sun Fire 15K Servers Can Fail to Detect Domain Stop Interrupts (BugId 4924523)

If a domain stop (`dstop`) interrupt is detected by `hwad` but not by `dsmd`, `dsmd` will report a heartbeat failure. Only hardware configuration information is dumped, and neither CPU register or domain data (`dsmd.dump`) is saved. Hardware configuration files report `dstop` condition.

*Workaround:* You can re-post the domain at an increased post level to reveal the source of the hardware problem.



## SMS Will Not Start if IP Address Is Missing (BugId 4929849)

If the a high-end server's system controller cannot resolve its own hostname, then `wcapp` will not start. As a result, SMS will not start, either. Instead, you will see continuous `wcapp` error messages in the platform log. For example:

```
wcapp[9433:1]: [12300 8753505948023 ERR libWcApp.cc 2227]
Wcapp : java.net.UnknownHostException:

[1312 8753513433994 ERR StartupManager.cc 3021] software component failed: name=
wcapp

[1304 8753514591425 NOTICE StartupManager.cc 2740] software component start-up
initiated: name=wcapp

wcapp: [NOTICE] /usr/java1.2/lib/ext/jsse.jar, /usr/java1.2/lib/ext/jnet.jar,
/usr/java1.2/lib/ext/jcert.jar: optional JSSE jarfiles not all found or not readable by user;
running without SSL support
```

**Workaround:** Make sure that the SC's correct hostname (as returned by the `hostname(1)` command) and IP address are recorded in the `/etc/hosts` file or whichever naming service is in use. One way to record the name in the `/etc/hosts` file to run the `smsconfig` command again and enter the hostname and IP address that were used for the SC in the Site Planning Guide. When you have verified that the hostname and IP address are correct, restart SMS.

---

## SMS 1.4 Documentation Errors

This section summarizes errors in the SMS 1.4 manpages and documentation.

### SMS Upgrade Example In `smupgrade.1m` Manpage Uses Wrong Suffix Numbers (BugID 4912378)

The upgrade example in the `smupgrade.1m` manpage does not display the correct upgrade suffixes for the SMS packages. All upgraded packages should have a `.2` suffix.

*Workaround:* Read the SMS 1.4 Installation Guide, instead.

### The `pcd.1m` manpage Displays Incorrect Data Fields (BugId 4918650)

The platform data descriptors in the `pcd.1m` manpage and the *SMS 1.4 Reference Manual* are not correct. For SMS 1.4, the descriptors are version 3, and a Chassis Serial Number field has been added to platform information.

*Workaround:* none.

### `flashupdate` Information in Installation Guide Is Incorrect. (BugId 4942045)

The SMS 1.4 Installation Guide did not point out that two `flashupdate` files, `nSCCPOST.di` and `oSCCPOST.di`, can only be used on certain types of system controllers (SC). Each of those files is intended only for the following hardware:

- `nSCCPOST.di` -> CP1500 board
- `oSCCPOST.di` -> CP2140 board

In addition, the examples on pages 23, 38, 52, and 61 show a CP1500 board on one SC and a CP2140 board on the other SC, which is not supported.

*Workaround:* To find out which type of SC you have, check the platform messages log file when SMS is started.

## showboards -c Provides Wrong Information About WPCI Boards (BugId 4970807)

The `showboards -c` command, designed to display the clock source for all system boards, incorrectly indicates that all WPCI boards in the system are turned Off. The incorrect status is displayed only with the `-c` option.

*Workaround:* Ignore the status for WPCI boards or run the `showboards` command again without the `-c` option to verify board status.



# Dynamic Reconfiguration Release Notes

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Dynamic reconfiguration (DR) on Sun Fire high-end systems consists of two parts. One part runs with SMS on the system controller (SC), and this chapter contains release notes pertaining to that part for the SMS 1.4 release. The other part runs on the domain side and release notes about that portion are included in the appropriate version of *Solaris Release Notes Supplement for Sun Hardware*.

---

**Note** – This information is correct as of the printing date of this document. For the latest information, please also see [http://www.sun.com/servers/highend/dr\\_sunfire/slot1\\_dr.html](http://www.sun.com/servers/highend/dr_sunfire/slot1_dr.html).

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## Known Limitations

By default, using a MAXCPU board in a split slot configuration is not allowed. If you need this configuration because you are upgrading from SMS 1.3 where the configuration was allowed, contact your Sun Service Representative and refer to RFE number #4863496.

---

## Slot 1 DR

Sun Fire high-end systems support up to 18 expander boards, each of which includes two slots. Slot 0 is the upper assembly, which contains a CPU/Memory board, and Slot 1 is the lower assembly. At the time of this publication, Slot 1 could contain either a MaxCPU board or a hsPCI assembly.

Solaris 9 4/03 is the first Solaris 9 release to support DR operations on a board in Slot 1, and Solaris 8 2/02 with certain patches is the first Solaris 8 release to support it. Domains running the base Solaris 9 release continue to support DR on CPU/Memory boards. In both cases, SMS 1.3 or SMS 1.4 is required. For more information and the required Solaris 8 patch numbers, see [http://www.sun.com/servers/highend/dr\\_sunfire/slot1\\_dr.html](http://www.sun.com/servers/highend/dr_sunfire/slot1_dr.html).

---

## DR Documentation Notes

For release notes that pertain to DR on the domain side, see the *Solaris Release Notes Supplement for Sun Hardware* that corresponds to the Solaris version running on your domains. That document accompanies each Solaris release and update. Also, see [http://www.sun.com/servers/highend/dr\\_sunfire/slot1\\_dr.html](http://www.sun.com/servers/highend/dr_sunfire/slot1_dr.html).

## Related Documentation

DR documentation is available at the following location:

[http://www.sun.com/products-n-solutions/hardware/docs/Servers/High-End\\_Servers/Sun\\_Fire\\_15K/SW\\_FW\\_Documentation/DR/index.html](http://www.sun.com/products-n-solutions/hardware/docs/Servers/High-End_Servers/Sun_Fire_15K/SW_FW_Documentation/DR/index.html)

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## Known Bugs

This section contains important SMS-side bugs that involve DR on the Sun Fire high end system.

### DCA Doesn't Detect Failed Network Connection (BugId 4628314)

DCA doesn't detect a failed network connection, which can cause a DR command to hang.

*Workaround:* Kill any of the following remote DR commands that appear to be hung:

## A Valid MaxCPU Board Used In An Invalid Split-Slot Configuration Will Fail POST (BugId 4904620)

DR of a board with "Test Status" of Failed will fail with "Insufficient Condition" unless board is powered cycled.

Workaround: Power cycle the board.

---

## Known Hardware Bugs

### GigaSwift Ethernet MMF Link Goes Down With CISCO 4003 Switch After DR Attach (BugId 4709629)

Attempting to execute a DR operation on a system with Sun GigaSwift Ethernet MMF Option X1151A, part number 595-5773, attached to certain CISCO switches causes the link to fail. The problem is caused by a known bug in the following CISCO hardware/firmware:

- CISCO WS-c4003 switch (f/w: WS-C4003 Software, Version NmpSW: 4.4(1))
- CISCO WS-c4003 switch (f/w: WS-C4003 Software, Version NmpSW: 7.1(2))
- CISCO WS-c5500 switch (f/w: WS-C5500 Software, Version McpSW: 4.2(1) and NmpSW: 4.2(1))

This problem is not seen on CISCO 6509 switch.

Workaround: Use another switch or consult Cisco for a patch.

